Partners in UK offshore wind

MORGAN OFFSHORE WIND PROJECT: GENERATION ASSETS

Environmental Statement

Volume 2, Chapter 13: Socio-economics

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Image of an offshore wind farm

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Errata

Errata reference number	Deadline included	Document number	Volume and chapter	Paragraph/ Table/Figure	Description of errata	Correction
28	D3	APP-017	Volume 2, Chapter 13: Socio-economics	Table 13.89	Reference to 'medium (adverse) significance' in Table 13.89 is incorrect.	The use of the term 'medium (adverse) is a typographical error, which should read 'minor (adverse) significance'. This typographical error does not affect the conclusions of the assessment.

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Annexes

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13.1	Socio-economics technical impact report

Glossary

Term	Meaning
Direct economic impacts	Direct economic impacts are directly attributable to a development. For example, the direct employment impacts are the jobs supported by activities associated with delivering each phase of a project.
Full-time equivalent (FTE)	Indicates the work time of an employed person in a way that makes jobs comparable e.g. an FTE of 1.0 is equivalent to a full-time worker, while an FTE of 0.5 signals half a full-time worker.
FTE years	The term 'FTE year' in employment terms is often used in labour reporting, in which one construction full-time equivalent (FTE) year represents the work done by one full-time employee in a year comprising a standard number of working days. This method of measuring jobs created is important, as many workers working on the Morgan Generation Assets will work for a fixed period or be involved in other projects in parallel.
Impact industries	Defined set of industries used for assessment of socioeconomic impacts, which represent employment and GVA in industries associated with the construction, operations and maintenance, and decommissioning of offshore energy infrastructure (i.e. not limited to offshore wind). These definitions can be found in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.
Indirect economic impacts	Indirect economic impacts are secondary impacts that occur as a result of the interactions between a development and other parts of the economy. For example, a project will require fabrication of components and subcomponents, and supply of equipment and transportation, all of which increases sector demand leading to economic impacts throughout the supply chain.
Induced economic impacts	Induced economic impacts result from changes in household spending patterns as a consequence of direct and indirect economic impacts. For example, the employment opportunities supported by a project (including those throughout the supply chain) result in workers having income to spend, leading to further economic impacts in other parts of the economy.
International Territorial Level 1	Geocode standard for referencing the subdivisions of the United Kingdom for statistical purposes, used by the Office for National Statistics (ONS). International Territorial Level 1 (ITL1) statistical regions correspond with the regions of the UK as used by the ONS.
Lifeline ferry	A ferry that is required in order for a community to be viable
Local Impact Area	'Local Impact Area' is a term used in the Morgan Generation Assets scoping report to describe potential sub-national study areas. This term is now superseded by 'socio-economics regional study area', however it still appears in some statutory consultation responses in Table 18.7.
Morgan Offshore Wind Project: Generation Assets	The Morgan Offshore Wind Project is comprised of both the generation assets and offshore and onshore transmission assets and associated activities.
Morgan and Morecambe Offshore Wind Farms: Transmission Assets:	The transmission assets for the Morgan Offshore Wind Project and the Morecambe Offshore Windfarm. This includes the Offshore Substation Platforms (OSPs), interconnector cables, Morgan offshore booster station, offshore export cables, landfall site, onshore export cables, onshore substations, 400kV grid connection cables and associated grid connection infrastructure such as circuit breaker infrastructure (as defined in the Morgan and Morecambe Offshore Wind Farms: Transmission Assets PEIR).

Term	Meaning
Offshore Energy Alliance	The Offshore Energy Alliance is a newly established offshore and energy supply chain cluster for the North Wales and North West region of the UK. The Alliance is a collective of public and private partners who work together under one umbrella, to promote wider involvement in offshore wind and other low carbon energy sectors.
Standard Industrial Classification 2007	The current Standard Industrial Classification (SIC) used in classifying business establishments and other statistical units by the type of economic activity in which they are engaged.
Tier 1 supplier	Direct suppliers of a product or service

Acronyms

Acronym	Description
AONB	Area of Outstanding Natural Beauty
BRES	Business Register and Employment Survey
CEA	Cumulative Effects Assessment
Cumbria LEP	Cumbria Local Enterprise Partnership
DCO	Development Consent Order
DESNZ	Department for Energy Security and Net Zero
DLUHC	The Department for Levelling Up, Housing and Communities
EIA	Environmental Impact Assessment
FTE	Full-time equivalent
GB	Great Britain
GDP	Gross Domestic Product
GVA	Gross Value Added
HRA	Habitat Regulations Assessment
IACC	Isle of Anglesey County Council
ILO	International Labour Organization
IPPR	The Institute for Public Policy Research
ITL1	International Territorial Level 1
JNCC	Joint Nature Conservation Committee
LIA	Local Impact Area
MDS	Maximum Design Scenario
MMO	Marine Management Organisation
NIA	National Impact Area
NPS	National Policy Statements
NRW	Natural Resources Wales
OBR	Office for Budget Responsibility

Acronym	Description
ONS	Office for National Statistics
ORE Catapult	Offshore Renewable Energy Catapult
OWIC	Offshore Wind Industry Council
PDE	Project Design Envelope
PEIR	Preliminary Environmental Information Report
SIC	Standard Industrial Classification
SIC07	Standard Industrial Classification 2007
SNCBs	Statutory Nature Conservation Bodies
SOV	Service Operation Vessel
TAN	Technical Advice Note
TT	Tourist Trophy
UK	United Kingdom
WTA	Wales Tourism Alliance
ZTV	Zone of Theoretical Visbility

Units

Unit	Description
%	Percentage
£	Pound Sterling
m	Million
bn	Billion
GW	Gigawatt
Km	Kilometre
MW	Megawatt
nm	Nautical miles

13 Socio-economics

13.1 Introduction

13.1.1 Overview

13.1.1.1 This chapter of the Environmental Statement presents the assessment of the potential impact of the Morgan Offshore Wind Project: Generation Assets, hereafter referred to as the Morgan Generation Assets, on socio-economics (including tourism). Specifically, this chapter considers the potential impact of the Morgan Generation Assets seaward of Mean High Water Springs (MHWS) during the construction, operations and maintenance and decommissioning phases.

13.1.1.2 With respect to Morgan Generation Assets (as with other similar projects), there is a complexity with the socio-economic impacts associated with offshore activities primarily manifesting onshore. This chapter's approach is focused on the 'source' of the impact. This is consistent with the broader approach to separating onshore and effects:

- Offshore: if physical infrastructure and civil works are located offshore, any resulting impacts are categorised as offshore
- Onshore: if physical infrastructure and civil works are located onshore, any resulting impacts are categorised as onshore.

13.1.1.3 As outlined in Volume 1, Chapter 3: Project description of the Environmental Statement, Morgan Generation Assets are in the offshore environment so all impacts are assessed as offshore.

13.1.1.4 The assessment presented is informed by the following Environmental Statement chapters:

- Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement
- Volume 2, Chapter 9: Other sea users of the Environmental Statement
- Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement.

13.1.1.5 This chapter also draws upon information contained within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

13.1.1.6 This chapter considers socio-economic receptors within the following categories:

- **Economic**: assessing the potential employment and Gross Value Added (GVA) impacts associated with the Morgan Generation Assets and the associated impacts on local employment opportunities
- **Social**: assessing the potential impacts of the workforce associated with the Morgan Generation Assets on housing, accommodation and population (including local services)
- **Tourism**: assessing the potential indirect impacts associated with visual amenity, overnight accommodation and recreation on tourism.

- **Isle of Man interactions with lifeline ferry services**: assessing potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services[1].

13.1.1.7 The approach to separating potential economic and social impacts is consistent with the best available and non-statutory industry guidance, Glasson *et al*. (2020), on assessing the socio-economic impacts of offshore wind farms, and Marine Scotland (2022) guidance Defining 'Local Area' for assessing impact of offshore renewables and other marine developments.

Economic and social

13.1.1.8 Expenditure on major energy infrastructure projects can stimulate economic growth by creating jobs and increasing output.

13.1.1.9 Direct economic impacts are directly attributable to a development. For example, the direct employment impacts are the jobs supported by activities associated with delivering each phase of a project.

13.1.1.10 Indirect economic impacts are secondary impacts that occur as a result of the interactions between a development and other parts of the economy. For example, a project will require fabrication of components and subcomponents, and supply of equipment and transportation, all of which increases sector demand leading to economic impacts throughout the supply chain.

13.1.1.11 Induced economic impacts result from changes in household spending patterns as a consequence of direct and indirect economic impacts. For example, the employment opportunities supported by a project (including those throughout the supply chain) result in workers having income to spend, leading to further economic impacts in other parts of the economy.

13.1.1.12 In addition to the economic measures linked to direct, indirect and induced impacts can result in wider beneficial outcomes for the population. Employment can provide individuals with a sense of purpose and connection within their community, thereby reducing feelings of social isolation and providing benefits in terms of self-esteem and mental wellbeing. Similarly, employment can provide individuals and households with economic stability, improving people's ability to meet essential needs such as food, housing, utilities and healthcare.

13.1.1.13 The movement of labour associated with the delivery of major energy infrastructure projects has the potential to result in social impacts. Workforce movements during construction may lead to an increase in demand for temporary/overnight accommodation, whilst labour migration during the operation and maintenance of a project may increase demand for long term and permanent accommodation. Long term changes to populations associated with labour migration (particularly during operation and maintenance) can lead to increased demand for public services such as healthcare and education. Significant increases in population associated with the delivery of major energy infrastructure projects can also raise concerns related to social cohesion.

13.1.1.14 More broadly, with increased economic output governments can generate higher tax revenues, facilitating increased investment in public services such as healthcare, education and infrastructure, all of which can further improve quality of life for the

[1] Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement has assessed potentially significant cumulative effects on adverse weather routeing of ferry services to and from the Isle of Man.

population. Increased employment and reduced unemployment can also reduce public spending via the welfare system. Economic growth and competitiveness can also increase innovation activity which can lead to technological progress, which can improve people's standard of living as well as the ongoing performance of sectors and the wider economy.

13.1.1.15 It is therefore important to assess the potential economic and social impacts associated with the Morgan Generation Assets in order to understand the extent to which the general population might be impacted.

13.1.1.16 Within this assessment the economic impacts are analysed in terms of jobs and GVA. These impacts represent the overall benefits associated with economic growth described here.

Tourism

13.1.1.17 There are also potential impacts associated with major energy infrastructure projects, which primarily have the potential to indirectly impact the visitor economy. The potential visual impacts associated with a project may result in adverse or beneficial impacts in relation to the visitor economy. The short term and temporary accommodation requirements of construction workers has the potential to impact overnight accommodation providers such as hotels, B&Bs and hostels. Finally, the physical infrastructure has the potential to impact recreation activities, which could indirectly impact the visitor economy.

13.1.1.18 It is therefore important to assess the potential tourism impacts associated with the Morgan Generation Assets in order to understand the extent to which the visitor economy might be impacted.

Isle of Man interactions with lifeline ferry services

13.1.1.19 Potential impacts on Isle of Man lifeline ferry services have been assessed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, which assesses significant effects of the Morgan Generation Assets on adverse weather routeing.

13.1.1.20 National Policy Statement EN-3 defines a lifeline ferry as follows: "*"Lifeline ferries" provide an essential service between islands or an island and the mainland on which the occupiers of the island rely for transportation of passengers and goods.*"

13.1.1.21 Lifeline ferry services are distinctive due to their contribution to making island communities 'viable' by prioritising essential requirements for the sustainable functioning of an island community. Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement categorises the Douglas–Liverpool and Douglas–Heysham crossings as lifeline ferry services.

13.1.1.22 The Isle of Man utilises ferry services for:

- Residents who need to access mainland services, employment, social, and leisure opportunities
- Businesses and public services which move goods on and off the Island, generate business travel and require connectivity for visitors and staff
- Tourists who want to visit the Island, contributing to the Island's visitor economy.

13.1.1.23 As well as their role in supporting essential requirements for Island life, lifeline ferries serve an important economic role in connecting Island-based businesses with mainland markets.

13.1.1.24 It is therefore important to assess the potential socio-economic impacts associated with potential lifeline ferry rescheduling in order to understand the extent to which the Isle of Man might be impacted.

13.2 Legislative and policy context

13.2.1 Planning policy context

13.2.1.1 The Morgan Generation Assets will be located in English offshore waters (beyond 12 nm from the English coast). As set out in Volume 1, Chapter 1: Introduction of the Environmental Statement, as the Morgan Generation Assets is an offshore generating station with a capacity of greater than 100 MW located in English waters, it is a Nationally Significant Infrastructure Project (NSIP) as defined by Section 15(3) of the Planning Act 2008 (the 2008 Act). As such, there is a requirement to submit an application for a Development Consent Order (DCO) to the Planning Inspectorate to be decided by the Secretary of State for the Department for Energy Security and Net Zero (DESNZ).

13.2.2 National Policy Statements

13.2.2.1 There are currently six energy National Policy Statements (NPSs), two of which contain policy relevant to offshore wind development and the Morgan Generation Assets, specifically:

- Overarching NPS for Energy (NPS EN-1) which sets out the UK Government's policy for the delivery of major energy infrastructure (DESNZ, 2023a)
- NPS for Renewable Energy Infrastructure (NPS EN-3) (DESNZ, 2023b).

13.2.2.2 NPS EN-1 includes guidance on what matters are to be considered in the assessment. These are summarised in Table 13.1. NPS EN-1 also highlights a number of factors relating to the determination of an application and in relation to mitigation. These are summarised in Table 13.2. There are no provisions within NPS EN-3 that are relevant to the topic of socio-economics.

Table 13.1: Summary of the NPS EN-1 provisions relevant to socio-economics.

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy. This information could include matters such as **employment**, equality, biodiversity net gain, community cohesion, health and well-being (emphasis added). [Paragraph 4.3.4]	As per paragraph 13.1.1.6, economic and social impacts are assessed within their own category. Potential economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering employment and GVA impacts and the potential associated impacts on local employment opportunities. Potential social impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering potential workforce on housing, accommodation and population.
For the purposes of this NPS and the technology specific NPSs the Environmental Statement should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project. [Paragraph 4.3.5]	Potential impacts during project development (i.e. pre-construction), are included within the economic impact estimates presented in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement. Potential economic and social impacts during construction, operation and maintenance, and

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
	decommissioning phases are presented in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement. Effects resulting from potential economic and social impacts are assessed within section 13.8.2.
Where some details are still to be finalised, the Environmental Statement should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed. [Paragraph 4.3.12]	The 'most likely' (current capacity) and 'worst case' (low) scenarios have been considered in the assessment of both economic and social effects within section 13.8.2. See also section 13.7 for further details on how the 'most likely' and 'worst case' scenarios have been considered for the topic of socio-economics.
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 Environmental Statement. [Paragraph 5.13.2]	As per section 13.4.3 potential socio-economic impacts are assessed at both national (UK, Isle of Man) and sub-national (North Wales, North West England) geographies (where relevant). Economic and social impacts are assessed within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.
The applicant is strongly encouraged to engage with relevant local authorities during early stages of project development so that the applicant can gain a better understanding of local or regional issues and opportunities. [Paragraph 5.13.3]	Stakeholder consultation (non-statutory) undertaken for the topic of socio-economics during preparation of the Preliminary Environmental Information Report (PEIR) invited all potentially relevant local authorities to participate (see section 0). Statutory (Planning Act 2008, Section 42) consultation on the PEIR has provided all relevant statutory stakeholders with the opportunity to provide input to the application, outlined in section 0.
The applicant's assessment should consider all relevant socio-economic impacts, which may include the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero. [Paragraph 5.13.4]	Potential economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering employment and GVA impacts and the potential associated impacts on local employment opportunities and the sustainability of these roles (temporary/permanent, short/long term). The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (hereafter Transmission Assets) DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.
The applicant's assessment should consider all relevant socio-economic impacts, which may include the contribution to the development of low-carbon industries at the local and regional level as well as nationally. [Paragraph 5.13.4]	Potential economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering employment and GVA impacts and the potential associated impacts on local employment opportunities. The significance of effects associated with potential economic impacts (employment and GVA) are assessed within section 13.8.2 according to existing baseline

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
	conditions, which includes consideration of the offshore wind sector (see section 13.4).
The applicant's 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. [Paragraph 5.13.4]	Potential social impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering potential workforce impacts on housing, accommodation and population (including local services). The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector. The Applicant has considered the provision of visitor faciliites and concluded the inclusion of such facilities as part of the Morgan Generation Assets is not appropriate.
The applicant's assessment should consider all relevant socio-economic impacts, which may include any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains. [Paragraph 5.13.4]	Potential economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering employment and GVA impacts and the potential associated impacts on local employment opportunities. This includes an estimate of potential direct, indirect (i.e. supply chain)and induced (i.e. household expenditure) economic impacts.
The applicant's assessment should consider all relevant socio-economic impacts, which may include effects (positive and negative) on tourism and other users of the area impacted. [Paragraph 5.13.4]	Potential effects on tourism are assessed within section 13.8.2.
The applicant's assessment should consider all relevant socio-economic impacts, which may include the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development. [Paragraph 5.13.4]	Potential social impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering potential workforce on housing, accommodation and population (including local services). Effects associated with potential social impacts are assessed within section 13.8.2.
The applicant's assessment should consider all relevant socio-economic impacts, which may include cumulative effects - if development consent were to be granted for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region. [Paragraph 5.13.4]	Potential cumulative effects associated with other projects are assessed within section 13.11.

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
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. [Paragraph 5.13.5]	Existing baseline conditions within relevant national and sub-national geographies are set out within section 13.4. Local planning policies, and how the Morgan Generation Assets interacts with these, are set out within section 13.2.
Socio-economic impacts may be linked to other impacts, for example visual impacts considered in Section 5.10 but may also have an impact on tourism and local businesses. Applicants are encouraged, where possible, to demonstrate that local suppliers have been considered in any supply chain. [Paragraph 5.13.6]	Potential effects on tourism are assessed within section 13.8.2, which includes consideration of how visual impacts may have an indirect impact on tourism. As accounted for by paragraphs 4.2.11 to 4.2.12 of NPS EN-1, there is currently insufficient information at this stage of the application to demonstrate consideration of local suppliers within the supply chain.
Applicants should consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include the need to provide temporary accommodation for construction workers if required. [Paragraph 5.13.7]	Potential social impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, covering potential workforce on housing, accommodation. Effects associated with potential social impacts are assessed within section 13.8.2. The Applicant has considered the development of an accommodation strategy. With reference to the assessment of potential workforce migration impacts assessed within section 13.9.3, negiligible impacts are identified during the construction and operations and maintenance phases due to the anticipated offshore siting of the workforce associated with installation of the Morgan Generation Assets. As a result, an accommodation strategy is not appropriate.

Table 13.2: Summary of NPS EN-1 policy on decision making relevant to socio-economics.

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
In considering any proposed development, in particular when weighing its adverse impacts against its benefits, the Secretary of State should take into account its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits. [Paragraph 4.1.5]	Potential socio-economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement. To assist the Secretary of State in their decision making, effects resulting from potential socio-economic impacts are assessed within section 13.8.2.
The Secretary of State should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike. [Paragraph 5.13.8]	To assist the Secretary of State in their decision making. measures adopted as part of the Morgan Generation Assets are set out within section 13.1.1.1.

Summary of NPS EN-1 provision	How and where considered in the Environmental Statement
The Secretary of State should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the Secretary of State considers to be both relevant and important to its decision. [Paragraph 5.13.9]	To assist the Secretary of State in their decision making, effects resulting from potential socio-economic impacts are assessed within section 13.8.2.
The Secretary of State may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS). [Paragraph 5.13.10]	Potential socio-economic impacts are estimated within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement. The annex sets out a detailed methodology which aligns with industry best practice and the latest available guidance, including: • Marine Scotland (2022) Defining 'Local Area' for assessing impact of offshore renewables and other marine developments • Crown Estate and Offshore Renewable Energy (ORE) Catapult (2019) Guide to an offshore wind farm • Glasson, J. *et al.* (2020) Guidance on assessing the socio-economic impacts of offshore wind farms.
The Secretary of State should consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts. [Paragraph 5.13.11]	The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.
The Secretary of State may wish to include a requirement that specifies the approval by the local authority of an employment and skills plan detailing arrangements to promote local employment and skills development opportunities, including apprenticeships, education, engagement with local schools and colleges and training programmes to be enacted. [Paragraph 5.13.12]	The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.

13.2.3 National planning policy

National Planning Policy Framework

13.2.3.1 The Morgan Generation Assets study area includes areas of the English Mainland. The National Planning Policy Framework (September 2023) (NPPF) provides overarching advice regarding development. The aim of achieving sustainable development is the main theme of the NPPF. Those sections of particular relevance to Socio-economics are set out in Table 13.3, below.

Table 13.3: English National Planning Policy Framework.

Summary of NPPF provision	How and where considered in the Environmental Statement
Achieving sustainable development, should include an economic objective to help build a strong, responsive and competitive economy and ensure effective use of land. (Paragraph 8a)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
All plans should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; and mitigate climate change. (Paragraph 11a)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
Planning policies and decisions should recognise and address the specific locational requirements of different sectors. This includes making provision for clusters or networks of knowledge and high technology industries; and for storage and distribution operations at a variety of scales and in suitably accessible locations. (Paragraph 87)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development. The approach taken should allow each area to build on its strengths, counter any weaknesses and address the challenges of the future. (Paragraph 85)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2. The potential impact of increased employment opportunities is assessed for its significance in section 13.8.2. The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.
The planning system should support the transition to a low carbon future in a changing climate. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, encourage the reuse of existing resources, and support renewable and low carbon energy and associated infrastructure. (Paragraph 157)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
To help increase the use and supply of renewable and low carbon energy, plans should consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development (Paragraph 160b)	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.

UK

13.2.3.2 The assessment of potential changes to socio-economics has also been made with consideration to the UK Government's strategic planning policy on the matter of economic growth and renewable energy. Key considerations are set out in Table 13.4 along with details as to how these have been addressed within the assessment.

Table 13.4: UK strategic planning policies of relevance to socio-economics.

Policy	Summary of key considerations	How and where considered in the Environmental Statement
British Energy Security Strategy, (UK Government, 2022).	The British Energy Security Strategy sets out the plan to achieve net zero carbon emissions from energy generation and reduce the UK's dependence on imported gas and oil. Offshore wind is identified as an important source of renewable energy and is anticipated to support 90,000 jobs in Britain by 2030, a proportion of which will be high skilled and high wage. [Page 17]	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
Industrial Strategy: Offshore Wind Sector Deal (UK Government, 2019)	The Sector Deal establishes the shared ambitions and commitments of the offshore wind sector and the UK government to support the continued growth of offshore wind in the UK. The sector deal also sets out the importance of working with educational institutions for post 16 year olds to build early stage skills and knowledge accessibility and working with the UK government to address identified skills gaps in relevant routes including construction, engineering and manufacturing. [Page 13]	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
Net Zero Strategy: Build Back Greener (UK Government, 2021)	This policy sets out policies and proposals for decarbonising all sectors of the UK economy to meet the net zero target by 2050. Achieving 40GW (since updated to 50 GW via the offshore wind net zero investment roadmap (HM Government, 2023)) of offshore wind by 2030 is a key policy for the UK government and aims to support this through investing in supply chains, infrastructure and offshore transmission networks to secure jobs and benefit communities across the UK. [Section 3i, Page 94] The UK government has committed to Investing in two ports in the North of England to upgrade their capacity to support the UK offshore wind manufacturing sector. [Section 4v, Page 269]	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.
The Clean Growth Strategy (UK Government, 2017).	This strategy sets out the UK government's approach to reducing carbon emissions whilst supporting economic growth, which includes maximising the social and economic benefits from this transition. [Chapter 3, Page 47]	Policy priority for potential beneficial socio-economic impacts relevant to the Morgan Generation Assets are considered in assessment of sensitivity of receptors within section 13.8.2.

13.2.4 North West Inshore and North West Offshore Marine Plans

13.2.4.1 The assessment of potential changes to socio-economics has also been made with consideration to the specific policies set out in the North West Inshore and North West Offshore Coast Marine Plans (MMO, 2021). Key provisions are set out in Table 13.5 along with details as to how these have been addressed within the assessment.

Table 13.5: North West Inshore and North West Offshore Marine Plan policies of relevance to socio-economics.

Policy	Key provisions	How and where considered in the Environmenal Statement
NW-REN-1: Proposals that enable the provision of renewable energy technologies and associated supply chains, will be supported. [Page 33]	Supply chains are recognised as important factors in harnessing the economic and social benefits of renewable energy in the UK. NWREN-1 will enable public authorities to support proposals that reduce costs, ensuring that businesses are operating competitively and with a long-term strategy. This will help develop stronger supply chains for renewable energy technology in the UK.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement provides an assessment of the direct, indirect and induced potential economic impacts (employment and GVA), which apply throughout the offshore wind supply chain.
NW-EMP-1: Proposals that result in a net increase in marine-related employment will be supported, particularly where they meet one or more of the following: 1) are aligned with local skills strategies and support the skills available 2) create a diversity of opportunities 3) create employment in locations identified as the most deprived 4) implement new technologies -in, and adjacent to, the north west marine plan areas. [Page 38]	NW-EMP-1 encourages decision-makers and proponents to deliver additional employment benefits from proposals, particularly those benefits associated with the listed policy criteria. NW-EMP-1 seeks to maximise sustainable economic activity, prosperity and opportunities for all, both now and in the future.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement provides an assessment of the direct, indirect and induced potential economic impacts (employment and GVA), at regional and national levels. The potential impact on economic receptors including employment, GVA and supply chain demand is assessed for its significance in section 13.8.2. The potential impact of increased employment opportunities is assessed for its significance in section 13.8.2.
NW-TR-1: Proposals that promote or facilitate sustainable tourism and recreation activities, or that create appropriate opportunities to expand or diversify the current use of facilities, should be supported. Proposals that may have significant adverse impacts on tourism and recreation activities must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate -adverse impacts so they are no longer significant. [Page 44]	The north west marine plan recognises tourism and recreation as important industries which provide economic and social benefits to coastal communities and visitors to the region. NW–TR-1 addresses the potential impact of proposals on existing tourism and recreation use to minimise stakeholder or future potential activities. Proposals that cannot avoid, minimise and mitigate significant adverse impacts on tourism and recreation activities are unlikely to be supported.	The potential impacts on tourism and recreation is assessed for its significance in section 13.8.2. This assessment is informed by: Volume 2, Chapter 8: Seascape, landscape and visual resources of the Enironmental Statement and Volume 2, Chapter 10: Other sea users of the Environmental Statement.
NW-CE-1: Proposals which may have adverse cumulative effects with other existing, authorised, or reasonably foreseeable proposals	This policy is intended to ensure all relevant effects are taken account of and addressed, including those that may seem less significant in their	Section 13.11 cumulative effects assessments considers the potential cumulative impacts of relevant major projects.

Policy	Key provisions	How and where considered in the Environmenal Statement
must demonstrate that they will, in order of preference: a) avoid b) minimise c) mitigate -adverse cumulative and/or in-combination effects so they are no longer significant. [Page 52]	own right. This will help to ensure that the cumulative effect on the wider environment of the north west marine area and other relevant receptors are effectively managed.	
NW–INF-1: Proposals for appropriate marine infrastructure which facilitates land-based activities, or land-based infrastructure which facilitates marine activities (including the diversification or regeneration of sustainable marine industries), should be supported. [Page 21]	NW-INF-1 supports the integration of the marine and land based systems by encouraging proposals that improve existing or provide new, sustainable marine or land-based infrastructure that facilitates activity in the other system. Supporting infrastructure development, diversification and regeneration will provide socio-economic benefits and support marine businesses, including those that are land-based.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement provides an assessment of the direct, indirect and induced potential economic impacts (employment and GVA), which apply throughout the offshore wind supply chain.

13.2.5 Isle of Man policies

13.2.5.1 This section provides a summary of the strategic policy context for the Isle of Man in relation to socio-economics.

13.2.5.2 Table 13.6 sets out a summary of the key considerations within the Isle of Man Government's strategic planning policy documentation on the economy, transport, and tourism, in relation to the assessment of potential impacts on socio-economic conditions on the Isle of Man.

Table 13.6: Isle of Man strategic policy – summary

Policy	Summary of key considerations
Our Island Plan (Isle of Man Government, 2023a)	The Our Island Plan is an overarching vision document, outlining strategic objectives to create a secure, vibrant, and sustainable economy, where everyone has access to high-quality services and opportunities. Informed by the Economic Strategy (2022), the Plan sets out strategic programmes to achieve the Isle of Man's ambitions including building better services for residents and building an attractive, competitive, and high-skilled Island. (pg.9) The Plan aims to ensure the Island is well-connected, enabling travel to, from and around it to make it attractive for residents, visitors, and businesses. (pg.26)
Our Island, Our Future: Isle of Man Economic Strategy (Isle of Man Government, 2022b)	The Economic Strategy sets out the Isle of Man Government's ambitions to develop a strong, diverse, and sustainable economy. It aims to facilitate economic growth by increasing business productivity, maintaining and supporting growth of key sectors and developing new sectors. Current key sectors of the economy are digital, financial services, high value manufacturing, and the visitor economy. Enabling sectors, important in ensuring the viability of the Island as an attractive place to live and work, are listed as retail, hospitality, culture and leisure, property, and energy. New sectors, which represent emerging areas of the economy characterised by innovation and strong growth potential, are listed as the green economy, data (linked to strengths in regulation and security), and the knowledge economy (education and training).

Policy	Summary of key considerations
	The Strategy sets out the aim to secure 5,000 new jobs, and reach £10 billion in overall GDP by 2032, which will support an estimated 100,000 Island residents over the next fifteen years. (pg.15) Attracting more economically active people to the Island is recognised as an important part in helping to generate further income that can be reinvested into the economy. (pg.42)
Our Big Picture Strategic Economic Framework: Phase 3 Report (KPMG, 2022)	The Framework identifies priorities and programmes of work that can be delivered over the next five to ten years to help achieve the Isle of Man's economic vision. Ensuring prosperity for businesses and communities are core goals for the Island, supported through creating provisions for high-quality education, healthcare, infrastructure, and transport, and an ecosystem that supports entrepreneurship, innovation, and investment. (pg.5, pg.11) The Framework outlines the Island's needs to support current and new businesses and to attract a younger, more diverse mix of individuals who have access to good career opportunities.
Isle of Man Employment Land Review (Isle of Man Government, 2015, amended 2017)	The Employment Land Review delivers an overview of employment land supply on the Isle of Man and sets out the geographic and sectoral distribution of the Island's economy. The Review recognises Douglas and the east of the Island as the main areas of focus for employment and businesses and sets the aim of attracting more investors and businesses to the Island through increasing the choice and quality of employment land available. The review estimates that a further 3,500 jobs will be added up to the year 2029 by key sectors (advanced manufacturing, finance, professional services, and tourism) and aims to sustain growth in these sectors and create growth in new emerging sectors (innovation, green growth). (pg.33)
Our Island, Our Future, Isle of Man Visitor Economy Strategy 2022-2032 (Biosphere Isle-Man and Visit Isle of Man, 2022)	The Visitor Economy Strategy sets out the aims and actions for the Island to become a strong visitor destination. The Strategy recognises that visitors help support employment and income for many residents and helps enhance the Island as a place to invest, work, and live. Visitors also help maintain the Island's air and sea links to the UK and Ireland. The Strategy highlights the introduction of the new Manxman ferry and the opening of the new Liverpool ferry terminal as an important enhancement to increasing ferry capacity (p5). The Strategy sets the aim to grow annual visitor numbers to 500,000 by 2032 (an increase of 175,000 visitors based on 2019 figures) and increase the annual economic contribution of the Island's visitor economy to £520m. (pg.10) The Strategy sets out actions to ensure the Isle of Man Steam Packet company continually looks to improve ferry services and promote ferry-inclusive packaged holidays to the Island. The Strategy aims to ensure the viability of critical air routes and develop new connections to international hub airports. (pg.18)
Smarter Movement Strategy (Isle of Man Government, 2021a)	The Smarter Movement Strategy sets out aims of improving the ability to move around the Island, between people, places, services, and organisations. Whilst the Strategy focuses on improving personal transport choices and transport on the Island, it notes that transport on and off the Island for business and social purposes are also important. It recognises the need for safe, reliable, and effective transport, which includes that of freight services to bring goods and supplies needed on the Island. (pg.2)

13.3 Consultation

13.3.1.1 A summary of the key topics raised during consultation activities undertaken to date specific to socio-economics is presented in Table 13.7 below, together with how these topics have been considered in the production of this chapter.

Table 13.7: Summary of key consultation topics raised during consultation activities undertaken for the Morgan Generation Assets relevant to socio-economics.

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
Socio-economics			
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	The Applicant should make effort to identify the location of the port and O&M base in the ES, where possible, and assess any likely significant effects associated with port use. If locations cannot be confirmed, the ES should explain the assumptions and worst-case scenario which have informed the assessment.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement sets out the detailed approach taken to define study areas – this approach aligns with industry best practice guidance 'Defining 'Local Area' for assessing impact of offshore renewables and other marine developments' (Marine Scotland, 2022).
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	The Scoping Report explains that Local Impact Area (LIA) centres will be based around likely port hub locations and the LIA then drawn from local authority areas predominantly within 60min drive of these centres in order to capture effective travel to work areas. The Environmental Statement should explain the basis for this assumption, providing the full reasoning behind the identification of the LIAs.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement sets out the detailed approach taken to define study areas – this approach aligns with industry best practice guidance 'Defining 'Local Area' for assessing impact of offshore renewables and other marine developments' (Marine Scotland, 2022).
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	Identification of likely port hub locations is identified as the basis of the assessment. It is understood from the Scoping Report that these locations will not be confirmed prior to completion of the EIA. However, the Environmental Statement should define them as far as possible, identify where uncertainty remains and assess the worst-case scenario, where possible.	Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement sets out the detailed approach taken to define study areas – this approach aligns with industry best practice guidance 'Defining 'Local Area' for assessing impact of offshore renewables and other marine developments' (Marine Scotland, 2022). A 'low' scenario – where no port in the identified sub-national study areas is selected for any activity – has been assessed within section 13.8.2. See section 13.7.1 for further details on scenario parameters.

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	The use of the larger spatial scale of National Impact Area (NIA) for employment and economy receptors is not explained in any detail in the Scoping Report. The Environmental Statement should define the NIA and set out the reasoning behind its definition, including where professional judgement has been applied.	Considered as part of the selection of potential port locations to identify socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report).
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	It is understood from the Scoping Report that as well as the desk- based sources listed, information from the marine vessel surveys will also be used in the assessment. The Inspectorate advises that the desk-study information is supplemented and ground-truthed as necessary with specific survey information, the specifics of which should be discussed with the relevant consultation bodies.	Considered as part of the consultation (section 0) – relevant stakeholders invited to input via series of consultation workshops during January 2023.
12 December 2022	Isle of Anglesey County Council (IACC) Statutory consultation response to Scoping Report	The IACC seeks to understand the socio-economic benefits via the Environmental Statement, with a focus on local employment, skills, and supply chain opportunities during all project phases. IACC reflects the Scoping Opinion recognises positive impacts but emphasises identifying and assessing potential negative socio-economic effects. A bespoke economic model should evaluate impacts on employment, GVA, and supply chain. The IACC encourages scenario-based assessment, local job opportunities, apprenticeships, and collaboration with educational institutions. While the construction port is undetermined, Holyhead Port is put forward by IACC as a potential option. IACC advocates collaborative efforts for overall project alignment and regional benefits.	Holyhead is considered as part of selection of potential port locations to identify socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement). Considered as part of consultation (section 0) – named stakeholders (including consultee) have been invited to engage with non-statutory consultation. Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Liverpool City Region Combined Authority Online consultation	Consider including Liverpool Port within North Wales impact area as it is closer to Mostyn.	Considered as part of selection of identifying socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report). There is a need to balance

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
			functional relationships alongside administrative and policy areas. It was determined that whilst there are interrelationships between the North Wales and North West England areas, the alignment to policy and administrative boundaries was more appropriate in defining study areas.
23 January 2023	Barrow Port Online consultation	Consider capacity of ports and suitability of existing infrastructure in handling large scale construction.	Considered as part of selection of potential port locations to identify socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Barrow Port Liverpool City Region Combined Authority Online consultation	Investment into infrastructure at port locations required to provide support during construction phase.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Barrow Port Liverpool City Region Combined Authority Online consultation	Consider sharing work amongst ports across the Offshore Energy Alliance cluster to sustain capability.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Barrow Port Online consultation	Potential in sub-station construction, less so in larger fabrication and staging processes of blades and foundations.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Liverpool City Region Combined Authority Online consultation	Investment would be beneficial to upskill current businesses.	The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
			will present a set of actions that will form the basis of the post-consent Skills and Employment Strategy.
23 January 2023	Barrow Port Cumbria Local Enterprise Partnership (LEP) Online consultation	Already significant offshore wind supply base, especially with operations and maintenance, which could be increased.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Barrow Port Cumbria LEP Liverpool City Region Combined Authority Online consultation	Consider building apprenticeship programmes and using skills and training facilities already in place.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Welsh Government (relevant representative) Online consultation	Consider how to make skills sustainable beyond construction of single offshore wind farm and understand time scales for demand.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Welsh Government (relevant representative) Online consultation	Transferability of skills in the region from a range of past and current projects that can be adapted and taken advantage of.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
23 January 2023	Barrow Port Liverpool City Region Combined Authority Welsh Government (relevant representative) Online consultation	Consider what impact a temporary workforce may have on the region and how to negate any costs to the community.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
02 June 2023	IACC Section 42 response to PEIR	The Council promotes the Anglesey Energy Island Programme for a low carbon economy, emphasising local benefits and sustainability. IACC acknowledges the project's potential to generate jobs and contribute to North Wales's GVA. The Council encourages the inclusion of local employment benefits, apprenticeships, and work placements. It recommends early engagement with Ambition North Wales and	Considered as part of selection of potential port locations to identify socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement). Considered as part of assessment of significant effects (section 13.8.2).

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
		local educational institutions. Emphasising Holyhead Port's suitability to play a role, the Council suggests collaboration to maximise socio-economic benefits. The recently granted Freeport status is seen as beneficial for attracting investments. The Council encourages ongoing engagement with Stena Line Ports.	Considered as part of cumulative effects assessment (section 13.11). The Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.
June 2023	Cumbria Local Enterprise Partnership Section 42 response to PEIR	The Cumbria Local Enterprise Partnership endorses the project, aligning with its focus on clean energy and business decarbonisation. The region, vital for economic growth in Cumbria, sees opportunities from increased BAE Submarine activities and the proposed Green Hub. Cumbria Local Enterprise Partnership supports the development as a substantial contribution to the UK's clean offshore energy target by 2030 and a catalyst for economic growth. It welcomes collaboration with the project and advocates for Barrow as an operations and maintenance hub.	Considered as part of selection of potential port locations to identify socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
June 2023	Ørsted Isle of Man Ltd Section 42 response to PEIR	Highlighting cumulative interactions with the Isle of Man Offshore Wind Farm (i.e. Moor Vannin)	Considered as part of cumulative effects assessment (section 13.11).
June 2023	Barrow Offshore Windfarm Section 42 response to PEIR	Highlighting potential interactions with the Barrow Offshore Windfarm	Considered as part of cumulative effects assessment (section 13.11).
June 2023	Burbo Bank Offshore Windfarm Section 42 response to PEIR	Highlighting potential interactions with the Burbo Bank Offshore Windfarm	Considered as part of cumulative effects assessment (section 13.11).
June 2023	West of Duddon Sands Offshore Windfarm Section 42 response to PEIR	Highlighting potential interactions with the West of Duddon Sands Offshore Windfarm	Considered as part of cumulative effects assessment (section 13.11).

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
June 2023	Scottish Power Renewables Section 42 response to PEIR	Highlighting potential interactions with the West of Duddon Sands Offshore Windfarm	Considered as part of cumulative effects assessment (section 13.11).
June 2023	Walney Offshore Windfarms (Walney 1 and 2) Section 42 response to PEIR	Highlighting potential interactions with the Walney Offshore Windfarms (Walney 1 and 2)	Considered as part of cumulative effects assessment (section 13.11).
June 2023	Walney Extension Windfarm (Walney 3 and 4) Section 42 response to PEIR	Highlighting potential interactions with the Walney Extension Windfarm (Walney 3 and 4)	Considered as part of cumulative effects assessment (section 13.11).
June 2023	Isle of Man Department for Infrastructure Section 42 statutory consultation	The Transport and Security Committee (TSC) raises concerns about the economic risks posed by the Mona and Morgan windfarms, especially regarding their impact on lifeline services. The TSC emphasises the economic significance of timely imports to the Isle of Man and highlights potential disruptions to lifeline goods, affecting residents and businesses. The economic impacts on resident travel, non-resident travel, and tourism are also outlined, including adverse effects on journey times, attractiveness as a place to live and work, and disruptions during peak travel periods. Additionally, the TSC calls for continued engagement in the assessment process.	Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services are cconsidered as part of assessment of significant effects (section 13.8.2), and cumulative effects assessment (section 13.11).
June 2023	Isle of Man Steam Packet Company Section 42 statutory consultation	The Isle of Man Steam Packet Company (IOMSPC) outlines potential negative impacts, including disruptions to lifeline supplies. The IOMSPC suggests that deviations from direct routes could lead to disruptions, affecting essential services, businesses, and the overall well-being of the island community.	Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services are considered as part of assessment of significant effects (section 13.8.2), and cumulative effects assessment (section 13.11).
June 2023	The Isle of Man Chamber of Commerce Section 42 statutory consultation	The Isle of Man Chamber of Commerce expresses concerns regarding the potential economic impact on established lifeline sea routes with the UK (Heysham & Liverpool). The Isle of Man Chamber of Commerce express concerns that impacts may increase journey	Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services are considered as part of assessment of significant effects (section 13.8.2), and cumulative effects assessment (section 13.11).

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
		times, reduce port turnaround times for urgent freight and affect the use of adverse weather routes, leading to more cancellations. The Chamber emphasises the island's heavy reliance on timely deliveries, particularly for same-day fresh foods.	
June 2023	Various stakeholders Section 42 statutory consultation	Local stakeholders have expressed concerns about the potential economic impacts of wind farm construction. This includes potential disruption to shipping routes, leading additional fares and longer journey times. Respondents emphasise the potential cumulative impact of multiple wind farm projects, suggesting that combined effects could impact shipping routes. Concerns include longer sailing times, disruptions to ferry services, and increased cancellation risks, particularly during adverse weather conditions. The importance of the Isle of Man Steam Packet Company as a lifeline for the community has also been raised. Respondents emphasise its role in transporting essential goods, such as food and medicine.	Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services are cconsidered as part of assessment of significant effects (section 13.8.2), and cumulative effects assessment (section 13.11).
Tourism			
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	The Inspectorate understands the approach described in the Scoping Report to assess impacts to tourism and community receptors on the LIA scale rather than a national spatial scale. The Inspectorate agrees that the Proposed Development is unlikely to result in significant effects on tourism and community at a national level, and that this matter can be scoped out.	Considered as part of selection of identifying socio-economics regional study areas (Volume 4, Annex 13.1: Socio-economics technical impact report). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).

Date	Consultee and type of response	Topics raised	Response to topics raised and/or where considered in this chapter
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	Should explain why the use of the ZTV identified within the seascape, landscape, and visual effects assessment to identify tourism and recreation receptors is appropriate for the types of impact and resulting effect to be considered in this chapter.	Considered as part of Maximum Design Scenario (MDS) (section 13.7). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
15 June 2022	The Planning Inspectorate Statutory consultation response to Scoping Report	The potential impacts of the generation assets on visitor numbers to designated sites may be relevant to other matters assessed in the Environmental Statement including the assessment of inter-project effects and the Inspectorate advises that appropriate cross-reference is made to ensure consistency in the information presented.	Volume 2, Chapter 15: Seascape, landscape and visual resources is reviewed for potential indirect impacts on tourism and recreation resulting from potential impacts on designated sites. Considered as part of MDS (section 13.7). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
25 January 2023	Visit Wales Online consultation	As offshore wind development becomes more established as a sector, negative perceptions of such developments – particularly in terms of visual impacts – have become less prevalent over time.	Understood this is an anecdotal observation and would need supporting with research findings to be relied upon as part of assessment of significant effects.
25 January 2023	Visit Wales Online consultation	Consider impact of using bed stock from the tourism sector to provide accommodation for a non-local workforce. Could create issues through taking away accommodation for visitors and reducing spend on attractions within the tourism industry.	Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).
25 January 2023	Visit Wales Online consultation	Consider a bigger demand for accommodation within the UK visitor sector.	Considered as part of baseline conditions (section 13.5). Considered as part of assessment of significant effects (section 13.8.2). Considered as part of cumulative effects assessment (section 13.11).

13.3.1.2 Three stakeholder consultation workshops, which covered generation and transmission topics across Morgan Offshore Wind Project and Mona Offshore Wind Project, were organised during January 2023. The focus of each workshop was tailored to the areas of knowledge and expertise of the participants as follows:

- **Economy**: discussion focused on potential ports, port infrastructure capacity, supply chain capacity, and skills and labour market capacity
- **Social**: discussion focused on skills and labour market factors such as capacity and training, and local factors such as housing market capacity and community dynamics
- **Tourism**: discussion focused on visual amenity, overnight accommodation, and recreation assets.

13.3.1.3 A range of key stakeholders were invited to participate in consultation to inform the assessment. This included national and regional representative organisations as well as local authority officers within the socio-economics regional study areas.

13.3.1.4 Table 13.8 summarises the invite list for each workshop.

Table 13.8: Socio-economics stakeholder consultation invite list.

Note: asterisk (*) denotes the organisation attended the workshop.

Workshop	Invitees
Economic – January 2023	• Associated British Ports* • Cumbria County Council* • Cumbria LEP* • Furness Economic Development Forum • Liverpool City Region Combined Authority* • Marine Energy Wales • Mersey Maritime • North Wales Economic Ambition Board • ORE Catapult* • Renewable UK Cymru* • Welsh Government*
Social – January 2023	• Barrow-in-Furness Borough Council • Conwy County Borough Council • Denbighshire County Council* • Flintshire County Council • Isle of Anglesey County Council • Lancaster City Council
Tourism – January 2023	• Go North Wales • Royal Yachting Association • Visit North West • Visit Wales* • Wales Tourism Alliance (WTA)

13.3.1.5 This non-statutory stakeholder consultation was carried out during preparation of the PEIR. This process provided useful inputs which have been incorporated to the approach taken for the preparation of this Environmental Statement chapter.

13.3.1.6 There have been no significant changes relating to either the scope of the Morgan Generation Asstes or environmental conditions relevant to the topic of socio-economics since PEIR. As such, conducting further non-statutory stakeholder consultation is unlikely to yield further useful inputs. Furthermore, repeating non-statutory stakeholder consultation on the basis of unchanged project scope and environmental conditions risks consultation fatigue amongst stakeholders.

13.4 Baseline methodology

13.4.1 Relevant guidance

13.4.1.1 This section summarises the methodology applied to inform the analysis of the baseline environments of the economic, social and tourism study areas.

13.4.2 Scope of the assessment

13.4.2.1 The scope of this Environmental Statement has been developed in consultation with relevant statutory and non-statutory consultees as detailed in Table 13.7.

13.4.2.2 Taking into account the scoping and consultation process, Table 13.9 summarises the issues considered as part of this assessment. This assessment does not consider individual business level effects.

Table 13.9: Issues considered within this assessment.

Potential effects scoped into the assessment
Construction phase
The potential impact on economic receptors including employment and GVA.
The potential impact of increased employment opportunities within the subnational study areas.
The potential impact on population, housing and accommodation.
The potential impact on tourism.
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.
Operation and maintenance
The potential impact on economic receptors including employment and GVA within the subnational study areas.
The potential impact of increased employment opportunities within the subnational study areas.
The potential impact on population, housing and accommodation.
The potential impact on tourism.
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.
Decommissioning phase
The potential impact on economic receptors including employment and GVA
The potential impact of increased employment opportunities within the subnational study areas.
The potential impact on population, housing and accommodation.
The potential impact on tourism.
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.

13.4.2.3 Effects which are not considered likely to be significant have been scoped out of the assessment. A summary of the effects scoped out, together with justification for scoping them out and whether the approach has been agreed with key stakeholders through either scoping or consultation, is presented in Table 13.10.

Table 13.10: Impacts scoped out of the assessment for socio-economics.

Potential impact(s)	Phase	Study areas	Justification
The potential impact on economic receptors including employment and GVA.	O	UK	Potential economic impacts during the operations and maintenance phase will be concentrated at geographies below the UK level. As these are not anticipated to have any significant effects on economic receptors at the UK level, impacts are scoped out at the national level only.
The potential impact of increased employment opportunities.	All	UK	Potential labour market impacts during all phases will be concentrated at sub-national geographies. As these are not anticipated to have any significant effects on economic receptors at the UK level, impacts are scoped out at the national level only.

13.4.3 Study areas

Economic study areas

13.4.3.1 A detailed explanation of the approach to economic study area definition can be found in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

National economic study areas

13.4.3.2 National economic study areas are defined to reflect the wider reach of employment and GVA impacts that may materialise through the supply chain and demand for labour. As such, the following national economic study area has been identified:

- **United Kingdom (UK)**: understanding the UK content of potential economic impacts associated with offshore wind farm developments is an important aspect of considering a project's potential benefits. It is recognised, therefore, that assessing the potential impacts of the Morgan Generation Assets at the UK level will assist the Planning Inspectorate in its examination of the project application

Sub-national economic study areas

13.4.3.3 To ensure the assessment of impacts is proportionate, sub-national study area definition concentrates on locations within the relevant planning jurisdictions of England and Wales, in proximity to the Irish Sea, which could play a supporting role during the construction and decommissioning phases, or be the primary operations and maintenance port. Therefore, locations in North Wales and North West England are considered as part of this assessment[2,3].

13.4.3.4 The various components which contribute to the delivery of the Morgan Generation Assets will have different 'epicentres of impact' – locations from where the impacts 'radiate'. Industry best practice guidance from Marine Scotland (2022) Defining 'Local Area' for assessing impact of offshore renewables and other marine developments sets out that economic impacts can be geographically linked to a range of epicentres, including construction and operation and maintenance ports.

13.4.3.5 In this assessment the sub-national economic study areas are linked to potential construction, operation and maintenance and decommissioning ports within North Wales and North West England that have the capability to support the associated supply of inputs and services for the Morgan Generation Assets. These ports, and their socio-economic catchment areas, are potential epicentres of impact on economic receptors. Due to the infrastructure requirements of large components (e.g. laydown and storage areas), it is likely that multiple fabrication and marshalling ports will be utilised during project delivery.

13.4.3.6 The following sub-national economic study areas have been defined for the purposes of assessing potential economic impacts:

- **North Wales** regional economic study area[4] (hereafter referred to as 'North Wales')
- **North West England** regional economic study area[5] (hereafter referred to as 'North West England').

13.4.3.7 Sub-national economic study areas are shown in Figure 13.1.

Social study areas

13.4.3.8 The most likely cause of social impacts are related to the implications of economic impacts (i.e. the movement of labour). Therefore, the theoretical underpinnings of the

[2] The selection process associated with the identification of ports, inputs, and services will not conclude until the post-consent phase for the Morgan Generation Assets, which is typical for offshore wind farms. It is likely that fabrication and marshalling ports elsewhere in the UK and internationally will be utilised for the delivery of components.

[3] Douglas Harbour, on the Isle of Man, is in proximity to the Morgan Array Area. There is evidence this location has previously supported offshore wind operation and maintenance activity in the Irish Sea. Douglas may, therefore, play a small supporting role during the operations and maintenance phase with regards to crew transfer activity. Douglas Harbour is not currently considered to meet the requirements for the primary operation and maintenance port and is therefore not assessed. It should be noted the Isle of Man will be considered as a location by which to support wider roles., e.g. crew transfer. An Outline Skills and Employment Plan (OSEP) has been provided with the Morgan Generation Assets Application, which provides insight into the Applicant's proposed approach to working with local stakeholders and engaging with local residents to maximise employment opportunities and access to skills training and employment. The Isle of Man has been identified as a location in which labour market engagement will be considered. Regarding the Isle of Man, the OSEP raises wider awareness of skills employment opportunities relating to offshore wind across stakeholders and the Island's population. The Applicant's engagement with Isle of Man communities and businesses can help to deliver greater understanding of opportunities that could arise.

[4] Does not meet the statistical definition of a UK region.

[5] Does meet the statistical definition of a UK region.

economic study areas – with a focus on epicentres of impact by way of potential port(s)– are also applicable in defining suitable social study areas.

13.4.3.9 Social impacts are not assessed at a national level, therefore Wales and UK study areas are not considered within the assessment.

13.4.3.10 Having identified potential port facilities within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement, the same list has been utilised in determining appropriate regional social study areas. The extent of the economic study areas has been determined on the basis of labour catchment areas using a 60 minute drive time catchment as a proxy.

13.4.3.11 Therefore, the same 60-minute drive catchments for the same long list of port facilities results in the same best fit regional social study areas, as follows:

- **North Wales**
- **North West England.**

13.4.3.12 Social study areas are shown in Figure 13.1.

Tourism study areas

13.4.3.13 Potential impacts of the construction, operations and maintenance, and decommissioning of the Morgan Generation Assets on tourism are indirect in nature. It is necessary to derive an assessment of significance of effects on tourism from the findings elsewhere in the Environmental Statement on the basis of visual amenity, overnight trips/accommodation and recreation.

Visual amenity

13.4.3.14 It is necessary to derive an assessment of significance of effects on visual amenity from the findings of Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement. The potential visual impacts of the construction, operations and maintenance and decommissioning of the Morgan Generation Assets will be one of the most important considerations when assessing significance of effects on tourism.

13.4.3.15 On this basis, the tourism study areas definition draws on the Zone of Theoretical Visbility (ZTV) set out in Figure 10.1 within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement.

Overnight trips and accommodation

13.4.3.16 It is necessary to derive an assessment of significance of effects on overnight trips and accommodation from the findings of the assessment within this chapter of potential impacts on population, housing and accommodation.

13.4.3.17 On this basis, the tourism regional study areas definition draws directly on the social study areas within this chapter. These have been determined based on the location of potential ports, which is the main consideration in relation to the impact on overnight trips and accommodation.

Recreation

13.4.3.18 It is necessary to derive an assessment of significance of effects on recreation from the findings of Volume 2, Chapter 9: Other sea users of the Environmental Statement. The potential recreation impacts of the construction, operations and maintenance and

decommissioning of the Morgan Generation Assets will be an important consideration when assessing significance of effects on tourism.

13.4.3.19 On this basis, the tourism study areas definition considers the Other Sea Users regional study area – see Figure 9.1 within Volume 2, Chapter 9: Other sea users of the Environmental Statement for further details.

Overall tourism study areas

13.4.3.20 On the basis of the above considerations, three tourism study areas have been identified:

- **North Wales**
- **North West England**
- **Isle of Man.**

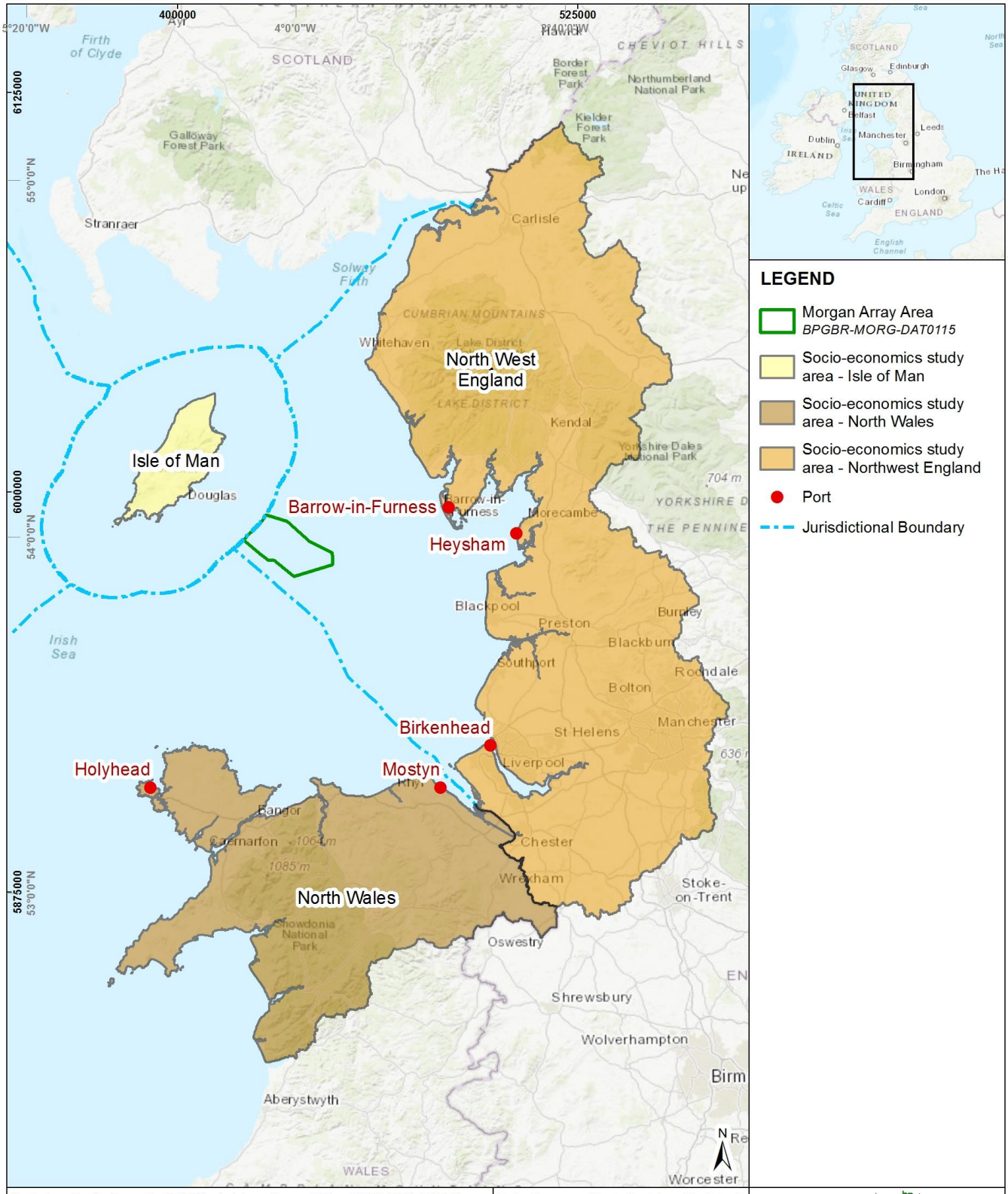
13.4.3.21 Tourism study areas are shown in Figure 13.1.

Lifeline ferry services study area

13.4.3.22 Potential impacts on Isle of Man lifeline ferry services have been assessed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, which assesses potentially significant cumulative effects on commercial operators including strategic routes and lifeline ferries and potentially significant cumulative effects on adverse weather routeing.

13.4.3.23 Understanding the potential for socio-economic impacts on the Isle of Man associated with offshore wind farm development in the Irish Sea is therefore an important aspect of considering the Morgan Generation Assets' potential impacts. It is recognised, therefore, that assessing potential socio-economic impacts on the Isle of Man, linked to potential lifeline ferry rescheduling, will assist the Secretary of State in their examination of the project application.

13.4.3.24 The Isle of Man socio-economics study area is shown in Figure 13.1.



Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Data Sources: Client. Contains OS data © Crown copyright and database right 2022 TravelTime Technologies Ltd, 2022.

Project Name:
MORGAN OFFSHORE WIND PROJECT

0 5 10 20 nm
0 5 10 20 30 40 50 km

Drawing Number:
RPSE-MG-ES-SOE-E001-02

Drawing Title:
NORTH WALES AND NORTHWEST ENGLAND STUDY AREAS (SOCIO-ECONOMICS)

Geodetic Information:
Datum: ETRS 1989
Projection: ETRS 1989 UTM Zone 30N
Scale@160mmx220mm: 1:2,000,000

VER	DATE	DETAILS	BY	CHECK
00	29/11/23	First Issue	MJ	MK
02	23/01/24	Revision	NG	PK

Figure 13.1: Economic, social and tourism study areas (North Wales and Northwest England) for the topic of socio-economics.

13.4.4 Desktop study

13.4.4.1 Information on socio-economics within the economic, social, and tourism study areas has been collected through a detailed desktop review of existing studies and datasets. These are summarised at Table 13.11 below.

Table 13.11: Summary of key desktop reports.

Title	Source	Year
Socio-economics		
Business Register and Employment Survey	Office for National Statistics (ONS)	2023a
Regional gross value added (balanced) by industry: local authorities	ONS	2023b
Regional gross value added (balanced) by industry: all ITL regions	ONS	2023c
Offshore Wind Skills Intelligence Report	Offshore Wind Industry Council (OWIC)	2023
Labour market		
Annual Population Survey	ONS	2023d
Annual Population Survey: model-based estimates of unemployment	ONS	2023e
Housing and accommodation		
Population estimates	ONS	2023f
Dwelling stock estimates by local authority and tenure	Statistics Wales	2023a
Chargeable empty and second homes, by local authority	Statistics Wales	2023b
Table 109 Dwelling stock: by tenure and region	Department for Levelling Up, Housing and Communities (DLUHC)	2023a
Table 615 Vacant dwellings by local authority district: England	DLUHC	2023b
Tourism		
Great Britain Day Visits Survey (GBDVS)	Visit England	2023a
Great Britain Tourism Survey (GBTS) Estimates of the volume and value of overnight trips taken by British residents in Great Britain in 2021 (April-December)	Visit England	2022
Great Britain Tourism Survey (GBTS) Estimates of the volume and value of overnight trips taken by British residents in Great Britain in 2021 (April – December, revised data) and in 2022 (January – December)	Visit England	2023b
Homepage	WTA	2023
North West England and Domestic Tourism	Visit England	2015
Providing recognition to tourism skills in North Wales	Ambition North Wales	2023
The Great Britain Day Visitor 2019 Annual Report	Visit England, Visit Scotland, and Visit Wales	2019
Domestic GB Tourism Statistics (day trips in Wales): 2022	Welsh Government	2023a
Domestic GB Tourism Statistics (overnight trips in Wales): 2022	Welsh Government	2023b
Tourism assets informed by various webpages – listed in 13.14	Various	2022

Title	Source	Year
Isle of Man		
National Income 2020/21	Isle of Man Government	2022
2021 Census Report Part 1 and 2	Isle of Man Government	2021
Census Report	Isle of Man Government	2016
Passenger Survey Annual Report 2018	Isle of Man Government	2019
Monthly Harbour Traffic Summary	Isle of Man Government	2023
Ferry Services Survey 2018	Isle of Man Government	2018
PORT0706: Domestic UK major port freight traffic by coastwise or one port traffic, cargo group and UK country	Department for Transport	2023
Service variance data (not publicly available)	Isle of Man Steam Packet Company (IOMSPC)	2023
Future		
Economic and fiscal outlook	Office for Budget Responsibility (OBR)	2023
Forecasts for the UK economy: a comparison of independent forecasts	HM Treasury	2023
The Skills Imperative 2035: Occupational Outlook – Long-run employment prospects for the UK, Baseline Projections – Working Paper 2a	NFER and Nuffield Foundation	2022
Net Zero North Sea: A managed transition for oil and gas in Scotland and the UK after Covid-19	Institute for Public Policy Research (IPPR)	2020
2020-based interim national population projections: year ending June 2022 estimated international migration variant	ONS	2023
Population projections for regions: Table 1	ONS	2020
Population projections by local authority and year	Statistics Wales	2021

Industry definitions

13.4.4.2 There is no widely agreed and accepted definition of the offshore wind industry. Enterprises within many sectors can be active within the offshore wind industry.

13.4.4.3 Data on employment and GVA in the offshore wind sector is very useful, however it does not capture the potential wider supply chain that could service the offshore wind sector. To this end, **impact industries** have been defined to represent employment and GVA in industries associated with the construction, operations and maintenance, and decommissioning of offshore energy infrastructure (i.e. not limited to offshore wind). These definitions can be found in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

13.4.4.4 The definitions of terms utilised throughout the socio-economics chapter to define industry activity are as follows:

- **All industries**: this industry definition includes all Standard Industrial Classification 2007 (SIC07) codes and can be thought of as the 'whole' economy
- **Impact industries**: various permutations of impact industries are utilised, each defined in Volume 4, Annex 13.1: Socio-economics technical impact report of the

Environmental Statement. These impact industries should not be seen as representing only activity that currently contributes to the offshore wind sector. Instead, these impact industries should be seen as representative activities in industries associated with the construction, operations and maintenance and decommissioning of offshore energy infrastructure (i.e. not limited to offshore wind)

- **Offshore wind**: this industry definition represents activity that currently contributes to the offshore wind sector. The best available data on employment and GVA in the offshore wind sector is used to define existing baseline conditions in the offshore wind sector itself. Employment data is based on the Offshore Wind Skills Intelligence Report (OWIC), 2022). GVA data is based on The Economic Value of Offshore Wind (ORE Catapult, 2017).

Receptors and indicators

13.4.4.5 The summary of baseline conditions aligns with the socio-economic and community impacts set out in Table 13.33, and will therefore cover the receptors set out below, along with associated indicators:

- Economy (employment and GVA):
  - Total employment in all industries
  - Employment change in all industries
  - Total employment in impact industries
  - Employment change in impact industries
  - Estimated employment in offshore wind sector
  - Total GVA in all industries
  - GVA change in all industries
  - GVA in impact industries
  - GVA change in impact industries
- Labour market:
  - Economic activity
  - Unemployment
  - Economically inactive individuals actively seeking employment.
- Housing and local services:
  - Population
  - Dwellings
  - Unoccupied dwellings
  - Dwellings within the private rented sector
- Tourism:
  - Employment in tourism sector
  - GVA in tourism sector
  - Overnight stays and day visits
  - Key tourist and visitor attractions.

13.4.4.6 These indicators will be analysed on the basis of publicly available desktop sources as set out in Table 13.11.

13.4.5 Site-specific surveys

13.4.5.1 No site-specific surveys have been undertaken to inform the socio-economics EIA. This is due to the availability of existing publicly accessible data for the identified study areas. Consultation has been undertaken with stakeholders across the identified economic, social and tourism study areas. The results of this consultation are set out in section 13.3.

13.5 Baseline environment

13.5.1.1 This section summarises relevant baseline data for the economic, social and tourism study areas under the following headings:

- employment (economic)
- GVA (economic)
- labour market (economic)
- housing, accommodation and population (social)
- tourism.

13.5.1 Economic

Employment and GVA

13.5.1.1 Employment is a measure obtained by adding the number of working owners not paid via Pay as You Earn (PAYE) to the number of full and part time employees. This is a measure of persons and is not measured in full-time equivalents (FTE).

All industries

North West England

13.5.1.2 All industries employment in North West England in 2022 was approximately 3.6 m (ONS, 2023a). Between 2015 and 2022, the number of employed persons in North West England increased by 310,000 (ONS, 2023a). This equates to an average annual growth of 1.3%.

13.5.1.3 All industries GVA in North West England in 2021 was approximately £196 bn (ONS, 2023c). Between 2015 and 2021, GVA in North West England increased by £33 bn (ONS, 2023c). This equates to an average annual growth of 3.1%.

North Wales

13.5.1.4 All industries employment in North Wales in 2022 was approximately 310,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in North Wales increased by 3,000 (ONS, 2023a). This equates to an average annual growth of 0.1%.

13.5.1.5 All industries GVA in North Wales in 2021 was approximately £15.6 bn (ONS, 2023b). Between 2015 and 2021, GVA in North Wales increased by £2.5 bn (ONS, 2023b). This equates to an average annual growth of 2.9%.

United Kingdom/Great Britain

13.5.1.6 All industries employment in Great Britain (GB) in 2022 was approximately 31.9 m (ONS, 2023a). Between 2015 and 2022, the number of employed persons in GB increased by 2.1 m (ONS, 2023a). This equates to an average annual growth of 1.0%.

13.5.1.7 All industries GVA in the UK in 2021 was approximately £2 trillion (ONS, 2023c). Between 2015 and 2021, GVA in the UK increased by £328 bn (ONS, 2023c). This equates to an average annual growth of 3.0%.

13.5.1.8 The figures for each economic study area are presented in Table 13.12.

Table 13.12: All industries economy indicators (employment and GVA) – count and change.

Source: Business Register and Employment Survey (BRES) (ONS, 2023a), Regional gross value added (balanced) by industry: local authorities (ONS, 2023b), and Regional gross value added (balanced) by industry: all ITL regions (ONS, 2023c).

Economic study area	Total employment (2022)	Employment change (2015 to 2022)	Total GVA (£m, 2021)	GVA change (£m, 2015 to 2021)
Regional				
North West England	3,600,000	310,000	£196,000	£32,900
North Wales	310,000	3,000	£15,600	£2,500
National				
GB/UK	31,900,000	2,100,000	£2,040,000	£327,000

Construction impact industries

North West England

13.5.1.9 Construction impact industries employment in North West England in 2022 was approximately 65,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in construction impact industries in North West England decreased by approximately 4,000 (ONS, 2023a). This equates to an average annual decrease of 0.8%.

13.5.1.10 Construction impact industries GVA in North West England in 2021 was approximately £30 bn (ONS, 2023c). Between 2015 and 2021, GVA in construction impact industries in North West England increased by £3.9 bn (ONS, 2023c). This equates to an average annual growth of 2.4%.

North Wales

13.5.1.11 Construction impact industries employment in North Wales in 2022 was approximately 7,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in construction impact industries in North Wales decreased by approximately 2,000 (ONS, 2023a). This equates to an average annual decrease of 3.5%.

13.5.1.12 Construction impact industries GVA in North Wales in 2021 was approximately £3.0 bn (ONS, 2023b). Between 2015 and 2021, GVA in construction impact industries in North Wales increased by £1.1 bn (ONS, 2023b). This equates to an average annual growth of 5.5%.

UK/GB[6]

13.5.1.13 Construction impact industries employment in GB in 2022 was approximately 594,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in construction impact industries in GB decreased by 25,000 (ONS, 2023a). This equates to an average annual decrease of 0.6%.

13.5.1.14 Construction impact industries GVA in the UK in 2021 was approximately £308 bn (ONS, 2023c). Between 2015 and 2021, GVA in construction impact industries in the UK increased by £33 bn (ONS, 2023c). This equates to an average annual growth of 1.9%.

13.5.1.15 The figures for each economic study area are presented in Table 13.13.

Table 13.13: Construction impact industries economy indicators (employment and GVA) – count and change.

Source: BRES (ONS, 2023a), Regional gross value added (balanced) by industry: local authorities (ONS, 2023b), and Regional gross value added (balanced) by industry: all ITL regions (ONS 2023c).

Economic study area	Employment (2022)	Employment change (2015 to 2022)	GVA (£m, 2021)	GVA change (£m, 2015 to 2021)
Regional				
North West England	65,000	–4,000	£30,100	+£3,900
North Wales	7,000	–2,000	£4,200	+£1,100
National				
GB/UK	594,000	–25,000	£308,000	+£32,700

Operations and maintenance impact industries

North West England

13.5.1.16 Operations and maintenance impact industries employment in North West England in 2022 was approximately 30,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in operations and maintenance impact industries in North West England decreased by approximately 2,000 (ONS, 2023a). This equates to an average annual decrease of 0.9%.

13.5.1.17 Operations and maintenance impact industries GVA in North West England in 2021 was approximately £17 bn (ONS, 2023c). Between 2015 and 2021, GVA in operations and maintenance impact industries in North West England increased by £2.8 bn (ONS, 2023c). This equates to an average annual growth of 2.9%.

North Wales

13.5.1.18 Operations and maintenance impact industries employment in North Wales in 2022 was approximately 2,500 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in operations and maintenance impact industries in North Wales

[6] GVA data is available for the UK, and employment data is available for GB but not UK.

decreased by approximately 1,500 (ONS, 2023a). This equates to an average annual decrease of 6.5%.

13.5.1.19 Operations and maintenance impact industries GVA in North Wales in 2021 was approximately £1.9 bn (ONS, 2023b). Between 2015 and 2021, GVA in operations and maintenance impact industries in North Wales increased by £340 m (ONS, 2023b). This equates to an average annual growth of 3.3%.

UK/GB

13.5.1.20 Operations and maintenance impact industries employment in GB in 2022 was approximately 274,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in operations and maintenance impact industries in GB decreased by 4,000 (ONS, 2023a). This equates to an average annual decrease of 0.2%.

13.5.1.21 Operations and maintenance impact industries GVA in the UK in 2021 was approximately £202 bn (ONS, 2023c). Between 2015 and 2021, GVA in operations and maintenance impact industries in the UK increased by £22 bn (ONS, 2023c). This equates to an average annual growth of 1.9%.

13.5.1.22 The figures for each economic study area are presented in Table 13.14.

Table 13.14: Operations and maintenance impact industries economy indicators (employment and GVA) – count and change.

Source: BRES (ONS, 2023a), Regional gross value added (balanced) by industry: local authorities (ONS, 2023b), and Regional gross value added (balanced) by industry: all ITL regions (ONS, 2023c).

Economic study area	Employment (2022)	Employment change (2015 to 2022)	GVA (£m, 2021)	GVA change (£m, 2015 to 2021)
Regional				
North West England	30,000	-2,000	£17,500	+£2,800
North Wales	2,500	–1,500	£1,900	+£300
National				
GB/UK	274,000	–4,000	£202,000	+£22,000

Decommissioning impact industries

North West England

13.5.1.23 Decommissioning impact industries employment in North West England in 2022 was approximately 37,000 (ONS, 2023a). Between 2015 and 2021, the number of employed persons in decommissioning impact industries in North West England decreased by approximately 4,000 (ONS, 2023a). This equates to an average annual decrease of 1.5%.

13.5.1.24 Decommissioning impact industries GVA in North West England in 2021 was approximately £20 bn (ONS, 2023c). Between 2015 and 2021, GVA in decommissioning impact industries in North West England increased by £3.3 bn (ONS, 2023c). This equates to an average annual growth of 3.0%.

North Wales

13.5.1.25 Decommissioning impact industries employment in North Wales in 2022 was approximately 3,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in decommissioning impact industries in North Wales decreased by approximately 2,000 (ONS, 2023a). This equates to an average annual decrease of 7.0%.

13.5.1.26 Decommissioning impact industries GVA in North Wales in 2021 was approximately £2.2 bn (ONS, 2023b). Between 2015 and 2021, GVA in decommissioning impact industries in North Wales increased by £420m (ONS, 2023b). This equates to an average annual growth of 3.7%.

UK/GB

13.5.1.27 Decommissioning impact industries employment in GB in 2022 was approximately 306,000 (ONS, 2023a). Between 2015 and 2022, the number of employed persons in decommissioning impact industries in GB decreased by 14,000 (ONS, 2023a). This equates to an average annual decrease of 0.6%.

13.5.1.28 Decommissioning impact industries GVA in the UK in 2021 was approximately £227 bn (ONS, 2023c). Between 2015 and 2021, GVA in decommissioning impact industries in the UK increased by £26 bn (ONS, 2023c). This equates to an average annual growth of 2.0%.

13.5.1.29 The figures for each economic study area are presented in Table 13.15.

Table 13.15: Decommissioning impact industries economy indicators (employment and GVA) – count and change.

Source: BRES (ONS, 2023a), Regional gross value added (balanced) by industry: local authorities (ONS, 2023b), and Regional gross value added (balanced) by industry: all ITL regions (ONS, 2023c).

Study area	Employment (2022)	Employment change (2015 to 2022)	GVA (£m, 2021)	GVA change (£m, 2015 to 2021)
Regional				
North West England	37,000	–4,000	£20,000	+£3,300
North Wales	3,000	–2,000	£2,200	+£420
National				
GB/UK	306,000	–14,000	£227,000	+£25,800

Offshore wind sector

13.5.1.30 Whilst there is no agreed SIC07 based sector definition for offshore wind, the OWIC provides an estimate of direct and indirect employment in the sector (OWIC, 2023). This was established through collecting detailed workforce data via an industry survey of the offshore wind sector, with robust extrapolation formula, ratios and government multipliers then used to estimate the total current workforce:

- Direct employment: refers to a FTE job that is directly involved in the manufacturing, development, construction, or operations and maintenance of an offshore windfarm. This includes engineering, procurement, construction and installation of any of the wind farm's finalised kit including wind turbines,

foundations, substations and cables. OWIC estimates there were 17,400 jobs directly supported by the offshore wind sector in the UK as of the start of 2023. Given the continuing growth of the offshore wind sector in terms of development since 2020, the current number of jobs in the sector is likely to be higher than the OWIC estimate

- Indirect employment: refers to employment in industries that supply and support the core activities of offshore wind renewable energy deployment. Usually, these workers do not consider themselves as working in renewables; they produce steel, plastics, or other materials, or they provide financial and other services. These industries are not directly involved in renewable energy activities but produce intermediate inputs along the value chain of renewable energy technologies. OWIC's review of employment factors indicates the inclusion of indirect jobs typically increases overall employment numbers by anywhere from 50% to 100%. OWIC adopted a ratio of 83% for their analysis. OWIC estimates there were 14,900 jobs indirectly supported by the offshore wind sector as at the start of 2023
- Total: OWIC estimates there were around 32,300 jobs in the UK directly and indirectly supported by the offshore wind sector as at June 2023.

13.5.1.31 OWIC also provide a regional breakdown of the industry survey results, which shows extrapolated results from the survey results to the whole sector. The OWIC indicate 2,750 jobs based in North West England (10.5% of the UK total), and 118 jobs in Wales[7] (0.5% of the UK total). No data is provided for North Wales.

13.5.1.32 A summary of OWIC's offshore wind employment estimates is provided in Table 13.16.

Table 13.16: Offshore wind sector employment estimates.

Source: HJA analysis of OWIC intelligence report (2023).

Note: some figures have been rounded and may not sum.

Economic study area	Estimated Survey-based employment	Share of UK total	Estimated offshore wind sector employment[8]
Regional			
North West England	868	10.5%	3,387
North Wales	–	–	–
National			
Wales	41	0.5%	161
UK	8,268	100%	32,257

13.5.1.33 Robust data on the GVA contribution of the offshore wind sector to the UK economy is not readily available.

[7] Wales data is reported as a proxy for North Wales.

[8] Regional figures derived on the basis of regional shares of UK total.

Labour market

Economic activity

13.5.1.34 Economic activity is a measure of those in employment or self-employment, as well as those actively seeking employment. Economic inactivity is defined as people not in employment who have not been seeking work within the last four weeks and/or are unable to start work within the next two weeks. The ONS also reports on the rate of economically inactive individuals that are seeking employment.

North West England

13.5.1.35 The economic activity rate in North West England in 2022 was 77% (ONS 2023d). The number of economically active individuals increased by an annual average of 0.3% between 2015 and 2022 (ONS, 2023d).

13.5.1.36 The share of those who were economically inactive who are seeking employment was 18% (ONS, 2023d). The number of economically inactive individuals who are seeking employment decreased by 4.7% between 2015 and 2022 (ONS, 2023d).

North Wales

13.5.1.37 The economic activity rate in North Wales in 2022 was 77% (ONS, 2023d). The number of economically active individuals increased by an annual average of 0.3% between 2015 and 2022 (ONS, 2023d).

13.5.1.38 The share of those who were economically inactive who are seeking employment was 21% (ONS, 2022d). The number of economically inactive individuals who are seeking employment decreased by an annual average of 2.7% between 2015 and 2022 (ONS, 2023d).

UK

13.5.1.39 The economic activity rate in the UK in 2021 was 78% (ONS 2023d). The number of economically active individuals increased by an annual average of 0.4% between 2015 and 2022 (ONS, 2023d).

13.5.1.40 The share of those who were economically inactive who are seeking employment was 18% (ONS, 2023d). The number of economically inactive individuals who are seeking employment decreased by 4.3% between 2015 and 2022 (ONS, 2023d).

13.5.1.41 The figures for each economic study area are presented in Table 13.17.

Table 13.17: Economic activity rate and economically inactive individuals seeking employment.

Source: Annual Population Survey (ONS, 2023d).

Economic study area	Economically active Individuals (2022)	Economic activity (2022)	Economically inactive individuals that are seeking employment (2022)	Share of economically inactive individuals that are seeking employment (2022)
Regional				
North West England	3,450,000	77%	187,000	18%
North Wales	319,000	77%	19,000	21%
National				
UK	32,510,000	78%	1,620,000	18%

Unemployment

13.5.1.42 The ONS Annual Population Survey uses the International Labour Organization's (ILO) definition of 'unemployment' as follows: individuals without a job who are able to start work in the two weeks following their participation in the survey, and who had either looked for work in the four weeks prior to survey, or were waiting to start a job they had already obtained. The unemployment rate is therefore the share of economically active individuals over the age of 16 years who are unemployed according to the ILO definition.

North West England

13.5.1.43 The number of unemployed individuals in North West England in 2022 was 146,000 (ONS, 2023e). The share of the total workforce that were unemployed was 4.1% in 2022 (ONS 2023e). The number of unemployed individuals decreased by an annual average of 3.4% between 2015 and 2022 (ONS, 2023e).

North Wales

13.5.1.44 The number of unemployed individuals in North Wales in 2022 was 9,000 (ONS, 2023e). The share of the total workforce that were unemployed was 2.7% in 2022 (ONS 2023d). The number of unemployed individuals decreased by an annual average of 7.1% between 2015 and 2022 (ONS, 2023e).

UK

13.5.1.45 The number of unemployed individuals in the UK in 2022 was 1.2 m (ONS, 2023e). The share of the total workforce that were unemployed was 3.5% in 2022 (ONS 2023e). The number of unemployed individuals decreased by an annual average of 5.1% between 2015 and 2022 (ONS, 2023e).

13.5.1.46 The figures for each economic study area are presented in Table 13.18.

Table 13.18: Unemployed individuals and unemployed rate.

Source: Annual Population Survey (ONS, 2023e).

Economic study area	Unemployed Individuals (2021)	Unemployment Rate (2021)	Change in Number of Unemployed Individuals – Per Annum (2015 to 2021)
Regional			
North West England	146,000	4.1%	–3.4%
North Wales	9,000	2.7%	–7.1%
National			
UK	1,200,000	3.5%	–5.1%

13.5.2 Social

Population

North West England

13.5.2.1 The population of North West England in 2021 was approximately 7.4 m (ONS, 2023f). This increased by approximately 247,000 over the period 2015 and 2021, at an annual average rate of 0.6%.

North Wales

13.5.2.2 The population of North Wales in 2021 was approximately 688,000 (ONS, 2023f). This decreased by approximately 6,000 over the period 2015 and 2021, at an annual average rate of -0.2%.

13.5.2.3 The figures for each social study area are presented in Table 13.19.

Table 13.19: Total population and population change.

Source: Analysis of Population Estimates (ONS, 2023f).

Social study area	Total population (2021)	Total population change (2015 to 2021)	Average annual population change (2015 to 2021)
North West England	7,420,000	+247,000	+0.6%
North Wales	688,000	-6,000	-0.2%

Dwellings

North West England

13.5.2.4 The Department for Levelling Up, Housing and Communities (DLUHC) (formerly Ministry of Housing, Communities and Local Government (MHCLG)) provides live tables on dwelling stock (including vacant dwellings).

13.5.2.5 In 2022, North West England had approximately 3.4 m dwellings (DLUHC, 2023a). This increased by approximately 188,000 over the period 2015 to 2022, at an average annual rate of 0.8%.

North Wales

13.5.2.6 Statistics Wales provides data on *Dwelling stock estimates by local authority and tenure* in Wales. The dwelling stock estimates provide annual baseline information on the overall amount of housing stock at a Wales and local authority level. It is used as evidence for policy making by both central and local government. The data is used by the Welsh Government, local authorities and other housing organisations to help monitor trends in the overall level of Welsh housing stock, as well as any changes in its tenure distribution over time. Dwelling stock estimates are also used by the private and third sectors to help develop a picture of demographic trends.

13.5.2.7 In 2022, North Wales had approximately 340,000 dwellings (Statistics Wales, 2023a). This increased by approximately 14,300 over the period 2015 to 2022, at an average annual rate of 0.6%.

13.5.2.8 The figures for each social study area are presented in Table 13.20.

Table 13.20: Total dwellings.

Source: Dwelling stock estimates by local authority and tenure (Statistics Wales, 2023a) and Table 109 Dwelling stock: by tenure and region (DLUHC, 2023a).

Social study area	Total dwellings	Total dwellings change (2015 to 2022)	Average annual dwellings change (2015 to 2022)
North West England	3,390,000	+188,000	+0.8%
North Wales	340,000	+14,300	+0.6%

Private rented sector

13.5.2.9 Understanding an area's private rented dwelling stock can provide a useful profile of the type of accommodation that might be utilised by, for instance, temporary workers relocating to participate in construction phase activities.

North West England

13.5.2.10 In 2022, 577,000 dwellings were recorded within the private rented sector within North West England (DLUHC, 2023a). This represented 17% of the total dwelling stock.

North Wales

13.5.2.11 In 2022, 42,000 dwellings were recorded within the private rented sector within North Wales (Statistics Wales, 2023a). This represented 12% of the total dwelling stock.

13.5.2.12 The figures for each social study area are presented in Table 13.21.

Table 13.21: Private rented sector dwellings (2022).

Source: Dwelling stock estimates by local authority and tenure (Statistics Wales, 2023a) and Table 109 Dwelling stock: by tenure and region (DLUHC, 2023a).

Social study area	Total dwellings in private rented sector	Private rented sector as share of total dwellings[5]
Regional		
North West England	577,000	17%
North Wales	42,000	12%

Vacant dwellings

13.5.2.13 Understanding an area's unoccupied dwelling stock can provide a useful profile of how easily an area might accommodate workers relocating to participate in construction, operations and maintenance, or decommissioning activities.

North West England

13.5.2.14 DLUHC provides data on Vacant dwellings by local authority district in England.

13.5.2.15 In 2022, North West England has approximately 41,000 long term vacant dwellings (DLUHC, 2023b). This represents 1.2% of the total dwelling stock.

North Wales

13.5.2.16 Statistics Wales provides data on chargeable empty and second homes, by local authority (number of dwellings) in Wales.

13.5.2.17 In the statistical period 2023 to 2024[9], North Wales has approximately 4,700 total chargeable[10] long term empty dwellings (Statistics Wales, 2023b). This represents 1.4% of the total dwelling stock.

13.5.2.18 The figures for each social study area are presented in Table 13.22.

[9] Council Tax dwellings data collection for 2023 to 2024 council tax financial year

[10] i.e. liable to pay Council Tax, whether at a discounted rate, a premium rate, or a standard rate.

Table 13.22: Unoccupied dwellings.

Source: Chargeable empty and second homes, by local authority (number of dwellings) (Statistics Wales, 2023b) and Table 615 Vacant dwellings by local authority district: England (DLUHC, 2023b).

Social study area	Total unoccupied dwellings[11]	Unoccupied dwellings as share of total dwellings[12]	Total unoccupied dwellings change[13]	Average annual unoccupied dwellings change[14]
North West England	41,000	1.2%	+420	+0.1%
North Wales	4,700	1.4%	–708	–2.3%

13.5.3 Tourism

Visitor economy

North West England

13.5.3.1 In 2022, North West England had 127 m tourism day visits, equivalent to 13% of all tourism day visits in England. These visits had an associated expenditure of £6.0 bn (Visit England, 2023a). This represents a significant drop in day visitors and associated expenditure compared to pre-pandemic levels.

13.5.3.2 North West England has numerous city centre locations with wide ranging visitor economies. Tourism assets include museums, monuments and architectural attractions, and sports teams. The Imperial War Museum, Merseyside Maritime Museum, Lancaster City Museum, Liverpool Cathedral, Lancaster Castle and Hadrian's Wall are all sites dedicated to providing an insight into the regions' heritages and histories. The Lake District, Jodrell Bank Observatory, Hadrian's Wall and the Maritime Mercantile City of Liverpool[15] have been classed as UNESCO heritage sites (UNESCO, 2022).

13.5.3.3 There is a vast array of shopping centres and quarters available to visitors in the major urban centres throughout the region.

Overnight trips

13.5.3.4 In 2021, there were around 13.3 m overnight visits to North West England. These trips accounted for £3.3 bn in spending in North West England (Visit England, 2022a). There were around 14.7 m overnight visits to North West England in 2022 (Visit England, 2023b).

[11] North Wales total unoccupied dwellings for 2023 to 2024, North West England total unoccupied dwellings 2022.

[12] North Wales unoccupied dwellings as share of total dwellings for 2023 to 2024, North West England unoccupied dwellings as share of total dwellings for 2022.

[13] North Wales total unoccupied dwellings change 2017/2018 to 2023/2024, North West England total unoccupied dwellings change 2015 to 2022.

[14] North Wales average annual unoccupied dwellings change 2017/2018 to 2023/2024, North West England average annual unoccupied dwellings change 2015 to 2022.

[15] UNESCO World Heritage status removed in 2021.

13.5.3.5 Overnight accommodation data is not available for North West England. Therefore – in the absence of granular data – monthly occupancy figures for serviced accommodation in England are presented in Table 13.23.

Table 13.23: Monthly occupancy figures for serviced accommodation, England (2017 to 2023).

Source: UK Occupancy Survey (Visit England, Visit Scotland, Visit Wales and Northern Ireland Statistics and Research Agency).

*note – averages for August to December and total average are for 2017 to 2022.

**note – average for 2023 period are for between January and July.

	2017	2018	2019	2020	2021	2022	2023	Average
January	56%	65%	65%	65%	24%	47%	65%	**54%**
February	63%	74%	73%	73%	29%	65%	73%	**63%**
March	66%	75%	75%	37%	33%	70%	75%	**59%**
April	70%	77%	76%	22%	34%	73%	77%	**59%**
May	73%	79%	79%	23%	34%	76%	78%	**61%**
June	80%	82%	80%	24%	57%	80%	83%	**67%**
July	84%	86%	85%	29%	64%	83%	84%	**72%**
August	81%	83%	82%	47%	71%	78%	-	**74%***
September	84%	84%	83%	46%	72%	80%	-	**75%***
October	80%	83%	82%	41%	71%	80%	-	**73%***
November	78%	79%	79%	28%	68%	78%	-	**68%***
December	71%	72%	71%	27%	56%	71%	-	**61%***
Average	**74%**	**78%**	**78%**	**39%**	**51%**	**73%**	**76%****	**65%***

13.5.3.6 Based on these occupancy rates, it can be estimated there is some slack in overnight accommodation capacity in North West England – this assumes regional occupancy rates reflect national rates. The highest monthly occupancy figure during the period 2017 to 2023 was 86% during July 2018. It is notable that occupancy rates from July 2021 onwards (when COVID-19 restrictions were mostly lifted) have mostly been lower than the average across the period 2017 to 2021, with occupancy levels returning to similar to pre-pandemic

13.5.3.7 Average occupancy across the period 2017 to 2022 was 65%.

North Wales

13.5.3.8 Tourism in Wales makes a contribution of £6.2 bn to Wales' Gross Domestic Product (GDP), and supports over 172,000 jobs (Wales Tourism Alliance, 2023). The tourism sector contributes around £0.7 m in GVA to the North Wales economy, and supports around 35,000 jobs in the region (Ambition North Wales, 2023).

13.5.3.9 North Wales has a number of Tourism assets that attract a wide range of visitors. This includes a number of popular sites for walking such as the Wales coastal path and Eryri National Park, as well as sites of rich history, such as Castell y Bere and Conwy Castle, and three UNESCO World Heritage Sites.

13.5.3.10 Data from the Domestic GB Tourism Statistics showed that Wales had around 62 m day trips in 2022, with around 12.3 m trips taking place in North Wales. These day visits accounted for an average expenditure of £445 m over the year of 2022 for North Wales (Welsh Government, 2023a). This represents a significant drop in day visitors and associated expenditure compared to pre-pandemic levels.

Overnight trips

13.5.3.11 In 2022, there were around 8.7 m visits ('trips') to Wales, and around 26.1 m overnight visits. These trips accounted for £1.9 bn in spending in Wales. Data for overnight visits is not available for North Wales (Welsh Government, 2023b). By analysis tourism enterprise data (Welsh Government, 2022), North Wales accounted for approximately 26% of tourism enterprises in Wales. Using this as a proxy for the region's share of overnight visits, there were approximately 7 m overnight visits to North Wales in 2021.

13.5.3.12 Overnight accommodation data is not available for North Wales. Therefore, in the absence of granular data, monthly occupancy figures for serviced accommodation in Wales are presented in Table 13.24.

Table 13.24: Monthly occupancy figures for serviced accommodation, Wales (2017 to 2021).

Source: UK Occupancy Survey (Visit England, Visit Scotland, Visit Wales and Northern Ireland Statistics and Research Agency).

	2017	2018	2019	2020	2021	Average
January	43%	47%	45%	61%	32%	**46%**
February	53%	51%	49%	71%	37%	**52%**
March	55%	53%	50%	40%	38%	**47%**
April	64%	59%	60%	20%	35%	**48%**
May	65%	66%	66%	29%	56%	**56%**
June	69%	71%	70%	31%	74%	**63%**
July	74%	71%	74%	26%	81%	**65%**
August	75%	74%	75%	68%	86%	**76%**
September	71%	68%	70%	60%	79%	**70%**
October	63%	57%	61%	26%	75%	**56%**
November	57%	56%	53%	37%	69%	**54%**
December	47%	53%	50%	25%	56%	**46%**
Average	**61%**	**61%**	**60%**	**41%**	**60%**	**57%**

13.5.3.13 Based on these occupancy rates, there is some slack in overnight accommodation capacity in the North Wales tourism regional study area – this assumes regional occupancy rates reflect national rates. The highest monthly occupancy figure during the period 2017 to 2021 was 86% during August 2021. It is notable that occupancy rates from July 2021 onwards (when Covid-19 restrictions were mostly lifted) have been consistently higher than the average across the period 2017 to 2021.

13.5.3.14 Average occupancy across the period 2017 to 2021 was 57%.

Isle of Man

13.5.3.15 The visitor economy makes an important contribution to the Isle of Man economy. Tourism brings expenditure from outside the Isle of Man economy, supporting local businesses and jobs, and contributing to sectors such as hospitality, retail and transportation.

13.5.3.16 According to the Isle of Man Passenger Survey 2018 (Isle of Man Government, 2019) the total expenditure by all arrivals to the Isle of Man (ferry and air) in 2018 was approximately £133 m.

13.5.3.17 The Isle of Man Tourist Trophy (TT) races are an annual motorcycle racing event taking place in May and June. The event consists of one week of practice and qualifying sessions followed by one week of racing along a 38 mile road circuit on the Island's public roads. Over the years, the Isle of Man TT has attracted a dedicated global fan base and has become an important event for motorcycle enthusiasts. A survey during the 2023 races indicated that 43,000 visitors travelled to the Isle of Man during the races, with 261,053 bed nights booked between 29 May and 10 June. This supported a total spend of £36.1 m in the Isle of Man economy during the races, with an average spend of £834 per person (BBC, 2023).

Visual amenity

13.5.3.18 Table 10.10 within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement presents the list of agreed representative viewpoints within North Wales, North West England and the Isle of Man assessed as part of the SLVIA.

13.5.3.19 As per section 10.5.2 of Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, the visual receptor categories considered in the SLVIA that are relevant to tourism include:

- Impacts on people using national trails (e.g., Millennium Way, Isle of Man and England Coast Path)
- Impacts on people using access land/open country (or public access equivalent)
- Impacts on people using National Cycle Routes (NCR)
- Impacts on people using national key coastal settlement seafront/shoreline (e.g., Douglas promenade and Blackpool promenade/piers)
- Impacts on people travelling along coastal roads
- Impacts on people travelling along coastal railways
- Impacts on people using main ferry routes
- Impacts on people using commercial shipping, recreational craft and fishing

North West England

13.5.3.20 The following representative viewpoints within North West England are assessed within the SLVIA to determine potential effects on the identified visual receptors:

- 14 Cistercian Way, Walney Island, Cumbria
- 15 Blackpool North Pier, Lancashire
- 16 Cumbria Coastal Way, Gutterby Banks/Townend Bank, Cumbria
- 17 Kinmont Buck Barrow, Cumbria

- 51 Blackpool Tower
- 58 Muncaster Fell, Lake District National Park
- 59 Black Combe, Lake District National Park
- 60 Whit Fell, Lake District National Park
- 61 Whin Rigg, Lake District National Park

North Wales

13.5.3.21 The following representative viewpoint within North Wales is assessed within the SLVIA to determine potential effects on the identified visual receptors:

- 55 Trwyn Eilian (Point Lynas), Isle of Anglesey NL

Isle of Man

13.5.3.22 The following representative viewpoints within Isle of Man are assessed within the SLVIA to determine potential effects on the aforementioned visual receptors:

- 18 Herring Tower trig point, Langness Peninsula, Isle of Man
- 19 Panoramic viewpoint at arch southwest of Douglas Head, Isle of Man
- 20 Snaefell, summit station trig point, Isle of Man
- 22 Liverpool too Douglas ferry, Isle of Man
- 23 Heysham to Douglas ferry, Isle of Man
- 42 Maughold Head/Maughold Brooghs, Isle of Man
- 43 Car park/seafront at Old Laxey, Isle of Man
- 44 Slieau Ruycairn/trig point, Isle of Man
- 45 South Barrule cairn/trig point, Isle of Man
- 46 TSS Mona's Queen III anchor memorial at Port St. Mary Point, Isle of Man
- 49 Douglas promenade, Isle of Man
- 50 Coast path at the Chasms/Sugarloaf, Isle of Man

Recreation

North West England

13.5.3.23 North West England has a wide range of tourist attractions to offer, with a mixture of rural and urban landscapes. With access to the coast and the Cumbrian lands as well as large urban centres, such as Liverpool and Manchester, the region is able to draw a great number of visitors each year (England's Coast, 2022; English Heritage, 2022; The Beach Guide, 2022; Visit England, 2022b; Visit North West, 2022):

- Walking: Lake District and Peak District national parks, Cumbria Coastal Way.
- Cycling and mountain biking
- Beaches and Seaside Towns: St Bees (Cumbria), Blackpool Beach, New Brighton (Wallasey) Beach, St Annes Pier, Southport Pier and South Pier (Blackpool) are popular destinations to visit

- Sports culture: golf, popular Premier League football teams, Chester Racecourse.
- Culture and arts

13.5.3.24 As per Volume 2, Chapter 9: Other sea users of the Environmental Statement there are sea fishing trips operating from Fleetwood in North West England.

North Wales

13.5.3.25 North Wales is known for its opportunities to experience the natural landscapes. It supports a wide range of recreation activities which draw in tourists (Conwy.com, 2022; Discover Anglesey, 2022; Eryri National Park, 2022; Flintshire County Council, 2022; UNESCO, 2022; Visit Snowdonia, 2022; Visit Wales, 2022a; Visit Wales, 2022b):

- Cycling and mountain biking
- Walking: Wales Coast Path, Eryri
- Extreme sports/experiences
- Golf
- Photography
- Culture and art
- History and heritage: Clwydian Range, Plas Mawr, Castell y Bere and Conwy Castle. North Wales has three UNESCO World Heritage Sites which are popular attractions: The Slate Landscape of North West Wales, Castles and Town Walls of King Edward I in Gwynedd and Pontcysyllte Aqueduct and Canal.

13.5.3.26 With regards to site-specific examples of recreational activities, as per section 9.5 of Volume 2, Chapter 9: Other sea users of the Environmental Statement there are:

- No recreational diving sites within the regional other sea users study area
- No recreational bathing sites within the regional other sea users study area
- A variety of recreational sailing, motorcruising and recreational fishing within the local other sea users study area.
- Sea fishing trips running from Conwy (North Wales)

13.5.3.27 As per Volume 4, Annex 7.1: Navigational risk assessment of the Environmental Statement, according to Automatic Identification System (AIS) based data relatively few yachts were recorded during the 2021/2022/2023 vessel traffic surveys, with less than one per day during the summer survey and none recorded during the winter survey.

13.5.3.28 As per Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement, there is little recreational activity within the Morgan Array Area, with most recreational activity occurring along the North Welsh coast. Relatively few yachts were recorded during the vessel traffic surveys, with less than one per day during the summer survey and none at all recorded during the winter survey indicating strong seasonality.

Isle of Man

13.5.3.29 The Isle of Man has a range of tourist attractions to offer. With its predominantly rural landscape, the Island is able to attract a number of visitors each year:

- Driving and motorsport: linked to the Isle of Man TT Races, outside racing events courses are open to road traffic – providers offer motorbike hire and guided tours to the top riding spots on the Island.
- Walking: hills, footpaths, and an extensive coastline
- Extreme sports: mountain biking and climbing
- Water sports: kayaking and coasteering
- Heritage: visitor attractions include Castle Rushen, Peel Castle, Cregneash, Tynwald Hill, the Manx Electric Railway, the Victorian Steam Railway and the Old House of Keys.

13.5.3.30 As per Volume 2, Chapter 9: Other sea users of the Environmental Statement there are sea fishing trips operating from the Isle of Man.

13.5.4 Isle of Man socio-economic context and interaction with lifeline ferry services

13.5.4.1 This section sets out the Isle of Man's socio-economic context, including population and demography, employment and labour market conditions and economic sector profiles.

Economy

13.5.4.2 In the financial year 2020/21, the Isle of Man economy generated £5 billion Gross Domestic Product (GDP) (Isle of Man Government, 2022a).

13.5.4.3 Insurance is the largest sector in the Isle of Man economy, accounting for 22.4% of GDP. Other significant contributors are eGaming (11.2%), other finance and business services (9.3%), other professional services (7.2%) and information/communication technology (6.8%).

13.5.4.4 As such, the Isle of Man can be characterised as a service dominated economy.

13.5.4.5 Table 13.25 sets out business income for the financial years 2019/20 and 2020/21. Both years are included, as the latest available data (2020/21) is likely to be affected by the COVID-19 pandemic.

Table 13.25: Income in year at factor cost[16], at current prices (£'000s)

Source: Isle of Man Government (2022a)

Economic Activity	2019/20	2020/21	Sector share (%) 2020/21
Agriculture, forestry and fishing	18,000	19,000	0.4%
Manufacturing: engineering	37,000	34,000	0.7%
Manufacturing: food and drink	31,000	25,000	0.5%
Manufacturing: general	55,000	68,000	1.4%
Mining and quarrying	4,100	7,300	0.2%
Construction	220,000	230,000	4.9%

[16] Factor cost is a measure of national income.

Economic Activity	2019/20	2020/21	Sector share (%) 2020/21
Utilities	85,000	95,000	2.0%
Transport and communications	160,000	150,000	3.1%
Wholesale distribution	42,000	31,000	0.6%
Retail distribution	120,000	130,000	2.6%
Banking	370,000	240,000	5.0%
Insurance	1,000,000	1,100,000	22.4%
Other finance and business services	470,000	450,000	9.3%
Information and communication technology	460,000	330,000	6.8%
Legal and accountancy services	88,000	85,000	1.8%
Corporate service providers	140,000	150,000	3.2%
Education	100,000	110,000	2.4%
Medical and health services	250,000	270,000	5.5%
Other professional services	300,000	340,000	7.2%
Tourist accommodation	30,000	12,000	0.2%
Catering and entertainment	36,000	37,000	0.8%
eGaming	910,000	540,000	11.2%
Miscellaneous services	150,000	160,000	3.2%
Public administration	190,000	220,000	4.5%

Labour market

Employment – all industries

13.5.4.6 In 2021, 43,500 residents were in employment on the Isle of Man. Between 2016 and 2021, the number of employed persons increased by 1,900 an annual average growth of 0.9% (Isle of Man Government, 2016; Isle of Man Government, 2021).

Employment by sector

13.5.4.7 Sectors with the highest resident employment numbers in 2021 were medical/ health services and construction. The largest growth between 2016 and 2021 was in financial and business services, construction, and information/communication technologies.

13.5.4.8 Table 13.26 provides a breakdown of employment by sector taken from the 2016 and 2021 Census.

Table 13.26: Employment by sector, Isle of Man (resident-based).

Source: 2016 Census and 2021 Census (Isle of Man Government 2016, 2021b).

Note: some figures may not sum due to rounding.

Employment by sector	2016	2021	Sector share (%) 2021
Agriculture, forestry and fishing	810	660	1.5%
Manufacturing	1,900	2,100	4.7%
Mining and quarrying	55	80	0.2%
Construction	3,500	4,200	9.7%
Utilities	490	500	1.1%
Transport	2,400	1,800	4.2%
Wholesale distribution	430	330	0.8%
Retail distribution	3,300	3,600	8.3%
Banking	2,300	1,900	4.3%
Insurance	1,900	1,300	3.0%
Other financial and business services	2,400	3,300	7.6%
Information and communication technology	700	1,300	3.0%
Legal and accountancy services	1,300	1,300	3.1%
Corporate service providers	1,600	1,600	3.6%
Education	2,700	2,500	5.8%
Medical and health service	4,900	4,700	10.7%
Other professional services	630	1,100	2.5%
Tourist accommodation	630	580	1.3%
Catering and entertainment	1,700	2,100	4.7%
eGaming	660	1,100	2.5%
Miscellaneous services	3,900	4,400	10.0%
Public administration	3,000	3,200	7.3%
Property owning and management	600	-	N/A
Total	**41,600**	**43,500**	

Social

Population

13.5.4.9 The resident population of the Isle of Man in 2021 was 84,100 (Isle of Man Government, 2021b). This increased by around 750 residents from 2016 by an annual average growth rate of 0.2% (Isle of Man Government, 2016, 2021b).Figure 13.2 sets out the Isle of Man's resident age profile.

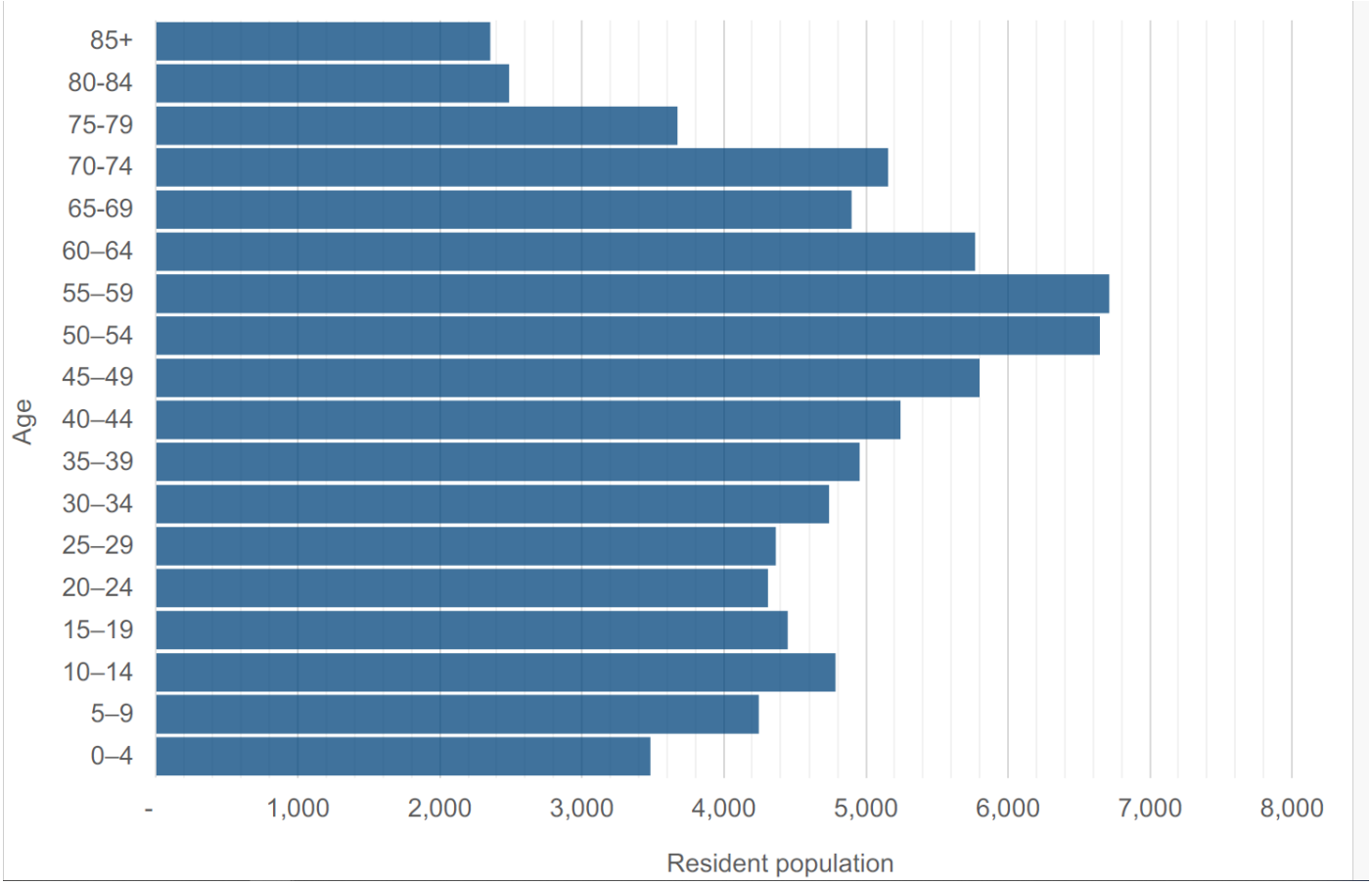


Figure 13.2: Isle of Man resident age profile, five-year intervals (2021)

Source: Isle of Man Government (2021b)

Isle of Man transport services profile

13.5.4.10 This section provides a characterisation of transport services to and from the Isle of Man based on publicly available data covering service frequency, passenger profiling, visitor expenditure, freight profiling and harbour traffic.

13.5.4.11 The primary modes of transport to and from the Isle of Man are via ferry services or aeroplane.

Travel by air

13.5.4.12 The latest Isle of Man Passenger Survey[17] was published in 2019 (Isle of Man Government, 2019). For the year 2018, there were 418,400 departures from the Island by air. This accounted for 60.5% of total departures in 2018. Between 2012 and 2018, the total number of passengers departing by air increased by 70,100 (+3.1% per annum).

13.5.4.13 Isle of Man Airport (Ronaldsway Airport) is the primary airport on the Island, located about 14.5 km southwest of Douglas. It offers scheduled flights to various destinations in the UK and Ireland, including Manchester (~1 hour), London (~1.5 hours), Belfast (~45 mins), and Dublin (~50 mins).

Travel by ferry

13.5.4.14 According to the latest Isle of Man Passenger Survey, in 2018 there were 272,900 journey departures from the Island by ferry (Isle of Man Government, 2019). This accounted for 39.5% of total journey departures in 2018. Between 2012 and 2018, the total number of passengers departing by sea decreased by 8,900 (–0.5% per annum). By comparison, air departures are shown to have increased during this period

13.5.4.15 The latest available data on scheduled ferry passengers indicates there were around 612,000 ferry passenger arrivals and departures via Douglas in the year to May 2023 (Isle of Man Government, 2023b).

13.5.4.16 The sea terminal at Douglas is the only ferry terminal on the Isle of Man and connects the Island to several ports in the UK and Ireland. There are crossings from Douglas to Heysham, Liverpool, Belfast and Dublin.

13.5.4.17 Liverpool, located in the northwest of England, is an important connection to Douglas, with a typical journey time of just under 3 hours (can vary seasonally). Liverpool accounted for well over half of all ferry arrivals (54%) and departures (56%) via Douglas in May 2023. Services between Douglas and Liverpool are seasonal, undertaken by the high speed ferry Manannan operated by the Isle of Man Steam Packet Company, operating between March and November. Services between Douglas and Liverpool are important, especially for seasonal tourism on the Isle of Man. Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement categorises the Douglas to Liverpool crossing as a lifeline ferry service.

13.5.4.18 Heysham, located in Lancashire, is a major gateway to the Isle of Man and this route is operated predominantly by the Isle of Man Steam Packet Company, with a typical journey time of around 3–4 hours. Heysham is a well-used crossing, accounting for over a third of ferry arrivals (38%) and departures (34%) via Douglas in May 2023. During winter months, Heysham accounts for the majority of crossings. In January 2023 almost all ferry arrivals (97%) and departures (99%) were on the Douglas to Heysham crossing (Isle of Man Government, 2023c). Services between Douglas and Heysham are year-round and provide essential transport for passengers and freight to the Isle of Man. Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement categorises the Douglas to Heysham crossing as a lifeline ferry service.

13.5.4.19 Ferries also connect the Isle of Man to Belfast in Northern Ireland, offering a journey time of just under 3 hours (can vary seasonally). Ferries between the Isle of Man and Dublin in Ireland offer a typical journey time of just under 3 hours. Belfast and Dublin

[17] The Isle of Man Passenger Survey is conducted by Economic Affairs, who interview departing passengers at Douglas Harbour and Ronaldsway Airport. Responses from these interviews are recorded electronically and analysed by the Department.

both accounted for a very small share of ferry arrivals (2%, 1%) and departures (2%, 0.3%) via Douglas in May 2023. Services between Douglas and both ports are seasonal, operating between April and September (and during the Christmas period for Belfast only).

Frequency

13.5.4.20 Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement sets out the number of crossings by operator in 2022. Crossing data relevant to the Isle of Man is set out in Table 13.27 below.

Table 13.27: Ferry routes and annual crossings to the Isle of Man – lifeline services

Operator	Route	Example vessels (2019-2022)	Approximate annual crossings (2022)
IoMSPC	HEY - DOUG	Ben-my-Chree	1,451
	LIV - DOUG	Manannan	593

13.5.4.21 Service variance data for Isle of Man Steam Packet Company (IoMSPC) vessels between 2018 and 2022 is set out within Table 13.28 below[18]. This includes high level categorisation of the reason for variance from the planned schedule.

Table 13.28: IoMSPC service variance data by vessel (2018–2022)

Note: Service variance represents the difference between scheduled and actual crossings. Positive values indicate fewer sailings than scheduled were provided. Negative values (in parentheses) indicate more sailings than scheduled were provided.

Vessel	Main route[19]	Reason	2018		2019	2020	2021	2022	Total
	Ben-my-Chree	Heysham to Douglas	Technical	6	2	50	110	38	206
			Covid-19	0	0	169	12	0	181
			Weather	32	28	56	70	31	217
			Total	38	30	275	192	69	604
	Manannan	Liverpool to Douglas	Technical	0	0	2	0	(18)	(16)
			Covid-19	0	0	449	14	0	463

[18] Annual data includes service variance on every route travelled by the vessel. Some vessel variance over the period recorded were on routes other than the main route identified in Table 13.28 – these account for <2% of variance on the Ben-my-Chree, and ~7% of variance on the Manannan. All variance on the MV Arrow service were on the main route identified.

[19] Note: variance data for all routes is included in annual data.

Vessel	Main route[19]	Reason	2018		2019	2020	2021	2022	Total
			Weather	10	6	18	0	4	38
			Total	10	6	469	14	(14)	485

13.5.4.22 A new vessel, the 'Manxman' entered service on 17 August 2023, replacing the Ben-my-Chree on the Douglas–Heysham route, service variance data for the MV Manxman is therefore not available.

13.5.4.23 The MS Arrow freight vessel is owned and operated by IoMSPC on the Douglas–Heysham route. The vessel provides dry-dock cover during instances of the Manxman being taken out of service for major repairs and maintenance, and back-up to provide additional freight capacity during peak service periods e.g. Isle of Man TT. This vessel allows for cancelled freight crossings to be more quickly 'caught-up'.

Passengers

13.5.4.24 The Isle of Man Passenger Survey 2018 (Isle of Man Government, 2019) reports data relating to passengers, visitors, and residents travelling to and from the Isle of Man[20].

13.5.4.25 The data reports journeys by visitor category:

- Overnight visitors in paid accommodation[21]
- Overnight visitors visiting friends and relatives[22]
- Business visitors[23]
- Day visitors[24].

13.5.4.26 The highest proportion of visitors by sea were overnight visitors in paid accommodation (88,400), overnight visitors visiting friends and relatives (39,500), followed by business visitors (9,300) and day visitors (700).

13.5.4.27 Between 2012 and 2018, resident departures by sea increased by 4,400 (+0.6% per annum) whilst visitor departures by sea decreased by 13,300 (–1.5% per annum). In terms of the change in visitors by sea in this time frame, only overnight visitors in paid accommodation increased (by +9,600, +1.9% per annum). Overnight visitors visiting friends and relatives decreased by 18,000 (–6.1% per annum), business visitors by 2,800 (–4.3% per annum) and day visitors by 1,900 (–19.6% per annum). It should be noted that UK Government Department for Transport (2023a) data indicates that ferry

[20] Data is provided up to the year 2018 and is the latest edition of this dataset. Change has been calculated between 2012 and 2018 in order to provide an understanding of growth or decline within a similar time span to previous analyses in earlier sections that look at change between 2016 to 2021/2022.

[21] Defined as non-business visitors who stayed in paid accommodation whilst on the island (Isle of Man Government, 2018).

[22] Defined as non-business visitors who stayed with friends or relatives whilst on the Island (Isle of Man Government, 2018).

[23] Defined as visitors who were on the Island for business purposes (Isle of Man Government, 2018).

[24] Defined as non-business visitors who did not stay overnight (Isle of Man Government, 2018).

passenger arrivals from Heysham and Liverpool have increased in the period since the latest Isle of Man Passenger Survey was published.

13.5.4.28 Table 13.29 provides a breakdown of departures and visits to the Isle of Man from the Isle of Man Passenger Survey 2018 (Isle of Man Government, 2019).

Table 13.29: Departures and visits to the Isle of Man[25]

Source: Isle of Man Passenger Survey 2018 (Isle of Man Government, 2019)

Note: negative values in parentheses.

Note: some figures may not sum due to rounding.

	2012	2018	Change between 2012 and 2018	Share of total passengers (2018)
Scheduled air departures				
Resident	205,000	247,900	42,900	36%
Visitor	143,300	170,500	27,200	25%
Total	348,300	418,400	70,100	61%
Scheduled sea departures				
Resident	130,700	135,100	4,400	20%
Visitor	151,100	137,800	(13,300)	20%
Total	281,800	272,900	(8,900)	39%
Scheduled sea departures – by visitor type				
Overnight visitors in paid accommodation	78,800	88,400	9,600	13%
Overnight visitors visiting friends and relatives	57,500	39,500	(18,000)	6%
Business visitors	12,100	9,300	(2,800)	1%
Day visitors	2,600	700	(1,900)	0.1%

13.5.4.29 Table 13.30 sets out the total and average sea passenger expenditure in the Isle of Man on the basis of visitor type.

Table 13.30: Visitor expenditure[26] on the Isle of Man – sea passengers

Source: Isle of Man Passenger Survey 2018 (Isle of Man Government, 2019)

	Expenditure, 2018 (£ million)	Expenditure as share of total visitor spend	Average expenditure (£)
Overnight visitors in paid accommodation	£52.4	39%	£590
Overnight visitors visiting friends and relatives	£9.8	7%	£250
Business visitors	£5.1	4%	£670

[25] Departures and Visits to the Isle of Man figures for this table are assumed to cover all routes/crossings in and out the Island.

[26] Expenditure includes travel to and from the Isle of Man, accommodation, and other expenditure.

	Expenditure, 2018 (£ million)	Expenditure as share of total visitor spend	Average expenditure (£)
Day visitors	£0.2	0.2%	£250
Total	**£67.5**	**51%**	**£525**

Freight

13.5.4.30 Data on freight movements to the Isle of Man is limited.

- 'Exports' from Douglas consisted of a total of 177,000 tonnes, which was entirely consisting of roll-on/roll-off traffic (Department for Transport, 2023b)
- 'Imports' into Douglas consisted of a total of 362,000 tonnes (68,000 tonnes liquid bulk, 3,000 tonnes dry bulk, 5,000 tonnes other general cargo, 2,000 tonnes container traffic, and 284,000 tonnes roll-on/roll-off traffic) (Department for Transport, 2023b).

13.5.4.31 Between 2016 and 2022, freight traffic moving in both directions decreased by 22,000 tonnes (–0.7% per annum). 'Export' freight in this time period increased by 6,000 tonnes (+0.6% per annum) whilst 'import' freight decreased by 28,000 tonnes (–1.2% per annum).

13.5.4.32 Data is also available on the breakdown of freight type transported to and from the Isle of Man in 2022, as set out in Table 13.31 below. Certain types of freight items have low time sensitivity, and delays or cancellations to ferry services are likely to have minimal impact on their delivery. This includes bulk commodities, non-perishable foods, building materials, non-urgent retail merchandise and industrial equipment. This category accounts for around 77% of freight to and from the Isle of Man in a typical year. Around 23% of freight to and from the Isle of Man is roll-on/roll-off freight that has high time sensitivity[27].

Table 13.31: Typical freight to and from the Isle of Man

Source: Department for Transport (2023b), IoMSPC

	Share of total freight, tonnage (2022)
Liquid bulk, liquid dry, general cargo, and container traffic	14%
Roll-on/roll-off – low time sensitivity	63%
Roll-on/roll-off – high time sensitivity	23%

13.5.5 Future baseline scenario

13.5.5.1 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) requires 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 Environmental Statement.

[27] High time sensitive freight varies. For example livestock, chilled fresh produce, and medical supplies.

In the event that Morgan Generation Assets does not come forward, an assessment of the future baseline conditions has been carried out and is described within this section.

Economic

Employment and GVA

13.5.5.2 Analysis by the Office for Budget Responsibility (OBR) sets out forecasts for the UK economy to 2028. This indicates that GDP recovered to near pre-pandemic levels during 2022. GDP is expected to return to growth in 2024, and output is set to recover its pre-pandemic (COVID-19) level in the middle of 2024 (OBR, 2023).

13.5.5.3 The National Foundation for Educational Research (NFER) and Nuffield Foundation have published long-run employment prospects for the UK (NFER and Nuffield Foundation, 2022). The report is an update of the labour market assessments produced by the Institute for Employment Research and Cambridge Econometrics in their Working Futures series of reports – such assessments have been conducted on a regular basis for many years. They include detailed quantitative assessments about the future size and composition of the labour market, focussing in particular on the patterns of employment by industry and occupation.

13.5.5.4 The 'Baseline' projections presented in the report are based on the macroeconomic, multi-sectoral model, developed by Cambridge Econometrics (one of the most well regarded forecasting agencies in the UK). They include detailed sectoral employment forecasts and underlying labour market projections. These baseline projections take account of existing technological trends (assuming that innovation, automation, as well as energy and environmental transitions, continue at a similar pace in the future). They also include the impact of other labour market factors, including demographic changes (such as population growth, migration and the current demographic structure of the workforce), as well as the impact of Brexit and the pandemic. In addition, they take account of any changes to the policy landscape which have been made or announced. The model focuses on how the sectoral structure of the economy will change.

13.5.5.5 Within the UK economy, overall employment and GVA is forecast to grow. Employment in manufacturing is forecast to decline, whereas GVA in manufacturing is forecast to increase, which points to increased productivity as the driver of growth in manufacturing. Employment and GVA in construction is forecast to see strong growth. Research by OWIC (2023) estimates the offshore wind sector could directly and indirectly support almost 104,401 jobs by 2030 (up from 32,257 in 2023).

13.5.5.6 This is likely to involve some transition from declining energy industries such as offshore oil and gas. The IPPR suggests that 68% of jobs in oil and gas sectors have skills that are at least partially transferable to low-carbon industries (IPPR, 2020). However, the IPPR also found that many fewer jobs (28%) have 'good' skills overlap with low carbon industries. There is therefore a need for 'upskilling' in order to successful transition workers from carbon intensive to low carbon sectors.

Labour market

13.5.5.7 In the UK Government monthly comparison of independent economic forecasts, the average unemployment rate for the UK in 2023 is forecast to be 4.4% and for 2024, the average unemployment rate is forecast at 4.6% (HM Treasury, 2023).

Social

Population

13.5.5.8 The ONS and other statistics authorities regularly produce population projections which estimate the future size and age structure of the population of the UK, its regions and local authorities.

13.5.5.9 Data for the North West England is available via the 2018-based interim set of projections (ONS, 2020). Data for North Wales is available via the 2018-based edition (Statistics Wales, 2021). A summary of population projections for the relevant social study areas is presented in Table 13.32.

13.5.5.10 The population in North Wales is expected to increase by approximately 0.2% per annum over the period 2022 to 2040. The population in North West England is expected to increase by approximately 0.3% per annum over the same period.

Table 13.32: Population projections.

Source: various.

Social study area	Population 2022	Population 2040	Change 2022 to 2040 (total)	Change per annum (total)	Change per annum (%)
North West England	7,400,000	7,800,000	+420,000	+23,000	+0.3%
North Wales	700,000	720,000	+14,000	+800	+0.2%

Tourism

Recreation

13.5.5.11 As per Volume 2, Chapter 9: Other sea users of the Environmental Statement, in the absence of the Morgan Generation Assets, the future baseline scenario for recreational activities is considered unlikely to change substantially.

13.5.5.12 As per Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, a review of available information for recreational activity does not suggest there would be a substantial change in activity from the baseline. Surveys of recreational participation conducted by the RYA do not indicate a notable increase, and more recently results have suggested a downturn. In the absence of definitive information, an assumption is made that recreational vessel activity will be similar in 2035 as to the existing baseline environment.

Isle of Man

13.5.5.13 In 2013, the Isle of Man Government undertook a wide-ranging research project to establish an evidence base relating to the Island's ageing population. This report was reviewed and updated in 2020. The data establishes the Isle of Man will continue to face an ageing population through to 2036 and beyond.

13.5.5.14 The report shows that an ageing population will be one of the most significant challenges facing the Isle of Man in the future, regardless of how successful the Island is at attracting younger working people.

13.5.6 Data limitations

13.5.6.1 Specific data on employment and GVA within offshore wind activities is not available across economic study areas on a consistent basis.

13.5.6.2 Conventional modelling of economic impacts for most industrial sectors relies on government statistics, for example, those based on SIC07 codes. SIC07 data is most appropriate for traditional industries. The development of new codes for a maturing sector such as offshore wind, however, takes time. At this stage, there are currently

no SIC07 codes specific to the offshore wind sector. This means that conventional Standard Industrial Classification (SIC) analyses of offshore wind and related activities needs to map existing SIC07 data onto offshore wind and related activities, which is not straightforward. Analyses using SIC07 codes also rely on generalised data. This means that, either intentionally or unintentionally, some activities relevant to offshore wind and related activities might be excluded, and other activity unrelated to offshore wind and related activities might be included. There is no officially agreed definition to be used when assessing the offshore wind related industry based on SIC07 codes.

13.5.6.3 Data on economic activity rates and resident-based employment are collected via the Annual Population Survey. As this is a survey, data from smaller areas (e.g. local authority level) can exhibit greater volatility than data from larger areas due to smaller sample sizes. These limitations are not deemed to be of sufficient scale to undermine the validity of the assessment and remain the best available data.

13.5.6.4 Some data on tourism baseline conditions (paragraphs 13.5.3.11 to 13.5.3.14) is not available at the North Wales level. It has therefore been necessary to make assumptions on the application of national (Wales) data at a lower geography – where data assumptions have been made, these have been described within the chapter.

13.6 Impact assessment methodology

13.6.1 Overview

13.6.1.1 The socio-economics impact assessment has followed the methodology set out in Volume 1, Chapter 5: EIA methodology of the Environmental Statement.

13.6.1.2 There is no official guidance or legislation governing the process of socio-economics EIA. This chapter's approach is based on the best available and latest industry guidance and evidence at the time of writing.

13.6.1.3 Specific to the socio-economic and tourism EIA, the following (non-statutory) guidance documents have been considered:

- Glasson, J. et al (2020). Guidance on assessing the socio-economic impacts of offshore wind farms, Oxford Brookes University
- Crown Estate and Offshore Renewable Energy (ORE) Catapult (2019) Guide to an offshore wind farm.

13.6.2 Economic and social impacts

13.6.2.1 Further details on the methodology adopted for estimating potential economic and social impacts can be found in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

13.6.2.2 The assessment of potential economic impacts in this chapter includes consideration of direct, indirect and induced economic impacts.

13.7 Key parameters for assessment

13.7.1 Maximum design scenario

13.7.1.1 The MDSs identified in Table 13.33 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope (PDE) presented in Volume 1, Chapter 3: Project description of the Environmental Statement.

13.7.1.2 Offshore effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the PDE (e.g. different infrastructure layout), to that assessed here be taken forward in the final design scheme.

Socio-economic assessment scenarios

13.7.1.3 A scenario represents a potential future outcome based on a set of assumptions. A range of scenarios are developed by changing the assumptions. Socio-economics looks at different scenarios to identify potential impacts and outcomes associated with various assumptions that may come about relating to economic and social factors.

13.7.1.4 With paragraph 4.3.12 of NPS EN-1 in mind (see Table 13.1), for the topic of socio-economics the 'most likely', 'maximum'and 'worst case' scenarios are not necessarily the same. Glasson *et al*. (2020) recommends specifying the 'more likely' scenario in order to avoid wide ranges of economic impact estimates which can *make life very difficult for decision makers and host authorities*.

Most likely scenario

13.7.1.5 This assessment considers the most likely 'current capability' scenario to represent the potential economic and social impacts, in accordance with NPS EN-1.

13.7.1.6 The current capability scenario is based on a set of assumptions derived from evidence of impacts associated with existing conditions and capabilities in the offshore wind sector and typical expenditure levels.

13.7.1.7 At the UK level, the current capability scenario assumes that project expenditure will reflect the typical UK content of recent offshore wind farm developments in the UK (as per Crown Estate and ORE Catapult, 2019).

13.7.1.8 In North West England, North Wales, and Wales, the current capability scenario assumes that where the capability currently exists within the sector to deliver a certain supply chain category (as set out in Appendix B of Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement), the associated impacts are captured within national and regional content figures, where relevant.

13.7.1.9 The current capability scenario has been quantitatively assessed to represent the most likely economic and social impacts associated with the Morgan Generation Assets under current sector conditions.

13.7.1.10 This approach is consistent with Glasson *et al*. (2020), which recommends specifying the 'more likely' scenario in order to avoid wide ranges of economic impact estimates.

Minimum – 'low' scenario

13.7.1.11 This assessment considers a 'low' scenario to represent the 'worst case' potential economic impacts, to satisfy paragraph 4.3.12 of NPS EN-1.

13.7.1.12 The low scenario considers a situation where no contracts are secured with a Tier 1 supplier (a direct supplier of a product or service) within North Wales and North West England for the delivery of development, fabrication, or marshalling activities.

13.7.1.13 In North Wales and North West England, the low scenario has been qualitatively assessed to represent the 'minimum' – or 'worst case' – economic impact associated with the Morgan Generation Assets.

13.7.1.14 A low scenario in the UK would cover a situation where all Tier 1 contracts are secured by companies based outside the UK – this would mean performance well below typical UK content. Given increasing UK capability in the offshore wind sector, a low scenario

is not considered likely at a national level, and is therefore not assessed. The current capability scenario already assumes some non-UK expenditure across all supply chain categories (see Volume 4, Annex 13.1: Socioeconomics technical impact report of the Environmental Statement).

13.7.1.15 As it would result in no change to receiving environment, the low scenario is not assessed for social impacts.

Maximum scenario

13.7.1.16 A ‘maximum’ scenario would cover a situation where greater sector investment would lead to an increase in national and regional content (note: this scenario differs from the MDS).

13.7.1.17 There is no information available at this stage to provide a basis for the assumptions that would be required to define a ‘maximum’ scenario.

13.7.1.18 Assessing a maximum scenario would provide a set of impact estimates above the current capability scenario. There is a risk that assessing a ‘maximum’ scenario could overstate potentially beneficial economic impacts.

13.7.1.19 In addition, assessing a maximum scenario would introduce a wide range of potential economic impacts. According to Glasson *et al*. (2020) this would be unhelpful and would present difficulties for decision makers.

13.7.1.20 In the case of socio-economics, the maximum scenario can therefore be considered an unhelpful scenario upon which to base an EIA. For this reason, the maximum scenario has not been assessed within this chapter.

Table 13.33: Maximum design scenario considered for the assessment of potential impacts on socio-economics.

[a] C=construction, O=operations and maintenance, D=decommissioning

Potential impact	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
Economic					
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	**Construction phase** • MDS assumes a similar delivery model to previous offshore wind farms developed in the UK – detailed assumptions are set out within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement • MDS assumes construction phase of up to four years • MDS assumes some construction phase activities to be delivered from a port (or more than one port) located in North Wales or North West England. **Operations and maintenance phase** • MDS assumes a similar delivery model to previous offshore wind farms developed in the UK – detailed assumptions are set out within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement • MDS assumes operations and maintenance phase of 35 years • MDS assumes operations and maintenance support facility to be located in North Wales or North West England. **Decommissioning phase** • MDS assumes some decommissioning phase activities to be delivered from a port (or more than one port) located in North Wales or North West England.	The MDS is informed by analysis within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement setting out the estimated economic impacts in terms of employment and GVA. **Construction phase** Potential expenditure on activities associated with the construction of the Morgan Generation Assets could support direct, indirect and induced employment and GVA impacts within the economy. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts. **Operational and maintenance phase** Potential expenditure on activities associated with the operation and maintenance of the Morgan Generation Assets could support direct, indirect and induced employment and GVA impacts within the economy. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts. **Decommissioning phase** Potential expenditure on activities associated with the decommissioning of the Morgan Generation Assets could

Potential impact	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
					support direct, indirect and induced employment and GVA impacts within the economy. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts.
The potential impact of increased employment opportunities.	✓	✓	✓	**Construction phase** • As per the impact on economic receptors including employment and GVA **Operational and maintenance phase** • As per the impact on economic receptors economic receptors including employment and GVA **Decommissioning phase** • As per the impact on economic receptors including employment and GVA.	**Construction phase** Potential employment impacts associated with the construction phase could increase the range and supply of employment opportunities that are accessible to residents. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts. **Operational and maintenance phase** Potential employment impacts associated with the operation and maintenance phase could increase the range and supply of employment opportunities that are accessible to residents. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts. **Decommissioning phase** Potential employment impacts associated with the decommissioning phase could increase the range and supply of employment opportunities that are accessible to residents.

Potential impact	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
					The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. The low impact scenario has been qualitatively assessed to provide a fair assessment of the potential 'worst case' economic impacts.
Social					
The potential impact on population, housing and accommodation.	✓	✓	✓	**Construction phase** • MDS assumes a similar delivery model to previous offshore wind farms developed in the UK – detailed assumptions are set out within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement • MDS assumes the maximum activity, and associated vessel numbers, located at any single potential port within North Wales or North West England at any one time will be linked to the marshalling of inter array and export cabling • MDS assumes construction phase of up to four years. **Operations and maintenance phase** • MDS assumes a similar delivery model to previous offshore wind farms developed in the UK – detailed assumptions are set out within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement • MDS assumes the maximum activity, and associated vessel numbers, located at any single potential port within North Wales or North West England will be linked to the delivery of all operation and maintenance activities associated with the Morgan Generation Assets. • MDS assumes operations and maintenance phase of 35 years. **Decommissioning phase** • As for construction phase.	The MDS is informed by analysis within Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement setting out the likely source of workforce associated with infrastructure, and likely demand for overnight, short term (temporary) and long term (permanent) accommodation. **Construction phase** Direct employment generated during the construction phase could impact overnight accommodation (during the construction phase). The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. **Operational and maintenance phase** Direct employment generated during the operations and maintenance phase could impact population, housing and accommodation. It is anticipated that due to the long term nature of the operations and maintenance requirements, part of the workforce will live locally. Some of those associated with the operation and maintenance of infrastructure may relocate to the area requiring long term (permanent) housing within the vicinity of the operations and maintenance port. The current capability scenario has been quantitively assessed to provide a fair assessment of the potential 'most likely' economic impacts. **Decommissioning phase** As for construction phase

Potential impact	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
Tourism					
The potential impact on tourism.	✓	✓	✓	**All phases** **Visual amenity** • As per Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement. MDS assumes 68 wind turbines and four offshore substation platforms (OSPs). **Overnight trips and accommodation** • As per the potential impact on population, housing and accommodation (above). **Recreation** • As per Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement which sets out the potential impact on recreational craft passages and safety. MDS assumes maximum number of 96 wind turbines plus four OSPs. • As per Volume 2, Chapter 9: Other sea users of the Environmental Statement which sets out the MDS for potential impacts, including displacement of recreational activities and increased SSCs and associated deposition affecting recreational diving and bathing sites. MDS for displacement of recreational activities assumes maximum number of 96 wind turbines plus four OSPs.	Potential impacts of the construction, operations and maintenance, and decommissioning of the Morgan Generation Assets on tourism are indirect in nature. It is necessary to derive an assessment of significance of effects on tourism from the findings elsewhere in the Environmental Statement as follows. **Visual amenity** It is necessary to derive an assessment of significance of effects on visual amenity from the findings of Volume 2, Chapter 10: Seascape and visual resources of the Environmental Statement. On this basis, the MDS for the impact on visual amenity in this chapter draws directly on the MDS for Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement. **Overnight trips and accommodation** It is necessary to derive an assessment of significance of effects on overnight trips and accommodation from the findings of the assessment within this chapter of potential impacts on population, housing and accommodation. On this basis, the MDS for the impact on overnight trips and accommodation draws directly on the MDS for the impacts on population, housing and accommodation (above). **Recreation** It is necessary to derive an assessment of significance of effects on recreation from the findings in Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, and Volume 2, Chapter 9: Other sea users of the Environmental Statement. On this basis, the MDS for the impact on recreation draws directly on the MDS for Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, and Volume 2, Chapter 9: Other sea users of the Environmental Statement.

Potential impact	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
Isle of Man					
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services				As per Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement **Construction phase** • Four years construction duration • Construction activities over the maximum extent of the Morgan Array Area (280 km^2). **Operations and maintenance phase** • Operational life of 35 years • Maximum extent of Morgan Array Area (280 km^2). **Decommissioning phase** • The duration of the decommissioning programme is anticipated to be the same as for construction, and thus, up to four years • During the decommissioning phase the changes would gradually decrease from the operations and maintenance MDS as the need for project-related vessels is reduced and structures are removed and cut below the seabed.	**Impact to commercial operators including strategic routes and lifeline ferries** Greatest extent of the Morgan Generation Assets over the longest duration, would impact the most routes whilst vessels navigate around the Morgan Array Area and therefore the greatest potential for impacts on commercial operators and routes. **Impact to adverse weather routeing.** Greatest extent of the Morgan Generation Assets over the longest duration, would impact the most routes whilst vessels navigate around the Morgan Array Area and therefore the greatest potential for impacts on adverse weather routeing.

13.7.1.21 The MDS considered for the assessment of impacts on economic receptors assumes that a similar delivery model to previous offshore wind farms developed in the UK will be followed and that some activities will be delivered from a port (or more than one port) located in North Wales or North West England throughout the project lifetime. For the social receptor, the MDS also assumes that the maximum activity, and associated vessel numbers, located at any single potential port within North Wales or North West England at any one time will be linked to at least some construction and operations and maintenance activities. For the tourism receptor, the MDS adopts assumptions from Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement and Volume 2, Chapter 9: Other sea users of the Environmental Statement. For the Isle of Man receptor, a maximum extent of the Morgan Array Area is assumed.

13.8 Measures adopted as part of the Morgan Generation Assets

13.8.1.1 For the purposes of the EIA process, the term 'measures adopted as part of the project' is used to include the following measures (adapted from IEMA, 2016):

- Measures included as part of the project design. These include modifications to the location or design of the Morgan Generation Assets which are integrated into the application for consent. These measures are secured through the consent itself through the description of the development and the parameters secured in the DCO and/or marine licences (referred to as primary mitigation in IEMA, 2016)
- Measures required to meet legislative requirements, or actions that are generally standard practice used to manage commonly occurring environmental effects and are secured through the DCO requirements and/or the conditions of the marine licences (referred to as tertiary mitigation in IEMA, 2016).

13.8.1.2 For the Morgan Generation Assets Application, the Applicant has provided an Outline Skills and Employment Plan (document reference J8). This document sets out the principles for Morgan Generation Assets which will be part of a full skills and employment plan for the whole Morgan Offshore Wind Project which will be secured via the Transmission Assets DCO. This will secure the economic benefits associated with the Morgan Generation Assets in relation to skills and employment within the offshore wind sector.

13.8.1.3 This plan will detail how the Applicant will engage with local workers and training providers for anticipated associated employment opportunities. It will set out opportunities for engagement to enable local workers and training providers to prepare for anticipated employment opportunities associated with the whole Morgan Offshore Wind Project.

13.8.2 Impact assessment criteria

13.8.2.1 The criteria for determining the significance of effects is a two-stage process that involves defining the magnitude of the impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement.

13.8.2.2 As this assessment sets out magnitude, sensitivity and significance for multiple study area geographies (national/regional) across multiple categories (economic, social and

tourism), the assessment has been tabulated for ease of interpretation. In addition, for each potential impact pathway, the baseline conditions for which magnitude and sensitivity are assessed are presented within the specific impact pathway assessment.

Magnitude of potential impacts

13.8.2.3 The magnitude of socio-economic impacts is assessed on the basis of the expected degree of change relative to baseline conditions (i.e. 'scale' of impact). For each socio-economic impact under consideration, the scale of potential impacts is assessed against multiple baseline conditions and aggregated to a single scale level as appropriate. The average value across baseline conditions is then calculated and used to determine the overall scale of impact.

13.8.2.4 The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, these factors are considered as follows:

- Spatial extent: geographical area over which the impact may occur
- Duration: the time over which an impact occurs. An impact may be described as short, medium or long-term, and permanent or temporary. This chapter assesses potential impacts predicted to last for more than five years as 'long term', potential impacts predicted to last between one year and five years as 'medium term', and potential impacts predicted to last less than one year as 'short term'. As such, construction phase and decommissioning phase impacts are predicted to be medium term (up to four years) and therefore temporary. Operations and maintenance phase impacts are predicted to be long term (35 years) and therefore permanent
- Frequency: the number of times an impact occurs across the relevant phase/lifetime of a project. Construction phase and decommissioning phase impacts are predicted to be intermittent. Operations and maintenance phase impacts are predicted to be continuous.

13.8.2.5 The criteria for defining magnitude in this chapter are outlined in Table 13.34 below.

Table 13.34: Definition of terms relating to the magnitude of an impact.

Magnitude of impact	Definition
High	Scale: major worsening of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a national geography. Duration: impact is of long term duration (more than five years). Frequency: impact is continuous. (Adverse)
	Scale: major improvement of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a national geography. Duration: impact is of long term duration (more than five years). Frequency: impact is continuous. (Beneficial)

Magnitude of impact	Definition
Medium	Scale: moderate worsening of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a regional geography. Duration: impact is of medium term duration (more than five years). Frequency: impact is continuous, or frequent intermittency. (Adverse)
	Scale: moderate improvement of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a regional geography. Duration: impact is of medium term duration (more than five years). Frequency: impact is continuous, or frequent intermittency. (Beneficial)
Low	Scale: minor worsening of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a local geography. Duration: impact is of short term duration (under one year). Frequency: impact is intermittent. (Adverse)
	Scale: minor improvement of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a local geography. Duration: impact is of short term duration (under one year). Frequency: impact is intermittent. (Beneficial)
Negligible	Scale: very minor worsening of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a neighbourhood geography. Duration: impact is of very short term duration (under one month). Frequency: infrequent intermittency. (Adverse)
	Scale: very minor improvement of socio-economic conditions compared to the baseline. Spatial extent: impact occurs at a neighbourhood geography. Duration: impact is of very short term duration (under one month). Frequency: infrequent intermittency. (Beneficial)
No change	The potential impact would result in no change of socio-economic conditions.

Sensitivity of receptors

13.8.2.6 The sensitivity of receptors can be assessed on the basis of a number of factors – tolerance, recoverability and value/importance (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement):

- Tolerance: the degree to which a receptor can accommodate a temporary or permanent change
- Recoverability: the ability of a receptor to be able to return to a state close to that which existed before an activity or event occurred

- Value and importance: the importance of the receptor in terms of social/community and/or economic value. In this chapter the receptor's value is based on:
  - Reference to best practice guidance
  - Reference to policy objectives
  - Outcomes of consultation to date.

13.8.2.7 The criteria for defining sensitivity in this chapter are outlined in Table 13.35 below. Professional judgement has been utilised in the application of the following criteria.

Table 13.35: Definition of terms relating to the sensitivity of the receptor.

Sensitivity	Definition
Very High	• Very high value – the receptor is identified as a national policy priority • Very low tolerance – the receptor is identified as being very responsive to changes in conditions, and the receptor is very unlikely to be able to accommodate any of the impacts of the Morgan Generation Assets • Very low recoverability – the receptor is highly unlikely to return to a state comparable with the conditions that existed before delivery of the Morgan Generation Assets.
High	• High value – the receptor is identified as a regional policy priority • Low tolerance – the receptor is identified as being highly responsive to changes in conditions, and the receptor is highly unlikely to be able to accommodate most of the impacts of the Morgan Generation Assets • Low recoverability – the receptor is highly unlikely to return to a state comparable with the conditions that existed before delivery of the Morgan Generation Assets.
Medium	• Medium value – the receptor is identified as a local policy priority • Medium tolerance – the receptor is identified as being responsive to changes in conditions, and the receptor may be able to accommodate some impacts of the Morgan Generation Assets, but is unlikely to be able to fully accommodate all impacts • Medium recoverability – the receptor is unlikely to return to the same conditions that existed before delivery of the Morgan Generation Assets.
Low	• Low value – the receptor is not identified as a policy priority • High tolerance – the receptor is identified as being unresponsive to changes in conditions, and the receptor is highly likely to able to accommodate most impacts of the Morgan Generation Assets, and may be able to fully accommodate all impacts • High recoverability – The receptor is likely to return to the same (or very similar) conditions that existed before delivery of the Morgan Generation Assets.
Negligible	• The receptor is deemed not important at any policy level • There is evidence of complete tolerance to the Morgan Generation Assets.

Significance of effects

13.8.2.8 The significance of the effect upon socio-economics is determined by correlating the magnitude of the impact and the sensitivity of the receptor. The particular method employed for this assessment is presented in Table 13.36.

13.8.2.9 Where a range of significance of effect is presented in Table 13.36, the final assessment for each effect is based upon expert judgement. In such instances, for

potentially beneficial effects the lower significance of effect is adopted so as not to over-estimate potential beneficial effects. For potentially adverse effects, the higher significance of effect is adopted so as not to under-estimate potential adverse effects.

13.8.2.10 In all cases, the evaluation of receptor sensitivity, potential impact magnitude and significance of effect has been informed by professional judgement and is underpinned by narrative to explain the conclusions reached.

13.8.2.11 For the purposes of this assessment, any effects with a significance level of minor or less have been concluded to be not significant in terms of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

Table 13.36: Matrix used for the assessment of the significance of the effect.

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

13.9 Assessment of significant effects

13.9.1.1 As per paragraph 13.1.1.2, this chapter's approach is focused on the 'source' of the potential impact. For example, if physical infrastructure and civil works are located offshore, any resulting impacts are categorised as offshore. As outlined in Volume 1, Chapter 3: Project description of the Environmental Statement, Morgan Generation Assets are in the offshore environment so all impacts are assessed as offshore.

13.9.1.2 The potential impacts of the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets have been assessed on socio-economics receptors. The potential impacts arising from the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets are listed in Table 13.33, along with the MDS against which each impact has been assessed.

13.9.1.3 A description of the potential effects on socio-economics receptors caused by each identified impact is given below.

13.9.2 Economic

The potential impact on economic receptors including employment and GVA

13.9.2.1 The construction, operations and maintenance, and decommissioning of the Morgan Generation Assets infrastructure may lead to potential impacts on economic receptors including employment and GVA. The assessment draws on the estimates of potential employment and GVA impacts as set out in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

Magnitude (scale) of impact - assessment approach

13.9.2.2 The scale of potential employment and GVA impacts is assessed against the following baseline conditions:

- Share of employment and GVA across all industries (2021): this gives an indication of the scale of the impact in the context of the receiving environment's employment and GVA base
- Share of employment and GVA in impact industries (2021): this gives an indication of the scale of the impact in the context of the receiving environment's impact industries employment and GVA base
- Share of employment (2021) in offshore wind sector: this gives an indication of the scale of the impact in the context of the receiving environment's offshore wind sector employment base.

13.9.2.3 The criteria against which magnitude of potential economic impacts are assessed can be found in Table 13.37.

Table 13.37: Magnitude of employment and GVA impacts assessment criteria.

Magnitude of Impact	Share of Relevant Baseline Conditions
High	>1.0%
Medium	0.5%–1.0%
Low	0.1%–0.5%
Negligible	<0.1%

13.9.2.4 These thresholds have been established on the basis of comparison with previously consented major infrastructure projects of national significance, and the scale of their predicted employment and GVA impacts in comparison with the national economy.

Construction phase

13.9.2.5 This assessment assumes a four-year (48-month) construction period (see Volume 1, Chapter 3: Project description of the Environmental Statement).

Current capability scenario

13.9.2.6 The potential impacts of the Morgan Generation Assets on employment and GVA in development and construction activities under the current capability scenario are set out in Table 13.38. These impacts will create opportunities to both safeguard existing economic activities, and facilitate new economic growth and development within the offshore wind sector at local, regional and national levels.

Table 13.38: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment and GVA in development and construction activities.

	North Wales	North West England	UK
Per annum			
Employment (FTE years)	35	170	1,900
GVA	£4m	£15m	£140m

	North Wales	North West England	UK
Total (48 months)[28]			
Employment (FTE years)	140	680	7,600
GVA	£15 m	£60 m	£540 m

Magnitude of impact

13.9.2.7 The magnitude of socio-economic impacts is assessed on the basis of the expected degree of change relative to baseline conditions (i.e. scale of impact). For each socio-economic impact under consideration, the scale of potential impacts is assessed against multiple baseline conditions and aggregated to a single scale level as appropriate. The average value across baseline conditions is then calculated and used to determine the overall scale of impact.

13.9.2.8 The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, these factors are considered as follows:

- Spatial extent: geographical area over which the impact may occur
- Duration: the time over which an impact may occur. An impact may be described as short, medium or long-term, and permanent or temporary. This chapter assesses potential impacts predicted to last for more than five years as 'long term', potential impacts predicted to last between one year and five years as 'medium term', and potential impacts predicted to last less than one year as 'short term'
- Frequency: the number of times an impact may occur across the relevant phase/lifetime of a project. Construction phase and decommissioning phase impacts are predicted to be intermittent[29].

13.9.2.9 With reference to the assessment criteria set out in Table 13.37, a comparison of the potential annual employment and GVA impacts associated with development and construction phase activities, compared to the relevant baseline conditions for each economic study area, results in an assessment of impact magnitude as set out inTable 13.39.

[28] As per Volume 1, Chapter 3: Project description of the Environmental Statement.

[29] Potential employment impacts during the construction phase are measured in FTE years. The term 'FTE year' in employment terms is often used in construction labour reporting, in which one construction FTE year represents the work done by one full-time employee in a year comprising a standard number of working days. This method of measuring jobs created accounts for both the duration and intensity of employment, providing a more comprehensive understanding of job impacts. It is especially valuable in industries like construction, where workforce requirements vary over time as many development and construction workers working on the Morgan Generation Assets will work for a fixed period or be involved in other projects in parallel. Consequently, construction phase economic impacts are assessed as intermittent.

Table 13.39: Magnitude of impact – potential construction phase employment and GVA impacts compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Low (beneficial)**	Regional	Medium term (temporary)	Intermittent
North Wales	**Low (beneficial)**	Regional	Medium term (temporary)	Intermittent
UK	**Low (beneficial)**	National	Medium term (temporary)	Intermittent

13.9.2.10 When assessing the potential scale of impact of the Morgan Generation Assets on employment within the offshore wind sector specifically[30], results suggest the Morgan Generation Assets has the potential to significantly impact fabrication and installation activity within this emerging sector.

Sensitivity of the receptor

13.9.2.11 As per section 13.8.2, receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, value and importance.

Value and importance

13.9.2.12 Whether an economic study area's policy position has the aim of making the offshore wind sector part of its approach to economic development is a key consideration. This can also be through providing jobs, skills, education and training for local residents to work in the offshore wind sector. Policy aims to provide the same opportunity in the renewable energy sector will also be considered as important. General policy aims to provide jobs, skills, education and training for local residents in any sector are also considered.

13.9.2.13 Increasing employment in the renewable energy sector, including offshore wind activities specifically, is a policy objective at the UK, Wales and North West England level. The offshore wind sector is identified as a growth opportunity within a more broadly defined energy sector which is forecast to experience employment decline.

13.9.2.14 As such, the value and importance of the receptor is assessed as high.

Tolerance

13.9.2.15 According to section 13.5, between 2015 to 2022 employed persons in construction impact industries decreased by approximately 2,000 in North Wales (–3.5% per annum), 4,000 in North West England (–1.2% per annum), 3,000 in Wales (–1.4% per annum), and 42,000 in UK (–0.8% per annum) (ONS, 2023a). This suggests there is potential across all economic study areas to accommodate an increase in development and construction activities in the offshore wind sector – although this would likely require a degree of 'upskilling' and transitioning for firms and workers.

13.9.2.16 The future baseline conditions set out in section 13.5.4 indicates there is likely to be potential capacity in the utilities and manufacturing sectors due to a decreasing employment base up to 2035. This again indicates there is potential to accommodate

[30] i.e. notwithstanding the potential scale of impact on 'all industries' and 'impact industries' employment and GVA – see paragraph 13.9.2.2 for a summary of the inputs to the quantitative assessment of the scale of impact on economic receptors including employment and GVA.

an increase in similar activities in the offshore wind sector. It is forecast that employment in the construction sector will increase over the period to 2035 – this suggests the sector is in a strong position of growth, although it may lead to tighter labour market conditions in construction activities.

13.9.2.17 Overall, the tolerance of the receptor is assessed as high, as per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.2.18 It is not possible to confidently determine whether or not the receptor would return to a state close to that which existed before any activity occurs. However, there are anticipated to be ongoing beneficial legacy effects, which would be part of positioning infrastructure, supply chain capabilities and labour market conditions to compete to deliver further activity in the offshore wind sector. As the impact is expected to be beneficial, it would be desirable to retain any impacts.

13.9.2.19 Even in the absence of ongoing legacy beneficial effects linked to direct expenditure, it is unlikely that economic impacts resulting from indirect and induced expenditure would be entirely reversed following the construction phase. As such, the recoverability of the receptor is assessed as medium.

Overall

13.9.2.20 The sensitivity of the receptor for all economic study areas is set out in Table 13.40**.**

Table 13.40: Sensitivity of receptor – potential construction phase employment and GVA impacts.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	Medium
Sensitivity	**Medium**

Significance of the effect

13.9.2.21 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.41.

Table 13.41: Significance of construction phase employment and GVA impacts (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Low (beneficial)	Medium	**Minor (beneficial)**	No
North Wales	Low (beneficial)	Medium	**Minor (beneficial)**	No
UK	Low (beneficial)	Medium	**Minor (beneficial)**	No

Low scenario

13.9.2.22 This scenario considers a situation where no Tier 1 contracts are secured within North West England and North Wales for the delivery of development, fabrication or marshalling activities.

13.9.2.23 Under this scenario, no direct employment and GVA impacts are anticipated to be retained within North West England and North Wales. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of supply chain expenditure is retained in these locations.

13.9.2.24 The significance of the effect for each economic study area under the low scenario is set out in Table 13.42.

Table 13.42: Significance of construction phase employment and GVA impacts (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

Operations and maintenance phase

13.9.2.25 This assessment assumes a 35-year operations and maintenance period (see Volume 1, Chapter 3: Project description of the Environmental Statement).

Current capability scenario

13.9.2.26 The potential impacts of the Morgan Generation Assets on employment and GVA in operation and maintenance activities under the current capability scenario are set out in Table 13.43. These impacts will create opportunities to both safeguard existing economic activities, and facilitate new economic growth and development within the offshore wind sector at local, regional and national levels.

Table 13.43: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment and GVA in operation and maintenance activities.

	North Wales	North West England	Wales
Per annum			
Employment (FTE years)	190	210	200
GVA	£20 m	£25 m	£25 m

Magnitude of impact

13.9.2.27 As per section 13.8.2, the magnitude of impact is assessed on the basis of scale, spatial extent, duration and frequency.

13.9.2.28 With reference to the assessment criteria set out in Table 13.37, a comparison of the potential annual employment and GVA impacts associated with operation and maintenance phase activities compared to the relevant baseline conditions for each economic study area results in an assessment of impact magnitude as set out in Table 13.44. Although potential employment and GVA impacts are anticipated to be greater

in North West England than in North Wales in absolute terms (see Table 13.43), the magnitude of impact is assessed as higher in North Wales because baseline employment and GVA is lower in North Wales than in North West England.

Table 13.44: Magnitude of impact – potential operations and maintenance phase employment and GVA impacts compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	Low (beneficial)	Regional	Long term (permanent)	Continuous
North Wales	Medium (beneficial)	Regional	Long term (permanent)	Continuous

13.9.2.29 When assessing potential impacts compared to offshore wind sector conditions in isolation, the results suggest the Morgan Generation Assets has the potential to significantly impact operations and maintenance activity within the growing offshore wind sector.

Sensitivity of the receptor

13.9.2.30 As per section 13.8.2, receptor sensitivity to potential operations and maintenance phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, value and importance.

Value and importance

13.9.2.31 As set out at paragraphs 13.9.2.12 to 13.9.2.14, the value and importance of employment and GVA growth – both generally and within the renewable energy and offshore wind sectors specifically – is assessed as high.

Tolerance

13.9.2.32 According to section 13.5, between 2015 to 2022 employed persons in operations and maintenance impact industries decreased by approximately 1,500 in North Wales (–6.5% per annum) and 2,000 in North West England (-0.9% per annum). This suggests there is potential capacity within relevant industries in North Wales and North West England to accommodate an increase in operations and maintenance activities in the offshore wind sector – although this would very likely require a degree of 'upskilling' and transitioning for firms and workers.

13.9.2.33 The future baseline conditions set out in section 13.5.4 indicate there is likely to be capacity in the utilities sector due to a decreasing employment base up to 2035 (i.e. more people unemployed or potentially open to work). This indicates there is likely to be potential to accommodate an increase in operations and maintenance activities in the offshore wind sector.

13.9.2.34 Overall, the tolerance of the receptor is assessed as high – as per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.2.35 The duration of the impact is assessed as long term and permanent. As such, the recoverability of the receptor is assessed as low – as per Table 13.35 this corresponds to a high sensitivity.

Overall

13.9.2.36 The sensitivity of the receptor for all economic study areas is set out in Table 13.45.

Table 13.45: Sensitivity of receptor – operation and maintenance phase employment and GVA.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	High
Sensitivity	**High**

Significance of the effect

13.9.2.37 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.46.

Table 13.46: Significance of operation and maintenance phase employment and GVA impacts (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Low (beneficial)	High	**Minor (beneficial)**	No
North Wales	Medium (beneficial)	High	**Moderate (beneficial)**	Yes

Low scenario

13.9.2.38 This scenario considers a situation where the primary operations facility is not located at a port within North Wales or North West England for the delivery of operations and maintenance activities. Wales impacts remain unchanged compared to the current capability scenario.

13.9.2.39 Under this scenario, no direct employment and GVA impacts are anticipated to be retained within North Wales and North West England. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of supply chain expenditure is retained in these locations.

13.9.2.40 The significance of the effect for each economic study area under the low scenario is set out in Table 13.47.

Table 13.47: Significance of operations and maintenance phase employment and GVA impacts (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

Decommissioning phase

13.9.2.41 This assessment assumes a four-year (48-month) decommissioning period (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.2.42 The preferred approach to decommissioning activity is uncertain at this time. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that recycling of decommissioned components will contribute to beneficial supply chain impacts.

13.9.2.43 The activities for the decommissioning of the Morgan Generation Assets is likely to be supported in a similar way to installation, with the process taking place in reverse (i.e. construction phase activities minus project development and fabrication).

13.9.2.44 The potential impacts of the Morgan Generation Assets on employment and GVA in decommissioning activities under the current capability scenario are set out in Table 13.48. These impacts will create opportunities to both safeguard existing economic activities, and facilitate new economic growth and development within the offshore wind sector at local, regional and national levels.

Table 13.48: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment and GVA in decommissioning activities.

	North Wales	North West England	UK
Per annum			
Employment (FTE years)	2	20	310
GVA	-	£1m	£20m
Total (48 months)			
Employment (FTE years)	7	80	1,200
GVA	-	£5 m	£85 m

Magnitude of impact

13.9.2.45 As per section 13.8.2, the magnitude of potential impacts is assessed on the basis of scale, spatial extent, duration and frequency.

13.9.2.46 With reference to the assessment criteria set out in Table 13.37, a comparison of the potential annual employment and GVA impacts associated with decommissioning phase activities compared to the relevant baseline conditions for each economic study area results in an assessment of impact magnitude as set out in Table 13.49.

Table 13.49: Magnitude of impact – potential decommissioning phase employment and GVA impacts compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Low (beneficial)**	Regional	Medium term (temporary)	Intermittent
North Wales	**Negligible**	Regional	Medium term (temporary)	Intermittent
UK	**Low (beneficial)**	National	Medium term (temporary)	Intermittent

13.9.2.47 When assessing potential impacts compared to offshore wind sector conditions in isolation, the results suggest the Morgan Generation Assets has the potential to significantly impact decommissioning activity within the growing sector.

Sensitivity of the receptor

13.9.2.48 As per section 13.8.2, receptor sensitivity to potential decommissioning phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance.

Value and importance

13.9.2.49 As per paragraphs 13.9.2.12 to 13.9.2.14, the value and importance of employment and GVA growth – both generally and within the renewable energy and offshore wind sectors specifically – is assessed as high.

Tolerance

13.9.2.50 The decommissioning phase is scheduled to commence following the end of the operations and maintenance phase (which itself lasts 35 years) (see Volume 1, Chapter 3: Project Description of the Environmental Statement). This is beyond the reasonable limit of labour market forecasting. As such, as a cautious assumption the tolerance of the receptor is assessed as medium.

Recoverability

13.9.2.51 It is not possible to confidently determine whether or not the receptor would return to a state close to that which existed before any decommissioning activity occurs. However, there are anticipated to be ongoing beneficial legacy effects, which would be part of positioning infrastructure, supply chain capabilities and labour market conditions to compete to deliver further decommissioning activity in the offshore wind sector. As the impact is expected to be beneficial, it would be desirable to retain any impacts.

13.9.2.52 Even in the absence of ongoing legacy beneficial effects linked to direct expenditure, it is unlikely that employment and GVA impacts resulting from indirect and induced expenditure would be entirely reversed following the decommissioning phase. As such, the recoverability of the receptor is assessed as medium.

Overall

13.9.2.53 The sensitivity of the receptor for all economic study areas is set out in Table 13.50**.**

Table 13.50: Sensitivity of receptor – potential decommissioning phase employment and GVA impacts.

	Sensitivity level
Value and importance	High
Tolerance	Medium
Recoverability	Medium
Sensitivity	**Medium**

Significance of the effect

13.9.2.54 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.51.

Table 13.51: Significance of decommissioning phase employment and GVA impacts (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Low (beneficial)	Medium	**Minor (beneficial)**	No
North Wales	Low (beneficial)	Medium	**Minor (beneficial)**	No
UK	Low (beneficial)	Medium	**Minor (beneficial)**	No

Low scenario

13.9.2.55 This scenario considers a situation where no Tier 1 contracts are secured within North Wales and North West England for the delivery of decommissioning activities. Wales and UK impacts remain unchanged compared to the current capability scenario.

13.9.2.56 Under this scenario, no direct employment and GVA impacts are anticipated to be retained within North Wales and North West England. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of decommissioning supply chain expenditure is retained in these locations.

13.9.2.57 The significance of the effect for each economic study area under the low scenario is set out in Table 13.52.

Table 13.52: Significance of decommissioning phase employment and GVA impacts (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

The potential impact of increased employment opportunities

13.9.2.58 The construction, operations and maintenance, and decommissioning of the Morgan Generation Assets may lead to potential impacts on economic receptors including employment opportunities for local residents. The assessment draws on the estimates of potential impacts as set out in Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

Magnitude (scale) of impact - assessment approach

13.9.2.59 The scale of potential employment opportunities for local residents is assessed against the following baseline conditions:

- Economic activity: using the economically active population as a benchmark to assess the scale of potential impact on the current available workforce

- Economically inactive individuals that are seeking employment, and unemployed population: comparison with this figure gives an indication of the scale of employment impacts in the context of potentially available workforce within an area.

13.9.2.60 The criteria against which magnitude of potential economic impacts are assessed can be found in Table 13.53.

Table 13.53: Magnitude of employment opportunities for local residents assessment criteria.

Magnitude of Impact	Share of relevant baseline conditions	
	Employment impact as share of economically active individuals	**Employment impact as share of available labour market**
High	>1.0%	>10%
Medium	0.5%–1.0%	5%–10%
Low	0.1%–0.5%	1%–5%
Negligible	<0.1%	<1%

Construction phase

13.9.2.61 This assessment assumes a four-year (48-month) construction period (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.2.62 The potential impacts of the Morgan Generation Assets on employment opportunities for local residents in development and construction activities under the current capability scenario are set out in Table 13.54.

Table 13.54: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment opportunities for local residents in development and construction activities.

	North Wales	North West England
Per annum		
Employment (FTE years)	35	170
Total (48 months)		
Employment (FTE years)	140	680

Magnitude of impact

13.9.2.63 As per section 13.8.2, the magnitude of potential impacts is assessed on the basis of scale, spatial extent, duration and frequency.

13.9.2.64 With reference to the assessment criteria set out in Table 13.53, a comparison of the potential labour market impacts associated with development and construction phase activities compared to the relevant baseline conditions for each economic study area results in an assessment of impact magnitude as set out in Table 13.55.

Table 13.55: Magnitude of impact – potential construction phase employment opportunities for local residents compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Negligible**	Regional	Medium term (temporary)	Intermittent
North Wales	**Negligible**	Regional	Medium term (temporary)	Intermittent

Sensitivity of the receptor

13.9.2.65 As per section 13.8.2, receptor sensitivity to potential construction phase labour market impacts is assessed on the basis of tolerance, recoverability, and value and importance.

Value and importance

13.9.2.66 Increasing employment in the renewable energy sector, including offshore wind activities specifically, is a policy objective at the national government level. The offshore wind sector is identified as a growth opportunity within a more broadly defined energy sector which is forecast to experience employment decline (IPPR, 2020). Providing high quality employment opportunities for residents is also a policy priority at every geographical level.

13.9.2.67 As such, the value and importance of the receptor is assessed as high.

Tolerance

13.9.2.68 The number of economically inactive individuals that are seeking employment was 19,000 in North Wales, and 187,000 in North West England in 2022 (ONS, 2023b). In 2022 the number of unemployed individuals was 9,000 in North Wales and 146,000 in North West England (ONS, 2023c). This suggests there are a significant number of residents across all economic study areas looking to enter the workforce.

13.9.2.69 For technical roles to be accessible to economically inactive and unemployed individuals that are seeking employment, this would very likely require a high degree of ‘upskilling’ and transitioning for workers. However, there are numerous indirect roles which support and facilitate technical roles, such as human resources, IT support, finance and administration which are potentially more accessible to economically inactive and unemployed individuals that are seeking employment.

13.9.2.70 As such, the tolerance of the receptor is assessed as high. As per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.2.71 There are anticipated to be ongoing beneficial legacy effects, which would be part of positioning a local workforce to compete to deliver further activity in the offshore wind sector. As the potential impact is expected to be beneficial, it would be desirable to retain these.

13.9.2.72 Even in the absence of ongoing legacy beneficial effects linked to direct expenditure, it is unlikely that labour market impacts resulting from indirect and induced expenditure would be entirely reversed following the construction phase. As such, the recoverability of the receptor is assessed as medium.

Overall

13.9.2.73 The sensitivity of the receptor for all economic study areas is assessed as in Table 13.56.

Table 13.56: Sensitivity of receptor – potential construction phase employment opportunities for local residents.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	Medium
Sensitivity	**Medium**

Significance of the effect

13.9.2.74 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.57.

Table 13.57: Significance of construction phase employment opportunities for local residents (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

Low scenario

13.9.2.75 This scenario considers a situation where no Tier 1 contracts are secured within North Wales or North West England for the delivery of development, fabrication, or marshalling activities. Wales and UK impacts remain unchanged compared to the current capability scenario.

13.9.2.76 Under this scenario, no direct employment opportunities for local residents are anticipated to be retained within North Wales and North West England. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of supply chain expenditure is retained in these locations.

13.9.2.77 The significance of the effect for each economic study area under the low scenario is set out in Table 13.58.

Table 13.58: Significance of construction phase employment opportunities for local residents (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

Operations and maintenance phase

13.9.2.78 This assessment assumes a 35-year operations and maintenance period (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.2.79 The potential impacts of the Morgan Generation Assets on employment opportunities for local residents in operation and maintenance activities under the current capability scenario are set out in Table 13.59.

Table 13.59: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment opportunities for local residents in operation and maintenance activities.

	North Wales	North West England
Per annum		
Employment (FTE years)	190	210

Magnitude of impact

13.9.2.80 As per section 13.8.2, the magnitude of potential impacts is assessed on the basis of scale, spatial extent, duration and frequency.

13.9.2.81 With reference to the assessment criteria set out in Table 13.53, a comparison of the potential annual labour market impacts associated with operation and maintenance phase activities compared to the relevant baseline conditions for each economic study area results in an assessment of impact magnitude as set out in Table 13.60.

Table 13.60: Magnitude of impact – potential operations and maintenance phase employment opportunities for local residents compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Negligible**	Regional	Long term (permanent)	Continuous
North Wales	**Low (beneficial)**	Regional	Long term (permanent)	Continuous

Sensitivity of the receptor

13.9.2.82 As per section 13.8.2, receptor sensitivity to potential labour market impacts is assessed on the basis of tolerance, recoverability, plus value and importance.

Value and importance

13.9.2.83 As per paragraphs 13.9.2.12 to 13.9.2.14, the value and importance of employment opportunities for local employment growth, both generally and within the renewable energy and offshore wind sectors specifically, is assessed as high.

Tolerance

13.9.2.84 As per paragraphs 13.9.2.68 to 13.9.2.70, the tolerance of the receptor is assessed as high. As per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.2.85 The duration of the impact is assessed as long term and permanent. As such, the recoverability of the receptor is assessed as low. As per Table 13.35 this corresponds to a high sensitivity.

Overall

13.9.2.86 The sensitivity of the receptor for all economic study areas is set out in Table 13.61.

Table 13.61: Sensitivity of receptor – operation and maintenance phase employment opportunities for local residents.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	High
Sensitivity	**High**

Significance of the effect

13.9.2.87 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.62.

Table 13.62: Significance of operation and maintenance phase employment opportunities for local residents (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	High	**Minor (beneficial)**	No
North Wales	Low (beneficial)	High	**Minor (beneficial)**	No

Low scenario

13.9.2.88 This scenario considers a situation where the primary operations facility is not located at a port within North Wales or North West England for the delivery of operations and maintenance activities.

13.9.2.89 Under this scenario, no direct employment opportunities for local residents are anticipated to be retained within North Wales and North West England. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of supply chain expenditure is retained in these locations.

13.9.2.90 The significance of the effect for each economic study area under the low scenario is set out in Table 13.63.

Table 13.63: Significance of operations and maintenance phase employment opportunities for local residents (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	High	**Minor (beneficial)**	No
North Wales	Negligible	High	**Minor (beneficial)**	No

Decommissioning phase

13.9.2.91 This assessment assumes a four-year (48-month) decommissioning period (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.2.92 The preferred approach to decommissioning activity is uncertain at this time. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that recycling of decommissioned components will contribute to beneficial labour market impacts.

13.9.2.93 The activities for the decommissioning of the Morgan Generation Assets is likely to be supported in a similar way to installation, with the process taking place in reverse (i.e. construction phase activities minus project development and fabrication).

13.9.2.94 The potential impacts of the Morgan Generation Assets on employment opportunities for local residents in decommissioning activities under the current capability scenario are set out in Table 13.64.

Table 13.64: Potential impacts (current capability scenario) of the Morgan Generation Assets on employment opportunities for local residents in decommissioning activities.

	North Wales	North West England
Per annum		
Employment (FTE years)	2	20
Total (48 months)		
Employment (FTE years)	7	80

Magnitude of impact

13.9.2.95 As per section 13.8.2, the magnitude of potential impacts is assessed on the basis of scale, spatial extent, duration and frequency.

13.9.2.96 With reference to the assessment criteria set out in Table 13.53, a comparison of the potential annual labour market impacts associated with decommissioning phase activities compared to the relevant baseline conditions for each economic study area results in an assessment of impact magnitude as set out in Table 13.65.

Table 13.65: Magnitude of impact – potential decommissioning phase employment opportunities for local residents compared to baseline conditions.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Negligible**	Regional	Medium term (temporary)	Intermittent
North Wales	**Negligible**	Regional	Medium term (temporary)	Intermittent

Sensitivity of the receptor

13.9.2.97 As per section 13.8.2, receptor sensitivity to potential decommissioning phase labour market impacts is assessed on the basis of tolerance, recoverability, plus value and importance.

Value and importance

13.9.2.98 Increasing employment in the renewable energy sector, including offshore wind activities specifically, is a policy objective at the national level. The offshore wind sector is identified as a growth opportunity within a more broadly defined energy sector which is forecast to experience employment decline. Providing high quality employment opportunities for residents is also a policy priority at every geographical level.

13.9.2.99 As such, the value and importance of the receptor is assessed as high.

Tolerance

13.9.2.100 As per paragraphs 13.9.2.68 to 13.9.2.70, the tolerance of the receptor is assessed as high – as per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.2.101 There are anticipated to be ongoing beneficial legacy effects, which would be part of positioning infrastructure, supply chain capabilities and labour market conditions to compete to deliver further decommissioning activity in the offshore wind sector. As the impact is expected to be beneficial, it would be desirable to retain any impacts.

13.9.2.102 Even in the absence of ongoing legacy beneficial effects linked to direct expenditure, it in unlikely that labour market impacts resulting from indirect and induced expenditure would be entirely reversed following the decommissioning phase. As such, the recoverability of the receptor is assessed as medium.

Overall

13.9.2.103 The sensitivity of the receptor for all economic study areas is set out in Table 13.66**.**

Table 13.66: Sensitivity of receptor – potential decommissioning phase employment opportunities for local residents.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	Medium
Sensitivity	**Medium**

Significance of the effect

13.9.2.104 The significance of the effect for each economic study area under the current capability scenario is set out in Table 13.67.

Table 13.67: Significance of decommissioning phase employment opportunities for local residents (current capability scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

Low scenario

13.9.2.105 This scenario considers a situation where no Tier 1 contracts are secured within North Wales or North West England for the delivery of decommissioning activities. Wales and UK impacts remain unchanged compared to the current capability scenario.

13.9.2.106 Under this scenario, no direct employment opportunities for local residents are anticipated to be retained within North Wales and North West England. There may be some indirect and induced impacts in these economic study areas, assuming a proportion of decommissioning supply chain expenditure is retained in these locations.

13.9.2.107 The significance of the effect for each economic study area under the low scenario is set out in Table 13.68.

Table 13.68: Significance of decommissioning phase employment opportunities for local residents (low scenario).

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Negligible**	No
North Wales	Negligible	Medium	**Negligible**	No

13.9.3 Social

The potential impact on population, housing and accommodation.

13.9.3.1 The impacts on population, housing and accommodation have the potential to arise through the overnight, short term (temporary), or long term (permanent) relocation of workers into social study areas.

13.9.3.2 ‘Overnight’ is defined for this assessment as a period generally measured in nights that would typically be accommodated within a hotel, hostel, guesthouse or bed and breakfast type environment. The worker would be expected to travel alone without family.

13.9.3.3 ‘Short term (temporary)’ relocation is defined as a period generally measured in months that would typically be accommodated within rented housing. The worker would be expected to travel alone without family.

13.9.3.4 'Long term (permanent)' relocation is defined as a period generally measured in years that would result in the worker relocating to the relevant area with a long-term housing solution alongside their family.

13.9.3.5 This impact is applicable to the construction, operations and maintenance and decommissioning phases. The assessment draws on the assessment of social impacts and discussion of workforce issues as set out in the supporting Volume 4, Annex 13.1: Socio-economics technical impact report of the Environmental Statement.

Magnitude (scale) of impact - assessment approach

13.9.3.6 The magnitude of impacts is assessed against the following baseline conditions and shown in Table 13.69:

- Potential overnight stays:
  - Total number of overnight stays: comparison with total number of overnight stays (in nights per annum) to provide indication of scale relative to existing market
- Potential long term (permanent) relocations:
  - Total population: comparison with total population to give an indication of the scale of the impact of labour migration on the resident population
  - Total dwellings stock: comparison with overall dwellings stock to give an indication of the scale of the impact of labour migration on the housing market
  - Total unoccupied dwellings stock: comparison with unoccupied dwellings stock to give an indication of the scale of the impact of labour migration on the housing market.

Table 13.69: Magnitude of potential impacts on population, housing and accommodation.

Magnitude of Impact	Share of baseline population and housing	Share of baseline overnight accommodation
High	>1.0%	>10%
Medium	0.5%–1.0%	5%–10%
Low	0.1%–0.5%	1%–5%
Negligible	<0.1%	<1%

Construction phase

13.9.3.7 A four-year (48-month) construction period has been assumed throughout (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.3.8 Under the current capability scenario it is assumed that procurement decisions are taken in line with current conditions within the UK offshore wind sector. Employment related to fabrication is assumed to draw on the standing workforces of existing enterprises. This will not have any impact on the demand for housing, accommodation and local services above current baseline activity.

13.9.3.9 Under the current capability scenario the array cable and interconnector marshalling port(s) are located within the same social study area. However, other installation and commissioning activities could be located at other ports within the same social study area. Any further impacts are not anticipated to be of greater scale than those assessed.

13.9.3.10 There will be a range of installation and commissioning roles filled by mobile workers, as is typical of all offshore wind projects. These roles will be largely offshore with workers accommodated within Service Operation Vessels (SOVs). It is assumed that offshore workers will be mobilised out of a single transfer port. These workers have the potential to give rise to demand for overnight accommodation at the start and end of typical four-week shift periods at sea.

13.9.3.11 It is anticipated there will be no material long term (permanent) or short term (temporary) relocation of workers into any of the social study areas.

13.9.3.12 As such, potential impacts on population, and any associated potential impacts on local services such as healthcare and education, are anticipated to be negligible and do not require further assessment.

13.9.3.13 Similarly, potential impacts on the demand for other services and facilities including community facilities, energy, water, transport and waste, are anticipated to be negligible and do not require further assessment.

13.9.3.14 The potential demand for overnight accommodation, as measured in nights per annum, arising from the Morgan Generation Assets are set out in Table 13.70.

Table 13.70: Potential impact on overnight accommodation (current capability scenario).

Study area	Maximum temporary overnight stays (nights per annum) during construction phase
North West England	15,900
North Wales	15,900

Magnitude of impact

13.9.3.15 Potential impacts compared to overnight accommodation capacity are estimated based on average unutilised hotel room occupancy. This is a proxy indicator. There is substantial unutilised capacity across a variety of overnight accommodation types.

13.9.3.16 Potential impacts are assessed as beneficial, creating demand for overnight accommodation within identified levels of available capacity in each social study area. Additional demand for overnight stays has a number of benefits. Firstly, this leads to increased revenue for overnight accommodation businesses. Secondly, maximising occupancy rates improves the efficiency of overnight accommodation providers by virtue of increased resource utilisation (staff, utilities, facilities). Finally, it increases spending in local businesses, resulting in local economic multiplier effects.

13.9.3.17 With reference to the assessment criteria set out in Table 13.69, the magnitude of impact, relative to the baseline for each social study area, is set out in Table 13.71.

Table 13.71: Magnitude of overnight accommodation demand, current capability scenario.

Study area	Magnitude	Spatial extent	Duration	Frequency
North West England	**Negligible**	Regional	Medium term (temporary)	Intermittent
North Wales	**Negligible**	Regional	Medium term (temporary)	Intermittent

Sensitivity of the receptor

13.9.3.18 As per section 13.8.2, receptor sensitivity to potential construction phase social impacts is assessed on the basis of tolerance, recoverability, plus value and importance.

Value and importance

13.9.3.19 The overnight accommodation sector forms part of the wider tourism sector which is a policy priority across each social study area.

13.9.3.20 As such, the value and importance of the receptor is assessed as high.

Tolerance

13.9.3.21 There will be a range of installation and commissioning roles filled by mobile workers, as is typical of all offshore wind farm projects. These roles will be largely offshore with workers accommodated within SOVs. However, these workers have the potential to give rise to demand for overnight accommodation at the start and end of typical four week shift periods at sea.

13.9.3.22 As set out in Table 13.24 occupancy rates of overnight accommodation are subject to variations from month-to-month and year-to-year. This is particularly so following the pandemic, where occupancy rates were significantly reduced compared to pre-pandemic levels. Normal fluctuation is substantially greater than the assessed scale of impact.

13.9.3.23 There is excess capacity within the overnight accommodation sector based on annual average and peak month occupancy data.

13.9.3.24 There is potential for offshore works to be seasonal, with some activities concentrated during times of the year with better weather. This is likely to coincide with times of the year experiencing higher occupancy rates in overnight accommodation.

13.9.3.25 Consideration of the above factors leads to the tolerance of the receptor being assessed as medium.

Recoverability

13.9.3.26 As stated above, occupancy rates of overnight accommodation are subject to wide variations from month-to-month and year-to-year (i.e. they are not static). As such, conditions are unlikely to be reversed following the construction phase as the baseline position is dynamic. The baseline position is likely to fluctuate regardless of whether or not the Morgan Generation Assets is consented.

13.9.3.27 However, there is potential for seasonal year-on-year changes to overnight accommodation demand as a result of the Morgan Generation Assets, which is likely to be reversed at the conclusion of the construction phase.

13.9.3.28 The recoverability of the receptor is therefore assessed as medium.

Overall

13.9.3.29 The sensitivity of the receptor for each social study area is assessed as high in Table 13.72.

Table 13.72: Sensitivity of operations and maintenance phase housing, accommodation and local services receptor.

	Sensitivity level
Value and importance	High
Tolerance	Medium
Recoverability	Medium
Sensitivity	**Medium**

Significance of the effect

13.9.3.30 The significance of the effect for each social study area is set out in Table 13.73.

Table 13.73: Significance of construction phase employment impacts on the demand for housing, accommodation and local services, current capability scenario.

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Minor (beneficial)**	No
North Wales	Negligible	Medium	**Minor (beneficial)**	No

Operations and maintenance

13.9.3.31 A 35-year operations and maintenance period has been assumed throughout (see Volume 1, Chapter 3: Project Description of the Environmental Statement).

Current capability scenario

13.9.3.32 Potential expenditure on activities associated with the operation and maintenance phase of the Morgan Generation Assets could support labour migration into social study areas.

13.9.3.33 Under the current capability scenario it is assumed that a port within a social study area is utilised as the primary operations and maintenance base. Some activity will be supported in other locations in the UK, which could potentially be another port within a social study area. However, the scale of any such impact will be lower than if selected as the primary port and assessment has been made on the most likely potential impact.

13.9.3.34 Theoretically the operations and maintenance workforce could live anywhere and travel to the site for shifts. However, given the long term continuity of the maintenance work there is a high likelihood the workforce will live locally, within the relevant social study area.

13.9.3.35 The Morgan Generation Assets is likely to directly create new roles within operation and maintenance activities. These roles could be filled through a number of routes including:

- Local workers transitioning from the offshore oil and gas sector
- Local resident entrants to the sector resulting from training activities
- Non-local commuting to the selected locality
- Non-local worker relocation to the selected locality.

13.9.3.36 Within the category of non-local workers relocating to the selected locality, it is assumed that any migrating workers would also relocate their families, resulting in additional population impacts.

13.9.3.37 Table 13.74 sets out estimates of the potential non-local worker relocation impacts, and the associated household population increase during the operations and maintenance phase.

Table 13.74: Potential itinerant employment impacts on population, housing and accommodation, current capability scenario.

Note: figures may not sum due to rounding

Study area	North Wales	North West England
Non-local worker relocation to the selected locality (population change)	26	6
Estimated household population increase (population change)	63	14

13.9.3.38 It is assumed that indirect and induced employment impacts will draw on the existing resident workforce in each area. Given these impacts are expected to take place in the wider economy, the contribution of these impacts to labour migration is expected to reflect typical migration patterns associated with economic growth. Indirect and induced employment impacts are therefore expected to have a negligible impact on population, housing and accommodation.

Magnitude of impact

13.9.3.39 Population growth can have both beneficial and adverse effects, with the overall impact largely contingent on various factors such as infrastructure, resources and planning.

13.9.3.40 On the one hand, population growth can stimulate economic activity and development. An increased population can lead to higher demand for goods and services, which can attract businesses, create jobs and generate revenue for the local authority. Additionally, a growing population can contribute to cultural diversity, enriching the social fabric and fostering a vibrant community.

13.9.3.41 On the other hand, population growth can place a strain on resources and infrastructure where appropriate planning is lacking. Sufficient transportation, healthcare and educational capacity can become more challenging to provide as a population expands.

13.9.3.42 Effective planning for these factors is a key determinant of whether effects associated with population growth should be considered beneficial or adverse in nature. Investment in infrastructure and sustainable development approaches are necessary to ensure the benefits of population growth are maximised whilst minimising potentially adverse effects. Collaboration between developers, local authorities, community stakeholders and public bodies is essential to create a well-managed environment that accommodates growth whilst maintaining the quality of life for residents.

13.9.3.43 For the purposes of this assessment, population impacts are considered to be 'neutral' (as opposed to beneficial or adverse).

13.9.3.44 Within North West England, it is estimated that around six non-local workers will relocate to the selected locality of the operations and maintenance port., It is estimated this would result in an increase of 14 residents,, including family members, to the North West England household population.

13.9.3.45 Within North Wales, it is estimated that around 26 non-local workers will relocate to the selected locality of the operations and maintenance port. It is estimated this would result in an increase of 63, including family members, to the North Wales household population.

13.9.3.46 With reference to the assessment criteria set out in Table 13.69, the magnitude of impact for each social study area is set out in Table 13.75.

Table 13.75: Magnitude of operations and maintenance phase employment impacts on population, housing and accommodation, current capability scenario.

Study area	Magnitude
North West England	**Negligible**
North Wales	**Negligible**

13.9.3.47 Given that potential impacts on population, and any associated potential impacts on local services such as healthcare and education, are anticipated to be negligible, impacts on local services do not require further assessment.

13.9.3.48 Similarly, potential impacts on the demand for other services and facilities including community facilities, energy, water, transport and waste are anticipated to be negligible and do not require further assessment.

Sensitivity of the receptor

13.9.3.49 As per section 13.8.2, receptor sensitivity to potential construction phase social impacts is assessed on the basis of tolerance, recoverability, and value and importance.

Value and importance

13.9.3.50 Growing the working age population (partly achieved by attracting migrant labour), as well as delivering additional housing, is a policy ambition across social study areas. Provision of local services is the purpose of all local authorities, making this a policy priority by definition.

13.9.3.51 As such, the value and importance of the receptor is assessed as high.

Tolerance

13.9.3.52 The population of North West England increased by approximately 247,000 over the period 2015–2021 (+0.6% per annum).

13.9.3.53 The population of North Wales decreased by approximately 6,000 over the period 2015–2021 (–0.2% per annum).

13.9.3.54 The future baseline scenario set out in section 13.5.4 indicates that populations in North Wales are expected to increase by approximately 14,000 (+0.2% per annum)

over the period 2022–2040. Populations in North West England are expected to increase by approximately 420,000 (+0.3% per annum) over the same period. These ONS projections are widely used in planning, for example, housing, local health and education provision.

13.9.3.55 It is reasonable to assume the relevant planning authorities factor population growth into strategic planning decisions. The housing market in each social study area has delivered additional dwellings in recent years, with plans for additional housing to meet planned population and economic growth being a standard consideration within strategic planning decisions.

13.9.3.56 Consideration of the above factors leads to the tolerance of the receptor being assessed as high, as per Table 13.35 this corresponds to a low sensitivity.

Recoverability

13.9.3.57 The duration of the impact is assessed as long term and permanent. As such, the recoverability of the receptor is assessed as low, as per Table 13.35 this corresponds to a high sensitivity.

Overall

13.9.3.58 The sensitivity of the receptor for each social study area is assessed as in Table 13.76**.**

Table 13.76: Sensitivity of operations and maintenance phase housing, accommodation and local services receptor.

	Sensitivity level
Value and importance	High
Tolerance	Low
Recoverability	High
Sensitivity	**High**

Significance of the effect

13.9.3.59 The significance of the effect for each social study area is set out in Table 13.77.

Table 13.77: Significance of operations and maintenance phase employment impacts on population, housing and accommodation, current capability scenario.

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	High	**Minor (neutral)**	No
North Wales	Low (neutral)	High	**Minor (neutral)**	No

Decommissioning phase

13.9.3.60 Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Morgan Generation Assets could increase demand for overnight accommodation in social study areas.

13.9.3.61 The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed, as future best practice is not currently known. Vessel information is not provided within the project design envelope.

13.9.3.62 Workforce for the decommissioning of the wind farm is likely to be sourced in a similar way to installation and commissioning. However, the scale of activity will be reduced.

13.9.3.63 On this basis the magnitude of impacts is likely to be no greater than those set out for the construction phase under the current capability scenario.

13.9.3.64 The significance of effects assessed at construction phase for population, housing and accommodation impacts are set out at Table 13.73, decommissioning phase effects are extrapolated from these results.

13.9.3.65 The significance of the effects for each social study area is set out in Table 13.78.

Table 13.78: Significance of decommissioning phase employment impacts on the demand for housing, accommodation and local services, current capability scenario.

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
North West England	Negligible	Medium	**Minor (beneficial)**	No
North Wales	Negligible	Medium	**Minor (beneficial)**	No

13.9.4 Tourism

The potential impact on tourism.

Evidence of potential links between offshore wind farms and the visitor economy

13.9.4.1 Several studies have been conducted to examine the effect of offshore wind farms on tourism and visitor economy, in particular in relation to visual amenity.

13.9.4.2 An assessment by Biggar Economics (2020) looked at indicators of the visitor economy in 11 areas in England, including Barrow-in-Furness and the Wirral which are located within North West England, in an attempt to identify a possible relationship between offshore wind farms and changes in visitor behaviour and spend during the construction period. Their work found that the local visitor economy did not underperform compared to long term averages, and local tourism-related employment followed the trends of the wider region during the construction period.

13.9.4.3 According to a Scottish government survey (Scottish Government, 2022) of those with experience of offshore wind farms, the majority (85%) approved of offshore wind farms before construction and still approve of them now. Positive views were given due to job creation and renewable energy, while adverse effects were attributed due to visual impacts and marine wildlife disruption. Two-thirds of respondents (66%) agreed that offshore wind farms provide a boost for the local economy, while two in five (41%) agree that they are a positive feature of the coastal landscape. Around a third (34%) indicated that offshore wind farms create new recreational opportunities. The majority of all respondents, whether national or coastal, have not avoided visiting an area due to the presence of offshore wind turbines visible from the shore, while just 4% of respondents have done so.

13.9.4.4 A study (Scottish Government, 2008) found that the majority (75%) of respondents felt wind farms had a positive or neutral visual impact, and 93-99% who saw the wind farms were not affected by that experience. Overall, the studies suggest that wind farms do not significantly impact upon tourism either positively or negatively and they don't affect the vast majority of tourist's intentions to return. Economically, while certain directly affected areas may experience some small loss through displacement of tourists, those tourists are unlikely to be lost to the wider region as they substitute affected places for those less affected within the region.

13.9.4.5 A study by Cronin *et al*. (2021) conducted an online survey to research the opinion and attitudes of the public towards marine renewable energy projects. Most respondents indicated they would not avoid a beach with visible turbines. Many respondents indicated there has been no perceptible impact on their location since the initial installation of an offshore wind farm, and it has resulted in no interference with their everyday lives. Wind farms in general are considered to have been a positive addition to a location, with many respondents praising the aesthetics and how this enhances the experience for sailors.

13.9.4.6 Overall, whilst there are some negative perceptions of the potential visual impacts of offshore wind farms on an area's visitor economy, there are a number of mitigating factors which can result in positive impacts on an area's visitor economy. It is also anticipated that any potential tourism impacts would be predominantly short term in nature, with opportunity for visitor economy adaptation in the longer term once an offshore wind farm becomes part of the baseline conditions of a location.

Relevant receptors

13.9.4.7 Morgan Generation Assets has the potential to cause both beneficial and adverse impacts on tourism. This impact is applicable to the construction, operation and maintenance and decommissioning phases.

13.9.4.8 In assessing any potential indirect impacts upon tourism, the following receptors have been considered: visual amenity, overnight trips and accommodation and recreation. Each receptor is considered here in turn, followed by an overall assessment of the impact on tourism.

Visual amenity

13.9.4.9 Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement assesses the potential impacts of the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets on visual resources. This chapter draws on Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement to assess the potential indirect effects of potential visual impacts on tourism.

13.9.4.10 Visual receptors are concerned with the individuals and/or defined groups of people who have the potential to be affected by the Morgan Generation Assets. As such, visual receptors are relevant to this chapter. The assessment of seascape and landscape receptors is not considered relevant to this chapter.

North West England

13.9.4.11 The visual receptors that have been assessed within Volume 2, Chapter 10: Seascape, ladscape and visual resources of the Environmental Statement and fall within North West England are:

- Visual impacts - Potential impacts on people using National Trails and long-distance paths - National Trails and Long Distance Footpaths, England
- Visual impacts- Potential impacts on people using commercial shipping, recreational craft and fishing vessels- Liverpool, England

13.9.4.12 Of the visual resources assessed within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement that are located within North West England, none are anticipated to have significant effects in EIA terms at either the construction, operation and maintenance, or decommissioning phases.

13.9.4.13 The evidence set out at paragraphs 13.9.4.1 - 13.9.4.6 also established that linkages between potential visual impacts and tourism behaviours are negligible.

13.9.4.14 On the basis of this assessment, there are no likely significant adverse indirect effects on tourism in North West England associated with visual amenity.

North Wales

13.9.4.15 No visual receptors have been assessed within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement that fall within the North Wales tourism study area.

13.9.4.16 As such, there are no likely significant adverse indirect effects on tourism in North Wales associated with visual amenity.

Isle of Man

13.9.4.17 The visual receptors that have been assessed within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement and fall within the Isle of Man are:

- Visual impacts - Potential impacts on people using National Trails and long-distance paths- Raad ny Foillan Coastal Path, Isle of Man
- Visual impacts - Potential impacts on people using National Trails and long-distance paths- Millennium Way, Isle of Man
- Visual impacts - Potential impacts on people using Countryside Rights of Way Act 2000 Access Land, or equivalent land with public access – Snaefell, Slieau Ruy and South Barrule, Isle of Man
- Visual impacts - Potential impacts on people using National Cycle Routes and the National Cycleway Network - Isle of Man National Cycleway Network 1- 6
- Visual impacts - Potential impacts on people at main coastal settlement seafronts/shorelines, Douglas and Laxey
- Visual impacts - Potential impacts on people travelling along coastal roads, Isle of Man
- Visual impacts - Potential impacts on people travelling along coastal railways, Isle of Man
- Visual impacts - Potential impacts on people using main ferry routes, Isle of Man
- Visual impacts - Potential impacts on people using commercial shipping, recreational craft and fishing vessels, Douglas, Isle of Man

13.9.4.18 Of the visual resources assessed within Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement that are located within the Isle of

Man, none are anticipated to have significant effects in EIA terms at either the construction, operation and maintenance or decommissioning phases.

13.9.4.19 The evidence set out at paragraphs 13.9.4.1 - 13.9.4.6 also established that linkages between potential visual impacts and tourism behaviours are negligible.

13.9.4.20 On the basis of this assessment, there are no likely significant adverse indirect effects on tourism on the Isle of Man associated with visual amenity.

Overnight trips and accommodation

13.9.4.21 The assessment of effects on population, housing and accommodation set out in section 13.9.3 identified the significance of effects during the construction, operation and maintenance and decommissioning phases, which are summarised in Table 13.79.

Table 13.79: Significance of employment impacts on population, housing and accommodation, current capability scenario.

Study area	Magnitude	Sensitivity	Significance	Significant in EIA terms
Construction				
North West England	Negligible	Medium	**Minor (beneficial)**	No
North Wales	Negligible	Medium	**Minor (beneficial)**	No
Operation and Maintenance				
North West England	Negligible	High	**Minor (neutral)**	No
North Wales	Low (neutral)	High	**Minor (neutral)**	No
Decommissioning				
North West England	Negligible	Medium	**Minor (beneficial)**	No
North Wales	Negligible	Medium	**Minor (beneficial)**	No

13.9.4.22 The assessment of effects on population, housing and accommodation identifies no significant effects. As a result, there is anticipated to be no significant impact on overight accommodation availability to satisfy demand within the visitor economy. On the basis of this assessment, there are no likely significant effects on tourism in either tourism study area.

13.9.4.23 Potential impacts associated with demand for overnight accommodation are considered to be benficial to the visitor economy. The increase in revenue to accommodation providers is anticipated to improve the financial sustainability of existing business, strengthening the sector in general.

Recreation

13.9.4.24 This assessment the considers potential indirect impacts on tourism associated with direct or indirect effects on recreation. This part of the assessment is based on Volume 2, Chapter 7: Shipping and navigation, and Volume 2, Chapter 9: Other sea users of the Environmental Statement.

13.9.4.25 Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement assesses the significance of potential impacts on recreational craft passages and safety within the shipping and navigation study area.

13.9.4.26 The assessment concludes that during the construction, operations and maintenance and decommissioning phases potential effects will be of minor adverse significance, which is not significant in EIA terms.

13.9.4.27 Volume 2, Chapter 9: Other sea users of the Environmental Statement assesses the significance of displacement of recreational activities.

13.9.4.28 The assessment concludes that during the construction phase, operations and maintenance and decommissioning phases potential effects will be of no more than minor adverse significance, which is not significant in EIA terms.

13.9.4.29 This consideration of potential indirect effects on recreation indicates that there are unlikely to be any material indirect impacts on tourism in either North Wales, North West England, or the Isle of Man associated with impacts on recreation as a result of the Morgan Generation Assets.

13.9.5 Overall

Construction phase

13.9.5.1 Based on a consideration of the pathways by which tourism activities might be impacted by Morgan Generation Assets during the construction phase, the following sets out the magnitude, sensitivity and significance for each tourism study area:

- North West England: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- North Wales: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- Isle of Man: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

Operation and maintenance phase

13.9.5.2 Based on a consideration of the pathways by which tourism activities might be impacted by Morgan Generation Assets during the operation and maintenance phase, the following sets out the magnitude, sensitivity and significance for each tourism study area:

- North West England: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- North Wales: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- Isle of Man: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

Decommissioning phase

13.9.5.3 Based on a consideration of the pathways by which tourism activities might be impacted by Morgan Generation Assets during the decommissioning phase, the following sets out the magnitude, sensitivity and significance for each tourism study area:

- North West England: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- North Wales: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms
- Isle of Man: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

13.9.6 Isle of Man

Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services

13.9.6.1 The construction, operations and maintenance and decommissioning of the Morgan Generation Assets offshore infrastructure may lead to potential adverse impacts on lifeline ferry services (refer to Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement), which could lead to potential impacts on socio-economic receptors on the Isle of Man.

13.9.6.2 Figure 13.3 below presents a logic diagram of the variables considered within this assessment.

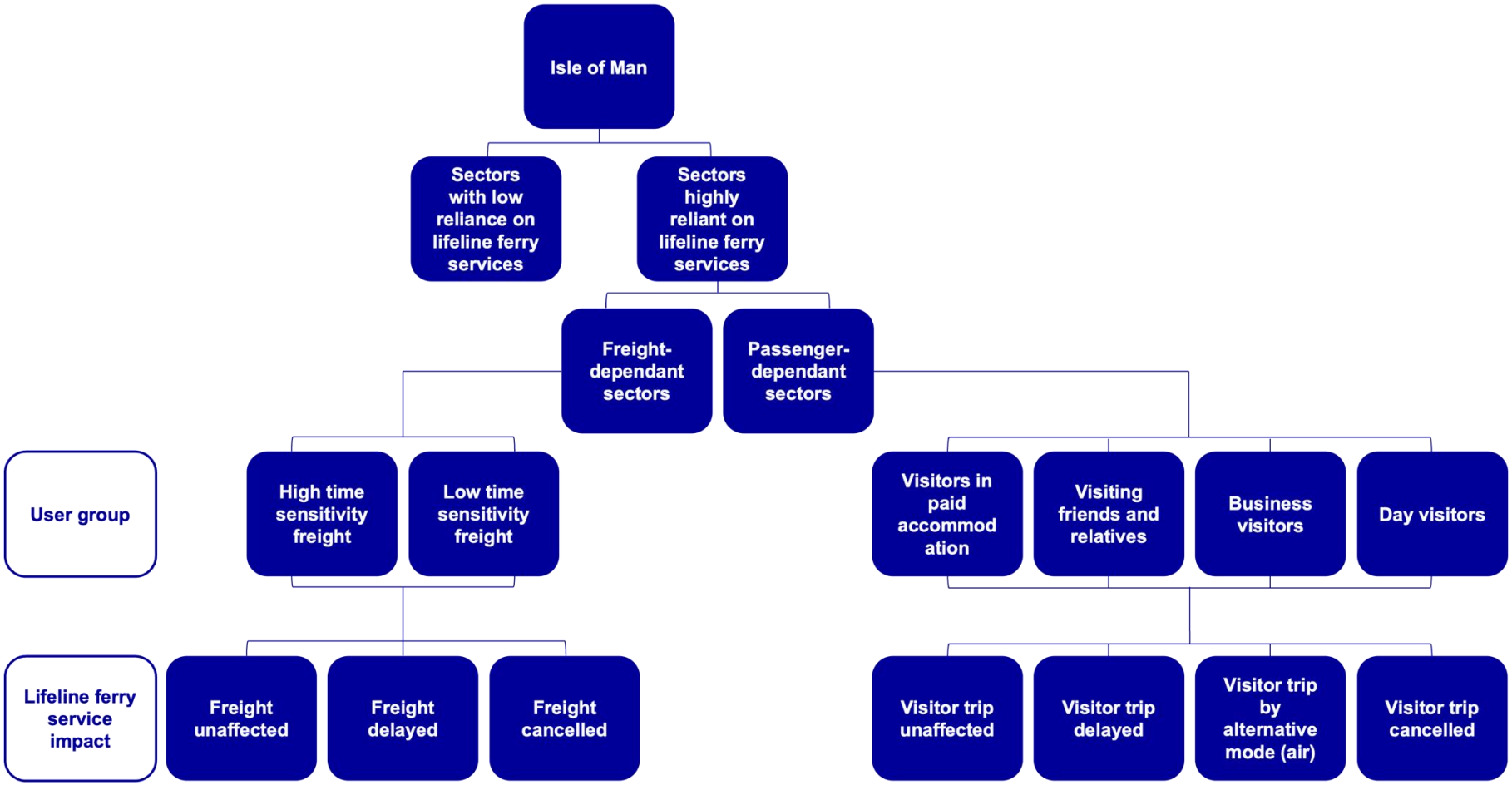


Figure 13.3: Assessment of lifeline ferry service impacts on the Isle of Man – logic diagram.

Service variance

13.9.6.3 Under current circumstances, the variance[31] in ferry services is affected by a number of factors – technical issues and adverse weather being the primary ones. These variables cause disruption to lifeline ferry services by way of delays and cancellations.

13.9.6.4 During the period of service variance data reported in Table 13.28, COVID-19 became a significant third influence on service variance. Given the unique nature of the COVID-19 pandemic and its impact on IoMSPC lifeline ferry crossings, service variance data for this category is excluded from the assessment.

13.9.6.5 The replacement of the Ben-my-Chree on the Douglas–Heysham route with the Manxman may also influence service variance due to technical issues. Whilst there may be some technical cancellations with a new vessel entering service, variance data from the Manannan vessel indicates that, in the medium to long term, technical issues with newer vessels are greatly reduced compared to older ones.

13.9.6.6 In the case of the Manannan, technical variance has recently tended to provide more crossings than scheduled. The MV Arrow has also been used to provide additional backup crossings. Overall, these help to offset some of the sailings cancelled by other vessels.

13.9.6.7 On the one hand, solely analysing service variance data on the basis of individual years can be unhelpful, as outliers can be exaggerated and present a risk of limiting the analysis to the most unlikely outcome. On the other hand, it is also important to analyse an atypical scenario of an outlier year, which can demonstrate the level of service variance the Isle of Man economy has recently withstood.

13.9.6.8 To balance these considerations, for each vessel/route this assessment considers typical service variance, and atypical service variance as follows:

- Ben-my-Chree/Douglas–Heysham:
  - Typical annual service variance on the basis of adverse weather influences – technical variances excluded given vessel replacement, and COVID-19 cancellations excluded.
  - Atypical level of adverse service variance for each vessel/route on the basis of technical and adverse weather influences.
- Manannan/Douglas–Liverpool:
  - Typical annual service variance on the basis of technical and adverse weather influences.
  - Atypical level of adverse service variance for each vessel/route, either adverse weather only, or technical and adverse weather reasons, whichever is higher.

13.9.6.9 On this basis, the data in Table 13.80 for the variance in ferry services is utilised for this assessment.

[31] Service variance is the difference between scheduled and actual ferry crossings.

Table 13.80: IoMSPC service variance – for use in assessment

Vessel	Main route[32]	Reason	2018	2019	2020	2021	2022	Total	Avg.
Ben-my-Chree	Heysham to Douglas	Technical	6	2	50	110	38	206	41
		Weather	32	28	56	70	31	217	43
		Total	38	30	106	180	69	423	84
Manannan	Liverpool to Douglas	Technical	0	0	2	0	(18)	(16)	(3)
		Weather	10	6	18	0	4	38	8
		Total	10	6	20	0	(14)	22	5

13.9.6.10 There were 1,451 crossings on the Douglas–Heysham route in 2022 (Table 13.27). Between 2018–2022 (Table 13.28), there was an annual average of 43 fewer crossings than scheduled due to adverse weather. In 2021, there were 180 fewer crossings than scheduled due to technical and adverse weather reasons. This is the greatest level of annual service variance across the period reported.

13.9.6.11 Assuming a typical year averages 1,500 scheduled crossings and 45 fewer crossing than scheduled due to adverse weather, an average of 3% of crossings may be cancelled as a result of adverse weather. During the greatest level of atypical service variance on the basis of technical and adverse weather reasons, 12% of crossings could be cancelled.

13.9.6.12 There were 593 crossings on the Douglas–Liverpool route in 2022 (Table 13.27). Between 2018–2022 (Table 13.28), there was an annual average of 5 fewer crossings than scheduled due to technical and adverse weather reasons. In 2020, there were 20 fewer crossings than scheduled due to technical and adverse weather reasons – this is the greatest level of annual service variance across the period reported.

13.9.6.13 Assuming a typical year averages 600 scheduled crossings and 8 fewer crossing than scheduled due to adverse weather reasons, an average of 1.3% of crossings may be cancelled as a result of adverse weather. During the greatest level of adverse service variance on the basis of technical and adverse weather reasons, 3.3% of crossings could be cancelled.

Socio-economic linkages

13.9.6.14 Lifeline ferry services play an important role in the supply chain of goods to the Isle of Man. This includes essentials like groceries, food and medical supplies, household goods and construction materials. Ferries also transport visitors, whose spending contributes to the Isle of Man's visitor economy, and passengers travelling for business and work.

13.9.6.15 In assessing any potential indirect impacts upon socio-economic conditions on the Isle of Man, both economic and social receptors have been considered. The linkages between each receptor and lifeline ferry services is considered here in turn, followed by an overall assessment of the potential indirect impact on the Isle of Man's socio-economic conditions.

[32] Note: variance data for all routes is included in annual data.

Economic

Service economy

13.9.6.16 As per section 13.5.4 (and paragraph 13.5.4.4), the Isle of Man can be characterised as a service dominated economy, with service exports accounting for a significant share of the Island's GDP (67%). The service economy also supports around 30% of resident-based unemployment on the Island.

13.9.6.17 Sectors such as banking, insurance, information and communication technology, legal and accountancy services, corporate services, eGaming, and other professional services are not reliant on the movement of passengers and freight and therefore ferry services play a negligible role in the operation of the Island's service economy.

13.9.6.18 Where ferry services do play a role in these activities e.g. business visitors and commuters, given the widespread use of remote working in modern business operations, any disruption is unlikely to result in material adverse economic impacts.

Public services

13.9.6.19 Whilst public services do not contribute as much to the Isle of Man's GDP output (17%),these activities make a vital contribution to Island life. Public service activities support around 29% of resident-based unemployment on the Island.

13.9.6.20 The day-to-day operation of sectors such as public administration, education, transport and utilities are not reliant on the movement of passengers and freight via lifeline ferry services. Ferry services therefore play a limited role in the operation of the Island's public services.

13.9.6.21 The medical and health services sector does have a greater level of interaction with lifeline ferries than other public service activities. Potential impacts on the Island's medical and health services and supplies are assessed within Volume 2, Chapter 14: Human Health Assessment of the Environmental Statement, which assesses effects to be of **minor** adverse significance, which is not significant in EIA terms.

Freight sectors

Retail and wholesale

13.9.6.22 The Isle of Man retail sector accounted for around £130 million of GDP in 2020/21, around 2.6% of the Island's economy. The retail sector accounted for around 3,600 jobs in 2021, around 8.3% of resident-based employment on the Island.

13.9.6.23 The Isle of Man wholesale sector accounted for around £31 million of GDP in 2020/21, around 0.6% of the Island's economy. The wholesale sector accounted for around 330 jobs in 2021, around 0.8% of resident-based employment on the Island.

13.9.6.24 Retailers, such as supermarkets and convenience stores, are reliant upon ferry services for stock delivery. The frequency and reliability of ferry services are important for ensuring consistent supplies.

13.9.6.25 Island communities can have limited agricultural capacity depending on potential land availability and climate. As a result, island communities often rely on mainland supply chains for fresh produce and other perishable goods. Ferry services ensure that goods reach Island consumers in a timely manner.

13.9.6.26 Beyond essential supplies, retailers on the Island provide a wide range of consumer goods and services, including clothing, electronics, appliances, and more. Ferry services contribute to the delivery of these goods.

13.9.6.27 Many Island residents use online shopping to purchase goods. Ferry services play a role in ensuring the timely delivery of online purchases to consumers.

13.9.6.28 With regards to fresh food deliveries, a single cancelled ferry service can lead to a delay (4+ hours) sufficiently long enough for refrigerated wagons to be diverted to an alternative location on the mainland. A single day without a crossing can result in some gaps appearing in fresh food store supplies, which can take up to 3 days fully recover. Two days without a crossing can result in further gaps of fruit, vegetable, and bread supplies, with some additional gaps on popular ambient and frozen food, this can take up to a week to fully recover.

Construction

13.9.6.29 The Isle of Man construction sector accounted for around £230 million of GDP in 2020/21, around 4.9% of the Island's economy. The construction sector accounted for around 4,200 jobs in 2021, around 9.7% of resident-based employment on the Island.

13.9.6.30 The construction sector on the Isle of Man is reliant on the availability of materials, equipment and skilled labour. The ferry services play a role in ensuring a steady supply of these resources.

13.9.6.31 Construction projects require materials such as concrete, steel, timber, bricks and other building components. These materials are not always readily available on the Isle of Man and often need to be sourced from the mainland. Ferry services ensure a consistent supply route for these materials.

13.9.6.32 Large construction equipment and machinery that are not produced on the Island need to be transported from the GB mainland. This might include cranes, excavators, and other heavy machinery. The ferry services facilitate the transportation of such equipment.

13.9.6.33 In some cases, specialised construction workers may need to be brought in from the mainland to work on specific projects. The ferry services provide a means of transport for such personnel.

13.9.6.34 Construction generates a degree of waste, including rubble, debris, and other materials. The ferry services are used to transport waste off the Island for proper disposal and/or recycling.

Manufacturing

13.9.6.35 The Isle of Man manufacturing sector accounted for around £127 million of GDP in 2020/21, around 2.7% of the Island's economy. The manufacturing sector accounted for around 2,100 jobs in 2021, around 4.7% of resident-based employment on the Island.

13.9.6.36 The manufacturing sector on the Isle of Man is reliant on the availability of materials, equipment and skilled labour. The ferry services play a role in ensuring a steady supply of these resources. Timely delivery of components and parts, in particular, is important for efficiency in manufacturing operations.

13.9.6.37 Goods produced by the manufacturing sector on the Isle of Man require transportation to markets on the UK mainland and further afield. Lifeline ferry services provide a means for exporting these goods.

Overall

13.9.6.38 Lifeline ferry services play a very important role in facilitating the delivery of freight to and from the Isle of Man. Although other sectors depend on sea freight services (i.e. agriculture), the retail and wholesale, construction and manufacturing sectors employ a greater number of people and are larger contributors to the Isle of Man economy as a whole. These larger sectors are also to a much greater extent operationally dependant on sea freight services and are therefore more likely to experience potentially significant impacts. For these reasons, only these sectors are scoped into the assessment.

13.9.6.39 In general, persistent and permanent disruption of freight services, whether by delay or cancellation, can increase costs for users. It is possible these costs will be passed from the operator to end users, with the costs eventually being absorbed by consumers. Disruption of freight services can impact the timely delivery of goods, which can result in increased holding costs for inventory, and can in some instances lead to contractual penalties for freight operators unable to meet delivery timelines.

13.9.6.40 Persistent and permanent disruption of freight services can also impact customer relationships and lead to reputational damage to freight operators and those businesses reliant on the movement of freight. Effective communication with clients and customers can significantly reduce the likelihood of this outcome.

13.9.6.41 Freight operators and end users develop comprehensive risk mitigation and contingency plans to address unforeseen disruption to ferry services. This typically involves establishing clear protocols for responding to various scenarios, including securing backup transportation options such as alternative modes and routes. To guard against the impact of lifeline ferry service disruption, freight operators can adopt a diversified approach to transportation. In the Isle of Man's case, options are more limited given that road and rail options are not available to end users. Air freight may be an alternative potential option for some freight delivery to minimise disruption but is not suitable for cost and operational reasons in many circumstances.

13.9.6.42 Integration of advanced tracking technologies can assist end users in monitoring the movement of freight. Real-time data on shipments can help freight operators and end users proactively respond to disruptions, enabling them to implement contingency plans in a proactive manner to minimise supply chain impacts.

13.9.6.43 End users and freight operators can also adopt an approach of strategically positioning inventory. This approach can help to reduce reliance on a single ferry route and allows for alternative routes to be utilised when required. In the case of the Isle of Man, Heysham is the dominant freight route (98.7% of wagons).

13.9.6.44 Certain types of freight items have low time sensitivity, and delays or cancellations to ferry services are likely to have minimal impact on their delivery:

- **Bulk commodities**: bulk goods like raw materials, minerals, and agricultural products that are not perishable, and are typically transported in large quantities, are likely to have less sensitivity to delivery timelines. Bulk chemicals with stable storage conditions are likely to be less affected by delays in ferry services. Liquid and dry bulk accounted for around 16% of typical freight tonnage to and from the Isle of Man over the period 2018–2022.
- **Non-perishable foods**: food items with long shelf lives, such as canned goods, dried foods and certain packaged items, are less impacted by delays and cancellations as they are not prone to spoilage.

- **Building materials**: construction materials like lumber, bricks, cement, and other building supplies can be ordered in advance, and slight delays in their delivery are unlikely to significantly impact construction projects.
- **Non-urgent retail merchandise**: certain retail items, especially those with steady demand and no seasonal urgency, are unlikely to be time-sensitive. Examples include non-seasonal clothing, home goods and general merchandise.
- **Industrial equipment**: large industrial equipment or machinery that is ordered well in advance and does not require immediate installation is likely to have minimal impact from delayed deliveries.

13.9.6.45 Based on 2022 data, it is estimated that freight which has low time sensitivity accounts for approximately 73% of roll-on/roll-off freight being transported to and from the Isle of Man. This figure does not include liquid and dry bulk (16% of total freight tonnage), and other general or container cargo (1% of total freight tonnage). Factoring in typical annual freight shares, around 61% of freight to and from the Isle of Man is roll-on/roll-off freight (via lifeline services) that has low time sensitivity, with a further 17% of mainly liquid and dry bulk freight which is not transported via lifeline ferry services.

13.9.6.46 Common freight items which are highly time-sensitive, and delays or cancellations to ferry services can have a material impact on end users:

- **Perishable foods**: fresh produce such as fruit and vegetables, dairy products, meat, seafood, and other perishable food items have a limited shelf life and require timely delivery to maintain quality and safety standards.
- **Live animals**: livestock and other live animals being transported require timely delivery to ensure their well-being.
- **Just-in-time inventory**: goods that are part of just-in-time inventory systems, common in manufacturing and retail, require precise delivery schedules to avoid disruptions in production and/or distribution.
- **Mail**: documents, packages, and parcels can be time-sensitive, this particularly applies to those handled by express or specialist courier services that are dependent on prompt transportation to meet delivery deadlines.
- **Pharmaceuticals and medication**: medications, vaccines, and medical supplies can have strict timelines for delivery to ensure they reach their destination promptly for patient care and safety reasons. Potential impacts on the Island's medical and health services are assessed within Volume 2, Chapter 14: Human Health Assessment of the Environmental Statement.

13.9.6.47 Based on 2022 data, it is estimated that freight which has high time sensitivity accounts for approximately 27% of roll-on/roll-off freight being transported to and from the Isle of Man. Factoring in typical annual freight shares (including liquid and dry bulk, and other general or container cargo), around 22% of total freight to and from the Isle of Man is roll-on/roll-off freight that has high time sensitivity.

13.9.6.48 Under current circumstances, service variance is affected by a number of factors, technical issues and adverse weather being the primary ones. These variables cause disruption to lifeline ferry services by way of delays and cancellations. Where there are delays or cancellations to ferry services, the IoMSPC has operational contingencies in place to ensure catch-up services are provided which prioritise freight in terms of time-sensitivity.

13.9.6.49 Estimating the exact share of freight that will be cancelled due to ferry service cancellations is challenging as there are many variables at play. The impact is likely to

be influenced by the duration of service disruption, the nature of the freight (e.g. low or high time sensitivity), the availability and viability of alternative transportation modes and ferry routes and the effectiveness of contingency plans implemented by freight operators.

13.9.6.50 Despite the best efforts of freight operators to minimise disruption, some freight is likely to experience delays or, in extreme cases, face cancellations. The actual share of freight cancelled would vary on a case-by-case basis and depends on the ability of the logistics system to adapt swiftly to the challenges posed by the ferry service disruption. Cancellation of freight deliveries are less likely where service cancellations are isolated to single instances. There is a higher (albeit still small) possibility of time sensitive freight delivery cancellations where ferry services are cancelled on consecutive days.

13.9.6.51 For the purposes of this assessment, it is assumed that for every cancelled lifeline ferry crossing, 5% of time sensitive freight would be lost to cancellation and 1% of non-time sensitive freight would be lost to cancellation.

13.9.6.52 Table 13.81 sets out the estimates of current roll-on/roll-off freight cancellations to and from the Isle of Man as a direct result of ferry crossing cancellations (please see also Table 13.31).

Table 13.81: Impact of lifeline ferry service cancellations on freight to and from the Isle of Man under current conditions.

Note: some figures may not sum due to rounding.

	Share of total freight to and from Isle of Man (2022)	Cancelled freight as share of total freight to and from Isle of Man (typical)	Cancelled freight as share of total freight to and from Isle of Man (atypical)
Sea freight – by freight type			
Roll-on/roll-off – low time sensitivity	63%	0.02%	0.1%
Roll-on/roll-off – high time sensitivity	23%	0.03%	0.1%
Total	**86%**	**0.05%**	**0.2%**

Passenger sectors

Visitor and leisure economy

13.9.6.53 The Isle of Man tourist accommodation sector accounted for around £12 million of GDP in 2019/20, around 0.2% of the Island's economy. The tourist accommodation sector accounted for around 580 jobs in 2021, around 1.3% of resident-based employment on the Island.

13.9.6.54 The Isle of Man catering and entertainment sector accounted for around £37 million of GDP in 2020/21, around 0.8% of the Island's economy. The catering and entertainment sector accounted for around 2,100 jobs in 2021, around 4.7% of resident-based employment on the Island.

13.9.6.55 The visitor economy makes an important contribution to the Isle of Man economy. Tourism brings expenditure from outside the Isle of Man economy, supporting local businesses and jobs, and contributing to sectors such as hospitality, retail, and transportation. The Isle of Man TT is especially dependent on ferry services, as

participants and many spectators will travel with their own motorbike, which can only be transported to the island by ferry.

13.9.6.56 Air travel is an important mode of transport for visitors to the Isle of Man, around 61% of all departures (residents and visitors) to the Island are made by air. Around 55% of visitor departures are made by air.

13.9.6.57 Around 39% of all departures (residents and visitors) to the Island are made by sea. Ferry services provide a relatively convenient and cost-effective means for visitors to travel to and from the Isle of Man, around 45% of visitor departures are made by sea. The services accommodate both foot passengers and vehicles, making them an accessible option for a wide range of passengers.

13.9.6.58 Around half of all sea departures are residents of the Isle of Man. The remaining departures are visitors to the Island which fall into a number of categories (please also see Table 13.29):

- Overnight visitors in paid accommodation
- Overnight visitors visiting friends and relatives
- Business visitors
- Day visitors.

13.9.6.59 In 2018, ferry passengers within these categories contributed approximately £67.5 million in visitor expenditure to the Isle of Man economy. This is around 51% of total visitor expenditure.

13.9.6.60 Ferry passengers may decide to cancel their travel plans (“cancel”), delay their travel plans until the next available ferry service (“delay”), or travel by an alternative mode (air) if given sufficient notice of cancellations due to adverse weather (“travel by air”).

13.9.6.61 Resident passengers will either delay or travel by air, cancelling their journey altogether is not an option given their main residence is on the Island.

13.9.6.62 Visitors to the Island may decide to cancel, delay, or travel by air. Data on passenger decisions with respect to cancelling, delaying, or travelling by air is not available.

13.9.6.63 Importantly, not all lifeline ferry service disruption will result in the loss of visitors to the Island and the expenditure associated with these visits. Where visitors cancel their trip, the associated expenditure will be lost, resulting in an adverse impact on the Isle of Man visitor and leisure economy. Where visitors delay or travel by air, there is likely to be a reduction in the associated expenditure where the duration of a visit is reduced as a result of travel disruption, however some expenditure will be retained.

13.9.6.64 Overnight visitors in paid accommodation accounted for around 29% of all visitor departures to the Isle of Man in 2018 (latest available data). The majority of visitors travelling by sea (64%) are overnight visitors in paid accommodation.

13.9.6.65 Overnight visitors in paid accommodation account for around £52 million of visitor expenditure in the Isle of Man economy each year (around 39% of total visitor expenditure).

13.9.6.66 A significant number of overnight visitors in paid accommodation travel to the Island for reasons associated with the Isle of Man TT. Data for 2023 indicates that 43,000 visitors travelled to the Isle of Man during the TT races. It is assumed that a higher proportion of these visitors would travel by sea as many may bring a motorbike, which cannot be transported by air. In the event of ferry service disruption during the TT event, it is assumed the majority of visitors would delay their journey, they would be unlikely to cancel or travel by air. For the purposes of this assessment, it is assumed

that 5% of TT-related passengers would cancel their visit, with the majority of remaining passengers opting to delay.

13.9.6.67 Of the remaining overnight visitors in paid accommodation travelling by sea, in the event of lifeline ferry service disruption these passengers might cancel, delay, or travel by air. Given the importance of expenditure by this visitor category, an increase in cancelled visits as a result of lifeline ferry disruption would have an adverse impact on the visitor and leisure economy. For the purposes of this assessment, it is assumed that up to 25% of overnight visitors in paid accommodation travelling by sea would cancel their visit as a result of ferry service cancellations, with the majority of remaining passengers opting to delay. Where overnight visitors in paid accommodation delay or travel by air, there is likely to be a reduction in the associated expenditure where the duration of a visit is reduced, however some expenditure will be retained.

13.9.6.68 **Overnight visitors visiting friends and relatives** account for around 13% of all visitor departures to the Isle of Man. Around 29% of visitors travelling by sea are overnight visitors visiting friends and relatives.

13.9.6.69 Overnight visitors visiting friends and relatives account for around £10 million of visitor expenditure in the Isle of Man economy each year (around 7% of total visitor expenditure).

13.9.6.70 In the event of lifeline ferry service disruption, overnight visitors visiting friends and relatives might cancel, delay, or travel by air.

13.9.6.71 Where overnight visitors visiting friends and relatives cancel their trip, the associated expenditure will be lost, resulting in an adverse impact on the Isle of Man visitor and leisure economy. For the purposes of this assessment, it is assumed that up to 25% of overnight visitors visiting friends and relatives travelling by sea would cancel their visit as a result of service cancellations, with the majority of remaining passengers opting to delay. Where overnight visitors visiting friends and relatives delay or travel by air, there is likely to be a reduction in the associated expenditure where the duration of a visit is reduced, however some expenditure will be retained.

13.9.6.72 **Business visitors** account for around 3% of all visitor departures to the Isle of Man. Around 7% of visitors travelling by sea are business visitors.

13.9.6.73 Business visitors account for around £5 million of visitor expenditure in the Isle of Man economy each year (around 4% of total visitor expenditure).

13.9.6.74 In the event of lifeline ferry service disruption, day visitors might cancel, delay or travel by air.

13.9.6.75 Where business visitors cancel their trip, the associated expenditure will be lost, resulting in an adverse impact on the Isle of Man visitor and leisure economy. For the purposes of this assessment, it is assumed that up to 50% of business visitors travelling by sea would cancel their visit as a result of service cancellations, with the majority of remaining passengers opting to delay. Where business visitors delay or travel by air, there is likely to be a reduction in the associated expenditure where the duration of a visit is reduced, however some expenditure will be retained.

13.9.6.76 **Day visitors** account for around 0.2% of all visitor departures to the Isle of Man. Around 0.5% of visitors travelling by sea are day visitors.

13.9.6.77 Day visitors account for around £0.2 million of visitor expenditure in the Isle of Man economy each year (around 0.2% of total visitor expenditure).

13.9.6.78 In the event of lifeline ferry service disruption, day visitors are most likely to cancel their visit. For the purposes of this assessment, it is assumed that up to 90% of day visitors travelling by sea would cancel their visit as a result of service cancellations.

Whilst the associated expenditure with cancelled trips will be lost, given the very low contribution of day visitors to overall expenditure, there is not anticipated to be any material adverse impact on the Isle of Man visitor and leisure economy.

13.9.6.79 Under current circumstances, service variance is affected by a number of factors, technical issues and adverse weather being the primary ones. These variables cause disruption to lifeline ferry services by way of delays and cancellations. Table 13.82 sets out the overall impacts of lifeline ferry service cancellations on visits to the Isle of Man under current conditions. In a typical year it is estimated that approximately 0.1% of all departures[33] to the Isle of Man are lost as a result of visitors to the Island cancelling their trip due to ferry service cancellations. In a year with atypically high levels of disruption, it is estimated that approximately 0.5% of all departures to the Isle of Man are lost as a result of visitors to the Island cancelling their trip due to ferry service cancellations.

Table 13.82: Impact of lifeline ferry service cancellations on visits to the Isle of Man under current conditions.

Note: some figures may not sum due to rounding.

	Share of total scheduled visitor departures to Isle of Man (2018–2022)	Cancelled visits as share of total scheduled visitor departures to Isle of Man (typical)	Cancelled visits as share of total scheduled visitor departures to Isle of Man (atypical)
Scheduled sea departures – by visitor type			
Overnight visitors in paid accommodation	29%	0.1%	0.4%
Overnight visitors visiting friends and relatives	13%	0.1%	0.3%
Business visitors	3%	<0.1%	0.1%
Day visitors	0.2%	<0.1%	<0.1%
Total	**45%**	**0.2%**	**0.8%**

Summary

13.9.6.80 The majority of the Isle of Man economy (~90% GDP) and resident-based employment (~70%) have very low levels of interaction with, and operational dependence on, lifeline ferry services. Considering the assessment within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, it is unlikely that the majority of the Isle of Man economy would be subject to adverse impacts associated with lifeline ferry service variance.

13.9.6.81 The sectors in the Isle of Man economy that have the greatest level of interaction with, and operational dependence on, lifeline ferry services are: retail and wholesale, construction, manufacturing, and the visitor and leisure economy. Together, these sectors accounted for around £470 million of GDP in 2020/21, around 9.8% of the Island's economy. These sectors accounted for around 12,800 jobs in 2021, around 29% of the resident-based employment on the Island.

[33] All departures includes air and sea passengers, and residents and non-residents.

13.9.6.82 Under current conditions, in a typical year it is estimated that approximately 0.1% of all freight and 0.2% of all visitor journeys to the Isle of Man are lost as a result of ferry service cancellations. In a year with atypically high adverse weather cancellations, it is estimated that approximately 0.5% of all freight 0.8% of all visitor journeys to the Isle of Man are lost as a result of ferry service cancellation.

13.9.6.83 Sectors, and individual businesses, typically have contingencies in place to deal with existing disruption to ferry services, whether service variance is a result of technical or adverse weather. The Isle of Man Government also has contingencies in place to mitigate potential adverse socio-economic impacts resulting from lifeline ferry service disruption.

13.9.6.84 The focus of the assessment will consider potential impacts on freight-dependant sectors such as retail and wholesale, construction, and manufacturing, and the passenger-dependant visitor and leisure economy. It is acknowledged these sectors represent a part of the Isle of Man economy, not the whole.

Social

13.9.6.85 The ferry service is an important means of travelling to and from the Island for accessing healthcare services, attending educational institutions and for leisure purposes – for example visiting friends and family.

Leisure passengers

13.9.6.86 Air travel is an important mode of transport for visitors to the Isle of Man, around 61% of all departures (residents and visitors) to the Island are made by air. Around 65% of resident departures and around 55% of visitor departures are made by air. Air travel to and from the Isle of Man increased between 2012–2018.

13.9.6.87 Around 39% of all departures (residents and visitors) to the Island are made by sea. Ferry services provide a relatively convenient and cost-effective means for visitors to travel to and from the Isle of Man, around 35% of resident departures and 45% of visitor departures are made by sea.

13.9.6.88 Ferry services are often more cost-effective compared to air travel, particularly for those bringing vehicles or traveling with a group. This makes it an accessible option for a wide range of people.

13.9.6.89 Ferry services allow visitors to bring larger items, such as gifts, luggage, and vehicles, offering flexibility to passengers. For extended visits, particularly those involving families or individuals relocating temporarily, the ability to bring a vehicle and personal belongings is advantageous.

13.9.6.90 Lifeline ferry services contribute to enabling people on the mainland to maintain connections with their friends and family on the Isle of Man, and vice versa. Visits to friends and family can lead to additional spending in the local economy. This includes expenditure on accommodation, dining, entertainment, and shopping, which contributes to the visitor economy of the Isle of Man.

13.9.6.91 Disruption to lifeline ferry services, as with disruption to any journey, can negatively affect itineraries – passengers may miss important events, meetings, or connections to subsequent legs of their journey. If the disruption is sufficiently severe to lead to cancellations, passengers may miss their engagement altogether.

13.9.6.92 Travel disruption can lead to uncertainty and frustration. Passengers may experience heightened stress as they navigate changes to their travel plans, especially when facing unexpected delays, cancellations, or rerouting.

13.9.6.93 Travel disruptions can result in financial losses for passengers. Delays and cancellations may lead to additional costs for re-booking tickets, accommodation, meals, or connections. Some passengers may also face penalties or fees for changing their travel plans at late notice.

13.9.6.94 Travel disruptions can be particularly challenging for vulnerable groups, such as elderly passengers, individuals with disabilities, or families with young children. These passengers may require additional assistance and support and disruptions can exacerbate their challenges.

13.9.6.95 Travel disruptions can diminish the overall travel experience, especially for those who are travelling for leisure. Passengers may face disappointment and dissatisfaction with their travel experiences when faced with unexpected disruptions. This can damage the overall perception of a service.

Health

13.9.6.96 The Isle of Man's healthcare system utilises lifelines ferry services to support its activities e.g. transportation of medical supplies. The potential health impacts associated with potential adverse impacts on lifeline ferries is assessed within Volume 4, Chapter 4: Human Health Assessment of the Environmental Statement.

Construction phase

13.9.6.97 Based on a consideration of the pathways by which economic and social receptors on the Isle of Man might be impacted by potential adverse effects on lifeline ferry services as a result of the Morgan Generation Assets, the following sets out a combined socio-economic assessment of the magnitude of impact, sensitivity of receptor, and significance of effect during the construction phase.

Magnitude of impact

13.9.6.98 As detailed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, during construction, IoMSPC vessels would be displaced from the Morgan Array Area due to the presence of construction buoyage and safety zones around fixed structures which are under construction. On the Douglas–Heysham route, this would require a deviation of 1.7 minutes of steaming time per crossing. On the Douglas–Liverpool route, this would require a deviation of 0.5 minutes of steaming time per crossing.

13.9.6.99 As detailed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, on the Douglas–Heysham route, a three hour and 45 minute service, with greater existing variation in transit duration and turnaround time, the deviation is not anticipated to impose significant operational impacts. On the Douglas–Liverpool route, a two hour and 45 minute service, with greater existing variation in transit duration and turnaround time, the deviation is not anticipated to impose significant operational impacts. There may be increased pressure on operators on both routes.

13.9.6.100 With deviations of 1.7 minutes and 0.5 minutes on the Douglas–Heysham and Douglas–Liverpool routes, respectively, it is unlikely that users will experience a material change in service timing and reliability as a result of the identified impact. No additional service cancellations are anticipated on either crossing as a result of this impact.

13.9.6.101 As detailed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, during severe adverse weather where it would be unsafe for a ferry to proceed to sea, some sailings are delayed or inevitably cancelled irrespective of the

presence of the Morgan Array Area. However, with the presence of the Morgan Array Area, sailings may be required to route a greater distance and duration than they otherwise would. The estimated additional journey time on the Douglas–Heysham crossing as a result of the Morgan Generation Assets is 21.5 minutes.

13.9.6.102 Over the course of a day, the accumulation of these delays could result in the potential for additional sailings to be cancelled where constraints such as hours of rest are exceeded. Such effects are already experienced by IoMSPC, but the presence of the Morgan Generation Assets may exacerbate this. During consultation and navigational simulations, the conditions in which adverse weather routes would be taken, or services cancelled, was shown to be dependent on many different factors including route, vessel, wind/wave directions, wind speed and wave height.

13.9.6.103 As detailed within Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement, the adverse weather routes for the Douglas–Liverpool route are clear of the Morgan Array Area.

13.9.6.104 Volume 2, Chapter 7: Shipping and Navigation of the Environmental Statement estimated the Ben-My-Chree makes significant adverse weather routeing on around 20 occasions per year. The presence of the Morgan Array Area could increase the number of occasions during which adverse weather routes are taken by IoMSPC vessels.

13.9.6.105 Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement assesses a potential requirement for freight and passenger services on the Douglas–Heysham route to take adverse weather routes ‘infrequently’, albeit multiple times per year. As such, there is potential for adverse impacts on socio-economic conditions on the Isle of Man.

13.9.6.106 These occurrences of adverse weather routeing are likely to result in delays but will not always lead to service cancellation.

13.9.6.107 There is currently a typical service variance of 45 fewer crossings per annum on the Douglas–Heysham crossing as a result of adverse weather conditions, impacting around 3% of scheduled crossings. In a year with atypically high adverse weather cancellations on the Douglas–Heysham crossing, it is estimated that 12% fewer crossings take place than scheduled.

Freight

13.9.6.108 Where the outcome of the impact is limited to delays (on the service in question and subsequent services that day), whilst there is likely to be impacts on supply chain efficiency, there is anticipated to be marginal reductions in freight movement.

13.9.6.109 During typical weather conditions, end users are very unlikely to notice material changes in supply chain efficiency as a result of the estimated additional journey times of 1.7 minutes on the Douglas–Heysham crossing and 0.5 minutes on the Douglas–Liverpool crossing as a result of the Morgan Generation Assets.

13.9.6.110 Where adverse weather conditions result in occurrences of adverse weather routeing, where impacts are limited to delays, it is highly unlikely that end users would notice material changes in supply chain efficiency as a result of the estimated additional journey time of 21.5 minutes on the Douglas–Heysham crossing as a result of the Morgan Generation Assets.

13.9.6.111 Where adverse weather conditions result in occurrences of adverse weather routeing, and these deviations lead to sailings being cancelled in instances where hours of rest

or schedule constraints are exceeded, it is likely that end users would notice a reduction in supply chain efficiency.

13.9.6.112 It is estimated in a typical year that adverse weather cancellations lead to approximately 0.05% of all scheduled freight to and from the Isle of Man being lost. It is estimated in an atypical year that adverse weather cancellations could lead to approximately 0.2% of all freight to and from the Isle of Man being lost (see Table 13.81).

13.9.6.113 In general, delays and cancellations to freight services have the potential to result in increased costs, disrupted supply chains, and damage to customer relationships and commercial reputation.

13.9.6.114 The data on the number of potential additional cancellations due to adverse weather routeing associated with the Morgan Generation Assets is not available at this stage. However, it is assumed that additional 'infrequent' occurrences of adverse weather routeing will not lead to typical disruption materially beyond the current greatest level of annual service variance i.e. 180 fewer crossings than scheduled, 0.1% of all freight being cancelled.

Passengers

13.9.6.115 Where the outcome of the impact is limited to delays (on the service in question and subsequent services that day), and where this results in the duration of a visit being reduced, there may be a small reduction in the associated visitor expenditure, however most expenditure is expected to be retained.

13.9.6.116 Where adverse weather routeing results in service cancellations, passengers may decide to cancel, delay, or travel by air. Where visitors cancel their trip, the associated expenditure will be lost, resulting in an adverse impact on the Isle of Man visitor and leisure economy.

13.9.6.117 It is estimated in a typical year that adverse weather cancellations lead to approximately 0.2% of all scheduled visitor departures to the Isle of Man being lost as a result of visitors on the Douglas–Heysham crossing cancelling their trip. It is estimated in an atypical year that adverse weather cancellations lead to approximately 0.6% of all scheduled visitor departures to the Isle of Man being lost as a result of visitors cancelling their trip.

13.9.6.118 In general, delays and cancellations to travel plans have the potential to result in disrupted itineraries, stress, financial loss, additional challenges for vulnerable passengers, and damage to perceptions.

13.9.6.119 The data on the number of potential additional cancellations due to adverse weather routeing associated with the Morgan Generation Assets is not available at this stage. However, it is assumed that additional 'infrequent' occurrences of adverse weather routeing will not lead to average disruption materially beyond the current greatest level of annual service variance i.e. 180 fewer crossings than scheduled, 0.6% of all scheduled visitor departures being lost.

Overall

13.9.6.120 On the Douglas–Liverpool crossing, the magnitude of impact is assessed as 'no change'.

13.9.6.121 On the Douglas–Heysham crossing, the potential impact is predicted to be low (adverse).

13.9.6.122 Overall, the potential impact is predicted to be of local spatial extent, long term duration, intermittent, and high reversibility. It is predicted the impact will affect the receptor indirectly. The magnitude is therefore, considered to be low (adverse).

Sensitivity of receptor

13.9.6.123 As per section 13.8.2, receptor sensitivity to potential construction phase social impacts is assessed on the basis of tolerance, recoverability, plus value and importance.

13.9.6.124 The Douglas–Liverpool crossing will be unaffected by the Morgan Generation Assets during both normal and adverse weather conditions. Therefore, the assessment of sensitivity considers the Douglas–Heysham crossing only.

Value and importance

13.9.6.125 As per Table 13.6, socio-economic conditions on the Isle of Man are a policy priority of the Isle of Man Government.

13.9.6.126 As such, the value and importance of the receptor is assessed as high, which equates to a high sensitivity.

Tolerance

13.9.6.127 Certain types of freight items have low time sensitivity, and delays or cancellations to ferry services are likely to have minimal impact on their delivery. This includes bulk commodities, non-perishable foods, building materials, non-urgent retail merchandise, and industrial equipment. This category accounts for around 77% of freight to and from the Isle of Man in a typical year. Around 23% of freight to and from the Isle of Man is roll-on/roll-off freight that has high time sensitivity. As such, the majority of freight to and from the Isle of Man is able to tolerate ‘infrequent’ occurrences of additional adverse weather routeing leading to disruption to freight services.

13.9.6.128 Aside from adverse weather, there have been a number of reasons for lifeline ferry service disruptions on the Isle of Man in recent years, including:

- COVID-19 restrictions (2020–2021)
- Industrial action (2023–2024)
- Technical failures, repairs, and upgrades (various)

13.9.6.129 Sectors and individual businesses typically have contingencies in place to deal with existing disruptions to ferry services. The Isle of Man Government also has contingencies in place to mitigate potential adverse socio-economic impacts resulting from lifeline ferry service disruption.

13.9.6.130 In the event of cancellations due to adverse weather, typical ‘catch up’ is achieved within a few days. ‘Infrequent’ occurrences of adverse weather routeing as a result of the Morgan Generation Assets are not anticipated to lead to disruption materially beyond the current greatest level of annual service variance (180 fewer crossings than scheduled due to adverse weather reasons).

13.9.6.131 By way of comparison with other causes of service variance, potential additional adverse weather routeing occurrences are anticipated to be much less severe:

- COVID-19 restrictions during 2020 (449 cancellations during the year across all routes).

- Planned industrial action in January 2024, which involved a reduction in passenger services for a two-week period. Manxman services were further reduced to one return trip per day following a rostered officer needing to take leave for personal reasons. Isle of Man Treasury confirmed that, despite the disruption, the Isle of Man was not at risk of shortages of supplies (BBC, 2024).
- Repair works in March 2023 on the Ben-my-Chree over an eight day period resulted in the cancellation of overnight passenger services.

13.9.6.132 The above considerations have informed an assessment of high tolerance, which equates to a low sensitivity.

Recoverability

13.9.6.133 Due to the dynamic nature of economies and societies, it is not possible to confidently determine whether or not the receptor would return to a state close to that which existed before any activity occurs.

13.9.6.134 However, and with all else being equal, in the event the Morgan Generation Assets is decommissioned and any infrastructure above sea bed level is removed, adverse weather routeing would be unaffected, and therefore conditions in those industries with interdependendcies with ferry services would fully recover to their previous condition. Recoverability is therefore assessed as high, which equates to a low sensitivity.

Overall

13.9.6.135 With respect to linkages with lifeline ferry services, socio-economic conditions on the Isle of Man economy are deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.

Significance of effect

13.9.6.136 Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be low. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

Operation and maintenance phase

13.9.6.137 As set out in Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement, the impacts to commercial operators including strategic routes and lifeline ferries and adverse weather routeing during operations and maintenance are not anticipated to be substantially different to those during construction.

13.9.6.138 Therefore, the magnitude of potential impacts and the sensitivity of the receptor during the operation and maintenance phase are assessed on the same basis as the construction phase.

Magnitude of impact

13.9.6.139 On the Douglas–Liverpool crossing, the magnitude of impact is assessed as ‘no change’.

13.9.6.140 On the Douglas–Heysham crossing, the potential magnitude of impact is predicted to be low (adverse).

13.9.6.141 Overall, the potential impact is predicted to be of local spatial extent, long term duration, intermittent, and high reversibility. It is predicted the impact will affect the receptor indirectly. The magnitude is therefore, considered to be low (adverse).

Sensitivity of the receptor

13.9.6.142 With respect to linkages with lifeline ferry services, socio-economic conditions on the Isle of Man economy are deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.

Significance of the effect

13.9.6.143 Overall, the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

Decommissioning phase

13.9.6.144 As set out in Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement, the impacts to commercial operators including strategic routes and lifeline ferries during decommissioning are not anticipated to be substantially different to those during construction.

13.9.6.145 Therefore, the magnitude of potential impacts and the sensitivity of the receptor during the operation and maintenance phase are assessed on the same basis as the construction phase.

Magnitude of impact

13.9.6.146 On the Douglas–Liverpool crossing, the magnitude of impact is assessed as 'no change'.

13.9.6.147 On the Douglas–Heysham crossing, the potential magnitude of impact is predicted to be low (adverse).

13.9.6.148 Overall, the potential impact is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted the impact will affect the receptor indirectly. The magnitude is therefore, considered to be low (adverse).

Sensitivity of the receptor

13.9.6.149 With respect to linkages with lifeline ferry services, socio-economic conditions on the Isle of Man economy are deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.

Significance of the effect

13.9.6.150 Overall, the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.

13.10 Cumulative effect assessment methodology

13.10.1 Methodology

13.10.1.1 The Cumulative Effects Assessment (CEA) takes into account the impacts associated with the Morgan Generation Assets together with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets, the Morecambe Offshore Windfarm: Generation Assets, and other projects and plans. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a

screening exercise (see Volume 5, Annex 5.1: CEA screening matrix of the Environmental Statement). Each project has been considered on a case by case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.

13.10.1.2 The socio-economics CEA methodology has followed the methodology set out in Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement.

13.10.1.3 The cumulative assessment considers three scenarios:

- Scenario 1: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets
- Scenario 2: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Offshore Windfarm: Generation Assets (hereafter referred to as the Morecambe Generation Assets)
- Scenario 3: Morgan Generation Assets plus Morgan and Morecambe Offshore Wind Farms: Transmission Assets alongside all other projects, plans and activities. This assessment has been allocated into 'tiers' reflecting the current stage of the other projects, plans and activities within the planning and development process. This tiered approach is adopted to provide a clear assessment of the Morgan Generation Assets and Morgan and Morecambe Offshore Wind Farms: Transmission Assets alongside other projects, plans and activities:
  - Tier 1: includes projects, plans and activities at the following stages:
    - Under construction
    - Permitted application
    - Submitted application
    - Those currently operational that were not operational when baseline data were collected, and/or those that are operational but have an ongoing impact.
  - Tier 2: includes projects, plans and activities at the following stages:
    - Scoping report has been submitted and is in the public domain.
  - Tier 3 includes projects, plans and activities at the following stages:
    - Scoping report has not been submitted and is not in the public domain
    - Identified in the relevant Development Plan
    - Identified in other plans and programmes.

13.10.1.4 This approach to CEA has been developed to provide an assessment of the Morgan Generation Assets together with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets (Scenario 1) and the Morecambe Generation Assets (Scenario 2) in order to identify, as far as possible, the combined effects of these three applications separately from the assessment that includes all other projects, plans and activities (Scenario 3).

13.10.1.5 The specific projects, plans and activities scoped into the CEA, are outlined in Table 13.83.

Table 13.83: List of other projects, plans and activities considered within the CEA.

Project/Plan	Status	Distance from the Morgan Array Area (km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Morgan Generation Assets
Tier 1						
Awel y Môr Offshore Wind Farm	Consented	46.8	At least 500 MW capacity offshore wind farm. Applicant expects consent Q3 2023.	2026–2030	2030–onwards	**Construction Phase** Construction period scheduled to overlap with the construction period of the Morgan Generation Assets in its entirety. Construction port(s) not yet identified, therefore possibility remains that both North Wales and North West England may be subject to cumulative effects. **Operations and Maintenance Phase** Operation of project scheduled to commence at the same point as the Morgan Generation Assets. Operations and maintenance port not yet identified, therefore possibility remains that both North Wales and North West England may be subject to cumulative effects. **Decommissioning Phase** Decommissioning period (commencing 2055) is not scheduled to overlap with the decommissioning period of the Morgan Generation Assets.
Mona Offshore Wind Project	Application submitted	11.1	Application for the Mona Offshore Wind Project in the east Irish Sea.	2026–2030	2030–onwards	**Construction Phase** Construction period scheduled to overlap with the construction period of the Morgan Generation Assets in its entirety. Construction port(s) not yet identified. Possibility that installation activities will be co-located with the Morgan Generation Assets in order to deliver project efficiencies. Possibility remains that both North Wales and North West England may be subject to cumulative effects.

Project/Plan	Status	Distance from the Morgan Array Area (km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Morgan Generation Assets
						Operations and Maintenance Phase Operation of project scheduled to commence at the same point as the Morgan Generation Assets. Operations and maintenance port not yet identified. Possibility that operation activities will be co-located with the Morgan Generation Assets in order to deliver project efficiencies. Possibility remains that both North Wales and North West England may be subject to cumulative effects. **Decommissioning Phase** Decommissioning period (commencing 2065) is scheduled to overlap with the decommissioning period of the Morgan Generation Assets. Possibility remains that both North Wales and North West England may be subject to cumulative effects.
Tier 2						
Morecambe Offshore Windfarm Generation Assets	Pre-application	11.2	480 MW capacity floating offshore wind farm.	Chapter 5: Project description of the PEIR states that a detailed project programme has not yet been developed. Therefore, the construction dates are unknown but it is assumed that overlap is likely	Unknown – overlap likely	**Construction Phase** Construction period scheduled to overlap with the construction period of the Morgan Generation Assets in its entirety. Possibility remains that both North Wales and North West England may be subject to cumulative effects. **Operations and Maintenance Phase** Operation of project scheduled to commence at the same point as the Morgan Generation Assets. Possibility remains that both North Wales and North West England may be subject to cumulative effects.

Project/Plan	Status	Distance from the Morgan Array Area (km)	Description of project/plan	Dates of construction (if applicable)	Dates of operation (if applicable)	Overlap with the Morgan Generation Assets
						Decommissioning Phase Decommissioning period (commencing 2065) is scheduled to overlap with the decommissioning period of the Morgan Generation Assets. Possibility remains that both North Wales and North West England may be subject to cumulative effects.
Mooir Vannin Offshore Wind Farm	Scoping published	4.8	1.4 GW capacity offshore wind farm in Isle of Man territorial waters.	2030–2032	2032–onwards	**Construction Phase** Construction period not scheduled to overlap with the construction period of the Morgan Generation Assets. **Operations and Maintenance Phase** Operation of project scheduled to commence during the operation and maintenance phase of the Morgan Generation Assets. Possibility remains that both North Wales and North West England may be subject to cumulative effects. **Decommissioning Phase** Decommissioning period (commencing 2065) is scheduled to overlap with the decommissioning period of the Morgan Generation Assets. Possibility remains that both North Wales and North West England may be subject to cumulative effects.

13.10.2 Maximum design scenario

13.10.2.1 The MDSs identified in Table 13.84 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the Project Design Envelope provided in Volume 1, Chapter 3: Project description of the Environmental Statement as well as the information available on other projects and plans. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different wind turbine layout), to that assessed here, be taken forward in the final design scheme.

Table 13.84: Maximum design scenario considered for the assessment of potential cumulative effects on socio-economics.

[a] C=construction, O=operations and maintenance, D=decommissioning

Potential cumulative effect	Phase[a]			Maximum Design Scenario	Justification
	C	O	D		
The impact on economic receptors including employment, GVA and supply chain demand.	✓	✓	✓	**Scenario 1** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets. **Scenario 2** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Generation Assets. **Scenario 3** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the following other projects/plans: <u>Tier 1</u> • Awel y Môr Offshore Wind Farm. • Mona Offshore Wind Project <u>Tier 2</u> • Morecambe Generation Assets • Mooir Vannin Offshore Wind Farm.	Outcome of the CEA will be greatest when the greatest number of other projects (which could impact on economic, social and tourism receptors) are delivered within the same study area.
The impact of increased employment opportunities.	✓	✓	✓	**Scenario 1** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets. **Scenario 2** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and	Outcome of the CEA will be greatest when the greatest number of other projects (which could impact on economic, social and tourism receptors) are delivered within the same study area.

Potential cumulative effect	Phase[a] C	O	D	Maximum Design Scenario	Justification
				Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Generation Assets **Scenario 3** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the following other projects/plans: <u>Tier 1</u> • Awel y Môr Offshore Wind Farm. • Mona Offshore Wind Project <u>Tier 2</u> • Morecambe Generation Assets • Mooir Vannin Offshore Wind Farm.	
The impact on the demand for housing, accommodation and local services.	✓	✓	✓	**Scenario 1** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets. **Scenario 2** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Generation Assets **Scenario 3** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the following other projects/plans: <u>Tier 1</u> • Awel y Môr Offshore Wind Farm.	Outcome of the CEA will be greatest when the greatest number of other projects (which could impact on economic, social and tourism receptors) are delivered within the same study area.

Potential cumulative effect	Phase[a] C	O	D	Maximum Design Scenario	Justification
				• Mona Offshore Wind Project Tier 2 • Morecambe Generation Assets • Mooir Vannin Offshore Wind Farm.	
The impact on tourism and recreation.	✓	✓	✓	**Scenario 1** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets. **Scenario 2** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Generation Assets. **Scenario 3** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the following other projects/plans: Tier 1 • Awel y Môr Offshore Wind Farm. • Mona Offshore Wind Project Tier 2 • Morecambe Generation Assets • Mooir Vannin Offshore Wind Farm.	Outcome of the CEA will be greatest when the greatest number of other projects (which could impact on economic, social and tourism receptors) are delivered within the same study area.
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	**Scenario 1** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets.	**Impact to commercial operators including strategic routes and lifeline ferries** Greatest extent of the Morgan Generation Assets over the longest

Potential cumulative effect	Phase[a] C	O	D	Maximum Design Scenario	Justification
				Scenario 2 Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the Morecambe Generation Assets **Scenario 3** Maximum design scenario as described for the Morgan Generation Assets (Table 13.33) assessed cumulatively with the Morgan and Morecambe Offshore Wind Farms: Transmission Assets and the following other projects/plans: <u>Tier 1</u> • Awel y Môr Offshore Wind Farm. • Mona Offshore Wind Project <u>Tier 2</u> • Morecambe Generation Assets • Mooir Vannin Offshore Wind Farm.	duration, would impact the most routes whilst vessels navigate around the Morgan Array Area and therefore the greatest potential for impacts on commercial operators and routes. **Impact to adverse weather routeing.** Greatest extent of the Morgan Generation Assets over the longest duration, would impact the most routes whilst vessels navigate around the Morgan Array Area and therefore the greatest potential for impacts on adverse weather routeing.

13.11 Cumulative effects assessment

13.11.1.1 A description of the significance of cumulative effects upon socio-economics receptors arising from each identified impact is given below.

13.11.1.2 The CEA for the Morgan Generation Assets is presented in a series of tables (one for each potential cumulative impact).

13.11.2 Economic

The potential impact on economic receptors including employment and GVA

Table 13.85: The potential impact on economic receptors including employment and GVA.

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Construction			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed on the basis of the expected degree of change relative to baseline conditions (i.e. 'scale' of impact) according to the current capability scenario. For each socio-economic impact under consideration, the scale of potential impacts is assessed against multiple baseline conditions and aggregated to a single scale level as appropriate. The average value across baseline conditions is then calculated and used to determine the overall scale of impact. Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination is dependant on the selection of construction ports for multiple projects within the same economic study area. There is a possibility that construction activities for these projects will be co-located in order to deliver project efficiencies. As the data for both projects is available to the Applicant, a consistent and comparable assessment of potential cumulative effects has been carried out on this basis.	The cumulative effects assessment for Scenario 2 is assessed on the basis of the current capability scenario. Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with the Morecambe Generation Assets is dependant on the selection of primary construction ports for multiple projects within the same economic study area. The Morgan Generation Assets and the Morecambe Generation Assets are being promoted by separate Applicants. However, whilst there are strong conceptual linkages between the projects by virtue of their combined Transmission Assets, there is no greater likelihood of economic effects being combined on the basis of construction port selection than with other cumulative projects being promoted by other Applicants. Detailed data on the approach to establishing economic impacts associated with the	The cumulative effects assessment for Scenario 3 is assessed on the basis of the current capability scenario. Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with any other Tier 1 or Tier 2 cumulative project is dependant on the selection of primary construction ports for multiple projects within the same economic study area. Consideration must be given to port capabilities and capacities. Within North Wales and North West England, port capacities and capabilities make it unlikely that delivery of project components would take place out of the same port at the same time. There are essentially capacity limits for the amount of construction activity that can take place out of any single port and any single economic study area at any one time. As a result, there are three likely outcomes: • **Programme staggering**: delivery of more than one project by separate Applicants from

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	Within the topic of socio-economics, magnitude is assessed as per paragraph 13.9.2.8. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **UK**: national spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	Morecambe Generation Assets, including employment and GVA, which would allow for a consistent and comparable quantitative assessment of potential cumulative effects is not currently available. Therefore, the results of the assessment carried out within Scenario 3 has been utilised to estimate the potential impacts associated with Scenario 2. The magnitude of potential impact is assessed qualitatively, on the same basis as Scenario 3. For the purposes of the CEA, as per the MDS presented in Table 13.84, it is assumed that project impacts combine to deliver the greatest level of impact. On this basis, for each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial) • **UK**: national spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly.	the same construction port could require a staggering of programmes. This would result in no concurrent cumulative effects. Any beneficial cumulative effects would be as a result of an investment pipeline of offshore wind sector activity supporting long-term employment and GVA impacts, as opposed to the medium-term impact of individual projects • **Alternative location selection**: delivery of more than one project by separate Applicants simultaneously could require a construction port outside North Wales and North West England to be selected for delivery of the relevant activities. As a result, no cumulative effects would occur within the sub-national economic study areas. • **Alternative port selection (within same subnational economic study area)**: delivery of more than one project by separate Applicants simultaneously could require separate construction ports within North Wales or North West England to be selected. As a result, cumulative effects could occur within the sub-national economic study area in question. This is assessed as the MDS for North Wales and North West England. The highest likelihood of construction port selection leading to cumulative effects between projects is between the Morgan Generation Assets and Transmission Assets in combination with the Tier 1 Mona Offshore Wind Projectas

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		The magnitude is considered to be low (beneficial).	these projects are being developed by the same joint venture of bp and EnBW.. There is a possibility that construction activities for these projects will be co-located in order to deliver project efficiencies. As the data for all three projects is available to the Applicant, a consistent and comparable assessment of potential cumulative effects has been carried out. Commercial procurement, contracting, and decision-making relating to construction port selection will not take place until post-consent for all projects, and is therefore not available for inclusion within the CEA. Detailed data on economic impacts associated with projects being promoted by other Applicants, which would allow for a consistent and comparable quantitative assessment of potential cumulative effects, is not available. Whilst there are capacity limits for the amount of construction activity that can take place out of any single port and any single economic study area at any one time, there remains a possibility that a cumulative project being promoted by a different Applicant could be delivered from a different port within the same sub-national economic study area. As a result, cumulative effects could occur within the sub-national economic study area in question. To allow for this possibility, an uplift is applied to the quantitative assessment of the Morgan Generation Assets and Transmission Assets in

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
			combination with the Mona Offshore Wind Project. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium to high (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium to high (beneficial) • **UK**: cumulative effects are very likely to occur at the UK level, as there is a very high likelihood the selection of construction ports for other projects will be within the UK. National spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, plus value and importance, as per paragraphs 13.9.2.11 to 13.9.2.19. Across all economic study areas the receptor is deemed to be of high tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Significance of effect	Overall, the magnitude of the cumulative impact across all economic study areas is deemed to be low (beneficial) and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance across all economic study areas, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms • **UK**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be medium to high (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium to high(beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms • **UK**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. The residual cumulative effect will, therefore, be of minor (beneficial) significance across all economic study areas, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England:** moderate (beneficial) significance, which is significant in EIA terms • **North Wales:** moderate (beneficial) significance, which is significant in EIA terms	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: Overall, for each economic study area: • **North West England**: moderate (beneficial) significance, which is significant in EIA terms

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		• **UK:** minor (beneficial) significance, which is not significant in EIA terms.	• **North Wales**: moderate (beneficial) significance, which is significant in EIA terms • **UK:** moderate (beneficial) significance, which is not significant in EIA terms.
Operations and maintenance			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed as per the construction phase, set out above. The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial).	The cumulative effects assessment for Scenario 2 is assessed on the basis of the current capability scenario. Cumulative effects associated with the operation and maintenance of the Morgan Generation Assets and Transmission Assets in combination with the Morecambe Generation Assets is dependant on the selection of primary operations and maintenance ports for all projects within the same economic study area. The Morgan Generation Assets and the Morecambe Generation Assets are being promoted by separate Applicants. However, whilst there are strong conceptual linkages between the projects by virtue of their combined Transmission Assets, there is no greater likelihood of economic effects being combined on the basis of operations and maintenance port selection than with other cumulative projects. Consideration must be given to port capabilities and capacities. Within North Wales and North West England, port capacities and capabilities make it unlikely that operations and maintenance of all projects would take place out of the same port at the same time. There is	The cumulative effects assessment for Scenario 3 is assessed on the basis of the current capability scenario. Cumulative effects associated with the operation and maintenance of the Morgan Generation Assets and Transmission Assets in combination with any other cumulative project (including Morecambe Generation Assets) is dependant on the selection of primary operations and maintenance ports for multiple projects within the same economic study area. The highest likelihood of operations and maintenance port selection leading to cumulative effects between projects is between the Morgan Generation Assets and Transmission Assets in combination with the Mona Offshore Wind Project. There is a possibility that operations and maintenance activities for these projects will be co-located in order to deliver project efficiencies. As the data for all three projects is available to the Applicant, a consistent and comparable assessment of potential cumulative effects has been carried out. Commercial procurement, contracting, and decision-making relating to operations and

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		essentially a ceiling for the amount of operations and maintenance activity that can take place out of any single port at any one time. As a result, it is likely that operations and maintenance ports for cumulative projects will be based at a variety of locations, either within the same sub-national economic study area or elsewhere in the UK. Delivery of multiple projects by separate Applicants simultaneously could require operations and maintenance ports outside North Wales and North West England to be selected for delivery of the relevant activities. Commercial procurement, contracting, and decision-making relating to operations and maintenance port selection will not take place until post-consent for all projects, and is therefore not available for inclusion within the CEA. Detailed data on the approach to establishing economic impacts associated with the Morecambe Generation Assets, including employment and GVA, which would allow for a consistent and comparable quantitative assessment of potential cumulative effects is not available. Therefore, the results of the quantitative assessment carried out within Scenario 3 has been utilised to estimate the potential impacts associated with Scenario 2. The the magnitude	maintenance port selection will not take place until post-consent for all projects, and is therefore not available for inclusion within the CEA. Detailed data on economic impacts associated with projects being promoted by other Applicants, which would allow for a consistent and comparable quantitative assessment of potential cumulative effects, is not available. Whilst there are capacity limits for the amount of operation and maintenance activity that can take place out of any single port and any single economic study area at any one time, there remains a possibility that a cumulative project being promoted by a different Applicant could be operated from a different port within the same sub-national economic study area. As a result, cumulative effects could occur within the sub-national economic study area in question. To allow for this possibility, an uplift is applied to the quantitative assessment of the Morgan Generation Assets and Transmission Assets in combination with the Mona Offshore Wind Project. For each economic study area, the cumulative effect is predicted to be of: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low to medium (beneficial)

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		of potential impact is assessed qualitatively, on the same basis as Scenario 3. For the purposes of the CEA, as per the MDS presented in Table 13.84, it is assumed that project impacts combine to deliver the greatest level of impact. On this basis, for each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial).	• **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium to high (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.2.30 to 13.9.2.35. Within all economic study areas the receptor is deemed to be of high tolerance, low recoverability and high value. The sensitivity of the receptor is therefore, considered to be high.		

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Significance of effect	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial) and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA term**s**.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low to medium (beneficial) and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium to high (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Overall, for each economic study area: • **North West England**: **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: **moderate (beneficial)** significance, which is significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: moderate (beneficial) significance, which is significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: moderate (beneficial) significance, which is significant in EIA terms.

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Decommissioning			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **UK**: national spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	The cumulative effects assessment for Scenario 2 is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial) • **UK**: national spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	The cumulative effects assessment for Scenario 3 is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be medium (beneficial) • **UK**: national spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, plus value and importance, as per paragraphs 13.9.2.48 to 13.9.2.52. Across all economic study areas the receptor is deemed to be of medium tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		
Significance of effect	Overall, the magnitude of the cumulative impact across all economic study areas is deemed to	Overall, for each economic study area:	Overall, for each economic study area:

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	be low (beneficial) and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance across all economic study areas, which is not significant in EIA terms.	• **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **moderate (beneficial)** significance, which is significant in EIA terms • **UK**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	• **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of moderate (beneficial) significance, which is significant in EIA terms • **UK**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. The residual cumulative effect will, therefore, be of minor (beneficial) significance across all economic study areas, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: moderate (beneficial) significance, which is significant in EIA terms	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: moderate (beneficial) significance, which is significant in EIA terms

	Scenario 1: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets	Scenario 2: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Morecambe Generation Assets	Scenario 3: Morgan Generation Assets + Morgan and Morecambe Offshore Wind Farms: Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		• **UK**: minor (beneficial) significance, which is not significant in EIA terms.	• **UK**: minor (beneficial) significance, which is not significant in EIA terms

The potential impact of increased employment opportunities

Table 13.86: The potential impact of increased employment opportunities

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Construction			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed on the same basis as that set out within Table 13.85. The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, magnitude is assessed as per paragraph 13.9.2.63. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and	Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with the Morecambe Generation Assets are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible	Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with any other Tier 1, Tier 2, or Tier 3 cumulative project are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible.	• **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	• **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low to medium (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.2.65 to 13.9.2.72. Across all economic study areas the receptor is deemed to be of high tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		
Significance of effect	Overall, the magnitude of the cumulative impact within both North Wales and North West England is deemed to be negligible and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance across all economic study areas, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low to medium (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. The residual cumulative effect will, therefore, be of **negligible** significance across all economic	There is no further mitigation proposed beyond existing commitments.	There is no further mitigation proposed beyond existing commitments.

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	study areas, which is not significant in EIA terms.	Therefore, the residual significance for each economic study area is: • **North West England**: negligible significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.	Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.
Operations and maintenance			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed on the same basis as that set out within Table 13.85. The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, magnitude is assessed as per paragraph 13.9.2.80. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	Cumulative effects associated with the operation and maintenance of the Morgan Generation Assets and Transmission Assets in combination with the Morecambe Generation Assets are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	Cumulative effects associated with the operation and maintenance of the Morgan Generation Assets and Transmission Assets in combination with any other Tier 1, Tier 2, or Tier 3 cumulative project are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low to medium (beneficial).

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.2.82 to 13.9.2.85. Within all economic study areas the receptor is deemed to be of high tolerance, low recoverability and high value. The sensitivity of the receptor is therefore, considered to be high.		
Significance of effect	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low to medium (beneficial), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Overall, the residual cumulative effect will, therefore, be of **negligible** significance across all economic study areas, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms. •

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Decommissioning			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible.	The cumulative effects assessment for this scenario is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	The cumulative effects assessment for this scenario is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.2.97 to 13.9.2.102. Across all economic study areas the receptor is deemed to be of high tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		
Significance of effect	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	• **North Wales**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms**.**	• **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	• **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: negligible significance, which is not significant in EIA terms • **North Wales**: negligible significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: negligible significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.

13.11.3 Social

The potential impact on population, housing and accommodation.

Table 13.87: The potential impact on population, housing and accommodation.

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Construction			
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed on the same basis as that set out within Table 13.85. The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, magnitude is assessed as per paragraph 13.9.3.15. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible.	Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with any other cumulative project (including Morecambe Generation Assets) are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).	Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with any other Tier 1, Tier 2, or Tier 3 cumulative project are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.3.19 to 13.9.3.28.		

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	Across all economic study areas the receptor is deemed to be of medium tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		
Significance of effect	Overall, the magnitude of the cumulative impact within both North Wales and North West England is deemed to be negligible and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance across all economic study areas, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance is as follows: Overall, the residual cumulative effect will, therefore, be of negligible significance across all economic study areas, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: negligible significance, which is not significant in EIA terms • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms. •	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (beneficial) significance, which is not significant in EIA terms. • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms.

Operations and maintenance

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Magnitude of impact	The cumulative effects assessment for Scenario 1 is assessed on the same basis as that set out within Table 13.85. The magnitude of impact is characterised on the basis of spatial extent, duration and frequency (as per Volume 1, Chapter 5: Environmental Impact Assessment methodology of the Environmental Statement). Within the topic of socio-economics, magnitude is assessed as per paragraphs 13.9.3.39 to 13.9.3.43. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible.	Cumulative effects associated with delivery of the Morgan Generation Assets and Transmission Assets in combination with any other cumulative project (including Morecambe Generation Assets) are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (neutral).	Cumulative effects associated with the operation and maintenance of the Morgan Generation Assets and Transmission Assets in combination with any other Tier 1, Tier 2, or Tier 3 cumulative project are assessed on the same basis as that set out within Table 13.85. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (neutral) • **North Wales**: regional spatial extent, long term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (neutral).
Sensitivity of receptor	Receptor sensitivity to potential construction phase employment and GVA impacts is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.3.49 to 13.9.3.57. Within all economic study areas the receptor is deemed to be of high tolerance, low recoverability and high value. The sensitivity of the receptor is therefore, considered to be high.		
Significance of effect	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (neutral), and the sensitivity of the receptor

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms.	is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (neutral), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms.	is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (neutral), and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor (neutral)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales:** minor (neutral) significance, which is not significant in EIA terms • **North West England**: minor (neutral) significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales:** minor (neutral) significance, which is not significant in EIA terms • **North West England**: minor (neutral) significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales:** minor (neutral) significance, which is not significant in EIA terms • **North West England**: minor (neutral) significance, which is not significant in EIA terms.
Decommissioning			
Magnitude of impact	The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. Vessel information is not provided within the project design envelope. Workforce for the decommissioning of the wind farm is likely to be sourced in a similar way to	The cumulative effects assessment for this scenario is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact	The cumulative effects assessment for this scenario is assessed as per the construction phase, set out above. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	installation and commissioning. However, the scale of activity will be reduced. On this basis the magnitude of impacts is likely to be no greater than those set out for the construction phase under the current capability scenario. For each economic study area, the cumulative effect is predicted to be: • **North West England**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be negligible.	will affect the receptor directly. The magnitude is considered to be negligible • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial**)**.	will affect the receptor directly. The magnitude is considered to be low (beneficial) • **North Wales**: regional spatial extent, medium term duration, and intermittent. It is predicted that the impact will affect the receptor directly. The magnitude is considered to be low (beneficial).
Sensitivity of receptor	Receptor sensitivity to potential decommissioning phase impacts is assessed on the basis of tolerance, recoverability, and value and importance. Across all economic study areas the receptor is deemed to be of high tolerance, medium recoverability and high value. The sensitivity of the receptor is therefore, considered to be medium.		
Significance of effect	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low	Overall, for each economic study area: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **negligible** significance, which is not significant in EIA terms.	(beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.	(beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of **minor (beneficial)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales:** negligible significance, significance, which is not significant in EIA terms • **North West England**: negligible significance, significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms • **North West England**: negligible significance, which is not significant in EIA terms.	There is no further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North Wales**: minor (beneficial) significance, which is not significant in EIA terms • **North West England**: minor (beneficial) significance, which is not significant in EIA terms.

13.11.4 Tourism

The potential impact on tourism

Table 13.88: The potential impact on tourism

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Construction			
Magnitude of impact	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. The receptors of visual amenity, overnight trips and accommodation, and recreation are considered, informed by Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement and Volume 2, Chapter 9: Other sea users of the Environmental Statement. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual receptors across all study areas during the construction phase. As such, under Scenario 1 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect will be of negligible significance across all economic	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual receptors across all study areas during the construction phase. As such, under Scenario 2 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 2 is assessed as: • **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of negligible significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual receptors across all study areas during the construction phase. As such, under Scenario 3 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 3 will be: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	study areas under Scenario 1, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 1 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as negligible.	(beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement states that the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 2 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as low (adverse).	(beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds that the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement states that the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 3 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as low (adverse).
Sensitivity of receptor	Across all economic study areas the sensitivity of the receptor is considered to be high.		
Significance of effect	• **North West England**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor**	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	(adverse) significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	**minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	**minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms.

Operations and maintenance

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Magnitude of impact	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. The receptors of visual amenity, overnight trips and accommodation, and recreation are considered, informed by Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement and Volume 2, Chapter 9: Other sea users of the Environmental Statement. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement deems that no visual receptors in the 50 km SLVIA study area are likely to experience significant cumulative visual effects due to the Morgan Generation Assets together with existing development projects. As such, under Scenario 1 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 1 will be of minor (neutral) significance across all economic study areas, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms.	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that the cumulative effect on visual receptors will be minor to moderate adverse and not signficiant. As such, under Scenario 2 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 2 will be of minor (neutral) significance across all economic study areas, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that the cumulative effect on visual receptors will be moderate to major adverse and not signficiant. As such, under Scenario 3 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 3 will be of minor (neutral) significance across all economic study areas, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 1 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as negligible.	on tourism under Scenario 2 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as low (adverse).	on tourism under Scenario 3 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as low (adverse).
Sensitivity of receptor	Across all economic study areas the sensitivity of the receptor is considered to be high.		
Significance of effect	• **North West England**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)**	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor**	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor**

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	significance, which is not significant in EIA terms.	**(adverse)** significance, which is not significant in EIA terms.	**(adverse)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms
Decommissioning			
Significance of the effect	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. The receptors of visual amenity, overnight trips and accommodation, and recreation are considered, informed by Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement and Volume 2, Chapter 9: Other sea users of the Environmental Statement. **Visual amenity** Volume 2, Chapter 10: Seascape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual receptors	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual receptors across all study areas during the decommisioning phase. As such, under Scenario 2 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 2 will be:	Cumulative Tourism impacts are assessed on the same basis as that set out in 13.9.4. The receptors of visual amenity, overnight trips and accommodation, and recreation are considered, informed by Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement, Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement and Volume 2, Chapter 9: Other sea users of the Environmental Statement. **Visual amenity** Volume 2, Chapter 10: Seascape, landscape and visual resources of the Environmental Statement finds that there will be no significant cumulative effects on static and dynamic visual

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	across all study areas during the decommisioning phase. As such, under Scenario 1 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 1 will be of negligible significance across all economic study areas, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 1 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as negligible.	• **North West England**: the magnitude of the cumulative impact is deemed to be negligible, and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of negligible significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 2 in any study area associated with impacts on recreation. **Overall**	receptors across all study areas during the decommisioning phase. significant adverse indirect effects on tourism in any study area associated with visual amenity. As such, under Scenario 3 there are no likely significant adverse indirect effects on tourism in any study area associated with visual amenity. **Overnight trips and accommodation** As per Table 13.87 the cumulative effect under Scenario 3 will be: • **North West England**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms • **North Wales**: the magnitude of the cumulative impact is deemed to be low (beneficial), and the sensitivity of the receptor is considered to be medium. The cumulative effect will, therefore, be of minor (beneficial) significance, which is not significant in EIA terms. **Recreation** Volume 2, Chapter 9: Other sea users of the Environmental Statement finds the cumulative effect on recreational craft passages and safety will be of minor adverse significance, which is not significant in EIA terms. Volume 2, Chapter 7: Shipping and navigation of the Environmental Statement finds the

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
		The magnitude of impact in all study areas is assessed as low (adverse).	cumulative effect on the displacement of recreational activities will be of minor adverse significance, which is not significant in EIA terms. This consideration of potential indirect cumulative effects on recreation indicates there are unlikely to be any material indirect impacts on tourism under Scenario 3 in any study area associated with impacts on recreation. **Overall** The magnitude of impact in all study areas is assessed as low (adverse).
Sensitivity of receptor	Across all economic study areas the sensitivity of the receptor is considered to be high.		
Significance of effect	• **North West England**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)**	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor**	• **North West England**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **North Wales**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms • **Isle of Man**: the magnitude of the impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor**

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	significance, which is not significant in EIA terms.	**(adverse)** significance, which is not significant in EIA terms.	**(adverse)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms	No further mitigation proposed beyond existing commitments. Therefore, the residual significance for each economic study area is: • **North West England**: minor (adverse) significance, which is not significant in EIA terms • **North Wales**: minor (adverse) significance, which is not significant in EIA terms • **Isle of Man**: minor (adverse) significance, which is not significant in EIA terms

13.11.5 Isle of Man

Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.

Table 13.89: Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Construction			
Magnitude of impact	The cumulative effects assessment for Scenario 1 considers the following: • The Transmission Assets consists of a single isolated structure and a temporary and localised cable installation impact which would have a negligible impact on ship routeing. The impact of Scenario 1 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be low (adverse).	In addition to the considerations included within the assessment of Scenario 1, the cumulative effects assessment for Scenario 2 considers the following: • Morecambe Generation Assets is anticipated to have no impact on IoMSPC shipping routes (including adverse weather routes) between Douglas–Heysham and/or Douglas–Liverpool. The impact of Scenario 2 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be low (adverse).	**Tier 1** In addition to the considerations included within the assessment of Scenario 1 and Scenario 2, the cumulative effects assessment for Scenario 3 (Tier 1) considers the following: • The Awel y Môr Offshore Wind Farm is anticipated to have no impact on IoMSPC shipping routes (including adverse weather routes) between Douglas–Heysham and/or Douglas–Liverpool. • The Mona Offshore Wind Project is anticipated to have 'infrequent' medium magnitude impacts on the IoMSPC route between Douglas–Liverpool associated with adverse weather routeing. This is almost exclusively a passenger-only service. • The Mona Offshore Wind Project is also anticipated to have low magnitude impacts on the IoMSPC Douglas–Liverpool normal weather route. • The Mona Offshore Wind Project is anticipated to have no impact on IoMSPC

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
			shipping routes (including adverse weather routes) between Douglas–Heysham. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be medium (adverse). **Tier 2** In addition to the considerations included within the assessment of Scenario 1, Scenario 2, and Scenario 3 (Tier 1), the cumulative effects assessment for Scenario 3 (Tier 2) considers the following: • The Mooir Vannin Offshore Wind Farm construction phase is not anticipated to overlap with the Morgan Generation Assets construction phase. Therefore, cumulative impacts are not anticipated during the construction phase. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be medium (adverse).
Sensitivity of receptor	Receptor sensitivity to potential construction phase socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraphs 13.9.6.123–13.9.6.135 The receptor is deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.		

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Significance of effect	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	**Tier 1** Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms. **Tier 2** Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. **Tier 1** Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms. **Tier 2** Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.

Operations and maintenance

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
Magnitude of impact	As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 1 is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 1 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be low (adverse).	As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 2 is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 1 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be low (adverse).	**Tier 1** As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 3 (Tier 1) is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 3 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be low (adverse). **Tier 2** As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 3 (Tier 1) is includes the same considerations as the construction phase, as set out above. In addition to the considerations included within the assessment of Scenario 1, Scenario 2, and Scenario 3 (Tier 1), the cumulative effects assessment for Scenario 3 (Tier 2) considers the following: • The Mooir Vannin Offshore Wind Farm, based on the scoping boundary, is anticipated to have more frequent delays and cancellations on the normal weather

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
			IoMSPC shipping route between Douglas–Heysham. • The Mooir Vannin Offshore Wind Farm, based on the scoping boundary, is anticipated to lead to a greater frequency of IoMSPC adverse weather shipping routes between Douglas–Heysham. • The Mooir Vannin Offshore Wind Farm, based on the scoping boundary, is anticipated to have no impact on IoMSPC shipping routes (including adverse weather routes) between Douglas–Liverpool. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. With the addition of the Mooir Vannin Offshore Wind Farm, the magnitude is therefore, considered to be medium (adverse).
Sensitivity of receptor	Receptor sensitivity to potential construction phase socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraph 13.9.6.142. The receptor is deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.		
Significance of effect	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	**Tier 1** Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms. **Tier 2**

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
			Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. **Tier 1** Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms. **Tier 2** Therefore, the residual effect is of medium (adverse) significance, which is not significant in EIA terms.
Decommissioning			
Magnitude of impact	As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 1 is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 1 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly.	As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 2 is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 1 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly.	**Tier 1** As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 3 (Tier 1) is assessed on the same basis as the construction phase, which is set out above. The impact of Scenario 3 is not anticipated to be materially different to that of the Morgan Generation Assets in isolation and described in section 13.9.6. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
	The magnitude is therefore, considered to be low (adverse).	The magnitude is therefore, considered to be low (adverse).	that the impact will affect the receptor directly. The magnitude is therefore, considered to be medium (adverse). **Tier 2** As per the assessment of the Morgan Generation Assets in isolation, the cumulative effects assessment for Scenario 3 (Tier 1) is assessed on the same basis as the construction phase, which is set out above. The cumulative effect is predicted to be of local spatial extent, medium term duration, intermittent and high reversibility. It is predicted that the impact will affect the receptor directly. The magnitude is therefore, considered to be medium (adverse).
Sensitivity of receptor	Receptor sensitivity to potential construction phase socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services is assessed on the basis of tolerance, recoverability, and value and importance, as per paragraph 13.9.6.149. The receptor is deemed to be of high tolerance, high recoverability and high value. The sensitivity of the receptor is therefore, considered to be low.		
Significance of effect	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	Overall, the magnitude of the cumulative impact is deemed to be low (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms.	**Tier 1** Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of **minor (adverse)** significance, which is not significant in EIA terms. **Tier 2** Overall, the magnitude of the cumulative impact is deemed to be medium (adverse) and the sensitivity of the receptor is considered to be low. The cumulative effect will, therefore, be of

	Scenario 1 Morgan Generation Assets + Transmission Assets	Scenario 2: Morgan Generation Assets + Morecambe Generation Assets + Transmission Assets	Scenario 3: Morgan Generation Assets + Transmission Assets + Tier 1, Tier 2, Tier 3 projects
			minor (adverse) significance, which is not significant in EIA terms.
Further mitigation and residual significance	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.	No further mitigation proposed beyond existing commitments. **Tier 1** Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms. **Tier 2** Therefore, the residual effect is of minor (adverse) significance, which is not significant in EIA terms.

13.12 Transboundary effects

13.12.1.1 A screening of transboundary impacts has been carried out and has identified that there is no potential for significant adverse transboundary effects with regard to socio-economics from the Morgan Generation Assets upon the interests of other states.

13.13 Inter-related effects

13.13.1.1 Inter-relationships are considered to be the impacts and associated effects of different aspects of the proposal on the same receptor. These are considered to be:

- Project lifetime effects: Assessment of the scope for effects that occur throughout more than one phase of the Morgan Generation Assets (construction, operations and maintenance, and decommissioning), to interact to potentially create a more significant effect on a receptor than if just assessed in isolation in these three phases (e.g. subsea sound effects from piling, operational turbines, vessels and decommissioning)
- Receptor-led effects: Assessment of the scope for all effects to interact, spatially and temporally, to create inter-related effects on a receptor. As an example, all effects on socio-economics may interact to produce a different, or greater effect on this receptor than when the effects are considered in isolation. Receptor-led effects may be short term, temporary or transient effects, or incorporate longer term effects.

13.13.1.2 A description of the likely interactive effects arising from the Morgan Generation Assets on socio-economics is provided in Volume 2, Chapter 15: Inter-related effects (Offshore) of the Environmental Statement.

13.13.1.3 Table 13.90 lists the inter-related effects (project lifetime effects) that are predicted to arise during the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets, and the inter-related effects (receptor-led effects that are predicted to arise for socio-economics receptors.

Table 13.90: Summary of likely significant inter-related effects on the environment for individual effects occurring across the construction, operations and maintenance and decommissioning phases of the Morgan Generation Assets and from multiple effects interacting across all phases (receptor-led effects).

Description of impact	Phase[a]			Likely significant inter-related effects	Significance
	C	O	D		
Economic					
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	There is likely to be beneficial effects on employment and GVA throughout the construction and installation, operations and maintenance and decommissioning phases. Employment and GVA effects will occur within different locations and sectors of the economy, and at different times and intensities. In combination the Morgan Generation Assets will provide a long-term employment and GVA stimulus.	These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase. Therefore, these inter-related effects would not be significant in EIA terms.

Description of impact	Phase[a]			Likely significant inter-related effects	Significance
	C	O	D		
The potential impact of increased employment opportunities.	✓	✓	✓	There will be beneficial effects on the potential for local workers to access employment throughout the construction and installation, operations and maintenance and decommissioning phases. Access to employment effects will occur within different locations, sectors of the economy, and labour market, and at different times and intensities. In combination the Morgan Generation Assets will provide a long-term employment stimulus.	These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase. Therefore, these inter-related effects would not be significant in EIA terms.
Social					
The potential impact on population, housing and accommodation.	✓	✓	✓	Direct and indirect employment generated during the construction phase could increase demand for housing, accommodation and local services during the construction phase. Direct and indirect employment generated during the operations and maintenance phase could increase demand for housing, accommodation and local services. It is anticipated that due to the long-term nature of the operations and maintenance requirements the workforce will live locally. Some of those may relocate to the area requiring long term/permanent housing within the vicinity of the operations and maintenance port. Direct and indirect employment generated during the decommissioning phase could increase demand for housing, accommodation and local services during the decommissioning phase. The housing and accommodation needs of employment during each phase differs.	These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase. Therefore, these inter-related effects would not be significant in EIA terms.
Tourism					
The potential impact on tourism.	✓	✓	✓	Potential impacts of the construction, operations and maintenance, and decommissioning of the Morgan Generation Assets on tourism and recreation are indirect in nature.	These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase. Therefore, these inter-related effects would not be significant in EIA terms.
Isle of Man					
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓		These inter-related effects as described are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phase. Therefore, these inter-related effects would not be significant in EIA terms.

Description of impact	Phase[a] C	O	D	Likely significant inter-related effects	Significance
Receptor-led effects					
By definition, the economic and social impacts outlined above will interact. The tourism receptor is an exception, which is primarily determined on the basis of visual impact. Socio-economic conditions on the Isle of Man are also an exception, as impacts are primarily determined on the basis of interactions with lifeline ferry services. Expenditure associated with the Morgan Generation Assets will result in employment and GVA impacts, these impacts are the basis for assessing potential socio-economic effects. The interactions between socio-economic receptors are inherent in the assessments of these impacts. It is not possible for socio-economic impacts to act together in a manner that multiplies effects. Employment-related receptors are likely to interact with the demand for housing, accommodation and local services receptor. In the event that employment and GVA impacts were to increase or decrease, effects related to the demand for housing, accommodation and local services would similarly increase or decrease. However, these impacts would not act together in a manner that multiplies effects.					

13.13.1.4 Summary of impacts, mitigation measures and monitoringTable 13.91 to Table 13.94 present a summary of the potential impacts and residual effects in respect to socio-economics across every study area. The impacts assessed include:

- The potential impact on economic receptors including employment and GVA
- The potential impact of increased employment opportunities for local residents
- The potential impact on population, housing and accomodation
- The potential impact on tourism.

13.13.1.5 Table 13.95 to Table 13.98present a summary of the potential cumulative socio-economic impacts, mitigation measures and residual effects.

13.13.1.6 No potential transboundary impacts have been identified in regard to socio-economic effects of the Morgan Generation Assets.

Table 13.91: Summary of potential environmental effects, mitigation and monitoring, North West England.

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
Economic										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Low (beneficial) O: Low (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (beneficial) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (beneficial) D: Negligible	None required
Social										
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None required
Tourism										
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial)	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
							O: Minor (beneficial) D: Minor (beneficial)		O: Minor (beneficial) D: Minor beneficial)	

Table 13.92: Summary of potential environmental effects, mitigation and monitoring, North Wales.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Economic										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Low (beneficial) O: Medium (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Moderate (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Moderate (beneficial) D: Minor (beneficial)	None required
The potential impact of increased employment opportunities .	✓	✓	✓	As above	C: Negligible O: Low (beneficial) D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (beneficial) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (beneficial) D: Negligible	None required
Social										

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Negligible O: Low (neutral) D: Negligible	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Moderate (beneficial) O: Minor (neutral) D: Minor (beneficial)	None required
Tourism										
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required

Table 13.93: Summary of potential environmental effects, mitigation and monitoring, UK.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Economic										
The potential impact on economic receptors including employment and GVA.	✓	-	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets	C: Low (beneficial) D: Low (beneficial)	C: Medium D: Medium	C: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) D: Minor (beneficial)	None required

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
				(document reference J8)						

Table 13.94: Summary of potential environmental effects, mitigation and monitoring, Isle of Man.

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
Socio-economic										
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	None proposed	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: Low O: Low D: Low	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
Tourism										
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required

Table 13.95: Summary of potential cumulative environmental effects, mitigation and monitoring, North West England.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Scenario 1										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Low (beneficial) O: Low (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (beneficial) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (beneficial) D: Negligible	None required
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (neutral) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (neutral) D: Negligible	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Negligible O: Negligible D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Negligible D: Negligible	None required
Scenario 2										
The potential impact on economic receptors including	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the	C: Medium (beneficial) O: Low (beneficial)	C: Medium O: High D: Medium	C: Moderate (beneficial) O: Minor (beneficial)	None proposed beyond existing commitments.	C: Moderate (beneficial) O: Minor (beneficial)	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
employment and GVA.				Morgan Generation Assets (document reference J8)	D: Low (beneficial)		D: Minor (beneficial)		D: Minor (beneficial)	
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Negligible O: Low (beneficial) D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (beneficial) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (beneficial) D: Negligible	None required
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (neutral) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (neutral) D: Negligible	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
Scenario 3										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Medium to high (beneficial) O: Low to medium (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Moderate (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Moderate (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Low (beneficial) O: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (beneficial)	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
					D: Low (beneficial)		D: Minor (beneficial)		D: Minor (beneficial)	
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Low (beneficial) O: Low (neutral) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required

Table 13.96: Summary of potential cumulative environmental effects, mitigation and monitoring, North Wales.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Scenario 1										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan	C: Low (beneficial) O: Medium (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Moderate (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Moderate (beneficial) D: Minor (beneficial)	None required

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
				Generation Assets (document reference J8)						
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Negligible O: Low (beneficial) D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (beneficial) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (beneficial) D: Negligible	None required
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Negligible O: Negligible D: Negligible	C: Medium O: High D: Medium	C: Negligible O: Minor (neutral) D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Minor (neutral) D: Negligible	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Negligible O: Negligible D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Negligible D: Negligible	None required
Scenario 2										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Medium (beneficial) O: Medium (beneficial) D: Medium (beneficial)	C: Medium O: High D: Medium	C: Moderate (beneficial) O: Moderate (beneficial) D: Moderate (beneficial)	None proposed beyond existing commitments.	C: Moderate (beneficial) O: Moderate (beneficial) D: Moderate (beneficial)	None required

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Low (beneficial) O: Low (beneficial) D:	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Low (beneficial) O: Low (neutral) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
Scenario 3										
The potential impact on economic receptors including employment and GVA.	✓	✓	✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Medium to high (beneficial) O: Medium to high (beneficial) D: Medium (beneficial)	C: Medium O: High D: Medium	C: Moderate (beneficial) O: Moderate (beneficial) D: Moderate (beneficial)	None proposed beyond existing commitments.	C: Moderate (beneficial) O: Moderate (beneficial) D: Moderate (beneficial)	None required

Description of impact	Phase[a]			Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
	C	O	D							
The potential impact of increased employment opportunities.	✓	✓	✓	As above	C: Low to medium (beneficial) O: Low to medium (beneficial) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (beneficial) D: Minor (beneficial)	None required
The potential impact on population, housing and accommodation.	✓	✓	✓	As above	C: Low (beneficial) O: Low (neutral) D: Low (beneficial)	C: Medium O: High D: Medium	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) O: Minor (neutral) D: Minor (beneficial)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required

Table 13.97: Summary of potential cumulative environmental effects, mitigation and monitoring, UK.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Scenario 1										
The potential impact on economic receptors including employment and GVA.	✓		✓	A Skills and employment plan for the Morgan Offshore Wind Project will be secured via the Transmission Assets DCO. The Applicant has provided an outline of this plan for the Morgan Generation Assets (document reference J8)	C: Low (beneficial) D: Low (beneficial)	C: Medium D: Medium	C: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) D: Minor (beneficial)	None required
Scenario 2										
The potential impact on economic receptors including employment and GVA.	✓		✓	As above	C: Low (beneficial) D: Low (beneficial)	C: Medium D: Medium	C: Minor (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C: Minor (beneficial) D: Minor (beneficial)	None required
Scenario 3										
The potential impact on economic receptors	✓		✓	As above	C: Medium (beneficial) D: Low (beneficial)	C: Medium D: Medium	C:Moderate (beneficial) D: Minor (beneficial)	None proposed beyond existing commitments.	C:Moderate (beneficial) D: Minor (beneficial)	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
including employment and GVA.										

Table 13.98: Summary of potential cumulative environmental effects, mitigation and monitoring, Isle of Man.

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Scenario 1										
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	None proposed	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: Low O: Low D: Low	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Negligible O: Negligible D: Negligible	C: High O: High D: High	C: Negligible O: Negligible D: Negligible	None proposed beyond existing commitments.	C: Negligible O: Negligible D: Negligible	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Scenario 2										
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	None proposed	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: Low O: Low D: Low	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
Scenario 3										
Tier 1										
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	None proposed	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: Low O: Low D: Low	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required

Description of impact	Phase[a] C	O	D	Measures adopted as part of the project	Magnitude of impact	Sensitivity of the receptor	Significance of effect	Further mitigation	Residual effect	Proposed monitoring
Tier 2										
Potential socio-economic impacts on the Isle of Man associated with potential adverse effects on lifeline ferry services.	✓	✓	✓	None proposed	C: Medium (adverse) O: Medium (adverse) D: Medium (adverse)	C: Low O: Low D: Low	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required
The potential impact on tourism.	✓	✓	✓	N/A	C: Low (adverse) O: Low (adverse) D: Low (adverse)	C: High O: High D: High	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None proposed beyond existing commitments.	C: Minor (adverse) O: Minor (adverse) D: Minor (adverse)	None required

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