LLŶR FLOATING OFFSHORE WIND PROJECT

Llŷr 1 Floating Offshore Wind Farm

Environmental Statement

Volume 3: Chapter 28 – Other Sea Users

August 2024

Prepared by: Llŷr Floating Wind Ltd

FLOVENTIS ENERGY

Document Status

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Approved by	Jay Hilton-Miller

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Acronyms and abbreviations

Acronym or Abbreviation	Definition	Acronym or Abbreviation	Definition
AIS	Automatic Identification System	MPS	Marine Policy Statement
ARPA	Automatic RADAR Plotting Aid	MOD	Ministry of Defence
CCUS	Carbon capture, utilisation, and storage	NPS	National Policy Statement
CEMP	Construction Environmental Management Plan	NRW	Natural Resources Wales
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea 1972	O&G	Oil & Gas
CTMP	Construction Traffic Management Plan	OWF	Offshore windfarm
DECC	Department of Energy & Climate Change	PCF	Professional Capabilities Framework
EIA	Environmental Impact Assessment	PDZ	Pembrokeshire Demonstration Zone
EMODnet	European Marine Observation and Data Network	PEDW	Planning and Environment Decisions Wales
ES	Environmental Statement	PPW	Planning Policy Wales
ESCA	European Subsea Cables Association	RYA	Royal Yachting Association
ESRP	Emergency Spill Response Plan	SIMOPS	Simultaneous operations
FLOW	Floating Offshore Windfarm	SMP	Shoreline Management Plan
GES	Good Environmental Status	SOLAS	International Convention for the Safety of Life at Sea 1974
GIL	Greenlink Interconnector Ltd	TCE	The Crown Estate
GIS	Geographic Information System	SUP	Stand Up Paddleboarding
GW	Gigawatt	UK	United Kingdom
HDD	Horizontal Directional Drilling	UKHO	UK Hydrographic Office
HM	His Majesty	KIS-ORCA	Kingfisher Information Service - Offshore Renewable & Cable Awareness
HRA	Habitats Regulations Assessment	LNG	Liquefied Natural Gas
IAM	Impact Assessment Matrix	MCAA	Marine and Coastal Access Act
ICPC	International Cable Protection Committee	META	Marine Energy Testing Area
IMCA	International Marine Contractors Association	UXO	Unexploded Ordnance
IPC	Infrastructure Planning Commission	WAM	Wales Activity Mapping
MEW	Marine Energy Wales	WNMP	Welsh National Marine Plan
MHPA	Milford Haven Port Authority		
MHWS	Mean high water springs		
MMO	Marine Management Organisation		

Glossary of project terms

Term	Definition
The Applicant	The developer of the proposed 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 Ltd and SBM Offshore Ltd of which Llŷr Floating Wind Limited is a wholly owned subsidiary.
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.
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.
proposed Project	All aspects of the Llŷr 1 development (i.e. the onshore and offshore components).
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.
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 Figures

List of Tables

28. OTHER SEA USERS

28.1 Introduction

1. Llŷr Floating Wind Ltd, 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 ten wind turbine generators (WTGs). The proposed Project will make landfall at Freshwater West before connecting into Pembroke Dock power station and the national grid network.
3. The Applicant is seeking a Section 36 consent and a Marine Licence for the proposed Project, 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 other sea users during the construction, operation and maintenance and decommissioning phases, and includes mitigation, monitoring and good practice measures to reduce the impacts of the proposed Project on other sea users.
4. **Section 28.10** of this ES chapter provides a summary of the impact assessment undertaken and significance of residual effects on other sea users following consideration of any mitigation measures. **Section 28.11** of this ES chapter provides an assessment of the potential impacts of the proposed Project when considered cumulatively with other plans and projects.
5. The assessment presented in this chapter should be read in conjunction with following linked and supporting chapters:

    - **Chapter 04: Description of the Proposed Project** provides further details of the proposed Project design parameters;
    - **Chapter 05: EIA Approach and Methodology** - provides further details of the general framework and approach to the EIA;
    - **Chapter 16: Socio-economics, Recreation and Tourism**;
    - **Chapter 23: Seascape, Landscape and Visual**;
    - **Chapter 24: Marine Archaeology**;
    - **Chapter 25: Shipping and Navigation**;
    - **Chapter 26: Commercial Fisheries**;
    - **Chapter 27: Aviation and Radar**;
    - **Chapter 31: Inter-related Effects Assessment**; and
    - **Appendix 5A: CEA Approach and Methodology**.

6. The assessment has been undertaken by AECOM. Further details of the proposed Project Team's competency are provided in **Appendix 1A: Statement of Competence**.

28.2 Legislation, Policy and Guidance

7. The following sections identify specific legislation, policy and guidance that is applicable to the assessment of other sea users. Further detail on the wider legislation, policy and guidance relevant to this ES is provided in **Chapter 02: Regulatory and Planning Policy Context**.

28.2.1. Legislation

8. The legislation that is applicable to the assessment of other sea users is summarised below.

- Marine Licence under Part 4 of the Marine and Coastal Access Act 2009 - allows the carrying out of certain activities in the marine environment, including construction activities on the seabed, depositing substances or articles and dredging; and
- UK Marine Policy Statement (HM Government, 2011) - The aim is to ensure a sustainable future for coastal and offshore waters through managing and balancing the many activities, resources, and assets in the marine environment.

28.2.2. National Planning Policy

9. National Policy Statements (NPS) on Energy have been designated by the UK government to guide decision making on Nationally Significant Infrastructure Projects (NSIPs) consented under the Planning Act 2008. Given that the NPSs only applies to offshore wind projects that exceed 350 MW in capacity, they would not directly guide decision making on the proposed Project. However, because they were written to guide decision making on offshore wind projects, they are considered relevant as material considerations.

10. Those relevant for the assessment of impacts on other sea users include:

- Overarching NPS for Energy (EN-1) (DESNZ, 2023a); and
- NPS for Renewable Energy Infrastructure (EN-3) (DESNZ, 2023b).

11. A review of EN-1 has been undertaken and there are no specific references to other users. Details of specific policies within EN-3, used to inform this assessment, are provided in **Table 28-1** below.

Table 28-1. A summary of national planning policy relevant to other sea users

Summary of policy	How and where it is considered in the chapter
Paragraph 2.6.179…*"Where a potential offshore wind farm is proposed close to existing operational offshore infrastructure or has the potential to affect activities for which a licence has been issued by Government, the applicant should undertake an assessment of the potential effect of the proposed development on such existing or permitted infrastructure or activities. The assessment should be undertaken for all stages of the lifespan of the proposed wind farm in accordance with the appropriate policy for offshore wind farm EIAs".*	The potential impacts of the proposed Project are assessed in **Section 28.8**. No significant effects to other sea users from the proposed Project were identified.
Paragraph 2.6.180…"*Applicants should engage with interested parties in the potentially affected offshore sectors early in the development phase of the proposed offshore wind farm, with an aim to resolve as many issues as possible prior to the submission of an application to the Infrastructure Planning Commission (IPC)*".	Consultation undertaken as part of the proposed Project is presented in **Chapter 06: Consultations & Stakeholder Engagement**.
Paragraph 2.6.181…"*Such stakeholder engagement should continue throughout the life of the development including construction, operation, and decommissioning phases where necessary. As many of these offshore industries are regulated by Government, the relevant Secretary of State should also be a consultee where necessary. Such engagement should be taken to ensure*	Consultation with relevant stakeholders such as NRW, will be ongoing throughout the lifetime of the proposed Project as appropriate.

Summary of policy	How and where it is considered in the chapter
that solutions are sought that allow offshore wind farms and other uses of the sea to successfully co-exist".	
Paragraph 2.6.183…"*Where a proposed offshore wind farm potentially affects other offshore infrastructure or activity, a pragmatic approach should be employed by the IPC. Much of this infrastructure is important to other offshore industries as is its contribution to the UK economy. In such circumstances the IPC should expect the applicant to minimise negative impacts and reduce risks to as low as reasonably practicable".*	Project mitigation measures are proposed in **Section 28.7** and presented in detail in **Chapter 04: Description of the Proposed Project**.
Paragraph 2.6.184… "*As such, the IPC should be satisfied that the site selection and site design of the proposed offshore wind farm has been made with a view to avoiding or minimising disruption or economic loss or any adverse effect on safety to other offshore industries. The IPC should not consent applications which pose unacceptable risks to safety after mitigation measures have been considered*."	The site selection process is detailed in **Chapter 03: Alternatives** with details of the proposed Project presented in **Chapter 04: Description of the Proposed Project**. Impacts to Shipping and Navigation are presented in **Chapter 25: Shipping and Navigation.**
Paragraph 2.6.185…"*Where a proposed development is likely to affect the future viability or safety of an existing or approved/licensed offshore infrastructure or activity, the IPC should give these adverse effects substantial weight in its decision-making*".	The potential impacts to other sea users of the Proposed Project are assessed in **Section 28.8.** No significant effects to other sea users from the proposed Project were identified.
Paragraph 2.6.186 … "*Providing proposed schemes have been carefully designed by the applicants, and that the necessary consultation with relevant bodies has been undertaken at an early stage, mitigation measures may be possible to negate or reduce effects on other offshore infrastructure or operations to a level sufficient to enable the IPC to grant consent*."	Project mitigation measures are proposed in **Section 28.7** and presented in detail in **Chapter 04: Description of the Proposed Project**.
Paragraph 2.6.187… "*Detailed discussions between the applicant for the offshore wind farm and the relevant consultees should have progressed as far as reasonably possible prior to the submission of an application to the IPC. As such, appropriate mitigation should be included in any application to the IPC, and ideally agreed between relevant parties*".	Consultation undertaken for the proposed Project is presented in detail in **Chapter 06: Consultations** and **Stakeholder Engagement.**

28.2.3. Welsh Planning Policy

12. The Welsh planning policy that is applicable to the assessment of other sea users is summarised below.

- Shoreline Management Plans - The proposed Project is located within the area of the South Wales Shoreline Management Plan (SMP2) spanning from Lavernock Point to St Ann's Head. Shoreline Management Plans provide an assessment of the risks associated with coastal processes and helps to reduce these risks to people and the environment;

- Planning Policy Wales (2024) - sets out the land use planning policies of the Welsh Government, supporting the UK's commitment to the EU Renewable Energy Directive and the UK target of 15% of energy from renewables by 2020;
- Milford Haven Conservancy Act 1983 - By the Milford Haven Conservancy Act 1958 (c. 23) the Milford Haven Conservancy Board (hereinafter referred to as "the Board") were established and charged with the duty of taking such steps as the Board may from time to time consider necessary or expedient to maintain, improve, protect and regulate the navigation and in particular the deep-water facilities in an area defined in that Act;
- UK Marine Strategy – is applicable to Wales (but not solely Welsh policy) and puts in place a framework to safeguard the seas for future generations. Its goal is to achieve or maintain Good Environmental Status (GES) in coastal and marine waters; and
- Wales National Marine Plan (WNMP) - covers the inshore and offshore Welsh marine plan regions and has been prepared and adopted under the Marine and Coastal Access Act 2009 and in conformity with the UK Marine Policy Statement. Those relevant to other sea users are presented in **Table 28-2**.

Table 28-2. A summary of Welsh National Marine Plan (WNMP) provisions relevant other sea users

WNMP Ref.	Summary of policy	How and where it is considered in the chapter
ECON_02	Proposals should demonstrate how they have considered opportunities for coexistence with other compatible sectors in order to optimise the value and use of the marine area and marine natural resources.	Consideration to coexistence with other compatible sectors was considered throughout site selection and is detailed in **Chapter 03: Alternatives.**
GOV_01	Proposals should demonstrate that they have assessed potential cumulative effects and, in order of preference: a) avoid adverse effects; and/or b) minimise effects where they cannot be avoided; and/or c) mitigate effects where they cannot be minimised. If significant adverse effects cannot be adequately addressed, proposals should present a clear and convincing justification for proceeding. Proposals that contribute to positive cumulative effects are encouraged.	Cumulative effects are assessed in **Section 28.11** and in **Chapter 30: Inter-related Effects Assessment**.
Policy DEF_01	To contribute to the defence of the nation by ensuring that Defence and National Security activities are not compromised.	Military activities within the Study Area are presented in **Section 28.5.** Impacts to military activities are presented in **Section 28.8.** Consultation with the Ministry of Defence is noted in **Chapter 27: Aviation and Radar, Section 27.3.**
SAF_01	Proposals likely to have significant adverse impacts upon an established activity covered by a formal application or authorisation must demonstrate how they will address compatibility issues with that activity. Proposals unable to demonstrate adequate compatibility must present a clear and convincing case for the proposal to progress under exceptional circumstances.	The baseline for Other Sea Users in the Study Area is presented in **Section 28.5.** Impacts to Other Sea Users is presented in **Section 28.8.** No significant effects to other sea users from the proposed Project were identified.

WNMP Ref.	Summary of policy	How and where it is considered in the chapter
	Proposals likely to have significant adverse impacts upon an established activity not subject to a formal authorisation must demonstrate how they will address compatibility issues with that activity. Proposals unable to demonstrate adequate compatibility must present a clear and convincing case for proceeding.	

28.2.4. Guidance

13. The following best practice guidelines / guidance has been considered throughout this chapter:

- Business, Energy and Industrial Strategy (BEIS) 2019 Decommissioning of offshore renewable energy installations: guidance notes for industry;
- International Cable Protection Committee (ICPC) recommendations, October 2017;
- European Subsea Cables Association (ESCA) recommendations; and
- Guidance on assessing the socio-economic impacts of offshore wind farms (OWFs), produced by Oxford Brooks and Vattenfall (Glasson et al., 2020).

28.3 Stakeholder Engagement and Consultation

14. Consultation with statutory and non-statutory organisations is a key element of the EIA process. 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. **Chapter 06: Consultations and Stakeholder Engagement** provides detail on the comments received during scoping for the proposed Project.

28.4 Approach to Assessment

28.4.1. Assessment Methodology

15. **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 other sea users.

16. The approach to the assessment of cumulative impacts, interrelated effects and transboundary impacts is provided in **Sections 28.11, 28.12** and **28.13.**

17. 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.

28.4.2. Significance Criteria

Magnitude of Impact

18. The scale or magnitude of potential impacts (both 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 **Chapter 05: EIA Approach and Methodology**, **Section 5.4.9.**

19. The criteria for defining magnitude of impact for the purpose of the assessment on other sea users are provided in **Table 28-3.**

Table 28-3. A summary of the magnitude criteria that are associated to specific impacts

Magnitude Criteria	Definition
Large	The impact occurs over a large spatial extent resulting in widespread, long-term (> 5 years), or permanent changes in baseline conditions or affects a large proportion of a receptor population. The impact is very likely to occur and / or will occur at a high frequency or intensity. For example, accidental damage to asset resulting in permanent or long-term inoperability or complete loss of access to economically important asset. **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
Medium	The impact occurs over a medium spatial extent resulting in medium-term (1-5 years), 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. For example, partial loss of access to economically important asset, or short-term complete loss of access. **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
Small	The impact occurs over a small spatial extent resulting in short-term (<1 year), 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. For example, short term disruption to access of asset. **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.

Magnitude Criteria	Definition
	Beneficial: Very minor benefit to or positive addition of one or more characteristics, features or elements

Sensitivity of Receptor

20. 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**.

21. The criteria for defining receptor sensitivity for the purpose of the assessment on other sea users are provided in **Table 28-4.**

Table 28-4. A summary of the criteria determining a receptor's sensitivity

Receptor Sensitivity Criteria	Definitions
Very High	Very high value activity or an activity that is key to the operation of an asset of international or national economic importance. No redundancy available in event of impact. Asset very sensitive to the impact, little or no ability to absorb change without fundamentally altering its character. Limited potential for substitution.
High	High value activity or an activity that is key to the operator of an asset of international or national economic importance. Very little redundancy available in event of impact. Asset sensitive to the impact with limited ability to absorb change and limited potential for substitution.
Medium	Medium value activity. Impact to asset would significantly reduce operators' activities but not result in complete failure to continue operations. Limited redundancy available. Asset regionally important, medium or high importance and rarity, regional scale, limited potential for substitution.
Low	Low value activity. Impact to asset would have limited implications on operator / public either due to the availability of redundancy or limited pathway for impact. Asset has some tolerance of impact, low or medium importance and rarity, local scale.
Negligible	Low value activity where there would be a barely perceptible impact on the operator's activities as a result of the impact. Asset tolerant of impact, very low importance and rarity, local scale.

Significance of Effect

22. 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 28-5.**

23. 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 matrix acts as a guide and that assessments also allow for the application of expert judgement.

Table 28-5. Significance matrix

		Value / Sensitivity				
		Very High	**High**	**Medium**	**Low**	**Negligible**
Magnitude	**Large**	Major	Major / Moderate	Major / Moderate / Minor	Moderate / Minor	Minor / Negligible
	Medium	Major / Moderate	Major / Moderate	Moderate / Minor	Minor / Negligible	Negligible
	Small	Major / Moderate / Minor	Moderate / Minor	Moderate / Minor	Minor / Negligible	Negligible
	Negligible	Minor / Negligible	Minor / Negligible	Minor / Negligible	Negligible	Negligible

24. The matrix provides levels of effect significance ranging from major to negligible. Assignment of significance is carried out with consideration of embedded mitigation measures. Embedded mitigation measures are presented within **Section 28.7**. Details on additional mitigation measures and associated definitions can be found in **Section 28.9**. For the purposes of this assessment, Moderate and Major levels of significance are defined as significant, and will require additional mitigation measures, whilst Negligible or Minor impacts are defined as not significant.

Table 28-6. A summary of the definitions of each significant of effect criteria

Significance Category	Definitions	Significant / Not Significant Effect
Major	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. Major 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	Significant (unless otherwise specified)

Significance Category	Definitions	Significant / Not Significant Effect
	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.	
Minor	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
Negligible	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

28.4.3. Study Area

25. As agreed during Scoping (**Appendix 5B: Scoping Opinion and 5C: Scoping Opinion Responses**), for baseline characterisation and this assessment, a buffer zone of 50 km to the Offshore Development Area has been adopted (**Figure 28- 1**) and considered receptors up to Marine High Water Springs (MHWS).

26. This 50 km Study Area has been used to support the identification of other users of the sea who may be directly or indirectly affected by the proposed Project. The study area is defined by the worst-case extent of potentially affected other sea users who may be directly or indirectly impacted by the Proposed Project in line with the standard approach for EIAs undertaken for other similar developments in the Celtic Sea (such as Erebus).

27. **Chapter 16: Socio-Economics and Tourism** provides information on the current economy and trends in economic factors, including; population, economic activity, the skills base, employment by industry, employment by occupation, business demographics, output by industry and deprivation. The geographic areas used in **Chapter 16** are listed below:

28. The Lower Super Output Area (LSOA) where the proposed Project is located, known hereafter as Pembrokeshire LSOA2;

- Local authority (Pembrokeshire);
- Regional (South Wales); and
- National (Wales).

29. The spatial extent of the socio economic receptors and therefore assessment marks the end of the study area for this chapter. The full list of receptors scoped out of this assessment, or addressed elsewhere in this ES is presented in **Section 28.6.1.**

28.4.4. Data Sources

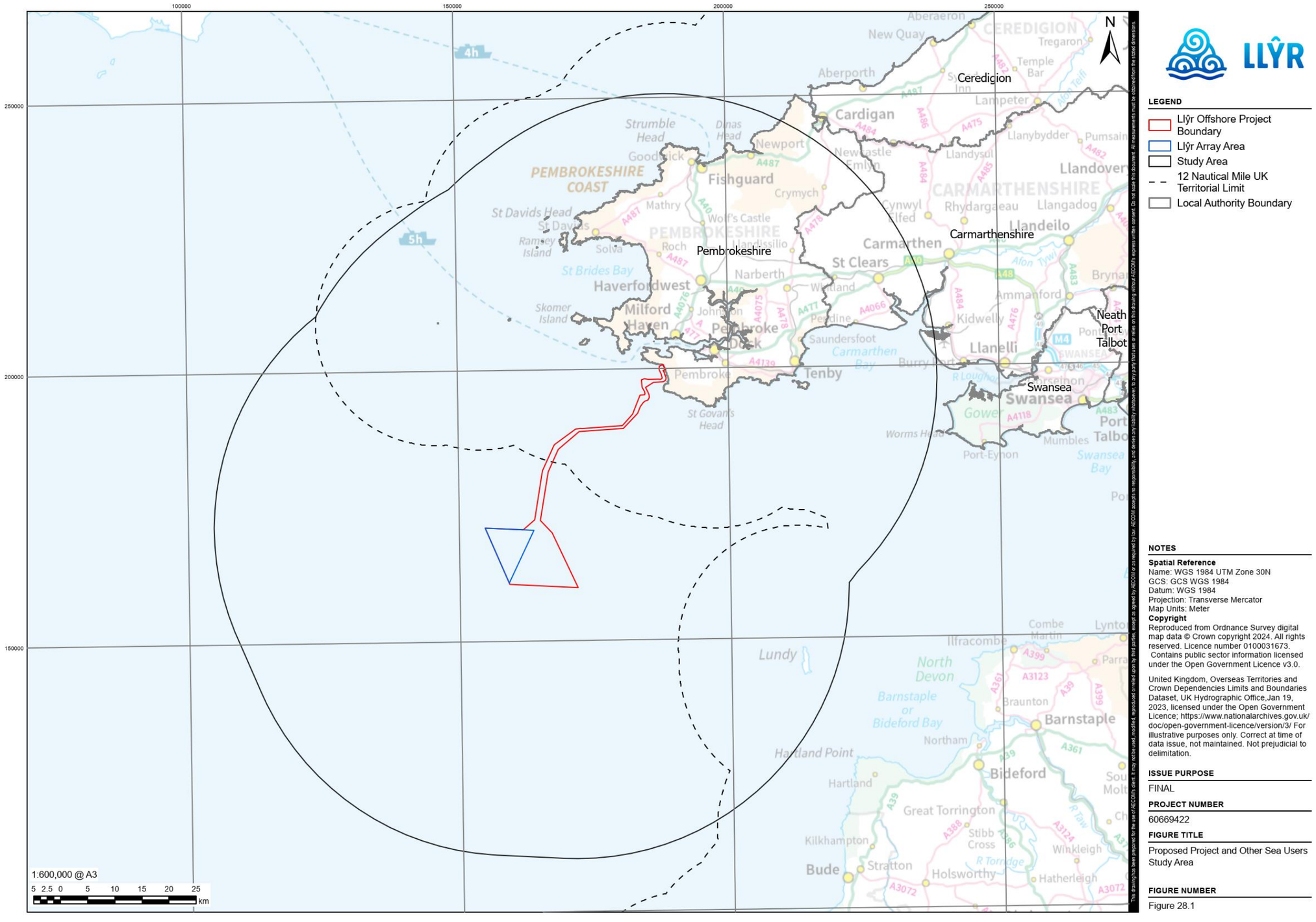
Desk Study

30. Baseline conditions have been established by undertaking desktop review of published information and consultation with relevant organisations. As stated during Scoping, no site-specific surveys for other sea users have been undertaken to inform this ES.

31. A comprehensive desk-based review was undertaken to inform the baseline for other sea users. Key data sources used to inform the assessment are set out in **Table 28-7**.

Table 28-7. Summary of key desktop sources

Title	Source	Year	Brief description	Author
Lle Geo-Portal and the Wales Marine Planning Portal.	Wales Marine Planning Portal	2023	An interactive mapping tool for data relating to marine planning in Wales	Lle-Geo
DataMapWales	Marine Licenced Disposal Sites (WNMP Sector Policy)	2024	Source for public sector data in Wales, providing a shared data platform to members of the public and public authorities.	Welsh Government
Geographic Information System (GIS) data	The Crown Estate	2023	Includes renewable and aggregate site agreements.	The Crown Estate
Marine Environmental Report for Greenlink Interconnector	Greenlink	2019	Marine Environmental Report.	Intertek
Project Erebus EIA Scoping Report	Project Erebus	2019	Scoping Report	MarineSpace
Marine sports websites	Various	2023	Surfline and Finstrokes, including spatial information about recreational users.	Various
UK Coastal Atlas of Recreational Boating	Royal Yacht Association (RYA):	2023	A GIS dataset of recreational boating activity around the UK.	RYA
Military Practice and Exercise Areas	UK Hydrographic Office	2021	GIS data.	UK Hydrographic Office
Offshore Renewable Cable (KIS-ORCA): Marine cables digital data	The Kingfisher Information Service	2022	GIS data.	The Kingfisher Information Service
European Marine Observation and Data Network (EMODnet)	EMODnet	2023	Online data portal	EMODnet
Offshore Oil and Gas Activity	North Sea Transition Authority	2023	Online data portal	North Sea Transition Authority



LLŶR

LEGEND

- Llŷr Offshore Project Boundary
- Llŷr Array Area
- Study Area
- 12 Nautical Mile UK Territorial Limit
- Local Authority Boundary

NOTES

Spatial Reference
Name: WGS 1984 UTM Zone 30N
GCS: GCS WGS 1984
Datum: WGS 1984
Projection: Transverse Mercator
Map Units: Meter

Copyright

ISSUE PURPOSE
FINAL

PROJECT NUMBER
60669422

FIGURE TITLE
Proposed Project and Other Sea Users Study Area

FIGURE NUMBER
Figure 28.1

Figure 28- 1. Proposed Project and Other Sea Users Study Area

28.5 Baseline

32. The following sections describe the baseline environment relating to other sea users.

28.5.1. Existing Baseline

Marine Tourism and Recreation

33. The Pembrokeshire Coast National Park is the only fully coastal National Park in the UK and is located within the Study Area. The Pembrokeshire Coastal Path is a 186-mile path encompassing 58 beaches and 14 harbours that starts in St Dogmaels in north Pembrokeshire and ends in Amroth, south Pembrokeshire. The Coastal Path's highlights include Neolithic tombs on St David's Head, castles at Manorbier and Pembroke and Celtic chapels near Bosherton (Visit Wales, 2023). The National Park Authority estimates that the Coastal Path attracts around one million user days annually (Pembrokeshire Coast, 2022), representing one of the county's most important economic assets. Other activities within the National Park include rock climbing, coasteering and sea kayaking. Further information on this National Park is presented in **Chapter 23: Seascape, Landscape and Visual**.

34. Pembrokeshire has many beaches, small towns and villages that are key to the local tourist industry. Ten beaches in Pembrokeshire have 2023 blue flag status, nine of which fall within the Study Area: Amroth, Newgale, Saundersfoot, Dale, Whitesands, Coppet Hall, Tenby South, Tenby Castle and Broadhaven North. Seven Pembrokeshire beaches, all within the Study Area, were also awarded the Green Coast Award (Visit Wales, 2023): Abereiddy, Freshwater East, Manorbier, Penally, Caerfai, Druidston, and West Angle Bay (**Figure 28-** 3**2**).

35. Marine recreational use in and around the Array Area (offshore) is lower in comparison to waters within the study area nearer to landfall (nearshore) and Offshore Export Cable Corridor (OfECC) due to its distance from the coast. Recreational use increases closer to shore, with a higher density of recreational activities including rowing, wind surfing, kayaking, canoeing, and surfing.

36. The proposed Project landfall at Freshwater West beach is popular for swimming. It is a wide sandy beach exposed to the prevailing south westerly winds and waves. Freshwater West is also renowned for body boarding and surfing / windsurfing.

37. The Study Area is a popular destination for sea kayaking for both novices and experienced paddlers, with kayaking also undertaken along most of the Angle Peninsula coastline. All activities are most frequently undertaken during the summer months, with surfing taking place throughout the year, especially during the winter swells (Pembrokeshire Coastal Forum, 2021).

Recreational Boating and Fishing

38. Within the Study Area, deep sea fishing, catch and release shark fishing, and diving on the offshore reefs, wrecks and reef sites occur.

39. Several companies, operating from Milford Haven, Neyland and Dale, offer wildlife boat trips, fishing charters and historical cruises. The trips include routes upstream within Milford Haven Waterway, trips to the islands of Skomer, Skokholm and Grassholm passing St. Annes Head, or further offshore to the Celtic Deep.

40. The Milford Haven Waterway is used frequently by power boats and cruiser sailing, undertaking day trips within the estuary to Dale and Watwick Bay or out to the islands of Skomer and Skokholm. Recreational angling boats regularly visit areas to the northwest of Angle Bay, around Stack Rock, off the coast of Rat Island, in deeper waters between St Anne's

Head and Sheep Island and off Angle Peninsula. These areas are used most frequently during late spring and during the summer holidays.

41. Recreational vessels that use the Study Area are predominantly local vessels, operating out of the large number of small local ports and harbours in the south Pembrokeshire region. These include Neyland Marina, Milford Marina, Tenby and Saundersfoot. Some recreational vessel activity will also be associated with visiting vessels from home ports further afield, including north Wales, north Devon, Cornwall, and the Republic of Ireland. There are nine RYA sailing and or boat clubs; Dale Yacht Club, Pembrokeshire Yacht Club, Solva Sailing Club, St Clears Boating Club, Tenby Sailing Club, Lawrenny Yacht Club, Neyland Yacht Club, Saundersfoot Sailing Club and Pembroke Haven Yacht Club, and several marinas and slipways across the south Pembrokeshire region. Sailing in yachts or dinghies is a popular activity on the Milford Haven Waterway, much of which is associated with the yacht clubs.

42. Sea fishing is a popular recreational activity, which occurs from many different platforms including from shore, kayak, personal boat, and charter vessels. In the UK, recreational sea fishing is usually synonymous with angling. Angling pertains to fishing with lines, and within the UK, angling is almost entirely by line with rod and reel (MMO, 2020). Recreational sea fishing from the shoreline and by charter vessel occurs year-round; typically, fishing intensity changes throughout the seasons based on weather and sea conditions, local behaviour of target species, and tourism patterns. The MMO found that in terms of overall number of trips, there was a maximum in summer and a minimum in winter (summer, 61%; winter, 39%) (MMO, 2020).

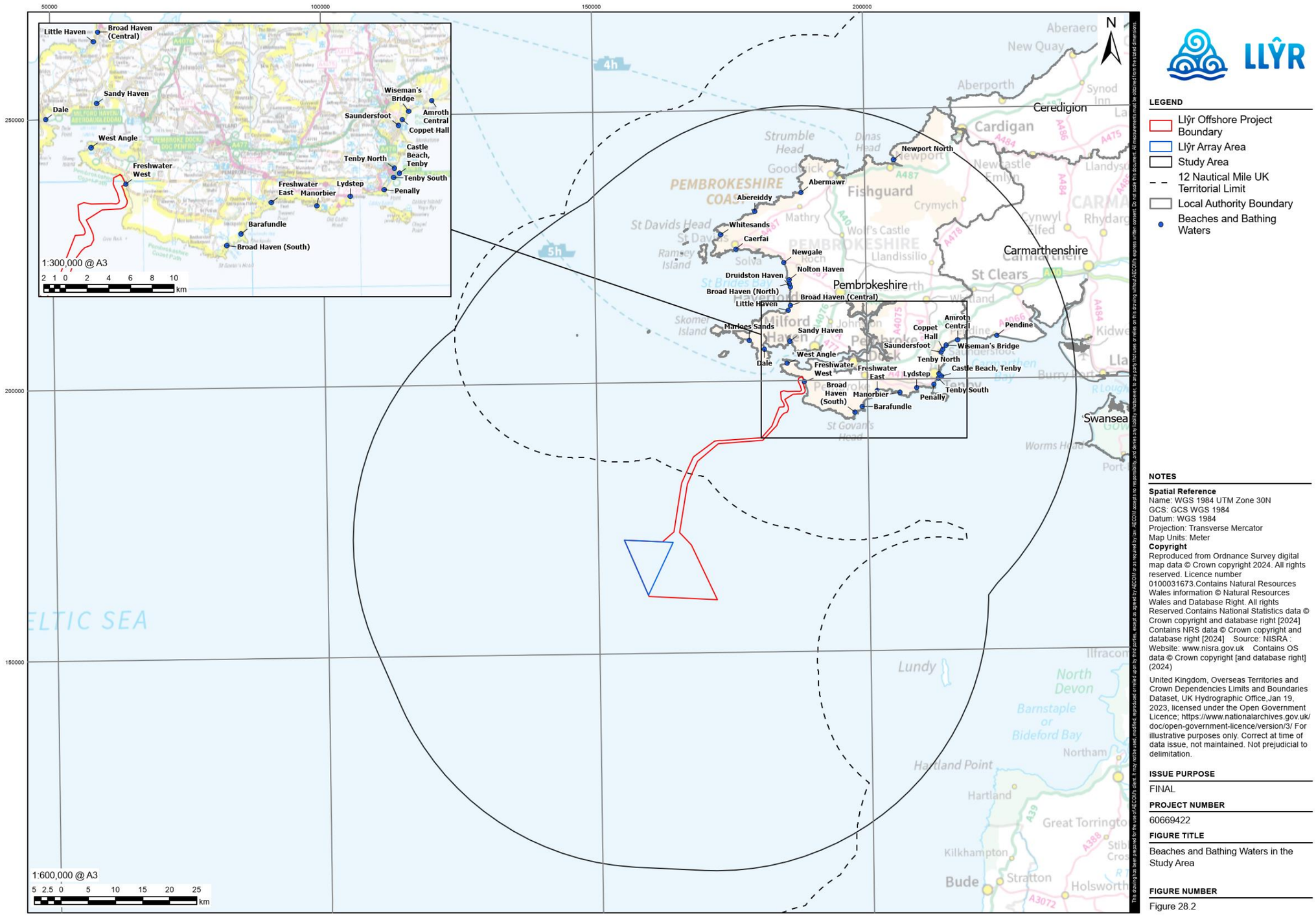
Other Recreational Activities

43. The following recreational activities were identified in the Study Area:

- Scuba diving: Pembrokeshire is one of the UK's top dive destinations. Dive operators provide trips to offshore dive sites which include: the reefs and waters surrounding Skomer, Skokholm and Middleholm Islands, and established dive sites and wreck sites closer inshore;
- Surfing, surf kayaking, and paddleboarding: Freshwater West beach is exposed to the prevailing south westerly winds and waves. Freshwater West is renowned for body boarding and surfing. SUP journeys are undertaken at both beaches;
- Windsurfing and kite surfing: Windsurfing and kite surfing is popular at Freshwater West beach;
- Canoeing and kayaking: Pembrokeshire is a popular destination for sea kayaking for both novices and experienced paddlers and kayaking is undertaken along most of the Angle Peninsula coastline. All activities are most frequently undertaken during the summer months, with surfing being busy throughout the year; and
- Designated Bathing Waters.
    - West Angle (Bathing Water ID: 38250)
    - Sandy Haven (Bathing Water ID: 38255)
    - Freshwater West (Bathing Water ID: 38248)
    - Dale (Bathing Water ID: 38260)
    - Marloes Sands (Bathing Water ID: 38280)
    - Little Haven (Bathing Water ID: 38295)
    - Broad Haven (Central) (Bathing Water ID: 38300)

- Broad Haven (South) (Bathing Water ID: 38240)
- Freshwater East (Bathing Water ID: 38235)
- Manorbier (Bathing Water ID: 38230)
- Lydstep (Bathing Water ID: 38220)
- Penally (Bathing Water ID: 38210)
- Tenby South (Bathing Water ID: 38200)
- Castle Beach, Tenby (Bathing Water ID: 38150)
- Tenby North (Bathing Water ID: 38100)

44. Beaches and bathing waters within the Study Area are presented in **Figure 28- 2**.



LLŶR

LEGEND

- LlŷrOffshore Project Boundary
- LlŷrArray Area
- Study Area
- 12 Nautical Mile UK Territorial Limit
- Local Authority Boundary
- Beaches and Bathing Waters

NOTES

Spatial Reference
Name: WGS 1984 UTM Zone 30N
GCS: GCS WGS 1984
Datum: WGS 1984
Projection: Transverse Mercator
Map Units: Meter

Copyright

ISSUE PURPOSE

FINAL

PROJECT NUMBER

60669422

FIGURE TITLE

Beaches and Bathing Waters in the Study Area

FIGURE NUMBER

Figure 28.2

Figure 28- 2. Beaches and bathing waters in the Study Area

Ports and Harbours

45. The Port of Milford Haven is a key UK shipping gateway and the largest port in Wales, and is located within the Milford Haven Waterway, approximately 38 km northeast from the Array Area and 4 km north from the OfECC. The OfECC overlaps with the Milford Haven port limits.

46. The Port of Milford Haven comprises the Milford Marina, Pembroke Port, Pembroke Dock Ferry Terminal, and Milford Fish Docks. Other small ports and harbours on the south Pembrokeshire coast include Tenby and Saundersfoot (**Figure 28- 3**). The Port of Milford Haven can deliver 30% of the UK gas demand through imports and serves the following: Valero Refinery and the Valero Pembrokeshire Oil Terminal, Puma Energy, South Hook Liquefied Natural Gas (LNG), and Dragon LNG. Milford Fish Docks is Wales' largest fishing dock. The Pembroke Dock Ferry Terminal is South Wales' busiest freight and passenger route to Ireland. The Milford Haven Waterway is also home to Pembroke Power Station, Europe's largest gas-fired power station (Milford Haven Port Authority (MHPA), 2023). The Port of Milford Haven is responsible for the movement of all vessels on the Milford Haven Waterway and provides pilotage, conservancy, and Vessel Traffic Services.

47. Full assessment of potential impacts on receptors relevant to the Port of Milford Haven can be found in **Chapter 16: Socio-Economics, Recreation and Tourism** and **Chapter 25: Shipping and Navigation**.

Oil and Gas operations

48. There are no existing or proposed oil and gas extraction licences or infrastructure within the Study Area. No oil and gas blocks in recent licensing rounds have been offered or awarded in proximity to the Offshore Development Area. There is however one historic abandoned oil and gas wellhead (Well Registration Number: 103 / 18-1) located within the Array Area (**Figure 28- 4**). Within the Milford Haven Waterway, there are several marine jetties and berthing facilities associated with the Valero refinery at Rhoscrowther, Puma Energy, and the Dragon and South Hook LNG facilities.

49. As there is no direct spatial interaction between these facilities and the proposed Project as they exceed the 50 km Study Area, no further consideration is given to oil and gas infrastructure in this chapter. Potential navigation risks and impacts from construction of the offshore export cable and shipping traffic associated with Oil and gas / LNG facilities are assessed in detail **in Chapter 25: Shipping and Navigation**.

Renewable Energy Developments

50. Several renewable energy projects (consented or at EIA Scoping / pre application stage) are present within the Study Area, these are described below and summarised in **Table 28-8** and **Figure 28- 4.** Recent announcements by The Crown Estate (TCE) have also provided evidence as to the future of floating offshore wind in the Celtic Sea and this is also discussed below.

51. Project Erebus is a 96 MW Floating Offshore Windfarm (FLOW) project being developed by Blue Gem Wind Ltd. Its Array Area is located approximately 5 km northwest of the proposed Project Array Area, with its offshore export cable corridor overlapping the proposed Project Offshore Export Cable Corridor for approximately 11 km. No crossing is currently anticipated with the offshore Erebus export cable route. This project was consented in February 2023.

52. Project Valorous is a 300 MW FLOW being developed by Blue Gem Wind and is directly adjacent to the west of the Offshore Development Area. An EIA Scoping Report was submitted to NRW in March 2021, and response received in May 2021. The EIA Scoping Report included

details of a proposed consent application date for Project Valorous of Autumn 2023, however, an application for this project is yet to be submitted. The export cables for Project Valorous have the potential to cross / come into proximity of the proposed Project Offshore Export Cable Corridor.

53. The South Pembrokeshire Demonstration Zone (PDZ) comprises a 90 km^2 area of seabed leased from TCE, located approximately 8 km east of the Offshore Development Area. The site was originally intended for the testing of multiple offshore renewable energy devices (wave and FLOW), with a total maximum deployed capacity of up to 100 MW. This purpose was supported by the submission of an EIA Scoping Report to NRW in 2018. In the absence of an updated EIA Scoping Report for the PDZ, and insufficient project information to allow the effects to be reasonably understood, the PDZ has not been considered further in this assessment. This approach corresponds with that adopted for the proposed Project cumulative effects assessment, see **Section 28.11** for more detail.

54. The Marine Energy Test Area (META) is located north of the Offshore Development Area. The META project is a £2.7 million project managed by Marine Energy Wales (MEW), consisting of eight test areas in the Milford Haven Waterway and surrounding waters (Pembrokeshire, Wales). The Marine Licence for these sites was awarded in January 2021, followed by TCE Lease in August 2021, making the test area fully operational, with the first experimental device deployed in November 2021. Five of the sites are defined as Phase 1 sites and are located within the Milford Haven waterway. Of the three remaining Phase 2 sites, one (East Pickard Bay) is the closest to the proposed Project, located approximately 1 km from Freshwater West beach and is intersected by the Offshore Export Cable Corridor on its approach to landfall. This is the location where the mWave device is being developed by Bombora Wave Power Ltd. Phase 2 Dales Roads is also located within 5 km of the Offshore Export Cable Corridor.

55. Other marine renewable energy projects within the Study Area include Tidal Stream Sites: Project Tiger Ramsey Sound, Gwynt Glas FLOW, Llywelyn FLOW, White Cross FLOW, Petroc FLOW, Celtic Deep Phase 1 FLOW, and Celtic Deep Phase 2 FLOW (**Table 28-8**). Information on developments on the concept / planning stage is currently limited.

Table 28-8. Marine renewable energy projects and proximity to the offshore development area.

Project	Distance from Offshore Development Area	Footprint of the proposed Project area	Construction timings based on available project information in the public domain
Project Erebus FLOW	Export cable intersects the Offshore Export Cable Corridor. The Erebus array is 5 km north west of the proposed Project Array Area.	43.5 km^2	Construction of the proposed Project will take approximately 18 months, starting in 2024 / 25 with commencement of operation anticipated in late 2026 or early 2027.
Project Valorous FLOW	0 km W	155 km^2	Construction 2026-2028, generating 2029.
Tidal Stream Site: Marine Energy Test Areas (META)	1 km NW	Eight test areas in the Milford Haven Waterway and surrounding waters.	Operational

Project	Distance from Offshore Development Area	Footprint of the proposed Project area	Construction timings based on available project information in the public domain
South Pembrokeshire Demonstration Zone	8 km E	90 km^2	Concept / Early Planning
Llywelyn FLOW	15 km SW	413.2 km^2	Concept / Early Planning
White Cross FLOW	17 km SE	49.4 km^2	Application Submitted
Gwynt Glas FLOW	27 km SW	1500 km^2	Concept / Early Planning
Tidal Stream Site: Project Tiger Ramsey Sound	29 km N	35 km^2	Inactive
Celtic Deep Phase 1 FLOW	34 km NW	TBC	Concept / Early Planning
Celtic Deep Phase 2 FLOW	36 km NW	TBC	Concept / Early Planning
Petroc FLOW	39 km SE	510.5 km^2	Concept / Early Planning

Subsea Cables

56. The proposed Project crosses 5 subsea cables listed below:

- KP 2-3: Celtic Array cables;
- KP 3-4: Celtic Array cables;
- KP 7-8: RPL cable line 1;
- KP 30-31: OSM Telecom Cables; and
- KP 48-49: Greenlink Interconnector.

57. **Table 28-9** summarises the operational or under construction subsea cables present within the Study Area, and these are also presented on **Figure 28- 4.**

Table 28-9. Subsea cables and proximity to proposed Project.

Cable Name	Status	Nature of Interaction
Project Express Telecommunication	Active/In Operation	Intersects
Gemini North Telecommunication	Inactive/Decommissioned	Approximately 1704 m to the North
Ireland - UK Crossing Telecommunication	Active/In Operation	Approximately 1149 m to the South West

Cable Name	Status	Nature of Interaction
PTAT Telecommunication	Inactive/Decommissioned	Approximately 1034 m to the South
Vsnl Atlantic North Telecommunication	Active/In Operation	Approximately 542 m to the North
Waterville - Weston No2 Historic (Telecommunication)	Inactive/Decommissioned	Intersects
Project Express Telecommunication	Lease-Marine	Approximately 892 m to the East
PTAT Telecommunication	Lease-Marine	Approximately 992 m to the South East

58. Further detail on subsea cable crossings is presented in **Chapter 04: Description of the Proposed Project**.

Marine Dredge and Disposal Sites

59. Dredge and disposal represent essential activities in ensuring efficient functioning of ports, harbours, and marinas. Maintenance dredging ensures continued navigational access to ports and harbours, while capital dredging enables new activities to proceed by creating new, deeper, and wider channels, and berths. Dredged material comprising marine sediment (mainly sand, silt, and clays) dredged from dock sites and navigation channels may be disposed of at sea in licensed areas, as outlined below.

60. There are several marine disposal sites within the Study Area (**Figure 28- 4**). Details of these are provided below:

- Milford Haven Three (LU169): OPEN: located 19 km to the northwest of the Offshore Development Area;
- Milford Haven Industrial (LU040): CLOSED: intersects with the Array Area;
- Milford Haven Two (LU168): OPEN: located approximately 1.8 km to the south of the Offshore Development Area;
- Milford Haven (LU170): CLOSED: located 2.0 km west of the Offshore Export Cable Corridor;
- Greenlink Two (LU171): CLOSED: located approximately 12 km north west of the Offshore Development Area;
- Closed ammunitions disposal site that stretches along the Pembrokeshire coast; and
- MHPA has predicted that, between 2018 and 2026, 480,000 m^3 of material will be disposed at LU169; with 88,000 m^3 of coarse sand deposited at LU168.

Aggregate Site Agreements

61. TCE (2022) classifies aggregate areas as either:

- Option areas;
- Application areas; or

- Production agreement areas.

62. Option areas are those areas where the aggregate company has the right to apply for a licence and take exploratory samples to see if they want to apply for a licence. Application areas are those areas where the aggregate company has applied for, or is in the process of applying for, a licence. Production agreement areas are those areas where the aggregate company has a licence to extract aggregates. Within the licensed area an active dredge zone may be defined which is the area available to be dredged at any one time. While under normal circumstances this is defined by the limits of the licence, zoning schemes (introduced either as licence conditions or as voluntary initiatives by licensees) can significantly reduce this area. This means that while an area may have been approved for extraction as a licence area, some or all of the area may never be actively dredged.

63. The closest aggregate area, NOBEL Banks (Area 476), is located within the Study Area, approximately 33 km east of the Offshore Development Area, in the Bristol Channel (**Figure 28- 4**). This is a production agreement area valid until 2031. No other areas (option areas, application areas or production agreement areas) are located within the Study Area.

64. Future aggregate resource areas have been identified off the Pembrokeshire coast which intersect with the proposed Project Offshore Export Cable Corridor.

Military Activity and Unexploded Ordnance

65. The Offshore Export Cable Corridor of the proposed Project crosses the D113A / D113B MoD Castlemartin military practice area for a distance of approximately 26 km (**Figure 28- 4**). The Array Area is located 16 km outside of the Castlemartin military practice area. The Firing Range covers a sea area of approximately 420 km^2; whilst the range on land covers approximately 16 km^2. The ranges are active for 44 weeks of the year and when in use can include a coastal exclusion zone of up to 22 km off the coast or as little as 5.6 km depending on equipment used. When the range is active, recreational boating and anchoring is restricted and safety vessels are present.

66. The D115A / D115B Manorbier and D117 Pendine military practice areas are located approximately 7 km and 32 km respectively from the Offshore Development Area. There are no other current active military practice areas within the vicinity of the proposed Project.

67. There are currently only limited data available on the amount, type, and distribution of unexploded ordinance (UXO) in the Study Area. However, due to the proximity of the inshore part of the proposed Project to the Castlemartin military practice area, the potential for UXO is judged to be high. As part of EIA characterisation surveys, magnetometer data has been collected that will be assessed for potential UXO issues post determination of the Marine Licence application. The impacts of UXO clearance on ecological receptors are considered in **Chapter 21: Marine Mammals** and **Appendix 21B: Marine mammals noise modelling** and **21C: Marine mammals noise assessment**.

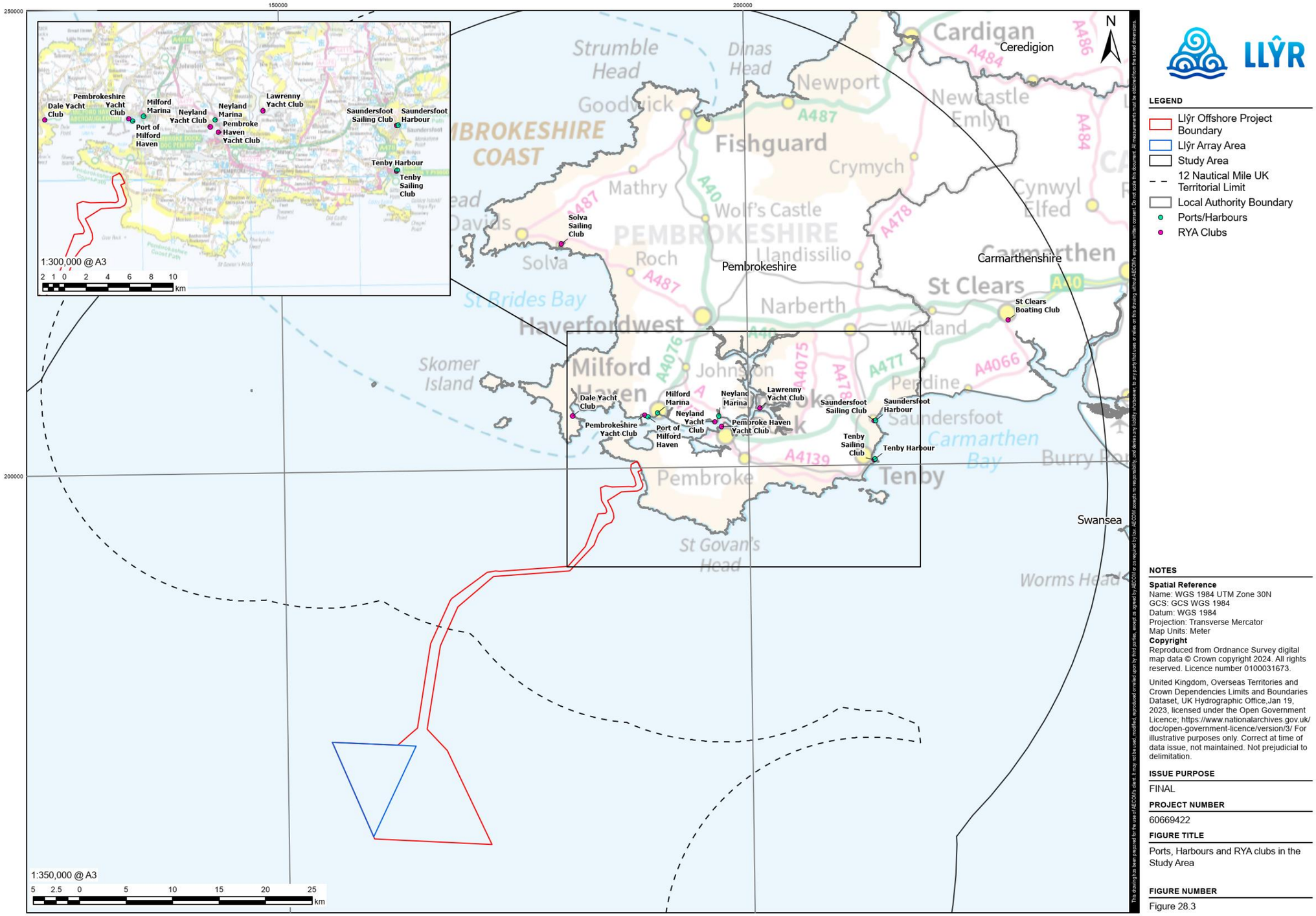
28.5.2. Future Baseline

68. This section considers any changes to the baseline conditions described above that might occur over the lifespan of the proposed Project, but in their absence (i.e. in the event that they are not installed).

69. All sectors of the UK economy will be affected by the UK's 2050 Net Zero target. Offshore industries have traditionally emitted high amounts of greenhouse gases, including from oil and gas production. As UK carbon emissions continue to fall, these industries must also decarbonise. New industries are expected to flourish under Net Zero, including offshore wind,

carbon capture, utilisation, and storage (CCUS), hydrogen, electricity interconnectors and low-carbon manufacturing (Nicolle et al. 2020).

70. UK offshore wind is expected to double in capacity by 2025 and to quadruple by 2030, in line with the Government's 2019 Manifesto commitment to 40 GW (recently updated to 50GW as per 2022 British Energy Security Strategy) of offshore wind installed by 2030 (Nicolle et al. 2020).



LLŶR

LEGEND

- Llŷr Offshore Project Boundary
- Llŷr Array Area
- Study Area
- 12 Nautical Mile UK Territorial Limit
- Local Authority Boundary
- Ports/Harbours
- RYA Clubs

NOTES

Spatial Reference
Name: WGS 1984 UTM Zone 30N
GCS: GCS WGS 1984
Datum: WGS 1984
Projection: Transverse Mercator
Map Units: Meter

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ISSUE PURPOSE
FINAL

PROJECT NUMBER
60669422

FIGURE TITLE
Ports, Harbours and RYA clubs in the Study Area

FIGURE NUMBER
Figure 28.3

Figure 28- 3. Ports, harbours and RYA clubs in the Study Area

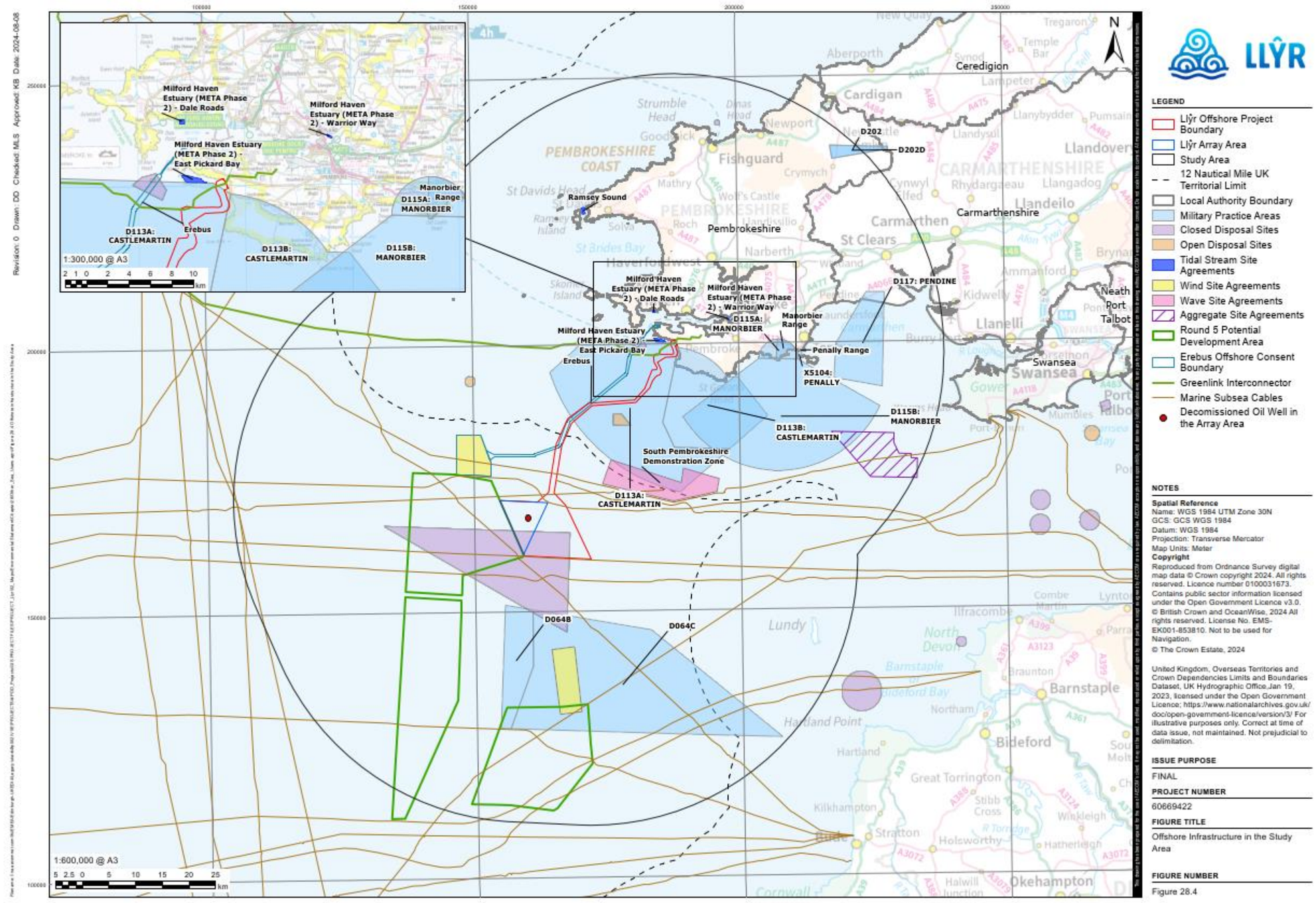

Figure 28- 4. Existing Offshore Infrastructure in the Study Area

28.6 Scope of the Assessment

71. An EIA Scoping Report for the proposed Project was submitted to NRW 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 in July 2022. Based on the Scoping Opinion received, and further consultation undertaken, potential impacts on other sea users scoped into the assessment are listed below in **Table 28-10**. Impacts scoped out of the assessment are listed in **Table 28-11**.

72. As set out in **Section 28.4.1**, this assessment considers the proposed Project design parameters 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 Design Envelope (**Chapter 04: Description of the Proposed Project**) 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.

73. Accordingly, the design scenarios identified in **Table 28-10** have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group within the other sea users study area. These scenarios have been selected from the details provided in **Chapter 04: Description of the Proposed Project**.

Table 28-10. Design scenario considered for the assessment

Potential impact	Design scenario	Justification
Construction		
Disruption to Marine Tourism and Recreation Disruption to Other Sea Users and Offshore Infrastructure Damage to or Interference with a Third-Party Asset	Array Area – 45 km^2 Offshore Export Cable Corridor Length– Up to 49 km Number of cables - 2 Maximum numbers of vessels on site simultaneously – 17 Offshore construction activities are planned to commence in Q1 2027. The installation of offshore components is likely to be completed over two years, with full commissioning of the wind farm in Q4 2028. Maximum duration of HDD: 64 weeks Offshore and landfall working hours will be continuous (24 / 7)	This approach sets out a series of realistic design assumptions from which worst case parameters are drawn, and allows specific reasoned maximum extents for key assessment parameters to be assessed on a 'realistic worst-case' basis. The spatial extent of activities represents the WCS for these impact pathways. The construction timing and methodologies will be fully developed once project design is finalised and construction contractors are appointed.

Potential impact	Design scenario	Justification
	Maximum number of cable crossings – 5 per proposed project cable	
Operation and maintenance		
Disruption to Marine Tourism and Recreation Disruption to Other Sea Users and Offshore Infrastructure Damage to or Interference with a Third-Party Asset	The proposed Project will be operational for a maximum of 30 years from final commissioning. Per year it is envisaged that a maximum of 12 vessel visits would be made to the turbines for maintenance purposes.	This describes the key maintenance tasks envisaged during the operation of the proposed Project, which includes maintenance of the turbines and floating platforms and cables. Operation and maintenance (O&M) activities will be adjusted to the final, as built, project requirements.
Decommissioning		
Disruption to Marine Tourism and Recreation Disruption to Other Sea Users and Offshore Infrastructure Damage to or Interference with a Third-Party Asset	The decommissioning phase is expected to be complete within 12 months between 2052 and 2054. As a WCS all infrastructure is assumed to be removed. Offshore working hours will be continuous (24 / 7) A decommissioning plan will be required at the relevant time following consultation with NRW.	The reasonable worst case design scenario during decommissioning.

28.6.1. Receptors Scoped Out of Assessment

74. Several receptors have been scoped out of the assessment for other sea users during EIA scoping. These impacts are outlined, together with the justification for scoping them out, in **Table 28-11.**

Table 28-11. Potential impacts scoped out the assessment for other sea users

Potential impact	Justification
Construction	
Onshore recreational users and socioeconomics.	Socio-economic baseline characterisation for land-based receptors (above MHWS) has been considered within **Chapter 16: Socio-economics, Recreation and Tourism**. This includes consideration of terrestrial-based receptors utilising the coastline for example, beach goers, water sports, and seaside tourism.
Marine Carbon Capture and Storage Sites	There are no specific existing carbon capture and storage sites identified within 50 km of the proposed Project, therefore this receptor has been scoped out of further assessment.

Potential impact	Justification
Oil and Gas Pipelines	There are no specific existing pipelines identified within 50 km of the proposed Project, therefore this receptor has been scoped out of further assessment.
Marine aquaculture sites	There are no active, inactive, or deregistered marine aquaculture sites identified within 50 km of the proposed Project and therefore this receptor has been scoped out of further assessment.
Commercial fishing grounds	Impacts to commercial fishing grounds are presented in **Chapter 26: Commercial Fisheries**.
Commercial vessels	Impacts to commercial vessels are presented in **Chapter 25: Shipping and Navigation.**
Vessel navigation routes	Impacts to vessel navigation routes are presented in **Chapter 25: Shipping and Navigation.**
Ports and Harbours	The risk of collision of a third-party vessel with a vessel associated with the Construction Phase activities is discussed in **Chapter 25: Shipping and Navigation**. Assessment of potential economic impacts onshore can be found in **Chapter 16: Socio-Economics, Recreation and Tourism.**
Navigation and communication equipment	Impacts to navigation and communication equipment is presented in **Chapter 25: Shipping and Navigation**.

28.6.2. Assessment Assumptions and Limitations

75. Baseline conditions have primarily been established through a desktop review of a range of data portals, with the exception of baseline information on recreational boating activities, which relies on traffic data for recreational boats, and information available on non-governmental websites (RYA, 2019) as defined in **Section 28.4.4**.

76. It is noted that recreational activities are highly seasonal and dependant on certain weather conditions. Furthermore, due to the COVID-19 pandemic, contemporaneous data on recreation may under-predict the extent of activity in 'normal' periods (i.e., false-lows or false-highs); the environmental assessment is cognisant of this risk and has endeavored to mitigate it through including longer-term consideration of historical trends. Data sources pre covid have therefore also been reviewed as part of this assessment.

77. The RYA UK Coastal Atlas of Recreational Boating provides a GIS dataset of recreational boating activity around the UK. The dataset provides spatial data which indicates the location of RYA clubhouses, training centers and marinas, general boating areas, and Automatic Identification System (AIS) recreational intensity (RYA, 2019). It is recognised that numbers and activity of recreational fishing and pleasure boats under 15 m in length are likely to be underestimated in the data because they may not be fitted with AIS. This is further discussed in **Chapter 25: Shipping and Navigation**.

28.7 Embedded Mitigation, Management Plans and Best Practice

78. As part of the proposed Project design process, several designed-in measures have been proposed to reduce the potential for impacts on other sea users (see **Table 28-12**). 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, 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 28.8** below. Assessment of sensitivity, magnitude and therefore significance includes the implementation of these measures.

Table 28-12. Mitigation measures, management plans and best practice adopted as part of the proposed Project

Measure	Description
Design Embedded Measures	
Array Area, cable siting and routing	As identified within **Volume 1, Chapter 03: Alternatives**, the Offshore Development Area has been positioned to minimise interaction with other sea user receptors, including marine recreational activities and third-party infrastructure development and operators, as far as possible.
	Pre-construction surveys will be undertaken to accurately chart the location of existing assets and will look to microsite cables to avoid identified infrastructure where possible.
	All crossings of existing infrastructure will be constructed in accordance with the terms of the Crossing Agreements put in place prior to Construction Phase activities commencing. Furthermore, proximity agreements will also be agreed with asset owners to manage risks. Such agreements include trenching exclusion zones and preventing large subsea equipment, such as trenchers and ploughs, operating close to assets.
Landfall construction	The proposed landfall location at Freshwater West was selected based on engagement with stakeholders, discussions with National Grid, feedback from the Scoping Opinion (**Volume 1, Chapter 06: Consultations and Stakeholder Engagement**) and consideration of alternatives (**Volume 1, Chapter 03: Alternatives**). Horizontal Directional Drilling (HDD) will be used at the landfall location to traverse the intertidal zone at Freshwater West. This will limit any potential impacts to both the environmental and social receptors in the area.
Proposed Project vessel requirements	The proposed Project will apply 500 m safety zones (via a separate Safety Zone application) around infrastructure that is under construction. This will reduce interactions with other vessels. Guard vessels will also be in place around partially installed infrastructure. Where possible, vessels will operate with dynamic positioning which will minimise anchor disturbance on the seabed.
Safety legislation and equipment to be adhered to by all vessels associated with the proposed Project	All vessels associated with construction and any required maintenance will comply with the Convention on the International Regulations for Preventing Collisions at Sea 1972

Measure	Description
	(COLREGS) and the International Convention for the Safety of Life at Sea 1974 (SOLAS). All applicable vessels will broadcast their status on Automatic Identification System (AIS) at all times. Guard vessels will use RADAR with Automatic RADAR Plotting Aid (ARPA) to monitor vessel activity and predict possible interactions.
Notifications	Notifications of the proposed Project will be made will be made; this shall include: • Notice(s) to Mariners (including Kingfisher Bulletins); • Appropriate notification will be provided to advise beach goers and those using the area for recreation in the close vicinity of the landfall; and • Regular consultation will be made with third-party infrastructure asset owners to notify them of any activities associated with the proposed Project and avoid spatial and temporal interactions between vessels.
Management Plans	
Construction Environmental Management Plan (CEMP)	Prior to cable construction activities commencing, a CEMP, will be developed and agreed with relevant stakeholders.
Fisheries Liaison and Co-existence Plan (FLCP)	Development, prior to construction, of a Fisheries Liaison and Co-existence Plan, setting out in detail the planned approach to fisheries liaison and means of delivering any other mitigation measures relevant to commercial fishing activity. The development of an FLCP will ensure structured liaison between the Applicant and fishing industry and minimise effects on commercial fisheries.
Project (Array) Layout Plan – A layout plan (including subsea cables) for the proposed Project will be agreed with the MMO following appropriate consultation with Trinity House and the MCA setting out proposed details of the offshore development areas.	The development of an agreed layout plan will ensure the final array layout is compliant with MGN 654.
Decommissioning Plan	A decommissioning Plan will be agreed with NRW at the relevant time prior to the start of offshore decommissioning.

28.8 Assessment of Environmental Effects

79. 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 28.7**.

28.8.1. Construction Effects

Disruption to Marine Tourism and Recreation

Recreational Boating

80. Recreational vessels that travel through the Offshore Development Area are likely to be routing to or from the Milford Haven Waterway or other marinas along the Pembrokeshire and Carmarthenshire coastline. It should also be noted that sailors from other harbours and marinas along the coast will also travel through the Offshore Development Area. Recreational boating also includes offshore tour operators. There is a risk of proposed Project vessels colliding with recreational vessels, with potential to cause physical harm to people as well as financial loss. This is considered further in **Chapter 25: Shipping and Navigation** where impacts have been assessed as 'Tolerable with Mitigation'. There is also potential for boaters to lose access to certain areas they would normally travel through for recreational purposes during Construction phase of the proposed Project.

Magnitude of impact

81. The magnitude of the potential effect on recreational boating has been assessed as **small** as the construction activities will be short term (**Table 28-10**).

Sensitivity of the receptor

82. The sensitivity of recreational boating has been assessed as **negligible**, as although the construction activities may spatially disrupt activities, recreational boaters will be able to use other areas in proximity. Notice(s) to Mariners will be issued and will include information on timings and location of Construction Phase activities prior to commencement of works. Recreational vessel access to areas around Freshwater West and associated marina and boat clubs within the Milford Haven Waterway will be maintained through agreements and ongoing engagement between the proposed Project and Milford Haven Port Authority.

Significance of the effect

83. The sensitivity of recreational boating is **negligible,** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **negligible** significance, which is not significant in EIA terms.

Recreational Fishing

84. Sea fishing boat operators operate from the Pembrokeshire coast all year round and are likely to travel through the Offshore Development Area with any safety zones around construction vessels potentially temporarily disrupting their existing operations along the Pembrokeshire coastline. Proposed Project construction is likely to target the favourable weather during summer months, which is also generally the most popular times of the year for recreational fishing.

85. Impacts of construction activities on fish and shellfish receptors are presented in **Chapter 20: Fish and Shellfish Ecology** which has concluded no significant effects on fish and shellfish receptors. Impacts to commercial fishing (**Chapter 26: Commercial Fisheries**) from construction, operation and maintenance and decommissioning activities has concluded effects will be of **minor / negligible** significance.

Magnitude of impact

86. The magnitude of the potential effect on recreational fishing has been assessed as **small** as the construction phase activities will be short term (**Table 28-10**).

Sensitivity of the receptor

87. Notice(s) to Mariners, via the local harbours, will be available to angling clubs and sea fishing boat operators. The sensitivity of recreational fishers has been assessed as **low** as whilst the construction activities may be considered to prove an inconvenience for offshore tour and sea fishing boat operators, other areas in proximity will be available for use. Shore-based anglers will not be affected by the construction activities as beaches will remain open.

Significance of the effect

88. The sensitivity of recreational boating is **low,** and the magnitude of the impact is assessed as **small**. Therefore, the effect will be of **minor / negligible** significance, which is not significant in EIA terms.

Other Recreational Activities

89. Other recreational activities within the Study Area include all those accessed from the surrounding coastline i.e. swimming, surfing, paddleboarding etc. During cable construction works at the landfall, disturbance to sea users accessing these coastal areas from land may occur.

Magnitude of impact

90. The OfECC passes approximately 600 m offshore of Freshwater West for a distance of approximately 1.6 km on approach to landfall. The magnitude of the potential effect on other recreational activities has been assessed as **small** as the Construction Phase activities at this location will be short term and any displacement or disturbance to activities such as swimming or surfing will be temporary (**Table 28-10**).

Sensitivity of the receptor

91. The proposed Project is committed to trenchless installation techniques (HDD) at the landfall at Freshwater West. Due to the 1300m length of the HDD, and location of the Transition Joint Bays 630m landward of MLWS beaches will remain open to the public during the Construction Phase of the proposed Project. Other recreational activities may still be able to function close to shore but may be limited in their access to areas within any temporary safety zones during construction activities at the landfall. Freshwater West is a wide beach and forms part of a more extensive series of beaches along the Pembrokeshire coast, with adjacent areas available for use. Appropriate notification will be put in place to advise beachgoers and those using areas for recreation through Notice to Mariners (NtM) and local organisations where appropriate. This will be a commitment within the Fisheries Liaison Coexistence Plan and part of the vessel contractor requirements. Other recreational activities therefore have a **low** sensitivity.

Significance of the effect

92. The sensitivity of other recreational activities is **low,** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **minor / negligible** significance, which is not significant in EIA terms.

Disruption to Other Sea Users and Offshore Infrastructure

Renewable Energy Developments

93. Offshore construction activities are planned to commence in Q1 2027. The installation of offshore components is likely to be completed over two years, with full commissioning of the wind farm in Q4 2028. There will be a maximum of 17 vessels in operation at any one time during the Construction Phase. Vessel types include construction support vessel, anchor handling tug supply vessels, floating heavy lift vessel, seabed clearance vessel, cable lay vessel, rock placement vessel, remotely operated underwater vessel, crew transfer vessel, guard vessels and survey vessels. During construction, a temporary 500 m safety zone will be applied for and implemented around all construction vessels which are restricted in their ability to maneuver and partially constructed installations.

94. Project Erebus is a proposed FLOW project within the Study Area, which is consented. The other planned marine renewable projects are small scale test sites (META) for the temporary deployment of devices, sub-assemblies, and components.

95. The deployment and decommissioning of infrastructure at the META sites will be dictated by future client bookings for use of the areas. In the absence of an installation programme for META, it is not possible to identify periods of conflict resulting from an overlap with the Construction Phase, however, due to the small scale of the test sites and distance from the Proposed Project it will be possible to minimise conflict or disruption through continued engagement with META. This is discussed further in **Section 28.11** and **Chapter 30: Inter-related Effects Assessment**.

96. The proposed Project has the potential to interact during simultaneous operations (SIMOPS) with other vessels working on existing assets, or those under construction, associated with renewable developments. Should SIMOPS be identified as the proposed Project and surrounding projects progress, proximity agreements will be required to manage risks. Given the potential for SIMOPS, ongoing coordination will be informed by appropriate industry guidance, such as the International Marine Contractors Association (IMCA) guidance on SIMOPS (IMCA, 2021).

97. Due to the proximity of Project Erebus to the proposed Project, and the construction timelines available, the likelihood of SIMOPS with this project is high. Should the potential for Construction Phase vessels associated with the proposed Project coincide with other vessels working on existing assets, or those under construction, a proximity agreement would be agreed with the asset owner to ensure that SIMOPS could be undertaken to manage risks between vessels and activities.

Magnitude of impact

98. The magnitude of the impact is assessed as **small** given the short to medium term duration, local extent, intermittent and reversible nature of construction activities (**Table 28-10**).

Sensitivity of the receptor

99. Renewable energy developments are of low vulnerability and high recoverability and value. Through the use of proximity agreements, the sensitivity of the above renewable energy developments is assessed as **low**.

Significance of the effect

100. The sensitivity of renewable energy developments to disruption is **low** and the magnitude of the impact is assessed as **small**. Therefore, the effect will be of **minor / negligible** significance, which is not significant in EIA terms.

Subsea Cables

101. As with renewable energy developments, where any simultaneous operations (SIMOPS) are likely, proximity agreements will be required to manage risks including necessary mitigation and controls, such as the application of minimum agreed separation distances.

102. Pre-construction surveys will be undertaken to accurately chart the location of existing assets and will look to microsite cables to avoid identified infrastructure where possible. Crossing infrastructure will be required where the proposed Project export cable crosses existing subsea cable infrastructure or those which are planned where construction coincides with the proposed Project. Crossing agreements will be agreed with asset owners as required with 6 crossings currently anticipated. Crossing design will be in line with industry standards, using procedures such as rock armour and concrete mattressing (Further details are presented on **Chapter 04: Description of the Proposed Project**). Final design will be agreed post consent with relevant asset owners. During construction, a temporary 500 m safety zone will be applied for and implemented around all construction vessels which are restricted in their ability to maneuver.

103. Damage and interference with third party assets is considered separately below.

Magnitude of impact

104. The impact is predicted to be of local spatial extent, with construction activities short to medium term, intermittent and reversible in nature with regards to SIMOPS. The magnitude of the impact is assessed as **small**.

Sensitivity of the receptor

105. Through the use of proximity agreements, the sensitivity of subsea cables to disruption during construction activities is assessed as **low**.

Significance of the effect

106. The sensitivity of subsea cables to construction disruption is **low** and the magnitude of the impact is assessed as **small**. Therefore, the effect will be of **minor / negligible** significance, which is not significant in EIA terms.

Marine Dredge and Disposal sites

107. There are several marine dredge and disposal sites within the Study Area, notably the open site Milford Haven Two (LU168) located approximately 1.8 km to the south of the Offshore Development Area. If activities of the proposed Project were to coincide with dredging and disposal activities, impacts could include temporary restrictions to dredging and disposal vessels as they manoeuvre to and from the site. During construction, a temporary 500 m safety zone will be applied for and implemented around all construction vessels which are restricted in their ability to maneuver.

Magnitude of impact

108. The magnitude of the impact is assessed as **small** as the proposed Project construction activities in this area are expected to be small and restricted to any vessel movements as required.

Sensitivity of receptor

109. Dredging and disposal site users are considered to have high tolerance for change. Any disturbance from the physical presence of vessels will be temporary, with any restrictions to commercial operations short term and representing only a very slight change from baseline

conditions. Given this open site is located outside of the Offshore Development Area, it is therefore considered to have **low** sensitivity to disruption.

Significance of the effect

110. The sensitivity of marine dredge and disposal sites to disruption is **low** and the magnitude of the impact is assessed as **small**. Therefore, the effect will be of **minor / negligible** significance, which is not significant in EIA terms.

Aggregate Site Agreements

111. The closest aggregate area, NOBEL Banks (Area 476), is located approximately 33 km east of the Offshore Development Area and has a low sensitivity given its distance from the proposed Project. During construction, a temporary 500 m safety zone will be applied for and implemented around any construction vessels which are restricted in their ability to maneuver.

Magnitude of impact

112. Any changes to the seabed composition and bathymetry from construction activities resulting from suspended sediment and associated deposition will be spatially limited and short-term (**Chapter 17: Physical Environment**). The magnitude of the impact is assessed as **negligible**.

Sensitivity of receptor

113. Given the distance of this open site from the proposed Project, it is therefore considered to have **low** sensitivity to disruption.

Significance of the effect

114. The sensitivity of aggregate site agreements to disruption is **low** and the magnitude of the impact is assessed as **negligible**. Therefore, the effect will, be of **negligible** significance, which is not significant in EIA terms.

Military Activity and Unexploded Ordnance

115. The proposed Project Array Area is located 16 km from the Castlemartin military practice area, but the Offshore Export Cable Corridor of the proposed Project is located within the Castlemartin Firing Range for approximately 24 km. The presence of Construction Phase vessels, including cable laying barges and temporary safety zones around Construction vessels within the Ministry of Defence (MOD) Castlemartin military practice area / sea danger area may disrupt firing exercises or other military activities. Although the construction programme would aim to avoid construction within periods of known firing exercises, for reasons beyond the proposed Project's control, for example weather down time, there may be some temporal overlap between construction and military activities. During construction, a temporary 500 m safety zone will be applied for an implemented around all construction vessels which are restricted in their ability to maneuver.

Magnitude of impact

116. Consultation will take place with the MOD and works will be agreed prior to any installation activities being undertaken in the Military Practice and Exercise Areas. Safety zones around the installation vessels will move at the rate of the associated vessels, any disruption from cable installation will be highly localised and short term. The magnitude of the impact is therefore assessed as **small** as the disruption will be short-term disruption, and other areas available within the practice area.

Sensitivity of receptor

117. The sensitivity of the receptor is considered **medium** as the Offshore Export Cable Corridor intersects an area which is use by the military, with limited capacity to accommodate any anticipated impact.

Significance of the effect

118. The sensitivity of military activities to disruption is **medium** and the magnitude of the impact is assessed as **small**. Therefore, the effect will be of **Moderate / Minor** significance, which is significant in EIA terms.

Damage to or Interference with a Third-Party Asset

119. A total of 5 cable crossings per proposed cable are predicted as part of the proposed Project. The pre-construction survey will include a geophysical survey that will be able to identify existing assets which includes out of service cables which may be in a different position to their charted location.

120. Crossing of infrastructure will be required where the proposed Project crosses existing infrastructure or those which are planned. As described **in Chapter 04: Description of the Proposed Project**, the Applicant anticipates that all crossings of existing infrastructure will be constructed in strict accordance with the terms of the Crossing Agreements put in place prior to Construction Phase activities commencing. Furthermore, proximity agreements would also be agreed with asset owners where infrastructure do not cross to manage risks. Such agreements include minimum separation distances for trenching activities, preventing large subsea equipment, such as trenchers and ploughs, operating close to assets.

Magnitude of impact

121. Implementing the mitigation measures outlined in **Table 28-12** reduces the likelihood of damage or disturbance to third party assets to acceptably low levels and reducing the magnitude of impact to **small.**

Sensitivity of receptor

122. Any unplanned interaction causing damage to third-party infrastructure would potentially compromise the intended purpose of the asset, resulting in major financial consequences for the company with very little redundancy immediately available in event of impact. Cables and pipelines are therefore considered **high** sensitivity.

Significance of the effect

123. The sensitivity of third-party assets to damage and interference is **high** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **Moderate / Minor** significance, which is significant in EIA terms.

28.8.2. Operation and Maintenance (O&M) Effects

124. Operation and maintenance activities can be categorised into two main types: planned / preventative and unplanned / corrective maintenance. Planned or scheduled maintenance includes general inspections, planned repairs and servicing while unplanned or corrective maintenance includes fault rectification and unexpected repairs.

Disruption to Marine Tourism and Recreation

125. Operation and maintenance phase activities associated with the proposed Project will involve vessel movements to undertake the inspection and servicing of the offshore infrastructure.

Such vessels may impact recreational boating and angling by obstructing access to site or increasing transit times.

126. The proposed Project operational lifetime is 30 years. The presence of wind turbines within the array has the potential to displace or exclude anglers (both recreational and charter) from existing fishing marks. Recreational angling may be subject to a degree of obstruction within the area of infrastructure due to the need to maintain a safe distance. Marker and Cardinal Buoys in line with MGN654 will be positioned round offshore infrastructure. Transiting vessels to and from the array may also disturb marine and tourism receptors.

Magnitude of impact

127. The potential impact will be long term, but temporary, over the 30-year lifespan of the proposed Project. However, the total number of vessel movements will be low and the duration of maintenance events short. Therefore, the magnitude of impact on marine tourism and recreation is considered **small**.

Sensitivity of the receptor

128. Marine tourism and recreation receptors have **low** sensitivity, due to the ability of these receptors to adapt to relocate to other areas where proposed Project vessels are working and to avoid the Array Area as appropriate.

Significance of the effect

129. The sensitivity of marine tourism and recreation receptors to operation and maintenance activities is **low** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **minor / negligible** significance, which is not significant in EIA terms.

Disruption to Other Sea Users and Offshore Infrastructure

130. The potential effects of the presence of the trenched cables, external protection on the seabed to vessels, and impacts to shipping routes is considered in **Chapter 25: Shipping and Navigation.** The potential effects of the presence of external protection on the seabed to physical processes, including waves, is considered in **Chapter 17: Physical Environment**.

131. Operation and maintenance phase activities associated with the proposed Project will involve vessel movements to undertake the inspection and servicing of the offshore infrastructure. Such vessels may impact other marine renewable energy projects by temporarily obstructing access to site or increasing transit time.

132. The proposed Project operational lifetime is 30 years. Vessels will operate within the Offshore Development Area throughout the operational and maintenance phase of the proposed Project; however, the number of vessel movements is anticipated to be low in comparison to the Construction Phase. Temporary safety zones will only be applied when undertaking major maintenance activities, and / or when towing major components back to port.

Magnitude of impact

133. The potential impact will be long term, over the 30-year lifespan of the proposed Project. However, the total number of vessel movements will be low and the duration of maintenance events short. Therefore, the magnitude of impact is considered **small**.

Sensitivity of the receptor

134. The receptors have **low** sensitivity, due to the ability of other sea user receptors to adapt, i.e., vessel movements from multiple projects can be planned safely and efficiently via routine marine operational systems.

Significance of the effect

135. The sensitivity of other sea users to operation and maintenance activities is **low** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **minor / negligible** significance, which is not significant in EIA terms.

Damage to or Interference with a Third-Party Asset

136. A total of 6 cable crossings are predicted as part of the proposed Project where additional rock protection will be required to secure the cable. Across the remaining route, once buried, submarine cables are unlikely to require routine maintenance and there should be no need for scheduled repair or replacement. However, it is likely that regular inspection surveys will be undertaken of both dynamic and buried cables. Periodic ROV visual inspections will be undertaken of the integrity and condition of the subsea cables to ensure these remain buried and undamaged. Dynamic cables will also be periodically inspected which will include buoyancy aid checks, monitoring for cable fatigue and monitoring of cable touch down points to check for any seabed scouring.

Magnitude of impact

137. Implementing the mitigation measures outlined in **Table 28-12** reduces the likelihood of damage or disturbance to third party assets to acceptably low levels and reducing the magnitude of impact to **negligible**.

Sensitivity of receptor

138. Any unplanned interaction causing damage to third-party infrastructure would potentially compromise the intended purpose of the asset, resulting in major financial consequences for the company with very little redundancy immediately available in event of impact. Cables and pipelines are therefore considered **high** sensitivity.

Significance of the effect

139. The sensitivity of third-party assets to damage and interference is **high** and the magnitude of the impact is assessed as **negligible**. Therefore, the effect will be of **minor** significance, which is not significant in EIA terms.

28.8.3. Decommissioning Effects

140. The decommissioning process will largely mirror the Construction Phase, in reverse, with platforms and moorings removed from the proposed Project and returned to local ports for disassembly and disposal. The decommissioning phase is expected to be complete within 12 months, between 2052 and 2054.

141. It is acknowledged that NRW has previously expressed a preference for buried cabling to be removed on decommissioning, however, there remain strong technical and environmental arguments to retain the cable *in-situ*. The case for cable recovery will be the subject of an environmental and economic assessment in the years leading up to decommissioning, including discussions with relevant stakeholders and a review of industry best practice at the time to determine the most appropriate approach for the proposed Project. It is instead proposed for pile anchors to be cut off at an agreed level. However, as a worst case scenario it is assumed that all infrastructure will be removed, in line with the NRW scoping opinion.

Disruption to Marine Tourism and Recreation

Magnitude of impact

142. During the decommissioning phase of the proposed Project, it is expected that impacts like those assessed for the Construction Phase will occur. The magnitude is therefore considered to be **small**.

Sensitivity of the receptor

143. During the decommissioning phase of the proposed Project, it is expected that impacts like those assessed for the Construction Phase will occur. The sensitivity of marine tourism and recreation is therefore considered to be **low/negligible**.

Significance of the effect

144. The sensitivity of marine tourism and recreation is **low/negligible,** and the magnitude of the impact is assessed as **small.** Therefore, the effect will, be of **minor / negligible** significance, which is not significant in EIA terms.

Disruption to Other Sea Users and Offshore Infrastructure

Magnitude of impact

145. During the decommissioning phase of the proposed Project, it is expected that impacts like those assessed for the Construction Phase will occur. The magnitude is therefore considered to be **small / negligible.**

Sensitivity of the receptor

146. During the decommissioning phase of the proposed Project, it is expected that impacts like those assessed for the Construction Phase will occur. The sensitivity of this receptor is therefore considered to be **high to low**.

Significance of the effect

147. The sensitivity of other sea users is **high to low** and the magnitude of the impact is assessed as **small / negligible.** Therefore, the effects will be of **minor / negligible** significance, which is not significant in EIA terms.

Damage to or Interference with a Third-Party Asset

Magnitude of impact

148. Implementing the mitigation measures outlined in **Table 28-12** reduces the likelihood of damage or disturbance to third party assets to acceptably low levels and reducing the magnitude of impact to **small**.

Sensitivity of receptor

149. Any unplanned interaction causing damage to third-party infrastructure would potentially compromise the intended purpose of the asset, resulting in major financial consequences for the company with very little redundancy immediately available in event of impact. Cables and pipelines are therefore considered **high** sensitivity.

Significance of the effect

150. The sensitivity of third-party assets to damage and interference is **high** and the magnitude of the impact is assessed as **small**. Therefore, the effect will, be of **Moderate / Minor** significance, which is significant in EIA terms.

28.8.4. Summary of Residual Environmental Effects

151. This chapter of the ES has assessed the potential environmental effects on *other sea users* 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.

152. **Table 28-13** summarises the impact assessment undertaken and confirms the significance of any residual effects, following the application of additional mitigation.

28.9 Summary of Additional Mitigation Measures

153. Additional mitigation measures for other sea users include a Communications Protocol agreed with the MOD and Castlemartin Firing Range reducing the likelihood of potential impacts and disruption, allowing exercises to be programmed accordingly. This additional mitigation reduces the magnitude of impact to MOD activities to **negligible** and the overall significance to **minor/negligible** for construction and decommissioning.

154. Proximity agreements between the Proposed Project and other sea users will also be established as appropriate. These would be agreed with asset owners where infrastructure do not cross to manage risks. Such agreements include minimum separation distances for trenching activities, preventing large subsea equipment, such as trenchers and ploughs, operating close to assets. This additional mitigation reduces the magnitude of impact to third party assets to **negligible** and the overall significance to **minor/negligible** for construction and decommissioning.

155. It is not considered that any other additional mitigation and monitoring measures for other sea users will be required during Construction, Operation and Maintenance, and Decommissioning Phases.

28.9.1. Monitoring

156. No monitoring is proposed for other sea users.

28.10 Summary of Effects and Conclusions

157. This section summarises the residual significant effects of the proposed Project on other sea users following the implementation of mitigation.

158. No significant residual effects have been identified for other sea users.

Table 28-13. Assessment summary

Project Phase	Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
Construction	Disruption to marine recreational users	Recreational boaters	Negligible	Small	Negligible	N/A	Negligible
		Recreational fishing	Low/Negligible	Small	Negligible	N/A	Negligible
		Other recreational activities	Low	Small	Minor / Negligible	N/A	Minor / Negligible
	Disruption to other sea users and offshore infrastructure	Oil and gas operations	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Renewable energy developments	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Subsea cables	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Marine dredge and disposal sites	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Aggregate extraction	Negligible	Small	Negligible	N/A	Negligible
		Military practice areas	Medium	Small	Moderate / Minor	Communications Protocol	Minor / Negligible

Project Phase	Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
	Unplanned event resulting in risk of damage to, or interference with, a third-party asset	Cable and pipeline asset owners	High	Negligible	Moderate / Minor	Proximity Agreements	Minor
Operation and maintenance	Disruption to marine recreational users	All recreational activities	Low	Small	Minor / Negligible	N/A	Minor / Negligible
	Presence of offshore infrastructure	Oil and gas operations	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Renewable energy developments	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Subsea cables	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Marine dredge and disposal sites	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Aggregate extraction	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Military practice areas	Low	Small	Minor / Negligible	Communications Protocol	Minor / Negligible
	Unplanned event resulting in risk of	Cable and pipeline asset owners	High	Negligible	Minor	Proximity Agreements	Minor

Project Phase	Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
	damage to, or interference with, a third-party asset						
Decommissioning	Disruption to marine recreational users	All recreational activities	Low	Small	Minor / Negligible	N/A	Minor / Negligible
	Presence of offshore infrastructure	Oil and gas operations	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Renewable energy developments	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Subsea cables	Low	Small	Minor / Negligible	N/A	Minor / Negligible
		Marine dredge and disposal sites	Negligible	Small	Negligible	N/A	Negligible
		Aggregate extraction	Medium	Small	Moderate / Minor	N/A	Minor / Negligible
		Military practice areas	High	Negligible	Minor	Communications Protocol	Minor
	Unplanned event resulting in risk of damage to, or	Cable and pipeline asset owners	High	Negligible	Moderate / Minor	Proximity Agreements	Minor

Project Phase	Potential Impact	Receptor	Receptor Sensitivity	Magnitude of impact	Significance of effect	Additional Mitigation	Residual Significance of Effect
	interference with, a third-party asset						

28.11 Cumulative Effects of the proposed Project

28.11.1. Introduction

159. 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 28.5.1** above.

160. This section appraises potential cumulative effects on other sea users from identified projects, plans and activities that have the potential to act cumulatively with the proposed Project.

161. PINS Advice 17: Cumulative Effects Assessment (2019) suggests that 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.

162. The approach to the assessment of cumulative effects has been detailed in Appendix 5B: Approach to Cumulative Effects Assessment and has also been summarised below in Table 28-14.

Table 28-14. 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 proposed Project). PINS notes that the proposed 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 is established within each ES technical chapters. Where significant adverse cumulative effects are identified, mitigation measures are also considered within

CEA Stage	Activity
	the CEA alongside the mechanism to secure that mitigation, e.g. consent condition requirements.

28.11.2. Scope of Cumulative Effects Assessment for Other Sea Users

163. The following impacts have been scoped into the CEA for other sea users:

Construction

- Disruption to Marine Tourism and Recreation;
- Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic; and
- Damage to or Interference with a Third-Party Asset.

Operation and Maintenance

- Disruption to Marine Tourism and Recreation;
- Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic; and
- Damage to or Interference with a Third-Party Asset.

Decommissioning

- Disruption to Marine Tourism and Recreation;
- Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic; and
- Damage to or Interference with a Third-Party Asset.

164. **Table 28-15** presents the short list of projects identified and included within the CEA for other sea users. These projects all fall within the 50 km zone of influence (ZOI) identified for this chapter.

165. Where other projects are expected to be completed before construction of the proposed Project and the effects of those projects are fully determined, effects arising from them should be considered as part of the baseline and may be considered as part of both the construction and operational assessment.

Table 28-15 List of projects considered for the other sea users cumulative effects assessment

Project Name / Developer	Project Type	Tier and Status	Approx. distance from the proposed Project
Greenlink Interconnector	Subsea Cable	Tier 1 - Consented	Intersects
Project Valorous	Floating Offshore Windfarm	Tier 2 – Scoping report submitted	0 km
Project Erebus	Floating Offshore Windfarm	Tier 1 - Consented	5 km
South Pembrokeshire Demonstration Zone	Wave Energy	Tier 3 – Concept / In-Planning	8 km
Trivane Demonstrator	Offshore Windfarm	Tier 3 – Concept / In-Planning	17 km

Project Name / Developer	Project Type	Tier and Status	Approx. distance from the proposed Project
White Cross	Floating Offshore Windfarm	Tier 1 – Application submitted	27 km
Gwynt Glas	Floating Offshore Windfarm	Tier 3 – Concept / In-Planning	33 km
NOBEL Banks	Dredging	Tier 1 – Operational	34 km
Celtic Deep Phase 1	Floating Offshore Windfarm	Tier 3 – Concept / In-Planning	36 km
Celtic Deep Phase 2	Floating Offshore Windfarm	Tier 3 – Concept / In-Planning	39 km
Petroc	Floating Offshore Windfarm	Tier 3 – Concept / In-Planning	39 km
Celtic Sea RWE Renewables	Floating Offshore Windfarm	Tier 3 – Concept / In-Planning	45 km
Celtic Sea Ocean Winds	Offshore Windfarm	Tier 3 – Concept / In-Planning	45 km

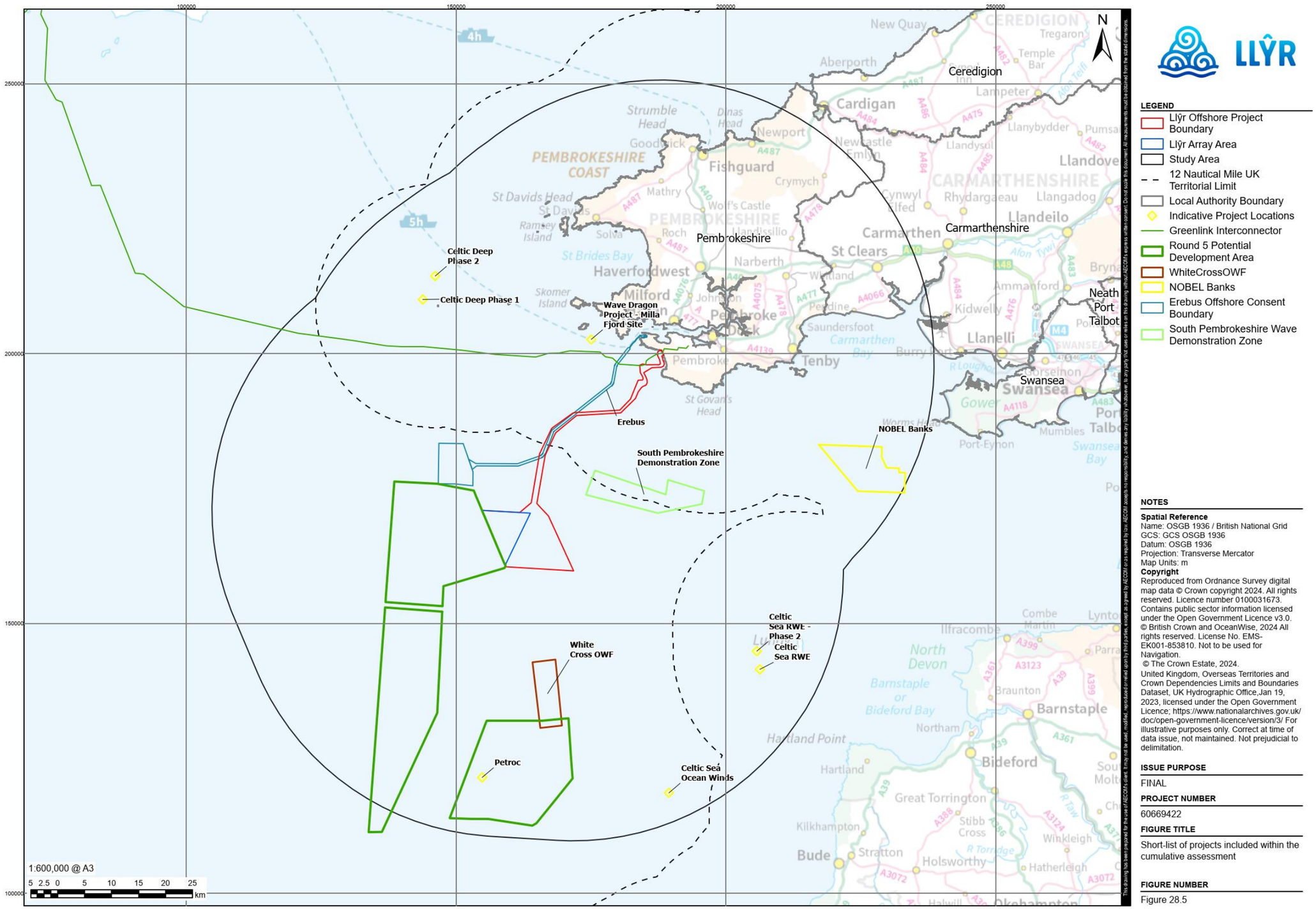

Figure 28- 5. Shortlist Projects Included within the Cumulative Assessment

28.11.3. Cumulative Effect Assessment

Construction

Disruption to Marine Tourism and Recreation

166. The construction phase for the proposed Project is expected to be undertaken between Q1 2027 to Q4 2028. The following developments may be undergoing construction during this time:

- Project Erebus; and
- White Cross.

167. Ongoing works at the NOBEL banks (approximately 12 km offshore) Production Agreement Area is also anticipated to be on going during construction of the proposed Project. The construction timelines of the remaining projects outlined in **Table 28-15** are currently unknown at this stage. Given the uncertainty and insufficient project information to allow the effects to be reasonably understood a cumulative assessment on these projects has not been undertaken. Those projects referred to in the **Table 28-15** which have not yet been consented, will need to undertake their own EIAs, that will include CEAs and take account of the Proposed Project.

168. Construction activities for Erebus and White Cross have the potential to overlap with the Proposed Project. Both projects are however located ≥ 45 km from the coastline, with the White Cross development making landfall in north Devon and Erebus making landfall at West Angle Bay in Pembrokeshire. Marine recreational users could be displaced from the area of spatial overlap, including any recommended clearance zones. Potentially displaced marine recreational activities include inshore sailing, swimming, surfing, wind and kite surfing, paddle boarding, canoeing and kayaking, and shoreline angling. Offshore sailing, boat-based angling, and tour boats could also be affected.

169. There is a risk of project vessels associated with either project colliding with recreational vessels, with potential to cause physical harm to people and financial loss. This is considered further in **Chapter 25: Shipping and Navigation.**

170. There is also potential for recreational users to lose access to certain areas they would normally utilise or travel through for recreational purposes, during the construction of both the proposed Development Erebus and White Cross.

171. Whilst there may be a slight increase in potential interruption to recreational activities because of both developments occurring cumulatively from increased vessel numbers, the magnitude of impact is still considered to be **small**. Notice(s) will be given to marine recreational users in the area via the use of Notices to Mariners, Kingfisher Bulletins, NAVTEX, and / or broadcast warnings.

172. The sensitivity of marine tourism and recreational users has been assessed as **low**. This is because construction activities associated with the proposed Project, Erebus and White Cross will only disrupt recreational users in the short term, and they will be able to use other areas in proximity during those periods.

173. Therefore, the cumulative effect of disruption to marine tourism and recreation is **minor** and **not significant**.

Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic

174. The construction phase for the proposed Project is expected to be undertaken between Q1 2027 to Q4 2028. The following developments are also expected to be undergoing construction during this time:

- Project Erebus; and
- White Cross.

175. Ongoing works at the NOBEL banks dredging site are also anticipated to be on going during construction of the proposed Project. The construction timelines of the remaining projects outlined in **Table 28-15** are currently unknown at this stage. Given the uncertainty and insufficient project information to allow the effects to be reasonably understood a cumulative assessment on these projects has not been undertaken.

176. Due to the proximity of the proposed Projects outlined above, there is potential for disruption to other sea users and offshore infrastructure operators from construction vessels. If construction periods of projects were to occur, it would be limited to a very short period. Therefore, the magnitude of impact is **small**.

177. Through use of proximity agreements, the sensitivity of other sea users to increased vessel traffic from the proposed Project in combination with other projects is **low**.

178. Therefore, the cumulative effect of disruption to other sea users and offshore infrastructure is **minor** and not **significant**.

Damage to or Interference with a Third-Party Asset

179. The potential impacts to the Greenlink interconnector and other existing subsea cables and pipelines is considered within **Section 28.8.1**. It is assumed that Erebus and White Cross would implement project specific Crossing and Proximity Agreements with cable owners where necessary; thus, reducing the risk of damage.

180. The likelihood of damage or disturbance to third party assets is low and the magnitude of impact **negligible**. This is because the Applicant anticipates that all crossings of existing infrastructure will be constructed in strict accordance with the terms of the Crossing Agreements put in place prior to Construction Phase activities commencing. Furthermore, proximity agreements would also be agreed with asset owners to manage risks.

181. However, any unplanned interaction causing damage to third-party infrastructure would potentially compromise the intended purpose of the asset, resulting in major financial consequences for the company with very little redundancy immediately available in event of impact. Third party assets such as cables and pipelines are therefore considered **high** sensitivity.

182. The cumulative effect of disruption to third party assets is **minor** and not **significant**.

Operation and Maintenance

Disruption to Marine Tourism and Recreation

183. Cumulative impacts during the operation and maintenance of the proposed Projects listed in **Table 28-15** are anticipated to include loss of recreational fishing grounds and access; disruption and displacement due to an increase in vessel traffic; collision risks; and increase in steering times to avoid the array area for recreational vessels.

184. Maintenance activities would be limited to repairs or remediation that would only cause disruption or reduced access for a temporary, short period of time. The magnitude is therefore considered to be **small**.

185. Marine tourism and recreation receptors can adapt, i.e., vessel movements from multiple projects can be planned safely and efficiently via routine marine operational systems. The sensitivity of this receptor is therefore considered to be **low**.

186. Therefore, the cumulative effect of project operation and maintenance is considered to be **minor** and not significant.

Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic

187. Cumulative impacts during the operation and maintenance of the proposed Projects listed in **Table 27-15** are anticipated to include disruption and displacement due to an increase in vessel traffic; collision risks; and increase in steering times to avoid the array area.

188. Maintenance activities would be limited to repairs or remediation that would only cause disruption or reduced access for a temporary, short period of time. The magnitude is therefore considered to be **small**.

Other sea users can adapt, i.e., vessel movements from multiple projects can be planned safely and efficiently via routine marine operational systems. The sensitivity of this receptor is therefore considered to be **low**.

189. Therefore, the cumulative effect of project operation and maintenance is **minor** and not significant.

Damage to or Interference with a Third-Party Asset

190. The potential impacts to the Greenlink interconnector and other existing subsea cables and pipelines is considered within **Section 28.8.1.** It is assumed that Erebus and White Cross would implement project specific Crossing and Proximity Agreements with cable owners where necessary; thus, reducing the risk of damage.

191. The likelihood of damage or disturbance to third party assets from operation and maintenance is low, and the magnitude of impact **negligible**. This is because the Applicant anticipates that all crossings of existing infrastructure will be constructed in strict accordance with the terms of the Crossing Agreements put in place prior to Construction Phase activities commencing. Furthermore, proximity agreements would also be agreed with asset owners to manage risks.

192. However, any unplanned interaction causing damage to third-party infrastructure would potentially compromise the intended purpose of the asset, resulting in major financial consequences for the company with very little redundancy immediately available in event of impact. Third party assets such as cables and pipelines are therefore considered **high** sensitivity.

193. Therefore, the cumulative effect of disruption to third part assets is **minor** and not **significant**.

Decommissioning

Disruption to Marine Tourism and Recreation

194. The same type and significance of cumulative impacts as described for the construction phase would, potentially, arise for marine tourism and recreation if decommissioning of the proposed Project and the other projects in the vicinity occurred simultaneously.

195. Therefore, the cumulative impact of disruption to other sea users and offshore infrastructure is **minor** and not significant.

Disruption to Other Sea Users and Offshore Infrastructure from Increased Vessel Traffic

196. The same type and significance of cumulative impacts as described for the construction phase would, potentially, arise if decommissioning of the proposed Project and the other projects in the vicinity occurred simultaneously.

197. Therefore, the cumulative impact of disruption to other sea users and offshore infrastructure is **minor** and not significant.

Damage to or Interference with a Third-Party Asset

The same type and significance of cumulative impacts as described for the construction phase would, potentially, arise if decommissioning of the proposed Project and the other projects in the vicinity occurred simultaneously.

198. Therefore, the cumulative impact of disruption to other sea users and offshore infrastructure is **minor** and not significant.

28.12 Inter-related Effects of the proposed Project

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 proposed Project effects, when considered in isolation.

199. Inter-relationship effects comprise:

- 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; and
- Receptor-led effects: consideration of the potential for all effects to interact, spatially and temporally, to create inter-related effects on a receptor.

200. **Chapter 31: Inter-related Effects Assessment** details the approach to the inter-related effects assessment and includes a description of the likely inter-related effects that may occur because of the proposed Project on other sea users.

201. This chapter considers potential impacts on recreational fishing, drawing on information from the fish and shellfish assessment (**Chapter 20**), and the commercial fisheries assessment (**Chapter 26**). The chapter also considers disruption to other human activities in relation to offshore renewable developments and subsea cables through reference to the assessments of shipping and navigation (**Chapter 25**).

202. Other sea users have been scoped out of the inter-related effects assessment as no shared receptors have been identified within the other chapters within this ES. All impacts to other sea users (excluding shipping and navigation and commercial fisheries) are contained within **Section 28.8**. Therefore, inter-relationships on other sea users and activities are not considered further here.

28.13 Transboundary Effects

203. A transboundary effect refers to the impacts or effects of the proposed 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.

204. In terms of the impacts on other sea user receptors, impacts will be localised to the extent of the other sea users study area. Given the intervening distance to adjacent European Economic Area (EEA) states, there is no potential for transboundary impacts and resultant effects to occur.

28.14 References

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