WHITE CROSS

White Cross Offshore Windfarm Environmental Statement

Chapter 23: Socio-Economics, Tourism and Recreation

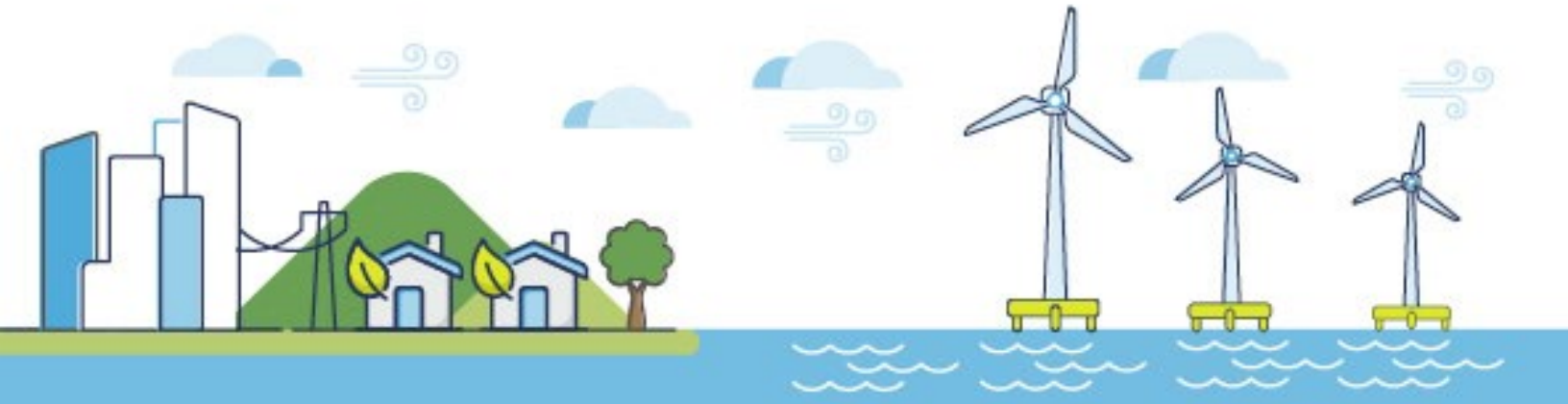

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Table of Contents

Table of Figures

Table of Tables

Glossary of Acronyms

Acronym	Definition
AONB	Area of Outstanding Natural Beauty
ES	Environmental Statement
AONB	Area of Outstanding Natural Beauty
BEIS	Department for Business, Energy and Industrial Strategy
Cefas	Centre for the Environment and Fisheries and Aquaculture Science
CEA	Cumulative Effect Assessment
EEA	European Economic Area
EIA	Environmental Impact Assessment
ES	Environmental Statement
GBDVS	Great Britain Day Visitor Survey
GDP	Gross Domestic Product
GP	General Practitioners
GVA	Gross Value Added
ICB	Integrated Care Board
km	Kilometre
Km^2	Square kilometre
LPA	Local Planning Authority
m	Metre
MHWS	Mean High-Water Spring
MMO	Marine Management Organisation
MW	Megawatts
NHS	National Health Service
NPPF	National Planning Policy Framework
NPS	National Policy Statement
NREL	National Renewable Energy Laboratory
NSIP	Nationally Significant Infrastructure Project
ONS	Office for National Statistics
OWF	Offshore Wind Farm
PDE	Project Design Envelope
RYA	Royal Yachting Association
SLVIA	Seascape, Landscape and Visual Impact Assessment
UK	United Kingdom
WTG	Wind Turbine Generator

Glossary of Terminology

Defined Term	Description
Agreement for Lease	An Agreement for Lease (AfL) is a non-binding agreement between a landlord and prospective tenant to grant and/or to accept a lease in the future. The AfL only gives the option to investigate a site for potential development. There is no obligation on the developer to execute a lease if they do not wish to.
Applicant	Offshore Wind Limited
Cumulative effects	The effect of the Project taken together with similar effects from a number of different projects, on the same single receptor/resource. Cumulative impacts are those that result from changes caused by other past, present or reasonably foreseeable actions together with the Project.
Department for Business, Energy and Industrial Strategy (BEIS)	Government department that is responsible for business, industrial strategy, science and innovation and energy and climate change policy and consent under Section 36 of the Electricity Act.
Direct Economic Impact	The employment and Gross Value Added supported directly by the Applicant and identified suppliers.
Dynamic cables	The floating substructures will require cables to run through the water column from their platform base at the water surface to the touchdown point on the seabed.
Engineer, Procure, Construct and Install	A common form of contracting for offshore construction. The contractor takes responsibility for a wide scope and delivers via own and subcontract resources.
Environmental Impact Assessment (EIA)	Assessment of the potential impact of the proposed Project on the physical, biological and human environment during construction, operation and decommissioning.
Export Cable Corridor	The area in which the export cables will be laid, either from the Offshore Substation or the inter-array cable junction box (if no offshore substation), to the NG Onshore Substation comprising both the Offshore Export Cable Corridor and Onshore Export Cable Corridor.
Floating substructure	The floating substructure acts as a stable and buoyant foundation for the WTG. The WTG is connected to the substructure via the transition piece and the substructure is kept in position by the mooring system.
Front end engineering and design	Front-end engineering and design (FEED) studies address areas of windfarm system design and develop the concept of the windfarm in advance of procurement, contracting and construction.
Generation Assets	The infrastructure of the Project related to the generation of electricity within the windfarm site, including wind turbine generators, substructures, mooring lines, seabed anchors and inter-array cables

Defined Term	Description
High Voltage Alternating Current	High voltage alternating current is the bulk transmission of electricity by alternating current (AC), whereby the flow of electric charge periodically reverses direction.
High Voltage Direct Current	High voltage direct current is the bulk transmission of electricity by direct current (DC), whereby the flow of electric charge is in one direction.
In-combination effects	In-combination effects are those effects that may arise from the development proposed in combination with other plans and projects proposed/consented but not yet built and operational.
Indirect Economic Impact	The employment and GVA supported by the wider supply chain of the Applicant and the identified suppliers.
Induced Economic Impact	The employment and GVA supported by the directly employed staff spending their wages elsewhere in the economy.
Inter-array cables	Cables which link the wind turbines to each other and the Offshore Substation Platform, or at the inter-array cables junction box (if no offshore substation). Array cables will connect the wind turbines to one and other and to the Offshyore Substation (if utilised). The initial section of the inter-array cables will be freely suspended in the water column below the substructure (dynamic sections) while the on seabed sections of the cables will be buried where possible.
Jobs	A measure of employment, which considers the headcount employment of an industry or organisation.
Landfall	Where the offshore export cables come ashore
Link boxes	Underground chambers or above ground cabinets next to the cable trench housing electrical earthing links
Mean high water springs	The average tidal height throughout the year of two successive high waters during those periods of 24 hours when the range of the tide is at its greatest.
Mean low water springs	The average tidal height throughout a year of two successive low waters during those periods of 24 hours when the range of the tide is at its greatest.
Mean sea level	The average tidal height over a long period of time.
Mooring system	The equipment (mooring lines and seabed anchors) that keeps the floating substructure in position during operation through a fixed connection to the seabed.
Mitigation	Mitigation measures have been proposed where the assessment identifies that an aspect of the development is likely to give rise to significant environmental impacts, and discussed with the relevant authorities and stakeholders in order to avoid, prevent or reduce impacts to acceptable levels. For the purposes of the EIA, two types of mitigation are defined:

Defined Term	Description
	• Embedded mitigation: consisting of mitigation measures that are identified and adopted as part of the evolution of the project design, and form part of the project design that is assessed in the EIA • Additional mitigation: consisting of mitigation measures that are identified during the EIA process specifically to reduce or eliminate any predicted significant impacts. Additional mitigation is therefore subsequently adopted by OWL as the EIA process progresses.
National Grid Onshore Substation	Part of an electrical transmission and distribution system. Substations transform voltage from high to low, or the reverse by means of the electrical transformers.
National Grid Connection Point	The point at which the White Cross Offshore Windfarm connects into the distribution network at East Yelland substation and the distributed electricity network. From East Yelland substation electricity is transmitted to Alverdiscott where it enters the national transmission network.
Offshore Development Area	The Windfarm Site (including wind turbine generators, substructures, mooring lines, seabed anchors, inter-array cables and Offshore Substation Platform (as applicable)) and Offshore Export Cable Corridor to MHWS at the Landfall. This encompasses the part of the project that is the focus of this application and Environmental Statement and the parts of the project consented under Section 36 of the Electricity Act and the Marine and Coastal Access Act 2009
Offshore Export Cables	The cables which bring electricity from the Offshore Substation Platform or the inter-array cables junction box to the Landfall
Offshore Export Cable Corridor	The proposed offshore area in which the export cables will be laid, from Offshore Substation Platform or the inter-array cable junction box to the Landfall
Offshore Infrastructure	All of the offshore infrastructure including wind turbine generators, substructures, mooring lines, seabed anchors, Offshore Substation Platform and all cable types (export and inter-array). This encompasses the infrastructure that is the focus of this application and Environmental Statement and the parts of the project consented under Section 36 of the Electricity Act and the Marine and Coastal Access Act 2009
the Offshore Project	The Offshore Project for the offshore Section 36 and Marine Licence application includes all elements offshore of MHWS. This includes the infrastructure within the windfarm site (e.g. wind turbine generators, substructures, mooring lines, seabed anchors, inter-array cables and Offshore Substation Platform (as applicable)) and all infrastructure associated with the export cable route and landfall (up to MHWS) including the cables and associated cable protection (if required).
Offshore Substation Platform	A fixed structure located within the Windfarm Site, containing electrical equipment to aggregate the power from the wind turbines and convert it into a more suitable form for export to shore
Offshore Transmission Assets	The aspects of the project related to the transmission of electricity from the generation assets including the Offshore Substation Platform (as applicable)) or offshore junction box, Offshore Cable Corridor to MHWS at the landfall

Defined Term	Description
Offshore Transmission Owner	An OFTO, appointed in UK by Ofgem (Office of Gas and Electricity Markets), has ownership and responsibility for the transmission assets of an offshore windfarm.
Onshore Development Area	The onshore area above MLWS including the underground onshore export cables connecting to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland. The onshore development area will form part of a separate Planning application to the Local Planning Authority (LPA) under the Town and Country Planning Act 1990.
Onshore Export Cables	The cables which bring electricity from MLWS at the Landfall to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland.
Onshore Export Cable Corridor	The proposed onshore area in which the export cables will be laid, from MLWS at the Landfall to the White Cross Onshore Substation and onward to the NG grid connection point at East Yelland.
Onshore Infrastructure	The combined name for all infrastructure associated with the Project from MLWS at the Landfall to the NG grid connection point at East Yelland. The onshore infrastructure will form part of a separate Planning application to the Local Planning Authority (LPA) under the Town and Country Planning Act 1990
Onshore Transmission Assets	The aspects of the project related to the transmission of electricity from MLWS at the Landfall to the NG grid connection point at East Yelland including the Onshore Export Cable, the White Cross Onshore Substation and onward connection to the NG grid connection point at East Yelland.
the Onshore Project	The Onshore Project for the onshore TCPA application includes all elements onshore of MLWS. This includes the infrastructure associated with the offshore export cable (from MLWS), landfall, onshore export cable and associated infrastructure and new onshore substation (if required).
Offshore Wind Limited	Offshore Wind Ltd (OWL) is a joint venture between Cobra Instalaciones Servicios, S.A., and Flotation Energy Ltd
the Project	the Project is a proposed floating offshore windfarm called White Cross located in the Celtic Sea with a capacity of up to 100MW. It encompasses the project as a whole, i.e. all onshore and offshore infrastructure and activities associated with the Project.
Project Design Envelope	A description of the range of possible elements that make up the Project design options under consideration. The Project Design Envelope, or 'Rochdale Envelope' is used to define the Project for Environmental Impact Assessment (EIA) purposes when the exact parameters are not yet known but a bounded range of parameters are known for each key project aspect.
White Cross Offshore Windfarm	Up to 100MW capacity offshore windfarm including associated onshore and offshore infrastructure

Defined Term	Description
White Cross Onshore Substation	A new substation built specifically for the White Cross project. It is required to ensure electrical power produced by the offshore windfarm is compliant with NG electrical requirements at the grid connection point at East Yelland.
Wind Turbine Generators (WTG)	The wind turbine generators convert wind energy into electrical power. Key components include the rotor blades, nacelle (housing for electrical generator and other electrical and control equipment) and tower. The final selection of project wind turbine model will be made post-consent application
Windfarm Site	The area within which the wind turbines, Offshore Substation Platform and inter-array cables will be present
Works completion date	Date at which construction works are deemed to be complete and the windfarm is handed to the operations team. In reality, this may take place over a period of time.

23. Socio-Economics (including Tourism and Recreation)

23.1 Introduction

1. This chapter of the Environmental Statement (ES) presents the potential impacts of the White Cross Offshore Windfarm Project (the Offshore Project) on socio-economics, tourism and recreation. Specifically, this chapter considers the potential impact of the Project seaward of Mean High-Water Springs (MHWS) during its construction, operation and maintenance, and decommissioning phases.

2. The ES has been finalised with due consideration of pre-application consultation to date (see **Chapter 7: Consultation**) and will accompany the application to the Marine Management Organisation (MMO) on behalf of the Secretary of State for Business for The Department for Business, Energy and Industrial Strategy (BEIS) for Section 36 Consent. This chapter will also support the application for relevant Marine Licences under the Marine and Coastal Access Act 2009.

3. The onshore components of the Project will be assessed as part of a separate application under the Town and County Planning Act 1990 which will be accompanied by a separate ES covering the onshore aspects of the White Cross Offshore Windfarm.

4. This ES chapter:

   - presents the existing environmental baseline established from desk studies, and consultation
   - presents the potential environmental effects on socio-economics, tourism and recreation arising from the Offshore Project, based on the information gathered and the analysis and assessments undertaken
   - identifies any assumptions and limitations encountered in compiling the environmental information
   - highlights any necessary monitoring and/or mitigation measures which could prevent, minimise, reduce or offset the possible environmental effects identified in the EIA process.

23.2 Policy, Legislation and Guidance

5. **Chapter 3: Policy and Legislative Context** describes the wider policy and legislative context for the Offshore Project. The principal policy and legislation used to inform the assessment of potential impacts on socio-economics, tourism and recreation for the Offshore Project are outlined below.

23.2.1 National Policy Statement

6. The specific assessment requirements for socio-economics, tourism and recreation are set out within the overarching National Policy Statement (NPS) for Energy (EN-1) (DECC, 2011a) and NPS for Renewable Energy Infrastructure (EN-3) (DECC, 2011b).

7. NPSs are statutory documents which set out the government's policy on specific types of Nationally Significant Infrastructure Projects (NSIPs) and are published in accordance with the Planning Act 2008. Although the Offshore Project is not an NSIP, it is recognised that due to its size of up to 100MW and its location in English waters, certain NPS are considered relevant to the Offshore Project and decision-making and are referred to in this ES.

8. The relevant NPS requirements for socio-economics, tourism and recreation are summarised in **Table 23.1**.

Table 23.1 Summary of NPS EN-1 and EN-3 provisions relevant to socio-economics, tourism, and recreation

Summary	How and where this is considered in the ES
"Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES" – **EN-1, paragraph 5.12.2.**	This chapter considers the potential impacts on socio-economics, tourism and recreation from the construction, operation, and maintenance and decommissioning of the Offshore Project at national and, where relevant, local level. The study areas considered depend on receptors' location and information available to date.
"This assessment should consider all relevant socio-economic impacts which may include the creation of job and training opportunities" – **EN-1, paragraph no. 5.12.3.**	Potential impacts on employment during construction, operation and maintenance and decommissioning are considered in **Sections 23.5, 23.6, and 23.7.**
"This assessment should consider all relevant socio-economic impacts which may include the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities" – **EN-1, paragraph no. 5.12.3**	Potential impacts on local infrastructure, such as schools and hospitals, are considered in **Sections 23.5, 23.6, and 23.7.**
"This assessment should consider all relevant socio-economic impacts which may include… effects on tourism" – **EN-1, paragraph no. 5.12.3.**	Effects on tourism are considered as part of **Sections 23.5, 23.6, and 23.7.**
"This assessment should consider all relevant socio-economic impacts which may include… the impact of a	Potential impacts on demographics from the influx of workers and their implications have been scoped out of the assessment as part of the Scoping Report.

Summary	How and where this is considered in the ES
changing influx of workers during the different construction, operation a**nd maintenance** and decommissioning phases of the energy infrastructure" – **EN-1, paragraph no. 5.12.3.**	
"This assessment should consider all relevant socio-economic impacts which may include…cumulative effects" – **EN-1, paragraph no. 5.12.3.**	Cumulative effects are considered in **Section 23.8**
"Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies" – **EN-1, paragraph no. 5.12.4.**	A baseline of existing socio-economic conditions and tourism activity is provided in S**ection 23.4**.
"Socio-economic impacts may be linked to other impacts, for example the visual impacts of a development". – **EN-1, paragraph no. 5.12.5.**	Links with impacts covered within other chapters of the ES are considered in **Section 23.10.**

23.2.2 National Planning Policy Framework

9. The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, updated July 2021) is the primary source of national planning guidance in England. Sections relevant to this aspect of the ES are summarised below in **Table 23.2**.

Table 23.2 Summary of NPPF policy relevant to socio-economics, tourism, and recreation

Summary	How and where this is considered in the ES
a) an economic objective - to help build a strong, responsive, and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation, and improved productivity; and by identifying and coordinating the provision of infrastructure. – **NPPF, Section 2, paragraph 8(a).**	The Offshore Project's economic contribution is considered in **Sections 23.5, 23.6, 23.7 and 23.8.**
Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available, including brownfield registers and permission in principle, and work proactively with applicants to	The contribution of the Offshore Project to sustainable development is

Summary	How and where this is considered in the ES
secure developments that will improve the economic, social, and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible – **NPPF, Section 4, paragraph 38.**	discussed throughout the chapter. Reference to the decarbonisation of the UK economy and the creation of green jobs is made within **Sections 23.5** and **23.6.**
The Government's commitment to creating jobs and prosperity through continued economic growth is defined within the NPPF, which sets out the importance of: • local and regional economic market business needs (paragraphs 81, 85) • setting out a clear economic vision and planning for economic development (paragraph 82) and • provision and accessibility of new jobs (paragraph 83) – **NPPF, Section 6, paragraphs 81-83, 85.**	How the Project supports employment is discussed in **Sections 23.5, 23.6, 23.7, and 23.8.**
To provide the social, recreational, and cultural facilities and services the community needs, planning policies and decisions should: • plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses, and places of worship) and other local services to enhance the sustainability of communities and residential environments • consider and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community • guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs • ensure that established shops, facilities, and services are able to develop and modernise, and are retained for the benefit of the community and • ensure an integrated approach to considering the location of housing, economic uses and community facilities and services. – **NPPF, Section 8, paragraph 93.**	The interaction between the Offshore Project and existing social infrastructure is discussed in **Sections 23.5, 23.6, 23.7, and 23.8.**

23.2.3 Local Policies

10. This section considers local policies and their relevance to the socio-economics, tourism, and recreation assessment. A summary of local policies is provided in **Table 23.3.**

Table 23.3 Summary of local policies relevant to socio-economics, tourism, and recreation

Policy Name	Summary	How and where this is considered in the ES
North Devon District Council and Torridge District Council Joint Local Plan (2018)	Policy ST09: Coast and Estuary Strategy (1) The sustainability of coastal communities will be maintained and enhanced with regard to their distinctive cultural heritage, diverse maritime economy, landscape setting and regeneration opportunities. The separate identity of these settlements will be maintained and enhanced. (2) Priority will be given to employment uses and waterside infrastructure requiring a coastal location. Such uses will be directed to previously developed sites around the coastline and the Taw-Torridge estuary with existing jetties and wharves. These sites should be safeguarded for employment uses requiring a waterside location. Facilities at Appledore and Yelland Quay will be protected for their value as landing stages for marine aggregates and for other marine employment uses. Loss of traditional boating facilities that are part of the fabric of coastal communities will be discouraged. (5) The integrity of the coast and estuary as an important wildlife corridor will be protected and enhanced. The importance of the undeveloped coastal, estuarine and marine environments, including the North Devon Coast Areas of Outstanding Natural Beauty, will be recognised through supporting designations, plans and policies. The undeveloped character of the Heritage Coasts will be protected. (7) Development within the Undeveloped Coast and estuary will be supported where it does not detract from the unspoilt character, appearance, and tranquillity of the area, nor the undeveloped character of the Heritage Coasts, and it is required because it cannot reasonably be located outside the Undeveloped Coast and estuary.	Potential impacts on employment(**Section 23.5.2, Section 23.6.2** and **Section 23.7.2**), tourism and recreation (**Section 23.5.6, Section 23.6.4** and **Section 23.7.4**) are considered in this ES. Reference to South West Coast Path and Tarka Trail is made in **Section 23.4.1.3**).

Policy Name	Summary	How and where this is considered in the ES
	(10) Delivery of onshore facilities for operational servicing of offshore renewable energy proposals will be facilitated in existing ports and at existing jetties and wharves where they: (a) do not harm identified environmental and heritage assets; and (b) do not prejudice the current operational effectiveness of the port. (11) The continuity of the South West Coast Path and the Tarka Trail will be protected and a network of connecting routes will be improved. Improvements to coastal and estuarine access will be sought where rundown waterfront areas are regenerated. The Tarka Trail link between Ilfracombe and Braunton will be completed.	
North Devon District Council and Torridge District Council Joint Local Plan (2018)	Policy ST11: Delivering Employment and Economic Development Employment growth will be supported to deliver quantitative and qualitative improvements in job opportunities throughout northern Devon; the achievement of which will be supported on the following basis: (1) Employment generating opportunities to meet identified needs and locally determined growth aspirations. (3) The District Councils, working in partnership with business and local communities, will maintain and enhance a diverse local economy and encourage opportunities for inward investment. The high environmental qualities of northern Devon will be safeguarded to attract further investment from new and existing employers and links between the environment and the economy will be fostered. (4) Opportunities for new business formations will be actively pursued and the long-term survival of businesses encouraged, with sustainable forms of business, including home-working, and the expansion of ICT particularly supported where this accords with	Potential impacts on economic activity and employment are considered in **Section 23.5.1, Section 23.5.2, Section 23.5.4, Section 23.6.2, and Section 23.7.2.**

Policy Name	Summary	How and where this is considered in the ES
	other Local Plan policies. Working with partners, the Councils will encourage education and skills development in order to provide employers with access to a suitably skilled labour force. (5) Within northern Devon, high-value jobs in business, education and research, those supporting a low carbon economy and other key growth sectors will be encouraged in sustainable locations. These jobs will retain and enhance local skills; and developers will need to demonstrate how they will work with local economic partnerships in maximising opportunities for employing local people and developing skills in northern Devon.	
North Devon District Council and Torridge District Council Joint Local Plan (2018)	Policy ST22: Community Services and Facilities (3) Development that involves the loss of community services and facilities will not be supported unless there is compelling evidence to demonstrate: (a) the existing use is no longer commercially viable or could not be made commercially viable; or (b) there is alternative local provision that is accessible to the local community by walking or cycling; and in either case (c) the premises are no longer required to meet the needs of the local community.	Consideration of any potential disruption to social infrastructure is covered in **Section 23.5.5**, **Section 23.6.3** and **Section 23.7.3**.

23.2.4 Guidance

11. Other than the policies mentioned in previous sections, there is no legislation applicable to the assessment of potential impacts on socio-economics, tourism, and recreation. The approach followed in this assessment draws on the following guidance documents:

- Social Impact Assessment: Guidance for assessing and managing the social impact of projects (International Association for Impact Assessment, 2015)
- Methods of Environmental and Social Impact Assessment (Natural and Built Environment Series) (Therivel and Wood, 2017)

- Social and Economic Assessment Requirements for Development Projects Affecting the Marine Environment (Productive Seas Evidence Group, 2015)
- Measuring the Economic Impact of an Intervention or Investment (Office for National Statistics, 2010)
- Defining 'local area' for assessing impact of offshore renewables and other marine developments: guidance principles (Scottish Government, 2022).

23.3 Assessment Methodology

23.3.1 Study Area

12. Details on the location of the Offshore Project and the offshore infrastructure are set out within **Chapter 5: Project Description.**

13. The socio-economics, tourism and recreation study area is defined with reference to the potential impacts on socio-economics, tourism and recreation from all the offshore components associated with the Offshore Project (i.e. WTGs, Offshore Export Cable Corridor, Offshore Substation) and any receptors that may be affected by those potential impacts.

14. The choice of the study areas considered in the assessment was based on BiGGAR Economics' guidance on the definition of local areas in the context of offshore renewable projects, as drafted on behalf of Marine Scotland. The process provides a set of principles that can be applied to projects across the UK.

15. The guidance identified six principles for the identification of local areas through a consultation programme and case study analysis. These can be used to define local areas based on pre-existing geographies that contain the epicentres of impact. The principles are:

- Principle 1 (Dual Geographies) - The local area for the supply chain and investment impacts should be separate from the local area(s) for wider socio-economic impacts, including tourism and recreation
- Principle 2 (Appropriate Impacts) - The appropriate impacts to be considered for assessments should be identified before defining the local areas;
- Principle 3 (Epicentres) - The local areas should include all the epicentres of the appropriate impacts
- Principle 4 (Accountability) - The local areas used in the assessment should comprise of pre-existing economic or political geographies (community councils, local authorities, development agencies) to enhance accountability
- Principle 5 (Understandable) - The local areas should be defined in such a way that they are understandable to the communities they describe

- Principle 6 (Connected Geography) - The local area for the supply chain and investment impacts should consist of connected (including coastal) pre-existing economic or political geographies.

16. For the purposes of the assessment of potential impacts associated with the offshore infrastructure the following study areas have been identified:

- Torridge
- North Devon
- the UK.

17. For the purposes of the assessment a Local Area has been defined as comprising Torridge and North Devon. This means that the assessment of potential impacts is carried out with respects to:

- Local Area (North Devon and Torridge)
- the UK.

18. Potential economic impacts (employment and expenditure) are considered with reference to the Local Area and the UK economy.

19. Wider potential socio-economic impacts (e.g., on demographics and social infrastructure such as housing, health, and educational provision) have been considered only with reference to the Local Area.

20. The guidance also informed the selection of the study area considered with respects to any potential impacts on tourism and recreation. The assessment focuses on tourism and recreation assets within the Local Area. In particular, it considers those located in the proximity of the landfall, as well as those with potential views of the Offshore Project (i.e., coastal assets).

21. The study areas considered as part of the assessment are set out in **Figure 23.1**.

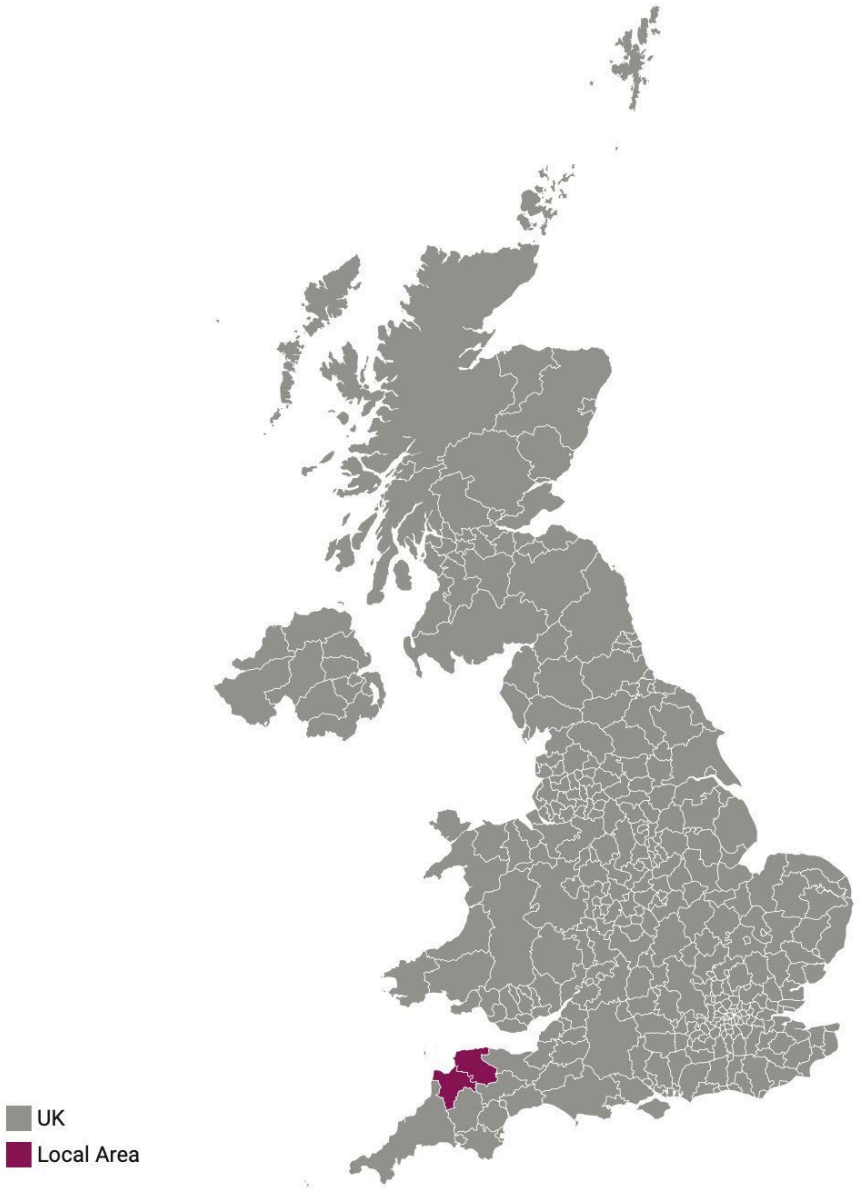


Figure 23.1 Socio-economics, tourism, and recreation study area

23.3.2 Approach to Assessment

22. The approach to the assessment of socio-economic, tourism and recreation impacts follows the guidance set out in **Chapter 6: EIA Methodology**. Definitions of magnitude and sensitivity have been tailored to the socio-economic, tourism or recreation asset under consideration.

23.3.2.1 Sensitivity of Receptors

23. The sensitivity of a receptor is determined by assessing the following considerations:

- Adaptability - the degree to which a receptor can avoid or adapt to an impact
- Tolerance - the ability of a receptor to accommodate temporary or permanent change without a significant adverse effect
- Reversibility and recoverability - the temporal scale over and extent to which a receptor will recover following an impact
- Value and importance - a measure of the receptor's importance in terms of its relative ecological, social or economic value or status.

24. This section discusses how this sensitivity has been applied to socio-economic and tourism receptors, including:

- Sensitivity of economies
- Sensitivity of the tourism economy
- Sensitivity of tourism and recreation assets
- Sensitivity of Community and Social Assets.

23.3.2.1.1 Sensitivity of Economies

25. The sensitivity of an economy is linked to how well it can absorb change. To consider the sensitivity of an economy, or a sector within that economy, it is necessary to consider both the resilience and agility of the economy. There are several factors that contribute to an assessment of resilience and agility, including:

- The scale of the economy
- The diversity of sectors in the economy
- The level of economic activity
- The level of skills and education
- The level of economic potential from utilising capital (natural, human, social and economic).

26. The **scale of an economy** is a particularly important aspect when considering rural areas. An economy that is small in absolute terms may have less agility, particularly if the structure is well established. Demographic trends are also likely to be relevant.

27. The **diversity of the economy**, as defined by the spread of sectors, is a good indicator of resilience. If an economy is over reliant on one sector, then a shock that impacts on this sector could have a disproportionate impact on the economy as a whole.

28. The **economic activity rate in an economy**, particularly how this compares to the wider national economy and trends in this rate are an indicator of economic resilience. A declining, either in absolute or relative terms, economically active population could indicate that the economy has been less able to accommodate changes. Conversely,

an economically active population that is growing at a faster rate than the national average could indicate a greater level of agility.

29. The **level of skill in an economy**, as described by the level of qualifications and occupation level, indicate the ability of the workforce to react to new employment opportunities or find new work if there is a loss of employment.

30. The economic potential of an economy is linked to the **natural, human, social and economic capital** that is available.

Table 23.4 Definitions of sensitivity for a socio-economics receptor

Sensitivity	Definition
High	A highly sensitive economy will not be able to absorb changes without fundamentally altering its present character or value. Factors that would contribute to an economy being considered of high sensitivity include: • The economy is particularly reliant on one single sector • The number of jobs in the economy has been declining over multiple years • The share of people with no qualifications is significantly above the average for the wider economy.
Medium	A medium sensitive economy has a moderate capacity to absorb changes without fundamentally altering its present character or value, however it would be less resilient than the wider economy. Factors what would contribute to an economy being considered of medium sensitivity include: • The economy is particularly reliant on a small number of sectors • The number of jobs in the economy has grown less than the wider economy • The share of people with no qualifications is above the average for the wider economy.
Low	A low sensitive economy tolerates changes without fundamentally altering its present character or value. Factors that would contribute to an economy being considered of low sensitivity include: • Most sectors in the economy are well represented • The number of jobs in the economy has grown in line with the wider economy • The level of educational attainment is in line with the wider economy.
Negligible	An economy with negligible sensitivity is very agile and will be able to accommodate changes without affecting its present character or value. Factors that would contribute to an economy having negligible sensitivity include: • There is balance between sectors • The number of jobs in the economy has grown at a quicker rate than the wider UK economy • The share of people with no qualifications is below the average for the wider economy.

23.3.2.1.2 Sensitivity of the Tourism Economy

31. The effect of the Offshore Project on the tourism economy is scoped into this assessment.

32. The assessment will consider the effect of the Offshore Project on the tourism economy. This will require consideration of the sensitivity of the tourism sector in the

study area. The tourism sector will be sensitive if there are only a few drivers of tourism or if there is a particular reliance on a particular type of visitor.

33. The assessment of sensitivity will also consider the nature of the impact and the key drivers of the tourism economy in each study area. As discussed in **Table 23.5** different tourism and recreation assets will be sensitive to different impacts. Therefore, if key assets within the tourism sector are not sensitive to an impact, this will reduce the sensitivity of the tourism economy to that impact. Similarly, if the key markets of the tourism sector in an area are sensitive to a particular impact this will also contribute to the overall sensitivity of the tourism sector. Therefore, the overall sensitivity of the tourism sector is dependent on the sensitivity of the drivers of tourism in the area.

34. To assess the sensitivity of the tourism economy in each of the study areas it is necessary to consider:

- The type and number of drivers of tourism to the area
- The sensitivity of key drivers of the tourism economy to the nature of the impact
- The types of visitors that are attracted to the area.

Table 23.5 Definitions of sensitivity for the tourism sector

Sensitivity	Definition
High	A highly sensitive tourism sector will not be able to absorb changes without fundamentally altering its present character or value. Factors that would contribute to an economy being considered of high sensitivity include: • The tourism sector is particularly reliant on one single attraction or market that is sensitive to the impact • The number of jobs in the tourism sector economy has been declining over multiple years.
Medium	A medium sensitive tourism sector has a moderate capacity to absorb changes without fundamentally altering its present character or value. Factors that would contribute to a tourism sector being considered of medium sensitivity include: • The tourism sector is particularly reliant on a small number of attractions or markets which are sensitive to the impact • The number of jobs in the tourism sector economy has grown at a slower rate than the wider tourism sector.
Low	A low sensitive tourism sector tolerates changes without fundamentally altering its present character or value. Factors that would contribute to a tourism sector being considered of low sensitivity include: • The assets and markets that drive the tourism economy are not sensitive to the impact • The number of jobs in the tourism sector economy has grown at a similar rate to the wider tourism sector.
Negligible	A tourism sector with negligible sensitivity is very agile and will be able to accommodate changes without affecting its present character or value. Factors that would contribute to the tourism sector's negligible sensitivity include: • There are a wide range of assets and markets that drive the tourism economy in the area • The number of jobs in the tourism sector economy has grown at a faster rate than the wider tourism sector.

35. This assessment will consider how the tourism sector contributes to the wider economy of each study area and if it is a contributing factor to the sensitivity of the economy. This will consider factors including:

- The contribution of the tourism sector to the local economy, including:
    - Tourism employment as a proportion of total employment
    - The contribution of the tourism sector to the productivity of the wider economy.

- The contribution of the area to the tourism sector in the wider economy. This will consider:
    - The number of visitors to the area relative to the number of visitors to the wider area
    - The presence of tourism attractions/receptors that are considered to be of national or regional importance

23.3.2.1.3 Sensitivity of Tourism and Recreation Assets

36. The impact of the Offshore Project on the tourism and recreation assets is scoped into this assessment.

37. The sensitivity of a tourism or recreation asset is determined by how reactive visitors, or users, of this asset are to a change in the environment. The sensitivity may change depending on which environmental factor is being considered. For example, an asset may be highly sensitive to changes in traffic and transport activity but have negligible sensitivity to landscape and visual impacts.

Table 23.6 Definitions of sensitivity for tourism and recreation assets

Sensitivity	Definition
High	A tourism or recreational asset with a high sensitivity will not be able to tolerate or adapt to impacts as these will result in a fundamental change in visitor behaviour. Factors that will contribute to a tourism or recreational asset being considered of high sensitivity include: • Being dependent on a single environmental condition to attract or accommodate visitors and users • Being unable to adapt or adjust in response to changes in visitor or user behaviour.
Medium	A tourism or recreational asset with a medium sensitivity will have a limited capacity to tolerate or adapt to impacts as these will result in a moderate change in visitor behaviour. Factors that will contribute to a tourism or recreational asset being considered of medium sensitivity include: • Being influenced by a single environmental condition to attract or accommodate visitors and users • Have a limited ability to adapt or adjust in response to changes in visitor or user behaviour.
Low	A tourism or recreational asset with a low sensitivity will have the ability to tolerate or adapt to impacts as these will result in an incidental change in visitor behaviour. Factors that will contribute to a tourism or recreational asset being considered of low sensitivity include: • Environmental conditions have a minor influence on the ability of the asset to attract or accommodate visitors and users • Being able to adapt or adjust the assets in response to changes in visitor or user behaviour.
Negligible	A tourism or recreational asset with a negligible sensitivity will be resistant to changes in environmental factors. Factors that will contribute to a tourism or recreational asset being considered of negligible sensitivity include: • Environmental conditions have a negligible influence on the ability of the asset to attract or accommodate visitors and users • Having substantial ability to adapt or adjust the assets in response to changes in visitor or user behaviour

23.3.2.1.4 Sensitivity of Community and Social Assets

38. The impact of the Offshore Project on the community and social assets is scoped into this assessment and covered alongside potential impacts on tourism activity. Consideration of community and social assets includes the demand for housing, health services and education services.

39. The adaptability and tolerance of the housing market to accommodate change in each study area is implied by the relative change in the price of housing stock compared to

the wider economy. If prices have increased significantly more within a study area, this would suggest that the housing market has not been able to adapt to a change in demand.

40. In the long term, community and social assets will adapt to serve the communities they are in. Hospitals and education facilities are planned based on the demographic demands in a particular area. Therefore, these sensitivities are considered for short term impacts only and the long-term sensitivities of these receptors will be negligible.

41. Throughout its operation, the Offshore Project is expected to generate tax revenue at local and national level. This will enable adjustments in the long-term provision of social assets in line with any changes in long-term population associated with the Offshore Project's operation. As a result, potential impacts on community and social assets are only considered during the construction phase.

42. The sensitivity of the public assets such as health services or schools will be dependent on the concentration of resources that are allocated to these assets. It is assumed that the ability of these assets to adapt to change will not vary by geography. Therefore, the key factor of sensitivity is tolerance to change. It is assumed that this is linked to the relative size of the community that is served by these assets. If a teacher or doctor has less students or patients than the national average, they are more likely to be able to tolerate changes, specifically increases, in these numbers. As a result, these assets will be less sensitive to change.

43. A summary of the definitions and contributing factors for the sensitivity of community and social assets are given in **Table 23.7.**

Table 23.7 Definitions of sensitivity for community and social assets

Sensitivity	Definition
High	A community or social asset with a high sensitivity will not be able to tolerate or adapt to impacts as these will result in a fundamental change in the ability of these assets to meet the needs of the community. Factors that will contribute to a community or social asset being considered of high sensitivity include: • House prices have increased at a considerably faster rate than the national average • The number of GPs per capita is much lower than the national average • The number of pupils per teacher is much higher than the national average.
Medium	A community or social asset with a medium sensitivity will have a limited capacity to tolerate or adapt to impacts as these will result in a moderate change in the ability of these assets to meet the needs of the community. Factors that will contribute to a community or social asset being considered of medium sensitivity include: • House prices have increased at a faster rate than the national average • The number of GPs per capita is lower than the national average • The number of pupils per teacher is higher than the national average.
Low	A community or social asset with a low sensitivity will have the ability to tolerate or adapt to impacts as these will result in an incidental change in the ability of these assets to meet the needs of the community. Factors that will contribute to a community or social asset being considered of low sensitivity include: • House prices have increased at a similar rate to the national average • The number of GPs per capita is similar to the national average • The number of pupils per teacher is similar to the national average.
Negligible	A community or social asset with a negligible sensitivity will be resistant to changes in environmental factors as they will have a greater capacity to tolerate changes than the wider country. Factors that will contribute to a community or social asset being considered of negligible sensitivity include: • House prices have increased at a slower rate than the national average • The number of GPs per capita is higher than the national average • The number of pupils per teacher is lower than the national average.

23.3.2.2 Magnitude of Impacts

44. As set out in **Chapter 6 of this ES**, the magnitude of an impact is determined by assessing the following considerations:

- Scale or spatial extent (small scale to large scale or most of the population or a few individuals)
- Duration (short term to long term)
- Likelihood of adverse effects occurring
- Frequency
- Nature of change relative to the baseline.

45. The socio-economic, tourism and recreation impacts are considered over distinct study areas to capture the spatial extent of any impact. The magnitude of any impact is then considered in relation to the baseline conditions within those study areas.

46. The frequency and temporal extent of any impact will be considered and those which occur over a short period of time will be described as temporary and those which occur over a longer period of time will be described as permanent.

47. The approach to determining the severity, and therefore magnitude, of any socio-economic impacts is outlined in this section for socio-economic and tourism impacts, including:

- Magnitude of sector specific economic impacts
- Magnitude of tourism and recreation impacts
- Magnitude of demographic and service demand impacts.

48. Between 2000 and 2019, the average level of Gross Domestic Product (GDP) per capita growth in the UK was 1% per annum (IMF, 2022). Similarly, between 2000 and 2019 the number of jobs has grown by 1% per annum (ONS, 2022). The magnitude of any change in an economy should be considered within this context.

49. The magnitude of employment impacts should be considered in relation to the levels of economic activity within a study area. The magnitude should be relative to the number of people in employment, rather than the unemployed. The geographic split of impact analysis should consider workplaces (jobs) rather than residents (employment rate) to be consistent with the approach followed in distributing contracts between study areas, which is based on the locations of the companies.

Table 23.8 Definitions of magnitude for economic impacts

Sensitivity	Definition
High	An impact would be considered to have a high magnitude if it was equivalent to all the typical economic growth per capita. Specifically, for each study area: • Peak annual Gross Value Added (GVA) impact is greater than, equal to, 1% of the economy or • Peak employment supported is greater than, or equal to, 1% of the total number of jobs.
Medium	An impact would be considered to have a medium magnitude if it was equivalent to half of the typical economic growth per capita. Specifically, for each study area: • Peak annual GVA impact is greater than, equal to, 0.5% of the economy • Peak employment supported is greater than, or equal to, 0.5% of the total number of jobs.
Low	An impact would be considered to have a low magnitude if it was equivalent to a quarter of the typical economic growth per capita. Specifically, for each study area: • Peak annual GVA impact is greater than, equal to, 0.25% of the economy or • Peak employment supported is greater than, or equal to, 0.25% of the total number of jobs.
Negligible	An impact would be considered to have a negligible magnitude if it was equivalent to less than a quarter of the typical economic growth per capita. Specifically, for each study area: • Peak annual GVA impact is less than 0.25% of the economy or • Peak employment supported is less than 0.25% of the total number of jobs.
No Impact	An impact would be considered to have no impact on magnitude, if no economic activity was to occur within the study area considered.

23.3.2.2.1 Magnitude of Sector Specific Economic Impacts

50. In addition to the change in the overall impact in the GVA or employment of an area, consideration should also be given to the sectors of the economy which are expected to contribute to the economic sensitivity of the area. For example, if there is a high level of concentration of employment in the tourism trade, particular attention should be given to the magnitude of change within these sectors. Similarly, sectors may contribute to the economy sensitivity of an area because of their relationship to the Offshore Project that is being developed. For example, if the Offshore Project is associated with offshore wind, then the construction, manufacturing and professional services sectors present in an area are likely to contribute towards its sensitivity.

51. The definitions of the magnitude of impacts within sectors are provided in **Table 23.9.**

Table 23.9 Definitions of magnitude for sector specific economic impacts

Magnitude	Sector Specific (including Tourism)
High	An impact would be considered to have a high magnitude on a sector if the change within that sector was equivalent to all the sector's share of typical economic growth per capita. Specifically, for each sector in a study area: • Peak annual GVA impact within that sector is greater than, equal to, 1% of the economy or • Peak employment supported by the sector is greater than, or equal to, 1% of the total number of jobs.
Medium	An impact would be considered to have a medium magnitude on a sector if the change within that sector was equivalent to half of the sector's share of typical economic growth per capita. Specifically, for each sector in a study area: • Peak annual GVA impact within that sector is greater than, equal to, 0.5% of the economy or • Peak employment supported by the sector is greater than, or equal to, 0.5% of the total number of jobs.
Low	An impact would be considered to have a low magnitude on a sector if the change within that sector was equivalent to a quarter of the sector's share of typical economic growth per capita. Specifically, for each sector in a study area: • Peak annual GVA impact within that sector is greater than, equal to, 0.25% of the economy or • Peak employment supported by the sector is greater than, or equal to, 0.25% of the total number of jobs.
Negligible	An impact would be considered to have a low magnitude on a sector if the change within that sector was equivalent to less than a quarter of the sector's share of typical economic growth per capita. Specifically, for each sector in a study area: • Peak annual GVA impact within that sector is less than 0.25% of the economy or • Peak employment supported by the sector is less than 0.25% of the total number of jobs.

23.3.2.2.2 Magnitude of Tourism and Recreation Impacts

52. For effects on tourism and recreation receptors to occur, two conditions need to be met:

- the receptors are sensitive to changes in their features caused by the Offshore Project; and
- the receptors experience an impact as a result of changes to their features.

53. The effects considered on tourism and recreation assets are changes to visitor or user behaviour and outcomes. Any environmental effect on these receptors shall therefore be assessed against how it will change behaviour compared to the current baseline of visitor or user behaviour of the receptor.

54. The definitions of the magnitude of impacts on tourism and recreation assets are provided in **Table 23.10.**

Table 23.10 Definitions of magnitude of tourism and recreation impacts

Magnitude	Sector Specific (including Tourism)
High	The impact on a tourism and recreation asset would be considered to have a high magnitude if it is predicted to experience a major change of behaviour of visitors or users.
Medium	The impact on a tourism and recreation asset would be considered to have a medium magnitude if it is predicted to experience a moderate change of behaviour of visitors or users.
Low	The impact on a tourism and recreation asset would be considered to have a low magnitude if it is predicted to experience a minor change of behaviour of visitors or users.
Negligible	The impact on a tourism and recreation asset would be considered to have a negligible magnitude if it is predicted to experience an undetectable change of behaviour of visitors or users.

23.3.2.2.3 Magnitude of Demographic and Service Demand Impacts

55. The magnitude of impacts on social or community assets is dependent on the demographic changes that will occur in each of the study areas as a result of the Offshore Project.

56. The severity of any change in demographics is measured against the level of annual change that is typical in the study area that it serves. This will be in line with the change a community or social asset will accommodate in a year.

Table 23.11 Definition of magnitude of social and community asset impacts

Magnitude	Definition
High	The impact on a social or community asset would be considered to have a high magnitude if the change in residual population was equivalent to 100% or more of the average annual growth rate for the study area.
Medium	The impact on a social or community asset would be considered to have a medium magnitude if the change in residual population was equivalent to between 50% and 100% of the average annual growth rate for the study area.
Low	The impact on a social or community asset would be considered to have a low magnitude if the change in residual population was equivalent to between 25% and 50% of the average annual growth rate for the study area.
Negligible	The impact on a social or community asset would be considered to have a negligible magnitude if the change in residual population was equivalent to less than 25% of the average annual growth rate for the study area.

23.3.2.3 Impact Significance

57. The significance of the effect upon socio-economics, tourism and recreation is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The method employed for this assessment is presented in **Table 23.12.**

Table 23.12 Significance of an effect - resulting from each combination of receptor sensitivity and the magnitude of the impact upon it

		Adverse Magnitude				Beneficial Magnitude			
		High	Medium	Low	Negligible	Negligible	Low	Medium	High
Sensitivity	High	Major	Major	Moderate	Minor	Minor	Moderate	Major	Major
	Medium	Major	Moderate	Minor	Negligible	Negligible	Minor	Moderate	Major
	Low	Moderate	Minor	Minor	Negligible	Negligible	Minor	Minor	Moderate
	Negligible	Minor	Negligible	Negligible	Negligible	Negligible	Negligible	Negligible	Minor

58. In the context of an EIA, moderate and major effects are considered significant.

23.3.3 Worst-Case Scenario

59. In accordance with the assessment approach to the 'Rochdale Envelope' set out in **Chapter 6: EIA Methodology**, the impact assessment for socio-economics, tourism and recreation has been undertaken based on a realistic worst-case scenario of predicted effects. The Offshore Project Design Envelope (PDE) for the Offshore Project is detailed in **Chapter 5: Project Description**.

60. **Table 23.13** presents the realistic worst-case scenario components considered for the assessment of socio-economics, tourism and recreation.

Table 23.13 Definition of realistic worst-case scenario details relevant to the assessment of effects in relation to socio-economics, tourism and recreation

Impact	Realistic worst-case scenario	Rationale
Construction		
Impact 1: Economic Expenditure **Impact 2: Employment**	Conservative assumptions are made with regards to the ability of businesses in the UK and in the Local Area to deliver contracts for the Offshore Project. The realistic worst-case scenario is based on a generating capacity of up to 100MW, with six turbines each having a generating capacity of 18MW*. The construction phase, inclusive of manufacturing and fabrication, and installation, was assumed to last four years. The assessment is based on peak activity over a single year.	An economic impact model is used to estimate the GVA and employment activity supported during the construction phase. The extent of benefits secured will depend on port choice and on the ability of companies across the Local Area and the UK to secure contracts.
Impact 3: Social Infrastructure **Impact 4: Tourism and Recreation**	Potential impacts on social infrastructure, recreation and tourism assets are based on a realistic worst-case scenario featuring six turbines each generating up to 100MW, with six turbines each having a theoretical generating capacity of 18MW. The analysis also considers any impact on tourism associated with construction activity. The construction phase, inclusive of manufacturing and fabrication, and installation, was assumed to last four years. The assessment of any potential impact on social infrastructure and tourism is based on peak activity over a single year.	The main social infrastructure assets considered relate to educational and health provision, and housing.
Operation and Maintenance		
Impact 1: Economic Expenditure	Conservative assumptions are made with regards to the ability of	An economic impact model is used to estimate the GVA

Impact	Realistic worst-case scenario	Rationale
Impact 2: Employment	businesses across the Local Area and the UK to deliver contracts associated with the operations and maintenance of the Offshore Project. The realistic worst-case scenario is based on a generating capacity of up to 100MW, with six turbines each having a theoretical generating capacity of 18MW.	generated during the operations and maintenance phase.
Impact 3: Social Infrastructure, **Impact 4: Tourism and Recreation**	Potential impacts on social infrastructure, recreation and tourism assets are based on a realistic worst-case scenario consisting of a generating capacity up to 100MW, with six turbines each having a theoretical generating capacity of 18MW*. The assessment of potential impacts on tourism and recreation is based on the Offshore Project being located 50km from the Devon coast.	The main social infrastructure assets considered in the assessment are schools and the health service, and housing. Evidence on the relationship between offshore windfarms, tourism and recreation will be used in assessing the impacts from the Offshore Project.

Decommissioning

To date there is limited evidence on the economic impacts associated with the decommissioning of offshore windfarms. In addition, the evidence available is from developments that are not comparable in scale to the Offshore Project. More clarity on the process underpinning the decommissioning phase will be set out within the Decommissioning Programme for the Offshore Project. An overview of the anticipated decommissioning works is provided in **Chapter 5: Project Description**.

For these reasons, the assessment of potential decommissioning impacts is based on a series of assumptions, including:

- decommissioning works happen in reverse to construction
- the same type and number of vessels as for construction will be required
- impacts are likely to be similar in scale to those associated with the construction of the Offshore Project.

The assessment of potential impacts during the decommissioning phase is based on a realistic worst-case scenario based on a generating capacity up to 100MW, with six turbines each having a theoretical generating capacity of 18MW*. In line with His Majesty Treasury's Green Book (UK Government, 2022), the assessment will discount future impacts based on social time preference (i.e., the different value attached to current compared to future consumption). This will reduce the scale of the potential impacts associated with decommissioning activity.

Impact	Realistic worst-case scenario	Rationale
Since the decommissioning phase will take place after a minimum 25-year operational period, there is a degree of uncertainty as to the available technology and processes involved at that point. Similarly, the future socio-economic and tourism conditions upon which decommissioning will impact are uncertain.		

*Theoretical maximum of 18MW WTG included to account for anticipated WTG technology development throughout Offshore Project design, noting this will be capped to the agreed total export capacity of the Offshore Project of up to 100MW where necessary.

23.3.4 Summary of Mitigation

23.3.4.1 Embedded Mitigation

61. No mitigation measure was identified with regards to socio-economics, tourism and recreation. Should the assessment identify any significant adverse effect, appropriate mitigation measures will be set out.

62. The level of economic activity associated with the delivery of the Offshore Project constitutes an opportunity for delivering economic benefits across the UK. The Applicant is committed, where possible, to maximise the share of its spending benefitting UK businesses.

63. Engagement with supply chain businesses will in part depend on the choice of a port location for construction and operations and maintenance, which has not been made yet.

23.3.5 Baseline Data Sources

23.3.5.1 Desktop Study

64. A desk study was undertaken to obtain information on socio-economics, tourism and recreation. Data were acquired through a detailed desktop review of existing studies and datasets, with reference to key data sources made as part of the Scoping Report.

65. The sources of information presented in **Table 23.14** were consulted to inform the socio-economics, tourism and recreation assessment.

Table 23.14 Data sources used to inform the socio-economics, tourism and recreation assessment

Source	Summary
Aitchison (2004), Fullabrook Wind Farm proposal, North Devon: evidence gathering of the impact of wind farms on visitor numbers and tourist experience.	Study on the impact of windfarms on the tourism economy of North Devon.

Source	Summary
BiGGAR Economics (2021), Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms.	Study on the impact of windfarms on the tourism economy of Scotland.
BiGGAR Economics (2019), East Anglia ONE North and East Anglia TWO Offshore Wind Farms: Tourism Impact Review.	Study of the impact on tourism from two offshore windfarms near the Suffolk Coast Area.
Cefas (2017), Participation, catches and economic impact of sea anglers resident in the UK in 2016 & 2017.	Report on the prevalence of sea angling as a popular activity in the UK and its economic impact.
Finstrokes (2022), Dive Map.	Information on dive sites along the shoreline.
Glasgow Caledonian University/Moffat Centre (2008), The Economic Impacts of Wind Farms on Scottish Tourism.	Study on the impact of wind farms on the tourism economy of Scotland.
Kantar (2019), Great Britain Day Visits Survey.	Information on volume and levels of spending from day visitors.
Kantar (2020), Great Britain Tourism Survey (Domestic Overnight Tourism).	Information on volume and levels of spending from domestic overnight visitors.
Land Registry Data (2022), House Price Statistics.	Data on average house prices in the UK.
NFO (2003), Investigation into the potential impact of wind farms on tourism in Wales.	Study of tourism perceptions in Wales.
NHS Digital (2022), General Practice Workforce, 30 September 2022.	Information on the number of patients per GP practice by local authority in England.
NISRA (2021), 2018-Based Population Projections: Principal Projection.	Information on projected population by 2043 and future demographic structure in Northern Ireland.
North Devon Council (2022), Walking.	Information on long-distance walking and cycle routes in North Devon.
Northumbria University (2014), Evaluation of the impacts of onshore wind farms on tourism.	Study of the impact of wind farms on the tourism economy of Northumberland.
ONS (2020), 2018-based Population Projections.	Information on projected population by 2043 and future demographic structure.
ONS (2022), Annual Survey of Hours and Earnings - resident analysis.	Data on the median and average annual gross income of residents.
ONS (2021), Business Register and Employment Survey.	Data on the industrial structure by area and jobs growth by area.
ONS (2020), International Passenger Survey.	Information on volume and levels of spending from international overnight visitors.
ONS (2021), Population estimates - local authority based by single year of age.	Data on projected population estimates and demographic structure.
ONS (2022), Regional gross domestic product: enterprise regions.	Data on the change in GVA and GVA per head by local area
ONS (2022), Regional gross value added (balanced) per head and income components.	GVA per head in the UK.

Source	Summary
ONS (2022), Median house prices for administrative geographies.	Data on house prices by area of England.
Regeneris and The Tourism Company (2014), Study into the Potential Economic Impact of Wind Farms and Associated Grid Infrastructure on the Welsh Tourism Sector.	Study of the impact of windfarms on the tourism economy of Wales.
StatsWales (2021), Population Projections by year and age.	Population projections for Wales.
Torridge Council (2022), Walks and Trails.	Information on long-distance walking and cycle routes in Torridge.
UK Government (2019), English Indices of Deprivation 2019.	Data collected on the indices of deprivation by small area of England.
UK Government (2021), Education and Training Statistics for the UK.	Information on pupil teacher ratios by UK region.
UK Parliament (2022), Local Authority Data: Housing Supply.	Data on the stock of housing by area of England.
VisitEngland (2016), 2016 Census of Serviced Accommodation Stock.	Data on the number and type of accommodation providers by area of England.

23.3.6 Data Limitations

66. The key limitations of data used within the baseline are:

- lags in the release of publicly available statistics
- the impact of Covid-19 on tourism statistics
- reliability of statistics on visitor numbers and spending at local level
- sectoral allocation of economic activity associated with offshore wind developments.

67. Data from official statistical sources, such as the surveys carried out by the Office for National Statistics (ONS), are generally published with a lag of between one and two years. This means that part of the information included in the baseline does not reflect current economic activity, while being based on the latest available data.

68. Similarly, the economic model estimating the economic impact from the Offshore Project relies on an Input-Output Methodology. One of the main data sources associated with this document is the UK Input-Output Tables, which, while it was last published in 2022, refers to sectoral interactions as of 2018.

69. Where the latest year for which information on tourism was 2020, data from 2019 was used instead. This is because 2020 was not considered as an appropriate reference point. Over 2020 and throughout 2021, tourism activity was constrained by restrictions aimed at preventing the spread of Covid-19, which limited domestic and international travel. While the Covid-19 pandemic may have changed attitudes

towards travel (for instance, shifting preferences from international to domestic holidays), international visitors are likely to remain a key group for the tourism sector.

70. The robustness of data on tourism visits and spending depends on the size of the study areas considered. Data at local authority level tend to rely on smaller sample sizes and are to be considered less accurate.

71. The analysis relies on the matching of economic activity and windfarm-related contracts to appropriate sectoral codes from the ONS Standard Industrial Classification (SIC) of Economic Activities. Data availability becomes limited the more detailed the assessment of contracts. For this reason, the economic model relies on a breakdown of economic activity by sector up to SIC level 2.

72. None of the assumptions and limitations listed above is likely to affect the overall assessment of effects from the construction, operation and maintenance and decommissioning of the Offshore Project.

23.3.7 Scope

73. Upon consideration of the baseline environment, the project description outlined in **Chapter 5: Project Description**, and Scoping Opinion (Case reference: EIA/2022/00002), potential impacts upon socio-economics, tourism and recreation have been scoped in or out. These potential impacts are outlined, together with a justification for why they are or are not considered further, in **Table 23.15** and **Table 23.16** respectively.

74. Compared to the Scoping Report, expenditure and employment impacts during construction, and operations and maintenance have been re-scoped into the assessment. This decision was made to ensure full consideration of the benefits associated with the Offshore Project.

75. Throughout the assessment of the potential economic impacts associated with construction activity, it is assumed that the construction port will be located outside the Local Area. This is because of the lack of suitable port space able to accommodate the extent of works required during this phase.

76. As it is recognised that the construction port location will benefit from activity during the construction phase, the assessment provides an indication of the scale of the benefits arising at this location.

Table 23.15 Summary of impacts scoped in relating to socio-economics, tourism and recreation

Potential Impact	Justification
Construction	
Economic expenditure	Potential economic impacts at UK level are considered in the assessment. This is to account of the relatively large-scale investment involved in delivering the Offshore Project and the commitment by the Applicant to maximise local content. More concentrated local impacts are likely to occur at the construction port location.
Employment	The assessment includes consideration of the creation of employment at UK level. This is to account for the relative importance of creating high-skilled jobs supporting the transition to Net Zero. Its inclusion is also justified on the basis of the Applicant's commitment to the creation of high skilled jobs within the UK during the construction phase.
Social infrastructure	Any potential impacts from construction activities through obstruction or disturbance to economic and social receptors will be minimised through micro-siting and mitigation. However, the assessment considers the impact of any disturbance from air quality, noise, visual and traffic on economic and social receptors.
Operations and Maintenance	
Economic expenditure	Any potential economic impacts have been considered, alongside the overall role of the Offshore Project in supporting the future use of floating substructures.
Employment	The contribution from employment during the operation and maintenance phase is going to be mostly associated with the creation of long-term jobs in the renewable sector and with any opportunities for the Applicant to target recruitment and training.
Social infrastructure,	Any potential impacts from operation and maintenance activities through obstruction or disturbance to economic and social receptors will be minimised through micro-siting and mitigation. However, the assessment considers the impact of any disturbance from air quality, noise, visual and traffic on economic and social receptors.
Cumulative Impacts	
Cumulative impacts	Being one of the earliest projects in the Celtic Sea, the Offshore Project could support the clustering of

Potential Impact	Justification
	windfarm developments in this area. This will have implications for supply chain businesses, with opportunities to expand economic activity and support employment.

Table 23.16 Summary of impacts scoped out relating to socio-economics, tourism and recreation

Potential Impact	Justification
Construction	
Demographic changes	Given the transient and short-term nature of the construction phase, coupled with the more local study area being influenced by annual tourism movements, the scale of any potential change is expected to be negligible.
Operations and Maintenance	
Demographic changes	Potential impacts are expected to be localised predominantly around the operations and maintenance hub. Given the fairly small scale of likely operational staff compared to coastal areas and their transient population linked to tourism, the scale of any potential change is expected to be negligible.
Other	
Potential transboundary impacts	There is no potential for social or economic impacts to extend outside UK boundary given the localised nature of the work and distance to nearest non-UK country (i.e., Ireland).

23.3.8 Consultation

77. Consultation has been a key part of the development of the Offshore Project. Consultation regarding socio-economics, tourism and recreation has been conducted throughout the EIA. An overview of the project consultation process is presented within **Chapter 7: Consultation**.

78. A summary of the key issues raised during consultations specific to socio-economics, tourism and recreation is outlined below in **Table 23.17**, together with how these issues have been considered in the drafting of this ES.

Table 23.17 Consultation responses

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
North Devon Council	5/04/2022, Pre-application enquiry response	Future engagement with the Applicant is sought on: -supply chain and local community benefits including the opportunity for locals to invest. -consideration of national energy and vulnerability to disruption. -consideration of the squeeze of viable fishing groups and cumulative reduction with marine conservation sites and other developments such as aquaculture.	N/A
Marine Management Organisation	Scoping Response	Agreement with approach to scoping as set out in the scoping report.	N/A
North Devon Surfing Reserve	31/10/2022, Consultation	"Specifically refer to the importance of ocean water activities, that rely on a functioning surf ecosystem, to the local and visiting communities' health, wellbeing and economy". Reference should be made to the historic and present Surfonomic study currently carried out by Dr Gregory Borne from Plymouth Marjon	Reference to the importance of surfing activity is made in **Section 23.4.** Assessment of any potential impacts on Saunton Sands will be considered as part of the onshore application.

Consultee	Date, Document, Forum	Comment	Where addressed in the ES
		University in the assessment.	

23.4 Existing Environment

79. This section describes the existing environment in relation to socio-economics, tourism and recreation associated with the White Cross study area. It has been informed by a review of the sources listed in **Table 23.14.**

23.4.1 Current baseline

23.4.1.1 Socio-Economic Baseline

23.4.1.1.1 Population

80. In 2020, North Devon had a total population of 98,200 and Torridge had a population of 68,700 (Office for National Statistics (ONS) 2021). In North Devon 57% of the population were aged between 16 and 64 years old, whereas in Torridge this group accounted for 56% of the population. The share of the working age population living in these areas was smaller than for the UK (62%).

81. In North Devon, people aged 65 and over accounted for 26% of the population, just below the share accounted for by this group in Torridge (28%). Both local areas had a significantly larger share of their population aged 65+ compared to the UK, where this group accounted for 19% of the total population.

82. The Local Area, which includes North Devon and Torridge, had a total population of 166,900. The Local Area had a smaller share of its population of working-age (57%) and a larger share aged 65+ (27%) compared to the UK.

83. The relatively larger share accounted for by people aged 65+ across North Devon and Torridge suggests demands on public services, especially health, may be more marked within the Local Area than across the UK.

Table 23.18 Population estimates

	North Devon	Torridge	Local Area	UK
Total Population	98,200	68,700	166,900	67,081,200
% aged under 16	17%	16%	17%	19%
% aged 16-64	57%	56%	57%	62%
% aged 65 and over	26%	28%	27%	19%

23.4.1.1.2 Population Projections

84. The ONS produces population projections based on recent trends in demographics, migration, fertility and mortality. Between 2018 and 2043, the population of North Devon is expected to increase from 96,110 to 110,678 equivalent to an increase of 15.2% (ONS 2021). Similarly, the population of Torridge is expected to increase by 15.8%, from 68,143 to 78,900. The population of the Local Area will therefore increase by over 25,000 people, going from 164,253 in 2018 to 189,578 in 2043.

85. The expected increase in population in the Local Area is above average compared to the UK, where the population is expected to increase by 9.2%, from 66,435,550 to 72,563,425 (Northern Ireland Statistics and Research Agency (NISRA) 2021) (StatsWales 2021) (National Records of Scotland (NRS) 2020).

86. The proportion of North Devon residents aged 16-64 years old is expected to decrease over time, with the share of working age population falling from 58% to 52% in 2043. The share of the population of working age is also expected to fall in Torridge, from 53% to 47%. The relative fall in the share of the working age population is expected to be more marked in the Local Area (a fall from 56% to 50%) than across the UK, where this group will go from 63% of the population to 59% in 2043.

87. Over the same period, the share of the population of North Devon accounted for by people aged 65+ is expected to increase from 25% to 33%. Similarly, in Torridge the share of the population accounted for by this group is expected to increase from 27% to 36%. Within the Local Area, the population aged 65+ will comprise 34% of the total population by 2043. The share of the population aged 65+ will be larger than across the UK, where people aged 65+ are expected to account for 24% of the UK's total population by 2043, up from 18% in 2018. The ageing population of the Local Area and the UK is likely to result in increased pressure on public services. The creation of a high productivity economy will be key to offset these trends.

Table 23.19 Population projections, 2018-2043

	North Devon		Torridge		Local Area		UK	
	2018	2043	2018	2043	2018	2043	2018	2043
Total Population	96,110	110,678	68,143	78,900	164,253	189,578	66,435,550	72,563,425
% aged under 16	17%	15%	20%	18%	18%	16%	19%	17%
% aged 16-64	58%	52%	53%	47%	56%	50%	63%	59%

	North Devon		Torridge		Local Area		UK	
% aged 65 and over	25%	33%	27%	36%	26%	34%	18%	24%

23.4.1.1.3 Sectoral Employment

88. The relative distribution of employment (inclusive of those self-employed) by sector in each of the study areas gives an indication of its relative reliance on any single type of activity. It also provides evidence on a study area's potential for attracting economic activity associated with the Offshore Project.

89. The sectors relevant to the assessment of the tourism economy and any potential impacts on tourism and recreation assets include:

- Accommodation and food services activities
- Arts, entertainment and recreation.

90. In both North Devon and Torridge, a larger share of the workforce was employed in the accommodation and food service activities sectors than across the UK (ONS 2021). The sector employed 12.7% and 11.0% of the workforce in North Devon and Torridge respectively, compared to 7.1% across the UK. Employment in arts, entertainment, and recreation in North Devon (1.3%) was lower than the UK average (2.3%). In Torridge, the share of employment accounted for by this sector was slightly higher than across the UK (2.6%).

91. Overall, these two sectors accounted for 13.8% of employment across the Local Area as opposed to 9.4% across the UK as a whole.

92. Sectors which may particularly benefit from the economic opportunities associated with the construction, and operations of maintenance of the Offshore Project include:

- Construction
- Manufacturing
- Professional, scientific and technical services
- Transportation and storage

93. The share of employment in the manufacturing sector across North Devon (12.7%) was larger than that of Torridge (7.7%) and the UK (7.7%). In Torridge the share of the workforce accounted for by construction was larger than average, accounting for 7.7% of the workforce in the area compared to 4.8% in North Devon and 4.9% across the UK as a whole. Professional, scientific, and technical activities and transportation and storage were both less represented in North Devon and Torridge. In North Devon,

professional, scientific, and technical activities accounted for 5.3% of the workforce, with the sector accounting for 5.0% of employment in Torridge and 8.8% of employment across the UK. Employment in transportation and storage was equivalent to 2.1% of the workforce in North Devon, lower than the share of employment in the sector across both Torridge (4.0%) and the UK (5.0%).

94. Overall, these three sectors supported 24.7% of employment in the Local Area, compared to 29.2% of employment across the UK. A full breakdown of sectoral employment across the North Devon, Torridge and UK economies is provided in **Table 23.20.**

Table 23.20 Sectoral employment

	North Devon	Torridge	Local Area	UK
Wholesale and retail trade	16.9%	15.4%	16.4%	14.7%
Human health and social work activities	14.8%	8.8%	12.9%	13.2%
Manufacturing	12.7%	7.7%	11.1%	7.7%
Accommodation and food service activities	12.7%	11.0%	12.1%	7.1%
Agriculture, forestry and fishing	7.9%	16.5%	10.7%	1.6%
Education	7.9%	9.4%	8.4%	8.6%
Administrative and support service activities	5.8%	5.0%	5.5%	8.6%
Professional, scientific and technical activities	5.3%	5.0%	5.2%	8.8%
Construction	4.8%	7.7%	5.7%	4.9%
Transportation and storage	2.1%	4.0%	2.7%	5.0%
Public administration and defence; compulsory social security	2.1%	1.5%	1.9%	4.4%
Real estate activities	1.8%	2.0%	1.9%	1.9%
Information and communication	1.5%	1.1%	1.4%	4.3%
Arts, entertainment and recreation	1.3%	2.6%	1.7%	2.3%
Other service activities	1.3%	1.2%	1.2%	2.0%
Other	1.2%	1.0%	1.1%	4.7%
Total Employment	**47,330**	**22,675**	**70,005**	**30,547,000**

23.4.1.1.4 Economic Activity

95. Between April 2021 and March 2022, the economic activity rate (a measure of those who are either in work or looking for work) in North Devon was 86.0%, 6.5 percentage

points larger than in Torridge (79.5%) (ONS 2022). The Local Area (83.2%) had a higher economic activity rate than across the UK economy (78.3%).

96. Between 2021 and 2022, North Devon and Torridge had unemployment rates of 2.4% and 2.5% respectively, which were lower than the unemployment rate across the entirety of the UK (4.2%).

97. In 2021, the median annual gross salary of North Devon residents was £26,106, slightly lower than that of people living in Torridge (£26,537). The median annual gross income of residents in the Local Area was over 16% smaller than that of UK residents (£31,285).

98. Between 2010 and 2020, the number of jobs in North Devon grew by 4%, while the number of jobs in Torridge fell by 2%. Jobs growth across the Local Area (2%) was lower than across the UK as a whole, where the number of jobs increased by 11% between 2010 and 2020.

99. Lower job growth in the Local Area may be linked to the lower gross incomes offered compared to other areas of the UK. This would suggest a lack of high paid employment, with implications on the attractiveness of Torridge and North Devon's labour markets.

Table 23.21 Economic activity, 2021/22

	North Devon	Torridge	Local Area	UK
Economic Activity Rate	86.0%	79.5%	83.2%	78.3%
Unemployment Rate	2.4%	2.5%	n/a	4.2%
Median Annual Gross Income (residents)	£26,106	£26,537	26,246	£31,285
Jobs Growth (2010 – 2020)	4%	-2%	2%	10%

23.4.1.1.5 Qualifications

100. The distribution of qualifications[1] within an economy is an indicator of the overall human capital available in an area. Individuals with higher qualification levels are more likely to get paid more and find employment quicker if they become unemployed.

[1] NVQ1+ are qualifications equivalent to or above GCSE grades D, E, F and G; NVQ2+ are qualifications equivalent to or above GCSE grades A*, A, B and C or an intermediate apprenticeship; NVQ3 are qualifications equivalent to or above A level, an access to higher education diploma, or advanced apprenticeships; NVQ4+ are qualifications equivalent to or above a certificate of higher qualification.

101. In North Devon, 36.3% of people aged 16 to 64 have achieved at least an NVQ4 qualification, equivalent to a higher education certificate (ONS, 2022). This is higher than the equivalent share in Torridge of 21.9%, but lower than the share of people with a higher education certificate across the UK (43.5%). A similar pattern applies to those holding at least NVQ3+ qualifications.

102. In North Devon, 93.4% of people aged 16 to 64 have achieved at least an NVQ1 qualification, a larger share than for Torridge (87.3%) and the UK (87.4%) (ONS 2022). The share of the working age population without qualifications in North Devon (3.6%) is smaller than in both Torridge (8.3%) and the UK (6.8%).

103. Overall, the Local Area lags the UK with respects to educational qualifications exceeding NVQ3+. This suggests a lower level of skills compared to the UK.

Table 23.22 Qualifications, 2021

	North Devon	Torridge	Local Area	UK
% with no qualifications	3.6%	8.3%	5.6%	6.8%
% NVQ1+	93.3%	87.5%	90.8%	87.4%
% NVQ2+	78.1%	75.8%	77.1%	78.1%
% NVQ3+	58.4%	50.5%	55.0%	61.4%
% NVQ4+	36.3%	21.9%	30.1%	43.5%

23.4.1.1.6 Gross Value Added (GVA)

104. The ONS provides GVA estimates for the local areas which comprise Local Enterprise Partnerships (ONS 2022). The latest publication estimated that in 2020, North Devon generated £2.2 billion GVA, 22% higher than in 2010 when the economy of North Devon generated £1.8 billion GVA. Over the same period, the GVA generated by Torridge has increased by 16%, from £0.8 billion in 2010 to £0.9 billion in 2020. The growth in GVA for Local Area (19%) is slower than the UK economy as a whole for which GVA increased by 34% between 2010 and 2020, from £1,452.6 billion to £1,949.6 billion.

Table 23.23 Gross Value Added (Balanced) at current prices (£ billion)

	North Devon	Torridge	Local Area	UK
2010	1.8	0.8	2.6	1,452.6
2020	2.2	0.9	3.1	1,949.6
Change (2010-2020)	22%	16%	19%	34%

23.4.1.1.7 GVA per Head

105. The GVA per head of population supported by North Devon in 2020 was £22,298, around 40% larger than in Torridge, where GVA per head was £13,417. The GVA per

head of the Local Area was £18,641, or 36% smaller than that of the UK, £29,063 GVA per head of population (ONS 2022).

23.4.1.1.8 Deprivation

106. The English Indices of Deprivation is a relative measure of deprivation which ranks small areas of England across seven dimensions: income, employment, education, health, crime, housing, and the environment. These areas can be ranked based on which quintile (fifth of the distribution) they belong to, with a small area in the first quintile being in the 20% most deprived areas in England.

107. There are 58 small areas in North Devon, of which 12% are in the 20% most deprived areas in England and 9% are in the 20% least deprived areas (UK Government 2019). Small areas in North Devon are largely concentrated in the second, third and fourth quintile, with the largest share accounted for by the second quintile, this equates to slightly above average levels of deprivation in the region.

108. Torridge also has slightly above average levels of deprivation compared to England as a whole. There are 37 small areas in Torridge, of which 5% are in the 20% most deprived areas of England and none are in the 20% least deprived. Similarly to North Devon, the second quintile accounts for the highest share of Torridge areas, with 57% of small areas in the local authority in the second quintile. Overall, 60% of the small areas in Torridge fall under the 40% most deprived areas across England, suggesting considerably higher levels of deprivation.

109. Levels of deprivation in the Local Area remain higher than average. 50% of the study areas fall within the least deprived 40% areas of England. Similarly, only 5% of areas within the Local Area belong to the 20% least deprived areas of England. Analysis at the level of the Local Area is skewed by the relatively higher share of small area in Torridge belonging to the 2nd quintile.

Table 23.24 Indices of deprivation, 2019

	North Devon	Torridge	Local Area
1 (most deprived quintile)	12%	5%	9%
2	31%	57%	41%
3	26%	24%	25%
4	22%	14%	19%
5 (least deprived quintile)	9%	0%	5%

23.4.1.2 Demographic Changes

23.4.1.2.1 Housing

110. The affordability and availability of housing in an economy contributes to its sensitivity to change and ability to accommodate new people.

111. Housing in North Devon is less affordable in both absolute and relative terms compared to the UK as a whole. The median house price in North Devon in March 2021 was £270,000, compared to £267,500 across the UK (ONS 2022). The median house price in North Devon was 10.3 times the median annual gross income in North Devon compared to 8.6 times greater across the UK. Torridge was more affordable in absolute terms, with the median house in the area costing £250,000, compared to £267,500. However, Torridge was less affordable in relative terms compared to the UK, with the median house costing 9.4 times the median salary of residents compared to 8.6 times greater across the UK.

112. Over the last five years, median house prices have grown at a slower rate across the Local Area (+25%), compared to the UK as a whole (27%). In 2020, the Local Area had a total housing stock of 81,887, of which 48,626 housing units in North Devon and 33,261 housing units in Torridge.

Table 23.25 Median house price values and changes, March 2016 – March 2021

	March 2016	March 2021	Change	Number of Units (2020)
North Devon	£215,000	£270,000	25%	48,626
Torridge	£200,000	£250,000	25%	33,261
Local Area	£209,000	£261,000	25%	81,887
UK	£210,000	£267,500	27%	29,548,000

Table 23.26 Housing affordability

	North Devon	Torridge	Local Area	UK
Median House Price/Median Annual Gross Income	10.3	9.4	9.9	8.6

23.4.1.2.2 Pupil Teacher Ratios

113. As the creation of new employment opportunities may result in temporary and long-term changes in population, the Offshore Project could affect the delivery of existing public services. In this way, the migration of households with children could have an impact on educational provision. This factor contributes to an economy's relative sensitivity.

114. As a measure of class size and existing provision, the analysis considers the pupil per teacher ratio. Data are not available at local authority level, so the South West region, which encompasses the Local Area, is compared to the UK.

115. There were 21 pupils per teacher in primary education in the South West, which is the same ratio as for the UK (UK Government 2021). The South West region had 17

pupils per teacher in secondary education, compared to 16 pupils per teacher across the UK.

116. Within nursery education, the pupil per teacher ratio was 31 in the South West, more than half the average across the UK of 64 pupils per nursery teacher.

117. Alternative educational institutions, such as pupil referral units, had a ratio of 28 pupils per teacher in the South West region, a ratio four times larger than across the UK, where similar institutions had a ratio of 7 pupils per teacher.

118. Across all educational facilities, the South West had a slightly higher pupil per teacher ratio, as there were 19 pupils for every teacher in the region, compared to 17 pupils per teacher across the UK.

Table 23.27 Pupil per teacher ratio

	South West	UK
Nursery	31	64
Primary	21	21
Secondary	17	16
Other	28	7
Total	**19**	**17**

23.4.1.2.3 Healthcare Provision

119. As the creation of new employment opportunities may result in temporary and long-term changes in population, the Offshore Project could have an impact on health provision by changing the ratio of patients per GP. This factor affects an economy's relative sensitivity.

120. North Devon and Torridge form part of the area that is covered by the National Health Service (NHS) Devon Integrated Care Board (ICB). ICBs are responsible for the provision of health and social care services across the region.

121. As of September 2022, there were 874 General Practitioners (GP) across NHS Devon ICB, with 1,276,248 patients registers at Devon GP practices (NHS Digital 2022). The number of patients per GP was 1,460. Across NHS boards of England, the average number of patients per GP was 1,724 for the same period.

23.4.1.2.4 Summary of Socio-Economic Baseline

122. The economies of North Devon and Torridge are well balanced but have not performed as well as the wider UK economy in recent years. The level of employment growth was lower in the Local Area, and the number of working age people is projected to decrease over the coming decades. The levels of higher education qualifications and median pay were both lower in the Local Area compared to the UK. However, the Local Area has strengths in sectors relevant to

the development of the Offshore Project, including manufacturing which is represented in North Devon, and construction, which accounts for an above average share of employment in Torridge.

123. The social and community assets within the Local Area, specifically housing, education and healthcare facilities, experience similar demands to those across the UK. While housing in the Local Area is relatively less affordable than across the UK, house prices have increased slightly below average compared to recent trends in the UK market. The number of patients per GP across Devon, including North Devon and Torridge, is lower than the UK average. In addition, across the South West region, including North Devon and Torridge, the number pupils per teacher is fairly in line with the UK average.

23.4.1.3 Tourism Baseline

23.4.1.3.1 Tourism economy

124. A range of statistics are available on visitor numbers and visitor spend, including from the Great Britain Day Visitor Survey (GBDVS), the Great Britain Tourism Survey (GBTS) and the International Passenger Survey. Data on international visitors were not available at the geographic level of North Devon and Torridge. As a result, reference is made to Devon as a whole.

125. In 2019, there were 4.7 million visitors to North Devon, with tourism spending amounting to £282.8 million. Day visitors accounted for 84% of visitors to North Devon and domestic overnight visitors accounted for 16% of visitors. Domestic overnight visitors spent the most in North Devon (£189.7 million), which amounts to £244 per visit. Day visitors spent a total of £93.1 million, which is equivalent to £24 per visit. International visitors to Devon spent on average £449 per visit.

126. In 2019, there were 2.0 million visitors to Torridge, with tourist spending amounting to £118.8 million. Day visitors accounted for 85% of visitors to Torridge and domestic overnight visitors accounted for 15% of visitors. Domestic overnight visitors spent the most in Torridge (£61.3 million), which amounts to £200 per visit. Day visitors spent a total of £57.4 million, which is equivalent to £34 per visit. International visitors to Devon spent on average £449 per visit.

127. In 2019, the Local Area attracted a total 6.7 million domestic visitors, including 5.6 million day visitors and 1.1 million domestic overnight visitors. Individual spending varied by visitor type, with overnight visitors spending more money in the local economy (£228 per visit), compared to day visitors (£26 per visit).

128. In 2021, there were a total 1.8 billion visits made to the UK, with tourists spending £119.3 billion. The spend per visit of tourists to the UK was highest amongst international overnight visitors, who spend an average £644 per visit, compared to £197 per visit spent by domestic overnight tourists, and £41 per visit spent by day visitors.

Table 23.28 Visitors and tourism spending, 2019

	North Devon	Torridge	Local Area	UK
Visits (million)				
Day Visitors	3.9	1.7	5.6	1,653
Domestic Overnight Visitors	0.8	0.3	1.1	124
International Overnight Visitors	0.4*	0.4*	0.4*	43
Total Visitors	**4.7****	**2.0****	**6.7****	**1,820**
Spend (£ million)				
Day Visitors	93.1	57.4	150.5	66,978
Domestic Overnight Visitors	189.7	61.3	251.0	24,368
International Overnight Visitors	192.3*	192.3*	192.3	27,920
Total Visitors	**282.8****	**118.8****	**401.6**	**119,265**

*Data only available for Devon as a whole. **Excludes international visitors.

23.4.1.3.2 Employment

129. The tourism sector has grown faster within the Local Area than across the wider UK economy. Between 2015 and 2021, the level of employment in the accommodation and food services and arts, entertainment and recreation sectors grew by 33% and 49% in North Devon and Torridge, respectively (ONS 2021). Employment across the Local Area grew from 8,150 to 11,200, a 37% increase, at a time when employment in the sector across the UK grew by 7%.

Table 23.29 Tourism employment growth

	North Devon	Torridge	Local Area	UK
2015 Employment	5,800	2,350	8,150	2,872,000
2021 Employment	7,700	3,500	11,200	3,072,000
Jobs Growth (2015-2021)	33%	49%	37%	7%

23.4.1.3.3 Geographic Distribution of Tourism Activity

130. Employment in the tourism sector (defined as comprising jobs in accommodation and food service activities and arts, entertainment and recreation) across the Local

Area is mostly concentrated along the coast. Around 48% of jobs (5,390) in the sector are supported on the North Devon Coast (between Lynton and Crow Point) and in Torridge around the Harland Devon Heritage Coast.

131. Most of the employment supported across the tourism sector is associated with activity in accommodation and food services, rather than reflecting activity at specific tourism attractions.

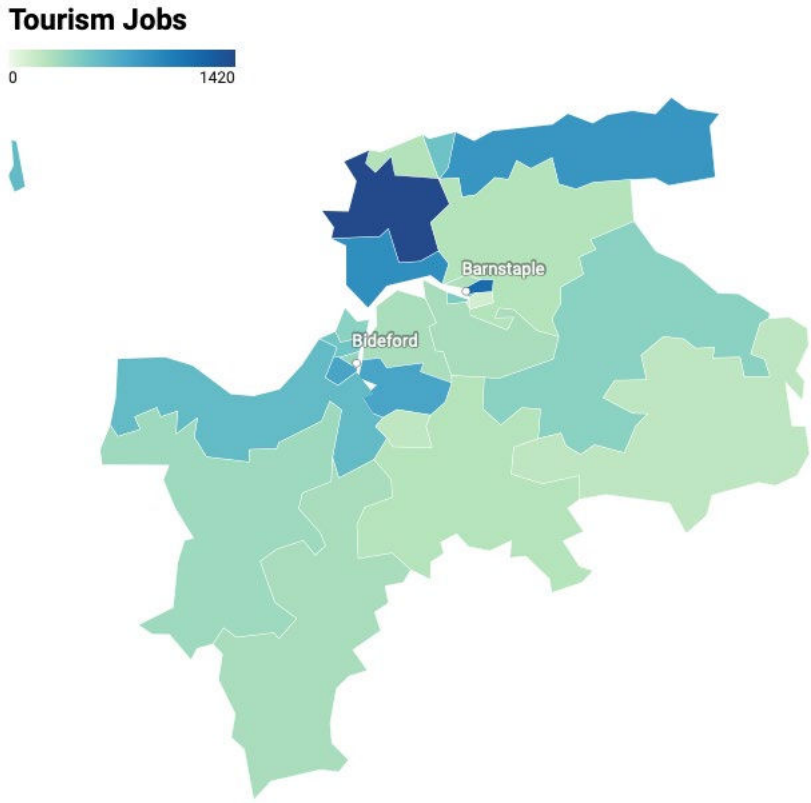


Figure 23.2 Distribution of employment in accommodation and food service activities, and arts, entertainment and recreation

Source: ONS (2022), Business Register and Employment Survey – Super Output Areas, Mid-layer

23.4.1.3.4 Tourist attractions

132. To understand the relative sensitivity of tourism assets within the Local Area, desk research was carried out to identify key visitor attractions. This was based on a review of local tourism websites such as VisitDevon.co.uk and on professional judgement. The approach draws on BiGGAR Economics experience in carrying out similar tourism assessments in the context of both onshore and offshore developments.

133. On this basis, 26 major attractions that were identified in the Local Area. These are listed and described in

134. **Table** 23.30. Among the identified attractions, 14 were considered as being located along the coast with views of the Celtic Sea.

Table 23.30 Local Area, top visitor attractions

Attraction	Description	Coastal?
North Devon World Surfing Reserve	The reserve, the first of its kind established within the UK covers an area of around 30km, including surf breaks such as Croyde, Saunton, Woolacombe, and Lynmouth.	Yes
South West Coast Path	England's longest National Trail of 630 miles around the entire South West peninsula, beginning in Exmoor and ending in Poole Harbour.	Yes
Ultimate Adventure Centre (Abbotsham)	Adventure Centre offering a comprehensive range of outdoor activities, with accommodation totalling 300 beds, a café and function space.	No
Church of St Mary (Bideford)	Parish Church which offers services, baptisms, weddings and funerals.	No
Bideford Pannier Market	Victorian Market building hosting 30+ shops and studios as well as markets on Tuesdays and Saturdays.	No
The Sports Ground (Bideford)	The Sports Ground is a football stadium used by Bideford A.F.C. on Kingsley Road in Bideford, Devon.	No
Burton Art Gallery (Bideford)	The Burton at Bideford is an art gallery and museum.	No
Victoria Park (Bideford)	Park in Bideford which includes a variety of recreational facilities, a children's play area, an open-air paddling pool and a skateboard park.	No
Church of St Margaret of Antioch (Bideford)	Anglican Parish Church which has been a Grade I listed building since 1951.	No
Hockings Dairy Ice Creams (Bideford)	Ice cream vans which are out daily from March to October in Appledore, Bideford, Barnstaple, Ilfracombe, Instow, Torrington and Westward Ho.	No
North Devon Maritime Museum (Bideford)	Maritime history museum in Bideford with several different maritime themed exhibits.	No
Sea Green of Appledore	Based on recycling, Sea Green is a small workshop/gallery in the heart of Appledore.	Yes

Attraction	Description	Coastal?
St Mary's Church (Appledore)	The Parish Church of Appledore with regular services.	No
Kipling Tors (National Trust)	An open greenspace owned by the National Trust including a walking route. The route passes next to the sea and features views across Bideford Bay and inland to Exmoor. Rudyard Kipling's novel, Stalky & Co, is based on his school days here.	Yes
Northam Burrows Country Park	Northam Burrows Country Park is a beautiful expanse of common land popular with visitors throughout the year and is a popular walking destination.	Yes
Appledore and Northam Burrows	Interesting and scenic coast walk from Westward Ho! To Appledore.	Yes
Royal North Devon Cricket Club (Instow)	North Devon Cricket Club was founded in 1823 and moved to its current ground at Instow in 1836, with cricket being played every year.	No
Braunton Burrows	Braunton Burrows, is one of the largest sand dune systems in the British Isles. At the heart of the North Devon Area of Outstanding Natural Beauty (AONB), it is a UNESCO designated Biosphere reserve.	Yes
Saunton Sands	Saunton Sands is a beach near the English village of Saunton on the North Devon coast near Braunton, popular for longboard surfing.	Yes
Saunton Golf Club	Based on the coast of North Devon & listed as one of the Best Golf Courses in the UK.	Yes
Croyde Sands	Croyde Bay is a sandy beach backed by sand dunes and situated in a small bay on the North Devon Coast.	Yes
Baggy Point (National Trust)	Headland at Croyde with crashing waves and dramatic cliffs.	Yes
Putsborough Sands	Putsborough Sands is a large sandy beach that forms the southern section of Woolacombe Sands, which is popular with surfers.	Yes
Woolacombe Sands	Popular sandy beach with family holiday park nearby.	Yes
Woolacombe Down (National Trust)	Coastline of cliffs, coves, beaches, dunes, and headlands, which is a popular destination for walking.	Yes

23.4.1.3.5 Marine recreational activities – Surfing and Diving

135. Water sports are very popular in the Local Area. There are many beaches along the coastline of both local authorities, which are abundantly used for water sports and water activities. The beaches at Northam, Saunton Sands, Croyde, Putsborough, and Woolacombe are particularly popular for surfing, wind surfing, and kite surfing.

Westward Ho! Beach in Torridge is also a Blue Flag site, which is one of the most recognised awards for beaches, marinas, and sustainable boating tourism operators. To qualify for the Blue Flag, a series of stringent environmental, educational, safety, and accessibility criteria must be met and maintained. Westward Ho! Beach also has a slipway for boating and other watercrafts.

136. In recognition of the surf breaks present on its coastline, in 2022 North Devon became one of 12 World Surfing Reserve. The reserve status covers an area of around 30km, which includes surf breaks such as Croyde, Saunton, Woolacombe, and Lynmouth. The North Devon World Surfing Reserve is the only one of its kind in the UK and one of two reserves in Europe (the other being Ericeira in Portugal). As a key stakeholder, the Applicant has engaged with the North Devon World Surfing Reserve. The comments received have been set out in **Table 23.17.**

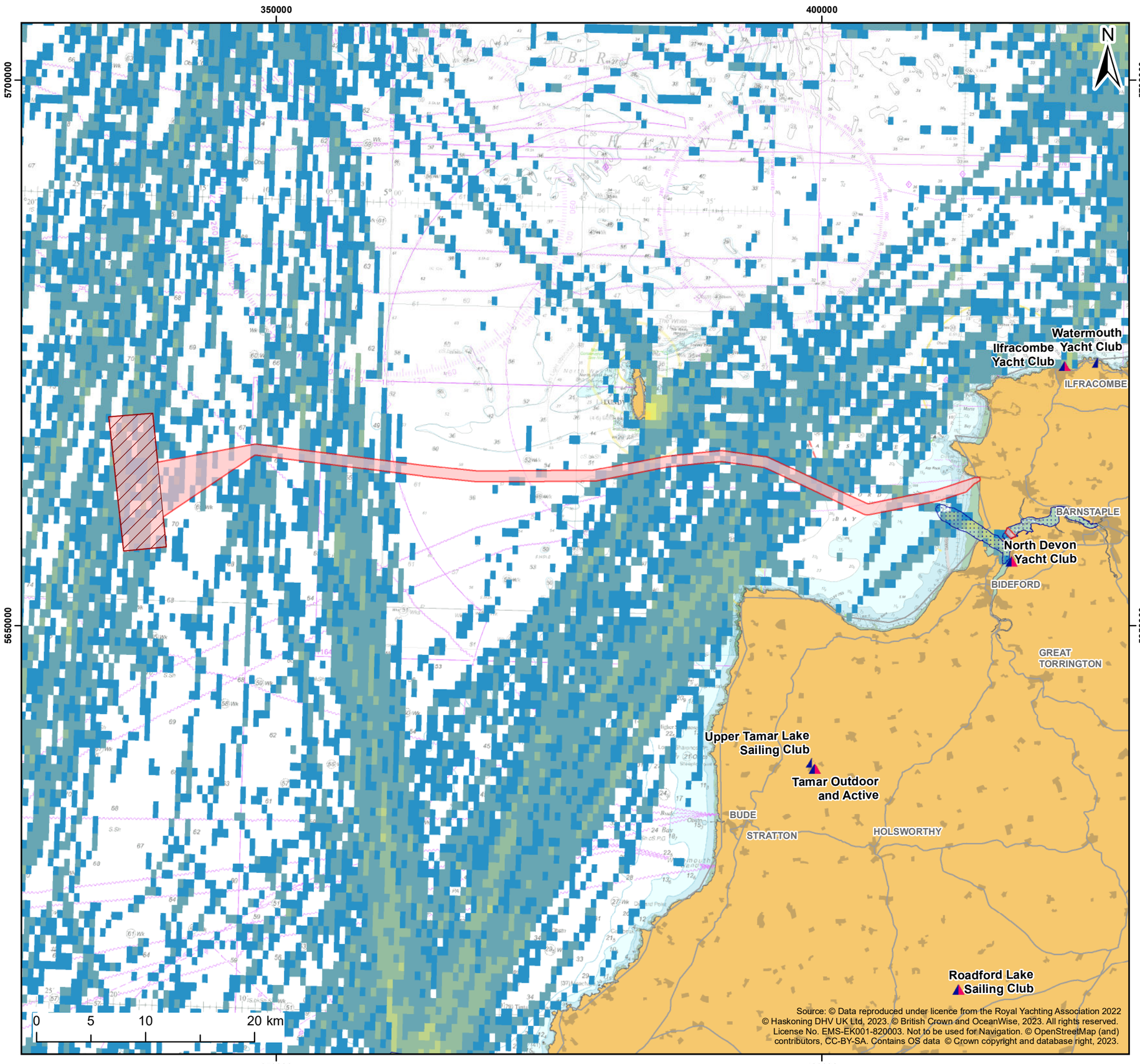
137. In 2013, Surfers Against Sewage, a marine conservation charity, carried out a study considering the economic impact of surfing activity across the UK. The study found that surfing activity across the UK directly supports a total of between £1.0 billion and £1.8 billion. The analysis suggested that around 22% of surfers were based in Devon. Researchers at the University of Plymouth are in the process of carrying out an updated assessment of the sector's economic impact.

138. Finstrokes is a website that gives divers detailed information on dive sites along hundreds of miles of shoreline, rivers, lochs, and quarries. There are two sites detailed on Finstrokes in the Local Area that are used for diving, being at Clovelly Beach and Wildersmouth Beach.

23.4.1.3.6 Yachting Activity

139. Yachting in North Devon is mostly associated with the activities of North Devon Yacht Club (North Devon Yacht Club, 2022). Based in Instow on the banks of the Rivers Torridge and Taw, the Club offers sailing within the Estuary or out in the Celtic Sea.

140. The North Devon Yacht Club is a Royal Yachting Association (RYA) centre accredited for training. The training activities offered cover both sailing (Sailing and Power Boating) and beyond, for instance through the provision of courses in First Aid. August is an important month for racing activity, with the organisation of the Open Week.



Legend:

- Windfarm Site
- Offshore Development
- General Boating
- RYA Club
- RYA Training Centre

AIS Intensity

- Low
- High

Client: Offshore Wind Ltd.	Project: White Cross Offshore Windfarm

Title: Yachting Activity in Torridge and North Devon

Figure: 23.3 | Drawing No: PC2978-RHD-ZZ-XX-DR-Z-0459

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
P02	13/03/2023	AB	CB	A3	1:350,000
P01	19/12/2022	AB	CB	A3	1:350,000

Co-ordinate system: WGS 1984 UTM Zone 30N

WHITE CROSS

Royal HaskoningDHV
Enhancing Society Together

23.4.1.3.7 Marine recreational activities – Sea Angling

141. Sea angling is popular along the coast of North Devon and Torridge. Sea angling is the capture of fish for leisure or personal consumption, by line only, and is the most common method of marine recreational fishing in the UK. The Centre for Environment Fisheries & Aquaculture Science (Cefas) undertook a study of sea angling in 2017. The report found that sea angling is a popular activity across the UK and has various social and economic benefits. It identified that there were 902,000 people that went sea angling in 2017 across the UK, with the South West being the most popular region of England for the activity. The study estimated that the total economic impact of sea angling in the UK was £1.94 billion in 2017 and supported 16,300 jobs. Sea angling is a popular recreational activity along the coastline of North Devon and Torridge, benefiting the local economy and supporting jobs.

23.4.1.3.8 Walking and cycling routes

142. There are a variety of walking trails and cycling routes located within the Local Area. The North Devon Council website (2022) and Torridge Council website (2022) identify several long-distance walking and cycle routes across North Devon and Torridge, including the following coastal routes:

- South West Coast Path
- Tarka Trail cycle path
- The Devon Coast to Coast cycle route
- La Velodyssee cycle route
- Appledore & Northern Burrows walk
- Westward Ho! Kingsley & Kipling walk
- Westward Ho! To Cornborough Cliffs walk
- Baggy Point circular walk via Bloodhills Cliff
- Baggy Point to Woolacombe circular walk.

23.4.1.3.9 Relationship between offshore wind farms and tourism

143. The relationship between wind developments (both onshore and offshore) and tourism activity has been the subject of several studies.

144. The visibility of wind turbines to onshore tourists and recreational receptors has the potential to affect the amenity of an area. However, tourism perception research in rural Wales (NFO 2003), North Devon (Aitchison 2004), Scotland (Glasgow Caledonian University 2008), and Northumberland (Northumbria University 2014) show that most people do not perceive windfarms negatively. Furthermore, economic studies of Wales (Regeneris and The Tourism Company 2014) and

Scotland (Biggar Economics 2021) demonstrate that windfarms have no measurable effect on the tourism economy.

23.4.1.3.10 Factors driving tourism activity

145. Based on existing evidence on tourism and the tourism economy, activity is mostly driven by the following factors:

- the ability and willingness of tourists to travel
- economic performance (and so whether tourists have disposable income available for leisure trips)
- exchange rates
- the quality of the overall tourism product
- the effectiveness of destination marketing
- the quality and value for money of the services offered by tourism businesses.

146. There exists no relationship between most of these factors and the existence of an offshore wind development. The assessment of potential tourism impacts during the construction and operations and maintenance phases of the Offshore Project will consider whether visitor attractions and the motivations for visiting them will be affected by the wind farm.

147. In case any evidence was found, for a change in tourism activity to happen, the following conditions would need to be met:

- the construction of the Offshore Project's components or their operation has some impact(s) on the area
- visitors, or potential visitors are aware of such impact(s)
- visitors, or potential visitors, react by changing their behaviour. For example, by changing the length of stay, where they chose to visit or the activities that they undertake
- the change in behaviour results in a change in their level of spending
- these changes in visitor spending result in a change in performance of the tourism sector, for example, a change in employment.

23.4.2 Do Nothing Scenario

148. The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 require that "an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge" is included within the ES (EIA Regulations, Schedule 4, Paragraph 3). From the point of assessment, over the course of the development

and operational lifetime of the Offshore Project (operational lifetime anticipated to be a minimum of 25 years), long-term trends mean that the condition of the baseline environment is expected to evolve. This section provides a qualitative description of the evolution of the baseline environment, on the assumption that the Offshore Project is not constructed, using available information on socio-economics, tourism and recreation.

149. In the context of the Offshore Project not being constructed, inferences can be made based on existing projections. Over the period to 2043, the population of the UK is expected to increase by 9.2% compared to 2018, with a relatively larger increase in the populations of North Devon (15.8%) and Torridge (15.2%).

150. Over the same period, the population structure is expected to change across the two study areas, with a relative increase in the share of the population accounted for by people aged 65+. This trend will be more marked across the Local Area.

151. An ageing population structure is expected to have implications for public service provision and the sustainability of the social security system, especially so in the Local Area. The lack of investment in the Offshore Project and an underperforming economy in the Local Area may reduce the likelihood of retaining and attracting young people to North Devon and Torridge and reduce demographic pressures.

152. Based on its legal obligations, the UK will have to reach carbon neutrality by 2050. Even with the Offshore Project not going ahead, there will remain a requirement for the electrification of the economy through renewable energy sources. The Offshore Project constitutes one of the first developments planned in the Celtic Sea. For this reason, if it was not carried out, there may be a risk of delays in the successful use of this sea area for renewable energy generation.

153. It remains of strategic importance for the UK economy to develop a robust supply chain in the offshore wind sector to benefit from its future expansion. Increasing renewable energy generation through the development of a strong domestic supply chain will have the joint benefits of increasing security of supply while benefitting economic activity.

154. While the Offshore Project cannot on its own affect these dimensions due to its scale, for the UK it remains key to be a first mover in the floating offshore wind sector. This will enable the formation of supply chains that may benefit from increasing demand elsewhere across the world. Floating offshore wind is a relatively new technology and, as such, investment in similar projects could support the UK economy and develop domestic industry.

23.4.3 Receptor Sensitivity

155. This section considers each of the receptors included within the analysis and assesses their relative sensitivity to impact.

23.4.3.1.1 Economic Activity in the Local Area

156. This receptor captures any changes in the level of employment and GVA within the Local Area, including supply chain activity. It also covers any contribution the Offshore Project could make towards the development of low-carbon industries.

157. The socio-economic baseline has identified that in the Local Area:

- a smaller share of employment is accounted for by sectors that could deliver construction contracts compared to the UK as a whole. Activity in accommodation and food service activities, which is associated with tourism, accounts for a larger share of employment than across the UK
- there is a lower share of the working age population holding higher qualification levels (NVQ3+ and NVQ4+) compared to the UK average
- levels of employment have increased by 2% over the period between 2010 and 2020, compared to 10% across the UK.

158. Based on these features of its socio-economic structure and in line with the approach outlined in **Table 23.7,** the sensitivity of the economy of the Local Area has therefore been assessed as **medium** sensitivity.

23.4.3.1.2 Economic Activity in the UK

159. This receptor captures any changes in the level of employment and GVA within the UK, including through supply chain activity. It also covers any contribution the Offshore Project could make towards the development of low-carbon industries.

160. The socio-economic baseline has identified that in the UK:

- the economy is well balanced between sectors
- educational attainment and jobs growth are, by definition, in line with the UK average.

161. The sensitivity of the UK economy has therefore been assessed as **low**, in line with the approach outlined in **Table 23.7.**

23.4.3.1.3 Social and Community Assets in the Local Area

162. This receptor considers assets such as housing, education and health services within the Local Area, and how current users of these assets are affected by any inward migration linked to the Offshore Project. The evidence from the socio-economic baseline suggests that:

- house prices in the Local Area have increased at a relatively slower rate (25%) than across the UK (27%)
- across the South West of England, pupil to teacher ratios are slightly higher than across the UK
- Devon has a smaller number of patients per GP (1,460) compared to the UK average (1,724).

163. The approach outlined in **Table 23.10** would therefore suggest that the sensitivity of the social and community assets in the Local Area is **low**.

23.4.3.1.4 Tourism and Recreation Activity in the Local Area

164. This receptor captures any change in tourism spending with knock-on implications on the employment and GVA supported by tourism in the Local Area.

165. The socio-economic baseline has identified that the tourism economy the Local Area:

- is mostly concentrated along the coast
- employment in the tourism sector has grown faster (+48%) over the period between 2015 and 2021 than across the UK (+9%).

166. The approach outlined in **Table 23.9,** would therefore indicate that the tourism economy of the Local Area could have a **medium** sensitivity to change.

23.5 Potential impacts during construction

167. The potential impacts during the construction phase of the Offshore Project have been assessed with respects to socio-economics, tourism, and recreation. This section provides a description of the potential effect on socio-economics, tourism and recreation receptors from each identified impact.

168. Compared to what was included in the scoping report, the analysis also considers impacts on economic activity and employment during the construction of the Offshore Project. This is because they provide a better understanding of the scale of investment involved and its role in the creation of skills and generation of renewable energy.

23.5.1 Estimating construction expenditure

169. The Offshore Project will generate economic impacts through the expenditure that will be required during is construction.

170. The economic impact assessment, including both the GVA that will be generated and the employment that will be support, is therefore based on estimates of the expenditure that will be required.

171. The assessment of GVA impacts was based on a realistic worst-case scenario where a total of six turbines would be installed. Under this scenario, the use of a lower number of turbines with larger capacity will reduce the level of spending secured by UK businesses because most of the spending on turbines will benefit businesses located outside of the UK.

172. The floating offshore wind market is developing rapidly across the world as the sector aims to achieve cost competitiveness with other renewable energy technologies. Analysis by the National Renewable Energy Laboratory (NREL, 2022)has estimated that a utility scale floating array would require capital investment equivalent to approximately £5 million per MW ($5.6 million). The Offshore Project is smaller than a utility scale development, which is assumed to include 75 turbines in the NREL assessment. Larger projects will achieve economies of scale that are not available to smaller offshore wind sites and therefore the costs associated with the Offshore Project are assumed to be higher per MW.

173. In total, it is estimated that the Offshore Project, across both the onshore and offshore components, will require over £500 million of capital investment.

174. The NREL study splits the components of capital expenditure on floating offshore wind projects by primary contract area which is shown in **Table 23.31**. This shows that the floating substructure, which will hold the WTG is likely to be the most expensive element of the project and account for 38% of the expenditure. This is flowed by the WTG itself, which will account for around 23% of total capital expenditure.

Table 23.31 Split of capital expenditure

	Share
Development and Project Management	2%
WTG	23%
Floating Substructure	38%
Electrical Infrastructure	13%
Assembly and Installation	6%
Other	19%

175. While this distribution is based on a hypothetical utility scale development, the overall split between contracts for the Offshore Project is expected to be similar. In

particular, the majority of the capital expenditure will be spent on the floating substructure and the WTG.

176. The scope of the assessment is to consider the economic impacts associated with the offshore assets, which will account for the vast majority of this expenditure.

23.5.2 Estimating Distribution of Expenditure

177. The economic impacts from the construction of the Offshore Project have been estimated to the Local Area and the UK. The economic impacts will occur if organisation are either directly contracted to work on the Offshore Project or form part of the wider supply chain.

178. At this stage of the project, many of the contracts which are outlined in in **Table 23.31** have not been determined. Therefore, to estimate the distribution of contract expenditure between the study areas it is necessary to consider the potential capacity of industries in both areas to meet the demands from the Offshore Project and the likelihood of these contracts being awarded in each study area. The worst-case scenario approach assumes that a lower proportion of the contracts are procured in either the Local Area or the UK.

179. For example, at this stage it is not known if the primary operational port will be within the Local Area. Therefore, the assessment has assumed that it will be located elsewhere in the UK. Similarly, the primary port for the assembly and integration of the WTGs to the floating substructures is also assumed to be within the UK, but not in the Local Area.

180. In addition, conservative assumptions were made on the ability of businesses within the UK to secure contracts. On this basis, it was assumed that 41% of construction spending would take place in the UK. The majority of the UK expenditure is expected to be associated with:

- fabrication of the floating substructure;
- fabrication and installation services for the offshore substation;
- cable manufacturing and installation;
- blade manufacturing ; and
- development and consenting services.

181. Within the Local Area, there will also be opportunities for the Offshore Project to stimulate economic activity through economic activity through contracts awarded during the construction phase. These opportunities are most likely to occur if a location within the Local Area is selected to be a key operations and maintenance

port. This will require operation and maintenance facilities to be constructed to ensure that the port is able to meet the requirements and provide office and industrial accommodation for staff. At this stage of the development, the location of the primary operation and maintenance base has not been determined and therefore, in line with the worst-case scenario approach, for the purposes of the assessment it is assumed that the operation and maintenance base will not be in the Local Area. While the worst-case scenario approach required conservative assumptions on local content, the Applicant remains committed to maximising economic benefits of the Offshore Project to the Local Area.

182. The purpose of this assessment is to consider the socio-economic impacts associated with the Offshore Project. This does not include the onshore cable route, from landfall to onshore substation. Therefore, in line with the worst-case scenario approach, it was assumed that no companies within the Local Area will directly secure contracts for the Offshore Project.

23.5.3 Impact 1: Economic Expenditure

23.5.3.1 Magnitude of impact

183. The starting point in considering GVA impacts involved estimating the spending from the construction of the Offshore Project. The first round of expenditure and economic impact will occur within the developer organisation and through its directly procured contractors. For the purposes of the assessment both the developer and its directly procured contractors are considered as one group within the direct impact analysis. This expenditure will generate GVA within these companies, which is measured by the sum of the profits and staff costs that will be stimulated by this turnover.

184. The level of GVA that is supported by a given amount of turnover is dependent on the sector that the company is operating in. To estimate the direct GVA from each of the main contract categories, each contract was split into sub-contracts. Using industry-specific data on turnover and Gross Value Added (GVA) from the Annual Business Statistics (ONS,2021), turnover per GVA ratios were applied to each specific sub-contract to estimate the direct GVA.

185. There will also be knock on effects in the supply chain as these directly procured companies purchase goods and services to support their activities. These effects are estimated by applying Type 1 (Indirect) GVA multipliers, which are sourced from the ONS (ONS, 2022), to the direct GVA impacts.

186. Those who are directly employed on the Offshore Project, or through the supply chain, will also have an impact on the economy through the spending of their salaries. This is the induced impact, and it is calculated using the Type 2 multipliers, that are based on the ONS Input-Output Tables.

187. The ONS provide estimates of both the Type 1 (indirect) and Type 2 (induced) multipliers for the UK economy, and these have been adjusted for North Devon and Torridge, where appropriate.

188. The construction of the Offshore Project is expected to generate a total £165 million (direct and indirect) GVA across the UK. No impact is expected within the Local Area, due to choices on the location of construction and operations and maintenance ports. A summary of impact across study areas is provided as part of **Table 23.32.**

Table 23.32 Construction: total GVA

	Local Area	UK
Direct GVA (£m)	-	86
Indirect GVA (£m)	-	79
Total GVA (£m)	-	165
Induced GVA (£m)	-	68
Total GVA Including Induced (£m)	-	233

189. As set out above, in addition to the direct and supply chain impacts, the Offshore Project will generate induced impacts. These could amount to an extra £68 million GVA across the UK economy.

190. The magnitude of the economic impact from the expenditure during the construction phase has been estimated in line with the methodology outlined in **Section 23.2.3** of this chapter. For the purposes of the assessment, only the direct and indirect economic impacts are considered when determining the magnitude of the impact. These describe the economic activity required to realise the Offshore Project and are the focus of other economic assessments associated with offshore wind projects.

191. In 2020 the GVA generated across the UK economy was £1.9 trillion. At its peak, the Offshore Project will be supporting a total £79 million GVA. Based on this, the economic activity associated with the Offshore Project is estimated as less than 0.1% of the UK economy.

192. In line with the approach described in **Table 23.8**, the magnitude of the effect on the UK economy is considered **negligible**. Similarly, the magnitude of impact with respects to the economy of the Local Area was assessed as **no impact**.

Table 23.33 Construction: magnitude of GVA impact

	Local Area	UK
Peak GVA (£m)	-	79
Current GVA of Study Area (2020, £m)	3,100	1,949,605
Peak GVA as % Current GVA	n/a	Less than 0.1%
Magnitude of Impact	No Impact	Negligible

23.5.3.2 Sensitivity of the receptor

193. The sensitivity of socio-economic receptors was discussed as part of **Section 23.4.3**. Based on the analysis in that section, sensitivity was assessed as:

- **medium** for the Local Area
- **low** for the UK economy.

23.5.3.3 Significance of effect

194. Based on the assessments of sensitivity and magnitude, the effect of spending on the UK economy during the construction of the Offshore Project was assessed as **negligible beneficial**. In the Local Area it has been assessed as **no change**.

23.5.3.4 Further Mitigation

195. The impact of construction activity on economic expenditure is expected to be beneficial. For this reason, no mitigation is required.

23.5.3.5 Scale of economic activities at primary port locations

196. The economic activity in the UK will be concentrated in the areas around the primary integration port, where the wind turbines will be integrated onto the floating substructures and towed out into position. The location of this port has not been determined; however it is assumed that this will be within the UK to minimise the distance required for towing. It is estimated that this activity will generate £30 million GVA (direct and indirect) during the integration, assembly and installation of the WTGs. This activity is expected to occur over a two-year period, with a peak of £20 million GVA being generated in a given year.

197. There will also be activity at the location of the primary operation and maintenance port during the construction phase. This will include the construction of office and workshop facilities at the port side and potential improvements to the port infrastructure. This activity will be worth £2 million GVA and is expected to occur over a one-year period.

198. The scale of the impacts are outlined for both the primary construction and operations and maintenance ports in **Table 23.37**. As the location of these ports has not been determined, it is not possible to describe the relative magnitude, sensitivity or significance of these effects.

Table 23.34 Construction: Total GVA around port locations

	Primary Construction Port	Operations & Maintenance Port
Direct GVA (£m)	22	2
Indirect GVA (£m)	8	1
Total GVA (£m)	30	2
Peak GVA (£m)	20	2

23.5.4 Impact 2: Employment

199. The Construction of the Offshore Project will also result in the creation of temporary employment across the UK. The estimation of impacts on employment relied on the same methodology and assumptions adopted to estimate impacts on GVA.

200. As the employment supported by the Construction of the Offshore Project will be temporary, impacts are estimated in terms of "years of employment". This is a measure of temporary employment, whereby a job lasting for 18 months is to be interpreted as 1.5 years of employment. In line with a worst-case scenario approach, it was assumed that both the construction, and the operations and maintenance port would be located outside the Local Area. For this reason, no employment impacts associated with the Offshore Project was assumed to occur within the Local Area and it was scoped out from further assessment.

23.5.4.1 Magnitude of impact

201. Based on these assumptions, it was possible to estimate the impact on employment (direct and indirect) from the Construction of the Offshore Project. During this phase the Offshore Project could result in the creation of 2,650 years of employment across the UK. No impacts on employment are expected in the Local Area due to port locations being located outside this study area, and impacts on the Local Area are therefore scoped out from further assessment.

Table 23.35 Construction: total employment

	Local Area	UK
Direct Employment	-	1,340
Indirect Employment	-	1,310
Total Employment	-	2,650
Induced Employment	-	1,060

	Local Area	UK
Total Employment Including Induced	-	3,710

202. In addition to the direct and supply chain impacts considered above, the Offshore Project will support economic activity through the spending of those employed during its construction (induced impacts). This could result in an extra 1,060 years of employment across the UK.

203. At its peak (2026 Q1), the Construction of the Offshore Project is expected to support 1,270 jobs across the UK. Peak employment was less than 0.1% of total employment across the UK economy.

204. In line with the approach described in **Table 23.8**, the magnitude of the effect on the UK economy is considered **negligible**. The magnitude of the effect on the Local Area's economy was also assessed as **no impact**.

Table 23.36 Construction: magnitude of employment impact

	Local Area	UK
Peak Employment (Jobs)	-	1,270
Current Jobs	70,005	30,547,000
Peak Jobs as % Current Jobs	n/a	<0.1%
Magnitude of Impact	No Impact	Negligible

23.5.4.2 Sensitivity of the receptor

205. The sensitivity of socio-economic receptors was discussed as part of **Section 23.4.3**. Based on the analysis in that section, sensitivity was assessed as:

- **medium** for the Local Area
- **low** for the UK economy.

23.5.4.3 Significance of effect

206. Based on the assessment of magnitude and sensitivity, the effect on the UK economy from employment associated with the Construction of the Offshore Project was assessed as **negligible beneficial**. Similarly, the effect on the Local Area was assessed as **no change**.

23.5.4.4 Further Mitigation

207. The impact of Construction activity on temporary employment is expected to be beneficial. For this reason, no mitigation is required.

23.5.4.5 Scale of economic activities at primary port locations

208. The economic activity in the UK will be concentrated in the areas around the primary integration port, where the wind turbines will be integrated onto the floating substructures and towed out into position. The location of this port has not been determined; however it is assumed that this will be within the UK to minimise the distance required for towing. It is estimated that this activity will support 520 years of employment (direct and indirect) during the integration, assembly and installation of the WTGs. This activity is expected to occur over a two-year period, with a peak of 350 jobs being supported.

209. There will also be activity at the location of the primary operation and maintenance port during the construction phase. This will include ethe construction of office and workshop facilities at the port side and potential improvements to the port infrastructure. This activity will support 30 years of employment and is expected to occur over a one-year period.

210. The scale of the impacts are outlined for both the primary construction and operations and maintenance ports in **Table 23.37**. As the location of these ports has not been determined, it is not possible to describe the relative magnitude, sensitivity or significance of these effects.

Table 23.37 Construction: total employment around port locations

	Primary Construction Port	Operations & Maintenance Port
Direct Employment	360	20
Indirect Employment	160	10
Total Employment	520	30
Peak Employment	350	30

23.5.5 Impact 3: Social infrastructure

23.5.5.1 Social Infrastructure

211. This section considers impacts on a range of receptors, including:

- temporary pressures on housing from migration associated with the Construction of the Offshore Project

- temporary pressures on key public services, such as the health service and schools, from migration during the Construction of the Offshore Project.

212. Any impacts on tourism and recreation are considered separately towards the end of this section.

23.5.5.2 Magnitude of impact

213. Impacts will be localised and based on the location of the Construction port. The distribution of economic activity during the development and construction of the Offshore Project is determined by the location of the directly contracted and supply chain companies. Changes to the use of and demand for social and community assets will be the result of new people moving to the area to work on the Offshore Project.

214. As the Local Area is not expected to host the construction port, it is unlikely that there will be any migration associated with the Offshore Project to these two local authority areas. As a result, no pressures on housing and supporting social infrastructure, including health and educational provision, are expected.

215. For this reason, the magnitude of impact with respects to social infrastructure in the Local Area was assessed as **no impact**.

23.5.5.3 Sensitivity of the receptor

216. The sensitivity of social infrastructure in the Local Area was assessed as **low**. As set out in **Section 23.4.3**, this was due to the area's relative alignment to average levels of health and educational provision, as well as lower increases in house prices over time.

23.5.5.4 Significance of effect

217. Based on the assessment of sensitivity and magnitude, the effect of the Offshore Project's Construction on social infrastructure was assessed as **no change** with respects to the economy of the Local Area.

23.5.6 Impact 4: Tourism and Recreation

218. At least in theory, construction activity could have an impact on the tourism economy. This may be the case, for instance, if it were to:

- Disrupt recreational activities at sea
- Disrupt access for recreational activities at the shore near the cable landfall or
- Affect access to tourism and recreation assets onshore located near the construction port.

23.5.6.1 Magnitude of impact

219. For the purposes of the assessment it is assumed that construction is not undertaken at a port location in the Local Area, there will be no impacts on access to onshore tourism and recreation assets.

220. As suggested above, another channel through which the construction of the Offshore Project could have an impact on tourism and recreation is if it were to affect marine activities. In the context of the Local Area, surfing and yachting play a relatively important role within marine recreation.

221. The use of ports outside of the Local Area means that the Offshore Project is unlikely to impact activities near to shore such as surfing, sea swimming or sea kayaking (note, a separate assessment is undertaken relative to any impacts on waves). However, the landfall site at Saunton Beach may lead temporarily to limited access. This scale of the temporary limited access will be dependent on the landfall installation method.

- Trenchless technique – no sections of the beach will require restricted access if the landfall method used is a trenchless technique as the drilling will occur from an onshore construction compound, rather than the beach itself.
- Open trench – a narrow section of the beach will require restricted access for a small number of days if the landfall method used is open trench. This will not cause restrictions to any other areas of the beach and the beach will be able to accommodate a similar level of surfing, sea swimming or kayaking activity as normal.

222. Yachting activity is mostly linked to North Devon Yacht Club and the Ilfracombe Yacht Club. Part of the club's activity is carried out within the estuary of the rivers Taw and Torridge, which is unlikely to be affected by construction activity. Both yacht clubs also access the open sea, particularly Lundy Island, which will require the yachts to pass over the proposed offshore cable route. During the construction period cable laying and surveying vessels will operate in this area. It is expected that the vessels shall operate for two months of the year during this period. The presence of these vessels will not impede the yachting clubs from accessing Lundy Island, however recreational mariners will need to be aware of these vessels during navigation (**Figure 23.3**).

223. Activity at sea may be affected but will not impeded. No impacts are expected on recreational fishing and diving activity.

224. The magnitude of impact from the Construction of the Offshore Project on tourism and recreation activity was assessed as **negligible**.

23.5.6.2 Sensitivity of the receptor

225. As set out in **Section 23.4.3**, tourism and recreation activity in the Local Area is concentrated along the coast. The sector has also witnessed faster growth than across the UK. For these reasons, the sensitivity of tourism and recreation activity to change was assessed as **medium**.

23.5.6.3 Significance of effect

226. Based on the assessment of sensitivity and magnitude, the effect of the Offshore Project's Construction on tourism and recreation was assessed as **minor adverse** with respects to the economy of the Local Area.

23.5.6.4 Further Mitigation

227. The Applicant will continue to engage with tourism and recreation bodies, including the yachting clubs and surfing organisations. This will include keeping all parties up to date with project developments, potential vessel movements and any access restrictions.

23.6 Potential impacts during operation and maintenance

228. The potential impacts of the operation and maintenance phase of the Offshore Project have been assessed with regards to socio-economics, tourism, and recreation. Economic expenditure, employment, and social infrastructure are considered in this chapter.

23.6.1 Impact 1: Economic Expenditure

229. In a similar way as for the Construction phase, economic activity during the operations and maintenance phase will have an impact on GVA. The analysis relied on a realistic worst-case scenario including the operation of six turbines for a total generating capacity of up to 100MW.

230. Expenditure during this phase of the project will include logistics costs, operational management, grid charges and the maintenance and service of both the WTGs and the wider balance of plant.

231. The assessment of economic impacts was based on conservative assumptions on the ability of businesses across the UK to secure operations and maintenance contracts. It was assumed that businesses across the UK could secure 82% of operational expenditure each year.

23.6.1.1 Magnitude of impact

232. For the purposes of the assessment of impact magnitude, only direct and indirect GVA impacts have been considered.

233. The magnitude of the economic impact from the expenditure during the operations and maintenance phase has been estimated in line with the methodology outlined in **section 23.3.2** of this chapter. For the purposes of assessment, only the direct and indirect economic impacts are considered when determining the magnitude of the impact. These describe the economic activity required to realise the Offshore Project and are the focus of other economic assessments associated with offshore wind projects.

234. The induced impacts are quantified and presented for completeness but are not used in the assessment of magnitude.

235. Based on the spending secured by UK businesses, it was possible to estimate that during each year of its operations the Offshore Project could generate a total £3 million GVA across the UK. No activity is expected to take place in the Local Area, since it expected the operations and maintenance port will be located outside of these two study areas, therefore there is No Impact in the Local Area on economic expenditure during the Operations and Maintenance Phase of the Offshore Project and it is scoped out from further assessment. A breakdown of impacts is provided in **Table 23.38.**

Table 23.38 Operations and maintenance: Annual GVA

	Local Area	UK
Direct GVA (£m)	-	2
Indirect GVA (£m)	-	2
Total GVA	-	3
Induced GVA (£m)	-	1
Total Including Induced GVA (£m)	-	5

Note: Figures may not sum due to rounding

236. In addition to the direct and supply chain impacts, the operations and maintenance of the Offshore Project will support economic activity through the wider spending in the economy of those carrying out the works. These benefits could amount to an extra £1 million GVA across the UK.

237. The annual direct and indirect expenditure associated with the operations and maintenance of the Offshore Project is less than 0.1% of the UK's GVA. Based on the methodology set out in **Table 23.8**, the magnitude of annual expenditure on

the operations and maintenance of the Offshore Project was assessed as **negligible** with respects to the UK economy.

Table 23.39 Operation and Maintenance: Magnitude of GVA Impact

	Local Area	UK
Peak GVA (£m)	-	3
Current GVA of Study Area (2020, £m)	3	1,949,605
Peak GVA as % Current GVA	n/a	<0.1
Magnitude of Impact	No impact	Negligible

23.6.1.2 Sensitivity of the receptor

238. The sensitivity of socio-economic receptors was discussed as part of **Section 23.4.3**. Based on the analysis in that section, sensitivity was assessed as:

- **medium** for the Local Area
- **low** for the UK economy.

23.6.1.3 Significance of effect

239. Based on the assessments of sensitivity and magnitude, the effect of spending from the Offshore Project's operations and maintenance on the Local Area's economy was assessed as **no change** and on the UK economy was assessed as **negligible beneficial**.

23.6.1.4 Further Mitigation

240. The impact is expected to be beneficial. For this reason, no mitigation is required.

23.6.1.5 Scale of economic activities at primary port locations

241. The economic activity in the operations and maintenance phase will be focused around the primary operation and maintenance port location. It is from there that the crews will be dispatched to complete the routine maintenance of the Offshore Project, monitor the performance of the WTGs and wider infrastructure and respond to any issues arising.

242. In addition, the primary port location will also generate further opportunities in the supply chain, including vessel maintenance, port and storage facilities.

243. It is estimated that in an average year, over £4 million will be spent on the operations and maintenance of the project, around the primary operation and maintenance port. This spend will generate £2 million of GVA directly and further

activity within the supply chain. This activity will occur throughout the lifetime of the Offshore Project.

Table 23.40 Operation and Maintenance: Annual GVA around port locations

GVA Type	Operations & Maintenance Port
Direct GVA (£m)	2
Indirect GVA (£m)	<1
Total GVA (£m)	2

244. The scale of the impacts are outlined in **Table 23.40**. As the location of this port has not been determined, it is not possible to describe the relative magnitude, sensitivity or significance of these effects.

23.6.2 Impact 2: Employment

245. The operations and maintenance of the Offshore Project will result in an increase in the turnover of those businesses supporting operational activities. Changes in turnover will support the jobs required to fulfil contracts, including through the creation of employment.

246. The assessment of impacts on employment relies on the same assumptions used in the estimation of GVA impacts during the operations and maintenance period.

23.6.2.1 Magnitude of impact

247. For the purposes of assessment, only the direct and indirect economic impacts are considered when determining the magnitude of the impact on employment from operations and maintenance contracts. These describe the economic activity required to realise the Offshore Project and are the focus of other economic assessments associated with offshore wind projects.

248. The induced impacts are quantified and presented for completeness but are not used in the assessment of magnitude.

249. Based on operations and maintenance activity, it was possible to estimate that during each year of its operations the Offshore Project could support 40 jobs across the UK. No impact on employment was assumed with respects to the Local Area, therefore impacts in the Local Area are scoped out from further assessment.

Table 23.41 Operations and maintenance: Annual employment

	Local Area	UK
Direct Employment	-	20
Indirect Employment	-	20
Total Employment	-	40
Induced Employment	-	10
Total Including Induced Employment	-	50

250. In addition to the direct and supply chain impacts considered above, the operations and maintenance of the Offshore Project will support an extra 10 jobs across the UK through induced activity.

251. The level of employment supported by operations and maintenance activity is equivalent to <0.1% of total employment across the UK. Based on the relative employment supported by the Offshore Project, the magnitude of employment activity was assessed as **negligible** with respects to the UK economy.

Table 23.42 Operation and Maintenance: magnitude of jobs impact

	Local Area	UK
Peak Employment (Jobs)	-	40
Current Jobs	70,005	30,547,000
Peak Jobs as % Current Jobs	n/a	<0.1%
Magnitude of Impact	No Impact	Negligible

23.6.2.2 Sensitivity of the receptor

252. The sensitivity of socio-economic receptors was discussed as part of **Section 23.4.3**. Based on the analysis in that section, sensitivity was assessed as:

- **medium** for the Local Area
- **low** for the UK economy.

23.6.2.3 Significance of effect

253. Based on the assessment of magnitude and sensitivity, the effect of the Offshore Project on employment during its operations and maintenance was assessed as **negligible beneficial** for the UK economy. The effect on the Local Area's economy was also assessed as **no change.**

23.6.2.4 Further Mitigation

254. This impact is expected to be beneficial from the perspective of the UK economy. For this reason, no mitigation is required.

23.6.2.5 Scale of economic activities at primary port locations

255. The economic activity in the operations and maintenance phase will be focused around the primary operation and maintenance port location. It is from there that the crews will be dispatched to complete the routine maintenance of the Offshore Project, monitor the performance of the WTGs and wider infrastructure and respond to any issues arising. The jobs that will be required to support this operation and maintenance activity include:

- Asset integrity managers
- Operations controllers
- Wind turbine technicians
- Rope Access/Blade Repair Technicians
- Divers and
- Warehouse and logistics operators.

256. In addition, the primary port location will also generate further opportunities in the supply chain, including vessel maintenance, port and storage facilities.

257. It is estimated that in an average year, 20 jobs will be directly supported on the operations and maintenance of the project, around the primary operation and maintenance port. This spend will generate stimulate a further 10 jobs elsewhere in the supply chain around the operation and maintenance port. This activity will occur throughout the lifetime of the Offshore Project.

Table 23.43 Operation and Maintenance: employment around port locations

Employment Type	Operations & Maintenance Port
Direct Employment	20
Indirect Employment	10
Total Employment	20

Note Numbers may not sum due to rounding.

258. The scale of the impacts are outlined in **Table 23.40**. As the location of this port has not been determined, it is not possible to describe the relative magnitude, sensitivity or significance of these effects.

23.6.3 Impact 3: Social Infrastructure

259. The assessment of impacts on social infrastructure during the operations and maintenance of the Offshore Project is based on a realistic worst-case scenario whereby the Offshore Project consists of six turbines each with a theoretical generating capacity of 18MW.

260. It is unlikely that there will be any impacts on social infrastructure since the creation of operations and maintenance employment could result in an increase in long-term employment. This will be accompanied by a long-term increase in the local tax revenue and tax base. As no temporary migration will be required, there will not be any unexpected pressures on the provision of public services including health and education. The demands on social infrastructure would come from workers that would move to the Local Area. However, the assessment of employment effects on the Local Area has identified that there would be no changes to employment as a result of the Offshore Project.

261. For this reason, the magnitude of impact with respects to social infrastructure in the Local Area was assessed as **no impact**.

23.6.3.1 Sensitivity of the receptor

262. The sensitivity of social infrastructure in the Local Area was assessed as **low**. As set out in **Section 23.4.3**, this was due to the area's relative alignment to average levels of health and educational provision, as well as lower increases in house prices over time.

23.6.3.2 Significance of effect

263. Based on the assessment of sensitivity and magnitude, the effect of the Offshore Project's Construction on social infrastructure was assessed as **no change** with respects to the economy of the Local Area.

23.6.4 Impact 4: Tourism and Recreation

23.6.4.1 Magnitude of impact

264. The Offshore Project at its closest to the coastline is expected to be 52.5km from Hartland Point on the North Devon coast. The socio-economic baseline suggests that businesses within the tourism economy are concentrated along the North Devon and Torridge coast. Employment in the sector is mostly associated with food and beverage services activities.

265. Existing evidence on the relationship between offshore wind developments and the tourism economy, as set out in the baseline assessment (**Section 23.4**), suggests

that there is no evidence of negative impacts on the tourism economy because of offshore windfarms. The evidence refers specifically to visual impacts. The significance of any seascape, landscape and visual impacts has been assessed in Chapter 19. This found that no significant adverse impacts have been identified on the landscape, landscape planning designations or visual amenity resource within the SLVIA study area. On this basis and given the distance between the coast and the Offshore Project, it is unlikely that any tourism asset onshore will be affected because of the offshore infrastructure.

266. In theory, the tourism economy could also be affected by any changes to the marine environment resulting in a reduction in sea availability or deterioration to its qualities (e.g., changes to the wave environment). These features, in turn, could result in impacts in the take-up of marine recreational activities, such as yachting and surfing, which are relatively important within the Local Area.

267. The Offshore Project is unlikely to affect general yachting activity from the North Devon Yacht Club or Ilfracombe Yacht Club since it will still allow for yachting activity within the Celtic Sea. However, both yachting clubs will see peaks in activity during events, such as the races around Lundy Island. If the primary operation and maintenance base is located to the west of Lundy Island, there may be the potential for major maintenance works to impede on these races. The likelihood of this occurring will be low as major events are only held by these clubs on a couple of days each year.

268. Similarly, a separate wave study has shown no noticeable changes to the wave environment as a result of the Offshore Project. Since wave quality will not be affected, no impacts on surfing activity are expected. For further detail, refer to **Appendix 8.A: Wave Modelling Report**.

269. On this basis, the magnitude of impact from the Offshore Project's operations and maintenance phase on the tourism economy of the Local Area was assessed as **negligible**.

23.6.4.2 Sensitivity of the receptor

270. The local tourism economy is more likely to be susceptible to any changes compared to its baseline and less likely to absorb any shocks compared to the national economy.

271. On this basis, the sensitivity of the tourism economy of the Local Area was assessed as **medium** sensitivity.

23.6.4.3 Significance of effect

272. Based on the assessment of magnitude and sensitivity, the effect of the Offshore Project during its operations and maintenance phase on tourism and recreation assets was assessed as **minor adverse** for the Local Area.

23.6.4.4 Further Mitigation

273. To mitigate against potential effects to recreational yachting, in particular during events held by both the North Devon Yacht Club and the Ilfracombe Yacht Club, the Developer will notify both clubs of major operation and maintenance works in advance and outline the proposed routes of operation and maintenance vessels.

23.7 Potential impacts during decommissioning

1. No decision has been made regarding the final decommissioning policy for the Offshore Project as it is recognised that industry best practice, rules and legislation change over time. The decommissioning methodology would be finalised nearer to the end of the lifetime of the Offshore Project to be in line with current guidance, policy and legalisation at that point. Any such methodology would be agreed with the relevant authorities and statutory consultees. The decommissioning works are likely to be subject to a separate licencing and consenting approach.

2. The anticipated decommissioning activities are outlined in **Section 5.10** of **Chapter 5: Project Description**. The potential impacts of the decommissioning of the Offshore Project have been assessed for socio-economics (including tourism and recreation) on the assumption that decommissioning methods will be similar or of a lesser scale than those deployed for construction.

23.7.1 Impact 1: Economic Expenditure

3. The impact of the Offshore Project during the decommissioning period was based on a realistic worst-case scenario including a total six turbines with a total generating capacity of up to 100MW.

4. The number of offshore wind developments that have undergone decommissioning to date is limited, therefore estimates of the costs and activities associated with decommissioning an offshore windfarm of this scale are based on projections, rather than experience.

5. The operational life of the Offshore Project is expected to be at least 25 years and therefore any decommissioning impacts will occur in the late 2050s. At this stage, there is the potential for significant supply chain development within the UK to meet the installation and decommissioning demands of the offshore wind sector.

However, in line with a worst-case scenario approach it is assumed that the companies who undertake the decommissioning works will be based in the same geographic areas as those who complete the installation works during the development and construction phase.

6. This is justified based on decommissioning expected to take place in reverse of construction, with activity required including the removal of the WTGs, foundations, cables, and the substation. Based on conservative content assumptions, it was estimated that the UK could secure up to 20% of the contracts associated with the decommissioning of the Offshore Project. The Local Area was assumed not to be able to attract any decommissioning activity, and therefore impacts upon the Local Area have been scoped out of further assessment.

23.7.1.1 Magnitude of impact

7. As with the development and construction phase, this additional expenditure in installation and decommissioning companies will support employment and generate GVA within these companies and the wider supply chain. It was estimated that decommissioning activity could support a total £3 million GVA and 20 years of employment across the UK. No impacts are expected with regards to Torridge and North Devon.

Table 23.44 Decommissioning: economic impacts

	Local Area	UK
Total Decommissioning Economic Impact		
Total GVA Impact (£m)	-	3
Peak Decommissioning Economic Impact		
Peak GVA Impact (£m)	-	2

8. In line with the guidance on assessing long term economic impacts, the GVA impacts of the decommissioning activity has been discounted before assessing the magnitude of impact. The discounted peak values of GVA are shown in **Table 23.45.**

Table 23.45 Decommissioning: discounted GVA impact

	Local Area	UK
Peak GVA Impact (£m)	-	2
Peak GVA Impact Discounted (£m)	-	1

9. In line with the approach in **Table 23.8**, the magnitude of the economic impacts is determined based on the change in GVA or employment, relative to the current GVA or employment levels. The value of GVA and the number of jobs in each of the study areas in the 2050s is not known and so current values are used to give an indicative measure of magnitude.

10. As shown in **Table 23.43**, the change in GVA is equivalent to less than 0.1% of the current GVA. The magnitude of all economic impacts during the decommissioning phase has therefore been assessed as **negligible**.

Table 23.46 Decommissioning: magnitude of economic (employment and GVA) impacts

	Local Area	UK
Magnitude of GVA Impacts		
Peak GVA Impact Discounted (£m)	-	2
Current GVA of Study Area (2020, £m)	3	£1,949,605
Peak GVA as % Current GVA	n/a	<0.1%
Magnitude of Impact	No Impact	Negligible

23.7.1.2 Sensitivity of the receptor

11. Based on the data availability, it was not possible to predict the relative performance of the economy in the 2050s. For this reason, the assessment of sensitivity of economic receptors remained the same as across the other impacts considered. In particular:

- the sensitivity of the Local Area's economy has been identified as **medium**
- the sensitivity of the UK economy has been assessed as **low**.

23.7.1.3 Significance of effect

12. Based on the assessment of magnitude and sensitivity, the effect of expenditure during decommissioning was assessed as **negligible** with respects to the UK economy and **No Change** to the Local Area's economy.

23.7.1.4 Further Mitigation

13. The impact from spending on decommissioning is expected to be beneficial. For this reason, no mitigation is required.

23.7.2 Impact 2: Employment

23.7.2.1 Magnitude of impact

14. As with the development and construction phase, this additional expenditure in installation and decommissioning companies will support employment and generate GVA within these companies and the wider supply chain. It was estimated that decommissioning activity could support a total of 20 years of employment across the UK. No impacts are expected with regards to Torridge and North Devon.

15. It is assumed that the decommissioning work will last for two years and therefore, at its peak the decommissioning of the Offshore Project will support 10 jobs across the UK.

Table 23.47 Decommissioning: economic impacts

	Local Area	UK
Total Decommissioning Economic Impact		
Total Job Impact (Years of Employment)	-	20
Peak Decommissioning Economic Impact		
Peak Jobs Impact (jobs)	-	10

16. In line with the approach in **Table 23.8**, the magnitude of the economic impacts is determined based on the change in employment, relative to the current employment levels. The value of the number of jobs in each of the study areas in the 2050s is not known and so current values are used to give an indicative measure of magnitude.

17. As shown **Table 23.48**, the change in employment is equivalent to less than 0.1% of the current jobs. The magnitude of all economic impacts during the decommissioning phase has therefore been assessed as **negligible**.

Table 23.48 Decommissioning: magnitude of economic (employment) impacts

	Local Area	UK
Magnitude of employment impacts		
Peak Employment (Jobs)	-	10
Current Jobs	70,005	30,547,000
Peak Jobs as % Current Jobs	n/a	<0.1%
Magnitude of Impact	No Impact	Negligible

23.7.2.2 Sensitivity of the receptor

18. Based on the data availability, it was not possible to predict the relative performance of the economy in the 2050s. For this reason, the assessment of sensitivity of economic receptors remained the same as across the other impacts considered. In particular:

- the sensitivity of the Local Area's economy has been identified as **medium**
- the sensitivity of the UK economy has been assessed as **low**.

23.7.2.3 Significance of effect

19. Based on the assessment of magnitude and sensitivity, the effect of expenditure during decommissioning was assessed as **negligible** with respects to the UK economy and there will be **No Change** to the Local Area's economy.

23.7.2.4 Further Mitigation

20. The impact from spending on decommissioning is expected to be beneficial. For this reason, no mitigation is required.

23.7.3 Impact 3: Social Infrastructure

21. For the purposes of the assessment of impacts on social infrastructure, it was assumed that under a worst-case scenario these would be similar as for the construction phase.

23.7.3.1 Magnitude of impact

22. As for the construction period, the magnitude of impact across the Local Area's social and economic infrastructure from the decommissioning of the Offshore Project was assessed as **no change.**

23.7.3.2 Sensitivity of the receptor

23. In a similar way, the sensitivity to change of the local socio-economic infrastructure, was assessed as **medium** sensitivity.

23.7.3.3 Significance of effect

24. Based on the assessment of magnitude and sensitivity, the effect of the Offshore Project's decommissioning on social infrastructure was assessed as **no impact**.

23.7.3.4 Further Mitigation

25. Any mitigations measures will depend on the choice of the port for decommissioning activity.

23.7.4 Impact 4: Tourism and Recreation

26. For the purposes of the assessment of impacts on tourism and recreation, it was assumed that under a worst-case scenario these would be similar as for the construction phase.

23.7.4.1 Magnitude of impact

27. As for the construction period, the magnitude of impact across the Local Area's social and economic infrastructure from the decommissioning of the Offshore Project was assessed as **negligible.**

23.7.4.2 Sensitivity of the receptor

28. In a similar way, the sensitivity to change of the local tourism and recreation was assessed as **medium** sensitivity.

23.7.4.3 Significance of effect

29. Based on the assessment of magnitude and sensitivity, the effect of the Offshore Project's decommissioning on social infrastructure was assessed as **minor negligible**.

23.7.4.4 Further Mitigation

30. Any mitigations measures will depend on the choice of the port for decommissioning activity.

23.8 Potential cumulative effects

31. The approach to cumulative effects assessment (CEA) is set out in **Chapter 6: EIA Methodology**. Only projects which are reasonably well described and sufficiently advanced to provide information on which to base a meaningful and robust assessment have been included in the CEA. Projects which are sufficiently implemented during the site characterisation for the Offshore Project have been considered as part of the baseline for the EIA. Where possible agreement has been sought with stakeholders for the use of as-built project parameter information (if available) as opposed to consented parameters to reduce over-precaution in the cumulative assessment. The scope of the CEA was therefore established on a topic-by-topic basis with the relevant consultees.

32. The cumulative effect assessment for socio-economics, tourism and recreation was undertaken in two stages. The first stage was to consider the potential for the impacts assessed as part of the project to lead to cumulative effects in conjunction with other projects. The cumulative assessment does not include impacts where

there has been no change identified in the assessments **in Section 23.5, Section23.5.6 23.6, or Section 23.7.**

33. The first stage of the assessment is detailed in **Table 23.49.**

Table 23.49 Potential cumulative effects considered for socio-economics, tourism, and recreation

Impact	Potential for cumulative effect	Rationale
Construction		
Impact 1: Economic Expenditure	Yes	Multiple construction projects have the potential to lead to the attraction of investment and to strengthen local supply chains, with implications on the level of GVA supported by each project.
Impact 2: Employment	Yes	Multiple construction projects have the potential to lead to the attraction of investment and to strengthen local supply chains, with implications on the level of employment supported by the construction of each project.
Impact 3: Social Infrastructure	No	Multiple projects have the potential, if concentrated around the same port location, to increase pressure on existing public service provision. However, no impact has been identified of the construction of the Project in isolation, therefore it is not appropriate to consider a no cumulative assessment for this effect.
Impact 4: Tourism and Recreation	Yes	Multiple projects have the potential, if concentrated around the same port location, to increase pressure on existing marine recreational activities.
Operations and Maintenance		
Impact 1: Economic Expenditure	Yes	Operational activity associated with multiple projects has the potential to create a stream of economic activity within the locations chosen as operations and maintenance ports.
Impact 2: Employment	Yes	Operational activity associated with multiple projects has the potential to create permanent employment within the locations chosen as operations and maintenance ports.

Impact	Potential for cumulative effect	Rationale
		In addition, local specialisation and clusters may lead to re-skilling and up-skilling of local populations.
Impact 3: Social Infrastructure	No	Operational activity associated with multiple projects may have an impact on public service provision. However, no impact has been identified of the construction of the Project in isolation, therefore it is not appropriate to consider a no cumulative assessment for this effect.
Impact 4: Tourism and Recreation	Yes	Operational activity associated with multiple projects may have an impact on marine recreational activities.
Decommissioning		
Impact 1: Economic Expenditure	No	Decommissioning activity associated with multiple projects has the potential to create a stream of economic activity within the locations chosen as decommissioning ports. However, there is not enough information available on the potential timings, technologies or approach to complete a meaningful cumulative assessment at this stage.
Impact 2: Employment	No	Decommissioning activity associated with multiple projects has the potential to create a stream of economic activity within the locations chosen as decommissioning ports. However, there is not enough information available on the potential timings, technologies or approach to complete a meaningful cumulative assessment at this stage.
Impact 3: Social Infrastructure	No	Decommissioning activity associated with multiple projects may have an impact on social infrastructure. However, there is not enough information available on the potential timings, technologies or approach to complete a meaningful cumulative assessment at this stage.
Impact 4: Tourism and Recreation	No	Decommissioning activity associated with multiple projects may have an impact on marine recreational activities. However, there is not enough information available on the potential

Impact	Potential for cumulative effect	Rationale
		timings, technologies or approach to complete a meaningful cumulative assessment at this stage.

34. The second stage of the CEA is to evaluate the projects considered for the CEA to determine whether a cumulative effect is likely to arise. The list of considered projects (identified in **Chapter 6: EIA Methodology Section 6.6.11**) and their anticipated potential for cumulative effects are summarised in **Table 23.50.** A rationale for inclusion in the CEA for Socio-Economics (including Tourism and Recreation) has been provided and is predominately based on distance or the tiering approach described in **Chapter 6: EIA Methodology.**

Table 23.50 Projects considered in the cumulative effects assessment of socio-economics, tourism and recreation

Project	Status	Distance from Offshore Development Area (km)	Included in the CEA?	Rationale
White Cross OWF – Onshore Components	Pre-planning application	Overlaps at Landfall	Yes	This is included as part of the assessment as it is interrelated with the offshore components considered in this chapter.
Minerals Aggregates Site: NOBEL Banks	Pre-planning application	15km	No	Activity is unlikely to affect the Project.
Valorous Offshore Wind Farm	Scoping Submitted	34km	Yes	This project is included as it will contribute to activity in the offshore wind supply chain.
Wave Site: South Pembrokeshire Demonstration Zone	Pre-planning application	38km	Yes	This project is considered since the test facility could also accommodate

Project	Status	Distance from Offshore Development Area (km)	Included in the CEA?	Rationale
				floating offshore wind technology.
Erebus Floating Wind Demo	Planning Application Submitted	38km	Yes	This project is included as it will contribute to activity in the offshore wind supply chain.
Offshore Seabed Mining Lease	Approved	74km	No	Activity is unlikely to affect the Project.
Offshore Minerals Mining Site: Area 1901	Consented	80km	No	Activity is unlikely to affect the Project.
Wind Site: Wave Hub	Active/ in operation	90km	Yes	The site, which is owned by an offshore wind developer has uses both for wave and offshore wind.
Wind Export Cable: Wave Hub	Pre-consent	22km	Yes	This element of Wave Hub is also considered with respects to the Offshore Project's operations.
The Llŷr Projects (Floating Wind Demo)	Scoping Submitted	95km	Yes	The project off the Pembrokeshire Coast is considered in the analysis of potential cumulative effects on offshore wind supply chains.
Marine Aggregate Extraction in Area 526 -	Approved	53km	No	Activity is unlikely to affect the Project.

Project	Status	Distance from Offshore Development Area (km)	Included in the CEA?	Rationale
Culver Extension				

35. It is noted that the first project listed is the Town and Country Planning Application for the onshore components of the White Cross OWF which are a separate element to the offshore Section 36 consent application for which this ES is prepared.

23.8.1 Cumulative Impact 1: Economic Expenditure

36. The presence of a series of offshore wind developments in planning (Erebus Floating Wind demo and The Llŷr Projects) provides an opportunity for both beneficial and adverse economic impacts.

- Beneficial - the construction of multiple offshore developments will support the creation and expansion of businesses serving the offshore wind sector. A pipeline of potential projects can provide the commercial security that will be required for organisations to invest in skills, facilities and equipment to meet the demands of the offshore wind sector. This includes port facilities, which will often require use on multiple offshore wind projects to recoup investments in required upgrades. This investment by local businesses will increase the supply of potential goods and services that can be procured locally, and the subsequent economic impacts.
- Adverse – the demand for goods and services from multiple offshore wind projects could decrease the share which is procured locally for each individual development. this is most likely to happen if the peaks in activity occur at the same time and the supply chain is not able to respond to this increase in demand.

23.8.1.1 Cumulative Magnitude of Change

37. The above projects represent a very small share of the capacity of offshore wind projects in the UK which are either in planning or have been approved. In January 2023 there was 16.5 GW of offshore wind projects that had been approved, but not constructed and over 30 GW in the earlier stages of development. The cumulative projects represent less than 1% of capacity of new offshore wind projects in the UK. This additional capacity is unlikely to influence decisions to invest across the UK in additional capacity, nor is the demand from these projects likely to be identified as a constraint for the UK supply chain. Therefore, the magnitude of the cumulative impact, at the level of the UK economy is **negligible**.

23.8.1.2 Significance of effect

38. Based on the projects identified in the list of cumulative sites, the cumulative effect from the economic expenditure associated with construction activity was assessed as **negligible** with respects to the UK economy.

23.8.1.3 Further Mitigation

39. Benefits from construction activity are maximised when different projects are delivered over time to avoid any peak periods of activity, where different projects compete over the same resources. Economic opportunities are realised, where the Applicant or a series of developers engage with businesses to ensure the right set of skills is in place by the time activity occurs.

23.8.2 Cumulative Impact 2: Employment

40. The cumulative impacts associated with construction employment are similar to those outlined in **Section 23.8.1**.

23.8.2.1 Cumulative Magnitude of Change

41. As with the potential cumulative impacts on GVA in the UK economy, the magnitude of the change in employment as a result of the cumulative impacts at the level of the UK economy has been assessed as **negligible**.

23.8.2.2 Significance of effect

42. Based on the projects identified in the list of cumulative sites, the cumulative effect from employment coming from the construction of those projects was assessed as **negligible** with respects to the UK economy.

23.8.2.3 Further Mitigation

43. Benefits from construction activity are maximised if different projects are delivered over time to avoid any peak periods of activity, where different projects compete over the same resources. Employment opportunities are maximised where the Applicant or a series of developers engage with businesses to ensure the right set of skills is in place by the time activity occurs.

23.8.3 Cumulative Impact 3: Tourism and Recreation

44. The construction of a series of offshore windfarms may result in impacts on tourism and recreation. This is the case if projects are delivered over similar timescales and use the same port location or have similar subsea cable routes.

23.8.3.1 Cumulative Magnitude of Change

45. The construction of multiple offshore wind farms in the Celtic Sea has the potential to have a cumulative impact on the access to marine recreation. In particular, vessel movements during the turbine installation and cable laying vessels could have a cumulative impact on recreational yachting or other marine activities. This will be determined by the location of cable routes for each of the cumulative sites and the location of the primary integration and assembly ports. The potential impacts identified for the Offshore Project are linked to potential vessel movements impeding the recreational marine users between Lundy and Devon. None of the sites identified are expected to add to the marine traffic in this area, in particular;

- Valorous Offshore Wind Farm – the cable route will include landfall in south Wales, and therefore is not expected to add to the number of vessel movements between Lundy Island and Devon
- Wave Site: South Pembrokeshire Demonstration Zone - the cable route will include landfall in Cornwall, and therefore is not expected to add to the number of vessel movements between Lundy Island and Devon
- Erebus Floating Wind Demo - the cable route will include landfall in Wales, and therefore is not expected to add to the number of vessel movements between Lundy Island and Devon
- Wind Export Cable: Wave Hub - the cable route will include landfall in Cornwall, and therefore is not expected to add to the number of vessel movements between Lundy Island and Devon and
- The Llyr projects (floating offshore wind) - the cable route will include landfall in Wales, and therefore is not expected to add to the number of vessel movements between Lundy Island and Devon.

46. Therefore, the cumulative magnitude of change on marine recreation users has been assessed as **negligible**.

23.8.3.2 Significance of effect

47. Based on the assumption that port locations for construction would not be located within the Local Area, the effect of impacts on tourism and recreation, was assessed as **negligible**. The overall effect is not expected to be dissimilar from the one associated with the Offshore Project.

23.8.3.3 Further Mitigation

48. No mitigation measure is envisaged with respects to cumulative impacts on social infrastructure, including tourism and recreation.

23.8.4 Cumulative Impact 4: Economic Expenditure

49. The cumulative impacts associated with operations and maintenance expenditure and GVA are similar to those outlined in **Section 23.8.1**.

23.8.4.1 Cumulative Magnitude of Change

50. As with the potential cumulative impacts on GVA in the UK economy, the magnitude of the change in employment as a result of the cumulative impacts at the level of the UK economy has been assessed as **negligible**.

23.8.4.2 Significance of effect

51. Based on the projects identified in the list of cumulative sites, the cumulative effect from employment coming from the operations and maintenance of those projects was assessed as **negligible** with respects to the UK economy.

23.8.4.3 Further Mitigation

52. The economic expenditure associated with the operations of the windfarms will deliver positive economic benefits. Benefits will be maximised through the choice of different port locations.

23.8.5 Cumulative Impact 5: Employment

53. The cumulative impacts associated with operations and maintenance employment are similar to those outlined in **Section 23.8.1**.

23.8.5.1 Cumulative Magnitude of Change

54. As with the potential cumulative impacts on employment in the UK economy, the magnitude of the change in employment as a result of the cumulative impacts at the level of the UK economy has been assessed as **negligible**.

23.8.5.2 Significance of effect

55. Based on the projects identified in the list of cumulative sites, the effect from employment coming from the operations and maintenance of those projects was assessed as **negligible** with respects to the UK economy.

23.8.5.3 Further Mitigation

56. The economic expenditure associated with the operations of the windfarms will deliver positive economic benefits

23.8.5.4 Further Mitigation

57. The employment associated with the operations of offshore windfarms will deliver positive economic benefits, which will be maximised through the choice of different port locations.

23.8.6 Cumulative Impact 6: Tourism and Recreation

58. The cumulative impacts associated with the operations and maintenance activities on tourism and recreation is similar to those described during the construction phase.

23.8.6.1 Cumulative Magnitude of Change

59. The operation of multiple offshore wind farms in the Celtic Sea has the potential to have a cumulative impact on the access to marine recreation. In particular, vessel movements during periods of major operation and maintenance activity could have a cumulative impact on the marine recreational users. This will be determined by the location of the primary operation and maintenance base for each development and whether the vessel routes cross areas of marine recreation activity, in particular between Devon and Lundy Island.

60. None of the listed developments have decided on the location of their primary operation and maintenance ports. However, considering that the majority of these sites are connecting to the grid in Wales, as this is the nearest landfall location, and the prevalence of suitable port facilities in South Wales, it is assumed that the primary operation and maintenance port for these developments will not be to the east of Lundy Island. Therefore, the vessel movements from these ports are unlikely to have a cumulative impact on marine recreation users in the Local Area.

61. Therefore, the cumulative magnitude of change on marine recreation users has been assessed as **negligible**.

23.8.6.2 Significance of effect

62. Based on the assumption that port locations for construction would not be located within the Local Area, the effect of impacts on tourism and recreation, was assessed as **negligible**. The overall effect is not expected to be dissimilar from the one associated with the Offshore Project.

23.8.6.3 Further Mitigation

63. At this stage, no further mitigation is envisaged.

23.9 Potential transboundary impacts

64. The Scoping Report identified that there was no potential for significant transboundary effects regarding socio-economics, tourism and recreation from the Offshore Project upon the interests of other EEA States and this is not discussed further.

23.10 Inter-relationships

65. Inter-relationship impacts are covered as part of the assessment and consider impacts from the construction, operation and maintenance, or decommissioning phases of the Offshore Project on the same receptor (or group). A description of the process to identify and assess these effects is presented in **Chapter 6: EIA Methodology**. The potential inter-relationship effects that could arise in relation to socio-economics, tourism and recreation include both:

- **Project lifetime effects:** Effects arising throughout more than one phase of the Offshore Project (construction, operation and maintenance, and decommissioning) to interact to potentially create a more significant effect on a receptor than if just one phase were assessed in isolation
- **Receptor led effects:** Assessment of the scope for all relevant effects to interact, spatially and temporally, to create inter-related effects on a receptor (or group). Receptor-led effects might be short term, temporary or transient effects, or incorporate longer term effects.

66. **Table 23.51** serves as a sign-posting for inter-relationships.

Table 23.51 Socio-economics, tourism and recreation inter-relationships

Topic and description	Related chapter	Where addressed in this Chapter	Rationale
Construction			
Commercial Fisheries	Chapter 14	**Section 23.5**	Potential disruption caused to commercial fisheries.
Shipping and Navigation	Chapter 15	**Section 23.5**	Potential disruption caused to shipping lanes and navigation affecting commercial and recreational fishing.
Operation and Maintenance			
Seascape, landscape and visual amenity	Chapter 19	**Section 23.6**	Potential visual impacts affecting tourism activity.
Commercial fisheries	Chapter 14	**Section 23.6**	Potential disruption caused to commercial

Topic and description	Related chapter	Where addressed in this Chapter	Rationale
			fisheries from the operation and maintenance of the Offshore Project.
Shipping and Navigation	Chapter 15	**Section 23.6**	Potential disruption caused to shipping lanes and navigation affecting commercial and recreational fishing from the operation and maintenance of the Offshore Project.
Decommissioning			
No Inter-relationship impacts have been identified			

23.11 Interactions

67. The impacts identified and assessed in this chapter have the potential to interact with each other, which could give rise to synergistic impacts from that interaction. The areas of interaction between impacts are presented in **Table 23.52, Table 23.53** and **Table 23.54**, along with an indication as to whether the interaction may give rise to synergistic impacts. This provides a screening tool for which impacts have the potential to interact.

68. **Table 23.55** then provides an assessment for each receptor (or receptor group) related to these impacts in two ways. Firstly, the impacts are considered within a development phase (i.e., construction, operation, maintenance or decommissioning) to see if, for example, multiple construction impacts could combine. Secondly, a lifetime assessment is undertaken which considers the potential for impacts to affect receptors across development phases. The significance of each individual impact is determined by the sensitivity of the receptor and the magnitude of impact; the sensitivity is constant whereas the magnitude may differ. Therefore, when considering the potential for impacts to be additive it is the magnitude of impact which is important – the magnitudes of the different effects are combined upon the same sensitivity receptor. If minor impact and minor impact were added this would effectively double count the sensitivity.

Table 23.52 Interaction between impacts during construction

Potential impact Construction	Impact 1: Economic Expenditure	Impact 2: Employment	Impact 3: Social Infrastructure	Impact 4: Tourism and Recreation
Impact 1: Economic Expenditure		Yes	Yes	Yes
Impact 2: Employment	Yes		Yes	No
Impact 3: Social Infrastructure	Yes	Yes		No
Impact 4: Tourism and Recreation	No	No	No	

Table 23.53 Interaction between impacts during operation and maintenance

Potential impact Operation and maintenance	Impact 1: Economic Expenditure	Impact 2: Employment	Impact 3: Social Infrastructure	Impact 4: Tourism and Recreation
Impact 1: Economic Expenditure		Yes	Yes	No
Impact 2: Employment	Yes		Yes	No
Impact 3: Social Infrastructure	Yes	Yes		No
Impact 4: Tourism and Recreation	No	No	No	

Table 23.54 Interaction between impacts during decommissioning

Potential impact				
Decommissioning	Impact 1: Economic Expenditure	Impact 2: Employment	Impact 3: Social Infrastructure	Impact 4: Tourism and Recreation
Impact 1: Economic Expenditure		Yes	Yes	No
Impact 2: Employment	Yes		Yes	No
Impact 3: Social Infrastructure	Yes	Yes		No
Impact 4: Tourism and Recreation	No	No	No	

Table 23.55 Potential interactions between impacts on socio-economics, tourism and recreation.

Receptor	Construction	Operation and Maintenance	Decommissioning	Lifetime Assessment
Economic Expenditure - UK	Negligible Beneficial	Negligible Beneficial	Negligible Beneficial	Negligible Beneficial
Employment - UK	Negligible Beneficial	Negligible Beneficial	Negligible Beneficial	Negligible Beneficial
Economic Expenditure – Local Area	No Change	No Change	No Change	No Change
Employment – Local Area	No Change	No Change	No Change	No Change
Tourism and Recreation – Local Area	Minor Adverse	Minor Adverse	Minor Adverse	Minor Adverse
Economic and Social Infrastructure – Local Area	No Change	No Change	No Change	No Change

23.12 Summary

69. This chapter has investigated the potential effects on socio-economic, tourism and recreation receptors arising from the Offshore Project. The range of potential impacts and associated effects considered has been informed by the Scoping Opinion, consultation, and by reference to existing policy and guidance. The impacts considered include those brought about directly as well as indirectly.

70. The assessment has not identified any significant effects upon the receptors considered.

71. However, the assessment has assumed that the primary construction and operation and maintenance ports will be located within the UK but not within the Local Area. The assessment has quantified the value of employment and GVA that would be supported around these port locations. This found that the Primary Construction port could support up to 350 jobs during the construction phase and the operation and maintenance port could support 20 jobs during the operational lifetime of the Offshore Project.

72. **Table 23.56** presents a summary of the impacts assessed within this ES chapter, any commitments made, and mitigation required and the residual effects.

Table 23.56 Summary of potential impacts for socio-economic, tourism and recreation during construction, operation, maintenance and decommissioning of the Project

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Potential mitigation measure	Residual impact
Construction						
Impact 1: Economic Expenditure	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change
Impact 2: Employment	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change
Impact 3: Economic and Social Infrastructure	Local Area social infrastructure	Low	No Impact	No Change	N/A	No Change
Impact 4: Tourism and Recreation	Local Area tourism economy	Medium	Negligible Adverse	Minor Adverse	N/A	Minor Adverse
Operation and Maintenance						
Impact 1: Economic Expenditure	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change
Impact 2: Employment	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Potential mitigation measure	Residual impact
Impact 3: Social Infrastructure –	Local Area social infrastructure	Low	No Impact	No Change	N/A	No Change
Impact 4: Tourism and Recreation	Local Area tourism economy	Medium	Negligible Adverse	Minor Adverse	N/A	Minor Adverse
Decommissioning						
Impact 1: Economic Expenditure	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change
Impact 2: Employment	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
	Local Area economy	Medium	No Impact	No Change	N/A	No Change
Impact 3: Economic and Social Infrastructure	Local Area social infrastructure	Low	No Impact	No Change	N/A	No Change
Impact 4: Tourism and Recreation	Local Area	Medium	Negligible	Minor Adverse	N/A	Minor Adverse
Cumulative						
Impact 1: Economic Expenditure – construction	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
Impact 2: Employment – construction	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial

Potential impact	Receptor	Sensitivity	Magnitude	Significance	Potential mitigation measure	Residual impact
Impact 3: Tourism and recreation- construction	Local Area	Medium	Negligible Adverse	Minor Adverse	N/A	Minor Adverse
Impact 4: Economic Expenditure – operation	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
Impact 5: Employment – operation	UK economy	Low	Negligible Beneficial	Negligible Beneficial	N/A	Negligible Beneficial
Impact 6: Tourism and recreation - operation	Local Area	Medium	Negligible Adverse	Minor Adverse	N/A	Minor Adverse

23.13 References

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