Cenos Offshore Windfarm Limited

Cenos EIA

Chapter 19 Socio-economics, Tourism and Recreation

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CONTENTS

ACRONYMS

ACRONYM	DEFINITION
A&E	Accident and Emergency
AIS	Automatic Identification System
ALARP	As low as reasonably practicable
ARI	Aberdeen Royal Infirmary
CAPEX	Capital Expenditure
CCP	Climate Change Plan
CES	Crown Estate Scotland
CfD	Contract for Difference
CLO	Community Liaison Officer
CNSE	Central North Sea Electrification
CO_2	Carbon Dioxide
COVID-19	Coronavirus Disease 2019
DEVEX	Development Expenditure
DMO	Destination Management Organisation
EEA	European Economic Area
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EICC	Export/Import Cable Corridor
EMP	Environment Management Plan
ESG	Environmental, Social, and Governance
ETZ	Energy Transition Zone
EU	European Union
FLOWW	Fishing Liaison with Offshore Wind and Wet Renewables Group
FTE	Full-Time Equivalent
g	Grams
GB	Great Britain
GP	General practice
GVA	Gross Value Added
GW	Gigawatt

ACRONYM	DEFINITION
HIE	Highlands and Islands Enterprise
HITRANS	Highlands and Islands Transport Partnership
HNDA	Housing Need and Demand Assessment
HVDC	High Voltage Direct Current
IAC	Inter-Array Cable
ICES	International Council for the Exploration of the Sea
IGP	Industrial Growth Plan
IMF	Inner Moray Firth
INNS	Invasive Non Native Species
INNSMP	Invasive Non Native Species Management Plan
INTOG	Innovation and Targeted Oil and Gas
IPF	Initial Plan Framework
IRSS	Indicative Regional Spatial Strategy to 2050
km	Kilometres
kWh	Kilowatt Hour
LHS	Local Housing Strategy
LOIP	Local Outcome Improvement Plan
LQ	Location Quotient
MAU	Marine Analytical Unit
MD-LOT	Marine Directorate - Licensing Operations Team
MHWS	Mean High Water Springs
MPCP	Marine Pollution Contingency Plan
MSc	Master of Science
MW	Megawatt
NHS	National Health Service
NMP	National Marine Plan
NPF4	National Planning Framework 4
OEMP	Operations Environmental Management Plan
ONS	Office for National Statistics
OPEX	Operational Expenditure
PAC	Pre-Application Consultation

ACRONYM	DEFINITION
SCDS	Supply Chain Development Statement
SDS	Skills Development Scotland
SEIA	Socio-Economic Impact Assessment
SIMD	Scottish Index of Multiple Deprivation
SMP	Sectoral Marine Plan
SOWEC	Scottish Offshore Wind Energy Council
UK	United Kingdom of Great Britain and Northern Ireland
VILN	Visit Inverness Loch Ness
VMS	Vessel Monitoring System
WTGs	Wind Turbine Generators

GLOSSARY

TERM	DEFINITION
2023 Scoping Opinion	Scoping Opinion received in June 2023, superseded by the 2024 Scoping Opinion.
2023 Scoping Report	Environmental Impact Assessment (EIA) Scoping Report submitted in 2023, superseded by the 2024 Scoping Report.
2024 Scoping Opinion	Scoping Opinion received in September 2024, superseding the 2023 Scoping Opinion.
2024 Scoping Report	EIA Scoping Report submitted in April 2024, superseding the 2023 Scoping Report.
Area of Opportunity	The area in which the limits of electricity transmission via High Voltage Alternating Current (HVAC) cables can reach oil and gas assets for decarbonisation. This area is based on assets within a 100 kilometre (km) radius of the Array Area.
Array Area	The area within which the Wind Turbine Generators (WTGs), floating substructures, moorings and anchors, Offshore Substation Converter Platforms (OSCPs) and Inter-Array Cables (IAC) will be present.
Cenos Offshore Windfarm ('the Project')	'The Project' is the term used to describe Cenos Offshore Windfarm. The Project is a floating offshore windfarm located in the North Sea, with a generating capacity of up to 1,350 Megawatts (MW). The Project which defines the Red Line Boundary (RLB) for the Section 36 Consent and Marine Licence Applications (MLA), includes all offshore components seaward of Mean High Water Springs (MHWS) (WTGs, OSCPs, cables, floating substructures moorings and anchors and all other associated infrastructure). The Project is the focus of this Environmental Impact Assessment Report (EIAR).
Cenos Offshore Windfarm Ltd. (The Applicant)	The Applicant for the Section 36 Consent and associated Marine Licences.
Cumulative Assessment	The consideration of potential impacts that could occur cumulatively with other relevant projects, plans, and activities that could result in a cumulative effect on receptors.
Developer	Cenos Offshore Windfarm Ltd., a Joint Venture between Flotation Energy and Vårgrønn As (Vårgrønn).

TERM	DEFINITION
Environmental Impact Assessment (EIA)	The statutory process of evaluating the likely significant environmental effects of a proposed project or development. Assessment of the potential impact of the proposed Project on the physical, biological and human environment during construction, operation and maintenance and decommissioning.
Environmental Impact Assessment Regulations	This term is used to refer to the Environmental Impact Assessment Regulations which are of relevance to the Project. This includes the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, the Marine Works (Environmental Impact Assessment) (Scotland) Regulations 2017 (as amended); and the Marine Works (Environmental Impact Assessment) Regulations 2007.
Environmental Impact Assessment Report	A report documenting the findings of the EIA for the Project in accordance with relevant EIA Regulations.
Export/Import Cable	High voltage cable used to export/import power between the OSCPs and Landfall.
Export/Import Cable Bundle (EICB)	Comprising two Export/Import Cables and one fibre-optic cable bundled in a single trench.
Export/Import Cable Corridor (EICC)	The area within which the Export/Import Cable Route will be planned and the Export/Import Cable will be laid, from the perimeter of the Array Area to MHWS.
Export/Import Cable Route	The area within the Export/Import Export Corridor (EICC) within which the Export/Import Cable Bundle (EICB) is laid, from the perimeter of the Array Area to MHWS.
Floating Turbine Unit (FTU)	The equipment associated with electricity generation comprising the WTG, the floating substructure which supports the WTG, mooring system and the dynamic section of the IAC.
Flotation Energy	Joint venture partner in Cenos Offshore Windfarm Ltd.
Habitats Regulations	The Habitats Directive (Directive 92/43/ECC) and the Wild Birds Directive (Directive 2009/147/EC) were transposed into Scottish Law by the Conservation (Natural Habitats &c) Regulations 1994 ('Habitats Regulations') (up to 12 NM); by the Conservation of Offshore Marine Habitats and Species Regulations 2017 ('Offshore Marine Regulations') (beyond 12 NM); the Conservation of Habitats and Species Regulations

TERM	DEFINITION
	2017 (of relevance to consents under Section 36 of the Electricity Act 1989); the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001; and the Wildlife and Countryside Act 1981. The Habitats Regulations set out the stages of the Habitats Regulations Appraisal (HRA) process required to assess the potential impacts of a proposed project on European Sites (Special Areas of Conservation, Special Protection Areas, candidate SACs and SPAs and Ramsar Sites).
Habitats Regulations Appraisal	The assessment of the impacts of implementing a plan or policy on a European Site, the purpose being to consider the impacts of a project against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site.
High Voltage Alternating Current (HVAC)	Refers to high voltage electricity in Alternating Current (AC) form which is produced by the WTGs and flows through the IAC system to the OSCPs. HVAC may also be used for onward power transmission from the OSCPs to assets or to shore over shorter distances.
High Voltage Direct Current (HVDC)	Refers to high voltage electricity in Direct Current (DC) form which is converted from HVAC to HVDC at the OSCPs and transmitted to shore over longer distances.
Horizontal Directional Drilling (HDD)	An engineering technique for laying cables that avoids open trenches by drilling between two locations beneath the ground's surface.
Innovation and Targeted Oil & Gas (INTOG)	In November 2022, the Crown Estate Scotland (CES) announced the Innovation and Targeted Oil & Gas (INTOG) Leasing Round, to help enable this sector-wide commitment to decarbonisation. INTOG allowed developers to apply for seabed rights to develop offshore windfarms for the purpose of providing low carbon electricity to power oil and gas installations and help to decarbonise the sector. Cenos is an INTOG project and in November 2023 secured an Exclusivity Agreement as part of the INTOG leasing round.
Inter-Array Cable (IAC)	The cables which connect the WTGs to the OSCPs. WTGs may be connected with IACs into a hub or in series as a 'string' or a 'loop' such that power from the connected WTGs is gathered to the OSCPs via a single cable.
Joint Venture	The commercial partnership between Flotation Energy and Vårgrønn, the shareholders which hold the Exclusivity Agreement with CES to develop the Cenos site as an INTOG project.

TERM	DEFINITION
Landfall	The area where the Export/Import Cable from the Array Area will be brought ashore. The interface between the offshore and onshore environments.
Marine Licence	Licence required for certain activities in the marine environment and granted under the Marine and Coastal Access Act 2009 and/or the Marine (Scotland) Act 2010.
Marine Protected Area (MPA)	Marine sites protected at the national level under the Marine (Scotland) Act 2010 out to 12 NM, and the Marine and Coastal Access Act 2009 between 12-200 NM. In Scotland MPAs are areas of sea and seabed defined so as to protect habitats, wildlife, geology, underseas landforms, historic shipwrecks and to demonstrate sustainable management of the sea.
Marine Protected Area (MPA) Assessment	A three-step process for determining whether there is a significant risk that a proposed development could hinder the achievement of the conservation objectives of an MPA.
Mean High Water Springs (MHWS)	The height of Mean High Water Springs is the average throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest.
Mean Low Water Springs (MLWS)	The height of Mean Low Water Springs is the average throughout a year of the heights of two successive low waters during periods of 24 hours (approximately once a fortnight).
Mitigation Measures	Measures considered within the topic-specific chapters in order to avoid impacts or reduce them to acceptable levels. • Primary mitigation - measures that are an inherent part of the design of the Project which reduce or avoid the likelihood or magnitude of an adverse environmental effect, including location or design; • Secondary mitigation – additional measures implemented to further reduce environmental effects to 'not significant' levels (where appropriate) and do not form part of the fundamental design of the Project; and • Tertiary mitigation – measures that are implemented in accordance with industry standard practice or to meet legislative requirements and are independent of the EIA (i.e. they would be implemented regardless of the findings of the EIA). Primary and tertiary mitigation are referred to as embedded mitigation. Secondary mitigation is referred to as additional mitigation.

TERM	DEFINITION
Mooring System	Comprising the mooring lines and anchors, the mooring system connects the floating substructure to the seabed, provides station-keeping capability for the floating substructure and contributes to the stability of the floating substructure and WTG.
Nature Conservation Marine Protected Area (NCMPA)	MPA designated by Scottish Ministers in the interests of nature conservation under the Marine (Scotland) Act 2010.
Offshore Substation Converter Platforms (OSCPs)	An offshore platform on a fixed jacket substructure, containing electrical equipment to aggregate the power from the WTGs and convert power between HVAC and HVDC for export/import via the export/import cable to/from the shore. The OSCPs will also act as power distribution stations for the Oil & Gas platforms.
Onward Development	Transmission projects which are anticipated to be brought forward for development by 3rd party oil and gas operators to enable electrification of assets via electricity generated by the Project. All Onward Development will subject to separate marine licensing and permitting requirements.
Onward Development Area	The area within which oil and gas assets would have the potential to be electrified by the Project.
Onward Development Connections	Oil and gas assets located in the waters surrounding the Array Area will be electrified via transmission infrastructure which will connect to the Project's OSCPs. These transmission cables are referred to as Onward Development Connections.
Project Area	The area that encompasses both the Array Area and EICC.
Project Design Envelope	A description of the range of possible elements that make up the Project design options under consideration and that are assessed as part of the EIA for the Project.
Study Area	Receptor specific area where potential impacts from the Project could occur.
Transboundary Assessment	The consideration of impacts from the Project which have the potential to have a significant effect on another European Economic Area (EEA) state's environment. Where there is a potential for a transboundary effect, as a result of the Project, these are assessed within the relevant EIA chapter.

TERM	DEFINITION
Transmission Infrastructure	The infrastructure responsible for moving electricity from generating stations to substations, load areas, assets and the electrical grid, comprising the OSCPs, and associated substructure, and the Export/Import Cable.
Vårgrønn As (Vårgrønn)	Joint venture partner in Cenos Offshore Windfarm Ltd.
Wind Turbine Generator (WTG)	The equipment associated with electricity generation from available wind resource, comprising the surface components located above the supporting substructure (e.g., tower, nacelle, hub, blades, and any necessary power transformation equipment, generators, and switchgears).
Worst-Case Scenario	The worst-case scenario based on the Project Design Envelope which varies by receptor and/or impact pathway identified.

19 SOCIO-ECONOMICS, TOURISM AND RECREATION

19.1 Introduction

This chapter of the Environmental Impact Assessment Report (EIAR) presents the Socio-economics, Tourism and Recreation receptors of relevance to the Project and assesses the potential impacts from the construction, operation and maintenance, and decommissioning of the Project on these receptors. Where required, mitigation is proposed, and the residual impacts and their significance are assessed. Potential cumulative and transboundary impacts are also considered.

The Socio-economics, Tourism and Recreation chapter includes considerations of offshore and onshore impacts from the offshore and onshore project expenditure and other offshore activities including those that effect onshore receptors. This is for two principal reasons:

- Separating important aspects of expected Project expenditures into onshore and offshore categories is not meaningful for socio-economic receptors as these aspects are intrinsically linked. Therefore, the assessment in this chapter has been undertaken considering both offshore and onshore receptors; and
- The receptors that have the potential to experience effects relevant to the socio-economics topics such as businesses, workers, households, and visitors are either largely or wholly based onshore. Therefore, consideration of the scale and duration of potential effects needs to account for, among other things, the onshore spatial location of these receptors in connection to the offshore site and the onshore places where business and socio-economic activities relating to the Project are likely to occur. This approach also makes use of a hierarchy of spatial areas in the assessment of impacts.

Table 19-1 provides a list of all the supporting studies which relate to and should be read in conjunction with the Socio-economics, Tourism and Recreation impact assessment. All supporting studies are appended to this EIAR.

Table 19-1 Supporting studies

DETAILS OF STUDY	SUPPORTING STUDIES AND LOCATION (WHERE RELEVANT)
Detailed Socio-economic methodology	EIAR Vol. 4, Appendix 30: Detailed Socio-economic methodology

The impact assessment presented herein draws upon information presented within other impact assessments as part of this EIAR, including:

- EIAR Vol. 3, Chapter 14: Commercial Fisheries - assesses the impacts of potential effects of the Project on various receptors relating to commercial fisheries including the temporary loss of access to fishing ground, interference with fishing activities, displacement of fishing efforts to other areas, and risks of loss or damage to fishing gear;
- EIAR Vol. 3, Chapter 15: Shipping and Navigation – assesses the impacts of potential interference or risk to vessels navigating through the Project as a result of the physical presence of Project vessels and infrastructure; and
- EIAR Vol. 3, Chapter 17: Infrastructure and Other Users - assesses the impacts of infrastructure and other users including oil and gas operations, other offshore renewable energy developments, telecommunications and power, unexploded ordnance, licenced dredge spoil disposal sites, and sterilisation of areas for marine aggregates.

Where information from other chapters is used to inform the impact assessment, reference to the relevant EIAR Chapter is given.

The following specialists have contributed to the assessment:

- Alice Masson, Glic;
- James Blair Urquhart, Glic; and
- David Smart, Glic.

19.2 Legislation, policy, and guidance

The wider marine planning, legislation, policy and guidance is discussed in EIAR Vol. 2, Chapter 3: Policy and Legislative Context. The following policy and guidance are relevant to the assessment of impacts from the Project on Socio-economics, Tourism and Recreation receptors:

- United Kingdom (UK) government policy:
  - Support for the offshore renewables sector is a significant part of UK Government strategy, featuring in the *Industrial Strategy: Building a Britain fit for the future* (Department for Business, Energy & Industrial Strategy (BEIS), 2017) and *the Net Zero Strategy: Build Back Greener* (BEIS, 2021). In 2020, the Offshore Wind Sector Deal was launched (UK Government, 2020), which included several initiatives and targets that sought to support and stimulate additional investment in the offshore renewable energy sector, such as:

    - Offering developers and investors clearer expectations on the scale and schedule of future Contract for Difference (CfD) allocation rounds;
    - Implementing initiatives to attract more investment to grow and enhance the UK's renewable energy supply chain;
    - Encouraging further research, development, and innovation in offshore renewable energy technologies;
    - Introducing measures to increase the availability of a well-trained and qualified workforce;
    - Setting goals to improve the representation of women and other under-represented groups in the offshore renewable energy workforce; and
    - Establishing a target for 60% UK content over the lifetime of developments commissioned from 2030 onward.

- The government has reaffirmed its commitment to promoting renewable energy in general, with aims to make the UK grid net zero of carbon emissions by 2030. For this, the Secretary of State for Energy Security and Net Zero has allocated £1.1 billion a year to offshore wind in subsidy contracts. The government wants to use this to quadruple offshore wind capacity by 2030 as part of their net zero plan (UK Government, 2024a).

– Offshore Wind Industrial Growth Plan (Offshore Wind Industry Council (OWIC), 2024): RenewableUK, OWIC, The Crown Estate and Crown Estate Scotland (CES) have published a detailed Industrial Growth Plan (IGP), setting out plans to triple offshore wind manufacturing capacity over the next ten years. The measures set out in the IGP would create an additional 10,000 jobs a year and boost the UK's economy by £25 billion between 2024 and 2035 by accelerating offshore wind deployment to five to six gigawatts (GW) a year. The IGP's analysis shows that supply chain constraints in many of the key components needed in offshore wind farms are constraining the global market. The IGP identifies strategic new factories and manufacturing capabilities which the UK should build up to protect against supply chain risks and boost economic growth, and five key technology areas in which the UK should prioritise investment to secure value for UK industry. This includes the design and manufacture of offshore wind blades and turbine towers, foundations, cables and other key components and services for projects in the UK and abroad;
– Energy White Paper: Powering our Net Zero Future (BEIS, 2020a): A detailed plan for achieving a net zero energy system by 2050 that focuses on cleaner, low-cost energy;
– National Infrastructure Strategy (BEIS, 2020b): A strategy that sets out the UK's approach to long-term infrastructure development, with offshore wind as a key element in energy infrastructure;
– British Energy Security Strategy (BEIS, 2022): Developed in response to the energy crisis and rising fossil fuel prices, this strategy seeks to enhance energy independence and security; and

- Pathway to 2030: Offshore Transmission Network Review (BEIS, 2023): A review established to address the challenges of connecting offshore wind to the onshore grid efficiently and sustainably.

- Scottish Government policy:
  – Scotland's National Strategy for Economic Transformation (Scottish Government, 2022a):
    - The strategy focuses on creating sustainable economic growth through innovation and green industries, including offshore renewable energy. It emphasises leveraging Scotland's natural resources and expertise in offshore renewables to create new high-value jobs (and replace jobs expected to be lost in the oil and gas sector) and attract investment. It aligns offshore renewable growth with broader economic and social goals, including community benefit and equitable distribution of opportunities.
  – The Environmental Strategy for Scotland (Scottish Government, 2020a):
    - Scottish Government's environmental vision aims to create an inclusive and sustainable net zero, circular economy. The strategy sets a long-term vision to address climate and biodiversity crises by 2045, including objectives to protect and restore nature, limit climate impacts, promote resource efficiency, and foster a green economy. These goals support a healthy environment that promotes social equity, economic resilience, and global responsibility. The strategy integrates with policies like the Climate Change Act and Circular Economy Bill that aim for transformative change across society.
  – Scotland's Climate Change Plan, 2018-2032 (Scottish Government, 2020b) (under review):
    - The Climate Change Plan (CCP) is a statutory document required under the Climate Change (Scotland) Act 2009. The plan is required to include proposed measures related to issues devolved to the Scottish Parliament, and is organised by sector including electricity, transport, and agriculture. The current version is the third report on proposals and policies, published in 2018, taken together with the CCP update, published in 2020 (the latter takes account of the new targets and requirements introduced by the Climate

Change (Emissions Reduction Targets) (Scotland) Act 2019). The plan and its update covers the period 2018 to 2032, the next plan will 'roll forward' to cover the period from 2024/5 to, at least, 2040. Originally, the expected publication date of the draft CCP was November 2023. However, publication has been delayed; in November 2023 the Cabinet Secretary cited the need to analyse and take account of recent changes to UK Government policies and the economic situation as causes. The new plan is due to be published in March 2025.

- Blue Economy Vision for Scotland (2022-2045) (Scottish Government, 2022b):
  - This vision document describes how to sustainably develop Scotland's marine sectors, including offshore wind, by aligning environmental protection with economic benefits. At its core the vision recognises that economic prosperity and well-being are embedded in nature and, in order to harness blue opportunities, the economy and society must operate within the planet's sustainable limits. The Blue Economy Vision extends the Scottish Government's Environment Strategy vision of 'One Earth. One Home. One Shared Future' to include 'One Ocean'. The vision is that, by 2045, "*Scotland's shared stewardship of our marine environment supports ecosystem health, improved livelihoods, economic prosperity, social inclusion and wellbeing*" To deliver this aspiration the paper provides guidance on areas for attention. These include:

    - Environment: Scotland's marine and inter-linked freshwater and coastal environments are restored, adapted and resilient to climate change and sustainably managed to achieve good environmental status;
    - Social: Scotland's blue economy is managed to ensure fairer, healthier, happier communities across Scotland, with equal access to the benefits from marine resources; and
    - Economic: A healthy marine environment is enabling innovative blue sectors. Blue sectors are resource efficient, internationally competitive and operating to meet net zero and nature-positive commitments, supported by a skilled workforce that is inclusive, diverse, and fair, reflecting our commitment to equality and human rights.
- Scottish Energy Strategy (Scottish Government, 2017):
  - The plan sets out the long-term vision for a reliable, low-carbon energy system. Offshore wind plays a key role in the strategy, identified as an important resource to meet renewable energy targets and power Scotland's decarbonisation. It emphasises diversification, grid integration, and maximising offshore wind's economic potential through innovation and investment in infrastructure.
- Draft Energy Strategy and Just Transition Plan (Scottish Government, 2023a):
  - This (draft) plan aims to describe Scotland's pathway to a fair, net zero energy system positioning offshore wind as a cornerstone of the strategy. The draft was published on 26th May 2023. Ambitions included in the draft plan include:
    - More than 20 GW of additional renewable electricity on and offshore by 2030;
    - Increased contributions from solar, hydro and marine energy to Scotland's energy mix;
    - Generation of surplus electricity, enabling export of electricity and renewable hydrogen to support decarbonisation across Europe;
    - Energy security through development of our own resources and additional energy storage;
    - A just transition by maintaining or increasing employment in Scotland's energy production sector against a decline in North Sea production; and
    - Maximising the use of Scottish manufactured components in the energy transition, ensuring high-value technology and innovation.

- National Planning Framework 4 (NPF4) (Scottish Government, 2023b):
  - The Scottish Government's NPF4 integrates climate change targets and sustainability into spatial planning. It supports the growth of offshore wind as a key component of Scotland's transition to net zero, facilitating faster approvals for projects by aligning national energy priorities with planning policies. NPF4 places a strong focus on decarbonising energy and is likely to encourage strategic offshore wind developments in areas conducive to renewable energy generation. NPF4 was adopted in February 2023 and, of relevance, states:
    - "*Offshore renewables have a natural home [in Aberdeenshire] and will be at the heart of the area's future wellbeing economy*"; and
      "*To encourage, promote and facilitate all forms of renewable energy development onshore and offshore*" (policy intent).
- Scotland's National Marine Plan (NMP) (Scottish Government, 2015):
  - The Scottish Government's NMP outlines the development of Scotland's marine environment to provide multiple benefits including economic, defence and environmental elements. On offshore wind and marine renewable energy, the Plan specifically outlines aims to "contribute to achieving the decarbonisation target of 50 grams (g) of Carbon Dioxide (CO_2) / kilowatt hour (kWh) by 2030". The document notes two areas off the coast of Aberdeenshire as options for offshore wind plans. The NMP also notes that, to develop the renewables sector, it expects there to be significant positive interactions with submarine cables, manufacturing, construction, maintenance and ports and harbours sectors. This would lead to increased indirect income, much of which would likely be in and around Aberdeenshire and Scotland. However, it is noted that there would be competition for space from sectors such as fisheries and aquaculture; marine recreation and tourism; shipping; and defence, which could be mitigated by improved communication between sectors. Following the most recent review of the NMP in 2021, the Scottish Ministers announced, in 2022, their intention to update the National Marine Plan. This update is underway but has not yet reached a draft consultation stage. A stakeholder engagement strategy and statement of public participation was published in August 2024.
- Defining 'Local Area' for assessing impact of offshore renewables and other marine developments (Marine Scotland, 2022):
  - The report commissioned by Marine Scotland (2022) outlines standardised guidance on defining local spatial areas for the assessment of socio-economic effects. This guidance provides six key principles:
    - Dual geographies: The local area for the supply chain and investment impacts should be separate from the local area(s) for wider socio-economic impacts;
    - Appropriate impacts: The appropriate impacts to be considered for assessments should be identified prior to defining the local areas;
    - Epicentres: The local areas should include all the epicentres of the appropriate impacts;
    - Accountability: The local areas used in the assessment should comprise pre-existing economic or political geographies (community councils, local authorities, development agencies) to enhance accountability;
    - Understandable: The local areas should be defined in such a way that they are understandable to the communities they describe; and
    - Connected geography: The local area for the supply chain and investment impacts should consist of connected (including coastal) pre-existing economic or political geographies.

- Offshore Wind Policy Statement (Scottish Government, 2020c):
  - The statement affirms the Scottish Government's commitment to accelerating offshore wind development as a critical part of Scotland's energy mix. It sets objectives for scaling up offshore wind capacity, reducing barriers to development, and encouraging innovation in floating wind technologies. The statement also outlines the importance of collaboration with private industry and UK Government to ensure the capabilities of infrastructure and supply chains.
- Regional Marine Planning:
  - Marine Planning Partnerships create localised marine plans that focus on specific regional needs and priorities for coastal and marine areas. These plans support offshore wind development by assessing local environmental and socio-economic conditions, ensuring that projects align with regional priorities and minimise negative impacts on coastal communities and ecosystems;
- Sectoral Marine Plan (SMP) for Offshore Wind Energy (Scottish Government, 2020d):
  - The plan aims to identify sustainable options for the future development of commercial-scale (projects generating more than 100 megawatt (MW) of electricity) offshore wind energy in Scotland. It covers both the inshore and offshore waters of Scotland and identifies 15 areas ('plan options') that have been assessed to be suitable for such construction. These are spread across Scotland, though nearly two-thirds are off the east coast. The analysis of appropriate areas is primarily focused on natural and wildlife impacts. The report details the further actions required to ensure successful implementation, regarding seabed leasing for offshore wind farm development, as well as continued submission of new evidence to ensure the plan options remain viable
- Climate Emergency Skills Action Plan (2020-2025) (Scottish Government, 2020e):
  - Produced with Skills Development Scotland (SDS), the plan addresses gaps in skills to support Scotland's green transition, with a focus on building a workforce for the key sectors required to achieve this. It identifies renewable energy as key to the future creation of additional high quality, green jobs for Scotland.
- Innovation and Targeted Oil and Gas (INTOG) Initial Plan Framework (Scottish Government, 2022c):
  - The Initial Plan Framework (IPF) outlines the process for developing the Sectoral Marine Plan for INTOG decarbonisation. The INTOG leasing round seeks to reduce emissions from oil and gas and boost further innovation. It details the footprint that will be part of the Crown Estate leasing process and describes the next stages in the planning process as it relates to Scottish Government responsibilities.

- Local policy
  - Aberdeen and Aberdeenshire Council:
    - Aberdeen City and Shire Strategic Development Plan (Aberdeen City and Shire Strategic Development Planning Authority, 2020):
      - This outlines a long-term plan for sustainable growth in the Aberdeen City and Aberdeenshire combined region. It includes a focus on diversifying the economy, supporting innovation, and addressing climate change;
      - The plan highlights the important of the offshore wind sector as part of the strategy to shift away from the oil and gas sector and is considered important in driving future economic growth and as a significant source of future job creation. As such, the plan supports the sector's development including training and education initiatives to help equip the local workforce with the skills needed for the renewable energy sector and support for research into renewable energy technologies; and
      - The plan comments on the "*considerable potential in offshore renewables yet to be realised*" and proposes harbours along the north coast to be ideally suited for "*supplying services to offshore renewable energy facilities*". This aligns with the Councils' goal to grow and develop the harbours,

placing a focus on Aberdeen South Harbour and secondary infrastructure to ensure the harbour can be fully utilised. It also notes that future development plans for offshore renewables should look to support the wider transformation of Aberdeen City with the potential to improve local businesses.

- Regional Economic Strategy: A sustainable economic future for the North East of Scotland (Aberdeen City Council, Aberdeenshire Council, and Opportunity North East, 2023):
  - The strategy sets out a comprehensive plan to position the region as a pioneer in renewable energy, creating a thriving, sustainable, and inclusive economy for future generations. It aims to attract and retain talent, foster innovation, and enable investment in key sectors that will shape a post-fossil fuel future.;
  - Central to this plan is the North East's leadership in the green energy transformation. Offshore wind, particularly floating offshore wind, alongside green hydrogen and carbon capture, utilisation, and storage are essential parts of the region's strategy. By maximising green energy production and decarbonisation, the North East aims to retain its reputation as a hub for offshore subsea engineering and continue to build a competitive and commercially attractive supply chain for emerging green energy industries.; and
  - The strategy also emphasises the importance of developing a skilled workforce through initiatives like the Energy Skills Accelerator, led by local universities and North East Scotland College, with support from SDS and Energy Transition Zone (ETZ).

– Highlands:
  - Our Future Highland – Performance Plan (2022-2027) (Highland Council, 2024a):
    - Highland Council's corporate plan has five key strategic priority outcomes that together contribute to the delivery and monitoring of the Council's Our Future Highland programme which focuses on creating a more sustainable future for Highland communities; and
      One of the five strategic priority outcomes is "*a sustainable Highland environment and global centre for renewable energy*". Within this outcome, the plan stresses the Council's support and promotion of adopting a just transition approach to strategic planning.
  - Highland Council Indicative Regional Spatial Strategy to 2050 (IRSS) (Highland Council, 2021a):
    - The IRSS to 2050 outlines a 30-year vision to address regional growth, sustainability, and resilience, aligning with national goals within NPF4. Key themes include:
      - Sustainable and resilient communities: The strategy aims to strengthen both urban and rural areas, particularly by supporting digital connectivity, sustainable housing, and equitable access to essential services. The plan emphasises rural repopulation to counteract population decline, offering better opportunities for education, healthcare, and employment across Highland communities;
      - Green economy and climate action: Highland seeks to become a leader in renewable energy and a low-carbon economy. The strategy supports significant investments in renewable infrastructure, including local energy networks, clean energy production, and improved waste management;
      - Diversified economy and innovation: The IRSS emphasises expanding Highland's economic base by investing in tourism, life sciences, the space industry, and digital infrastructure. Enhanced connectivity, both physical and digital, is seen as essential to fostering economic resilience and growth, attracting inward investment, and supporting local enterprises;
      - Sustainable tourism and cultural heritage: Recognising its appeal as a globally renowned destination, the IRSS seeks to manage Highland's tourism sector sustainably, improving infrastructure while preserving natural and cultural heritage; and

- Infrastructure improvements: Essential upgrades to transportation and digital networks will support ambitions that include new roads, railways, and virtual connectivity to make Highland more accessible.

The IRSS reflects Highland Council's commitment to achieving a balanced growth model that aligns with climate and community goals, while leveraging the region's unique assets to contribute to Scotland's broader environmental and economic targets by 2050.

- Highlands and Islands Enterprise Strategy (2023-2028) (Highlands and Islands Enterprise, 2023):
  - The five-year strategy sets out Highlands and Islands Enterprise' (HIE) long-term vision for the Highlands and Islands. One of its key outcomes is increasing the economic and community benefit from the transition to net zero. The strategy aims to support renewable deployment and associated supply chain development, including offshore wind (ScotWind and INTOG);
  - With regard to offshore wind, the strategy outlines key steps that HIE endeavours to support to realise the opportunity for offshore wind in the region. It aims to develop the offshore wind supply chain through tailored support programmes, targeted investment, and company-specific interventions, with a focus on filling gaps in capability, especially for floating wind components; and
  - HIE is collaborating with Scottish Enterprise, South of Scotland Enterprise, and key project developers to coordinate engagement to address industry needs and regional opportunities, as well as the Scottish Offshore Wind Energy Council and the Highlands and Islands Regional Economic Partnership to drive investment in infrastructure and skills development.

19.3 Scoping and consultation

Stakeholder consultation has been ongoing throughout the Environmental Impact Assessment (EIA) and has played an important part in ensuring the scope of the baseline characterisation and impact assessment is appropriate with respect to the Project and requirements of the regulators and their advisors.

A Scoping Workshop was held on the 29th February 2024 (as detailed in EIAR Vol. 2, Chapter 1: Introduction). Relevant points specific to Socio-economics, Tourism and Recreation receptors are provided in Table 19-2 below, which sets out how these points have been addressed within the EIAR

The 2024 Scoping Report was submitted to the Marine Directorate – Licensing Operations Team (MD-LOT) in April 2024, other relevant stakeholders were also consulted. The Scoping Opinion was received in September 2024. The 2024 Scoping Report and Scoping Opinion supersedes the 2023 Scoping Report and Scoping Opinion for the Project. Relevant comments from the Scoping Opinion and other consultation specific to Socio-economics, Tourism and Recreation are provided in Table 19-2, which provides a high-level response on how these comments have been addressed within the EIAR.

Further consultation has been undertaken throughout the pre-application phase. Consultation activities relevant to Socio-economics, Tourism and Recreation include:

- Pre-Application Consultation (PAC) event: A PAC event was held at Peterhead Football Club, Peterhead, on 1st October 2024 in accordance with the Marine Licensing (Pre-Application Consultation) (Scotland) Regulations 2013. Two sessions took place (12:00 to 15:00 and 16:00 to 19:00). The PAC event was an opportunity for local community members and other stakeholders to learn more about the Project, meet the team and provide feedback. A series of display boards with information about the Project was provided, and members of the team were on hand to answer questions. The event was attended by 23 individuals with a range of interests in the project; and
- Non-statutory stakeholder consultation: A stakeholder mapping exercise was conducted post Scoping to identify non-statutory stakeholders that could be impacted by the Project in relation to Socio-economics, Tourism and Recreation. The final group was contacted via email (14/10/2024) and invited to a discussion on any potential positive or negative impacts they might experience as a result of the Project. The discussions contributed to baseline characterisation and ensuring appropriate receptor sensitivities were selected. Those contacted and subsequently consulted are listed below:

    - Aberdeenshire Employability Partnership (contacted);
    - Aberdeen Employability Partnership (ABZ Works) (contacted);
    - Aberdeenshire Health and Social Care Partnership (contacted);
    - Opportunity North East (contacted);
    - Scottish Canoe Association (contacted);
    - Scottish Surfing Federation (contacted);
    - SDS (contacted and consulted);
    - Sportscotland (contacted);
    - Surfers Against Sewage (contacted);
    - VisitAberdeenshire (contacted and consulted); and
    - VisitScotland (contacted and consulted).

Table 19-2 Comments from the Scoping Opinion relevant to Socio-economics, Tourism and Recreation

REGULATOR / CONSULTEE	COMMENT	RESPONSE
Scottish Ministers	The Developer has considered the socio-economic impacts of the Proposed Development in Chapter 19 of the Scoping Report and in Appendix 19A of Volume II of the Scoping Report. The latter specifically considers socio-economic issues relating to human health.	Noted. Socio-economic impact pathways scoped in are presented in Table 19 44, for reference, including impacts relating to human health.
Scottish Ministers	Scottish Ministers advise that the Developer must undertake a full Socio-Economic Impact Assessment ("SEIA") and in completing this, advise the Developer to fully consider the guidance and principles detailed in Annex 1 of the Marine Analytical Unit's (MAU) advice.	A full Socio-Economic Impact Assessment (SEIA) is carried out in this chapter and MAU advice (as noted throughout this Table) has been considered and referenced throughout.
Scottish Ministers	Scottish Ministers are content with the study area for the SEIA and agree with the proposal to include impacts to onshore receptors as well as offshore receptors from the Proposed Development.	Noted. For reference, the Socio-economics, Tourism and Recreation Study Area as defined in the Scoping Report is presented in Section 19.4.1 Consideration of onshore receptors including, but not limited to, tourism receptors, supply chain, and business activity are considered within the assessment presented within this Chapter.
Scottish Ministers	Scottish Ministers are broadly in agreement with the data sources detailed in table 19.4 of the Scoping Report. However, the Developer is referred to the MAU advice for information as to how the data sources may be broadened to improve the quality of the assessment presented. The Scottish Ministers highlight the MAU emphasis on the importance of community engagement throughout the process.	Noted. MAU advice has been referred to.
Scottish Ministers	In relation to economic impacts, the Scottish Ministers advise that the proposed approach to assess employment impacts should be expanded to include analysis of potential job creation from the Proposed Development	Section 19.6.1.1 presents an assessment of the potential job creation in comparison to the Study Area baseline. The methodological approach is detailed in Section 19.5.

REGULATOR / CONSULTEE	COMMENT	RESPONSE
	in comparison to existing jobs in the study area, as outlined in the MAU response. A detailed description of the methodology used to assess economic impacts must also be included in the EIA, outlining the methodological approach taken and any key assumptions that underpin any estimates.	
Scottish Ministers	The Scottish Ministers advise that all socio-economic issues should be considered within the same part of the document, this is a view supported by the MAU in its advice. For the avoidance of doubt, impacts scoped in for assessment relative to human health should form part of the SEIA.	Noted. All socio-economic impact pathways scoped in are presented in Section 19.5.1, for reference, including those relating to human health. Sections 19.6 and Section 19.7 present the assessment of impacts.
Scottish Ministers	The Scottish Ministers broadly agree with the scoping report's proposed approach. They encourage greater consultation with the local community and disagree with the scoping out of community safety, transport and access, and social participation. In addition, they expect a detailed description of the methodology to be included.	A PAC event was organised that was open to the local community. Additional non-statutory stakeholder consultation has also been carried out (see Section 19.4.3). Further consultation with local communities is planned and will follow government consultation advice. An assessment of the impacts on Community safety, transport and access, and social participation is included in potential socio-cultural effects (Sections 0 and 19.6.2.7).
Scottish Ministers	A detailed description of the methodology used to assess economic impacts must also be included in the EIA, outlining the methodological approach taken and any key assumptions that underpin any estimates.	EIAR Vol. 4, 30: Detailed Socio-Economic Methodology presents the socio-economics methodology utilised for this impact assessment
MAU	The Cenos Offshore Wind Farm Development scoping report includes descriptions of a range of potential impacts. This response focuses only on the assessment of social and economic impacts.	Noted.
MAU	We recommend that a full Socio-Economic Impact Assessment be carried out. We provide general advice on how to deliver this in Annex 1.	A full SEIA has been carried out within this Chapter in consideration of MAU guidance and advice (as noted throughout this Table) and has been considered and referenced throughout.

REGULATOR / CONSULTEE	COMMENT	RESPONSE
MAU	1. Overview 1.1. Study areas - The study areas relevant to the assessment were identified in section 19.3.1.2. of the scoping report.	Noted. For reference, the Socio-economics, Tourism and Recreation Study Area as defined in the Scoping Report is presented in Section 19.4.1
MAU	We welcome the approach of considering onshore receptors affected by offshore elements of the project.	This response is noted and welcomed. The assessment undertaken in this chapter with respect to onshore receptors has been carried out using the approach described in the scoping report, so is appropriate to the requirements of the MAU.
MAU	MAU support the approach of considering a short list of ports as epicentres of impact in the absence of a pre-approved port location for the purpose of establishing a study area for the socio-economic impacts of the project.	Spatial scoping for each scoped-in impact has been informed using this epicentre approach. Likely ports for majority of construction activity, including Floating Turbine Unit (FTU) substructure integration & Wind Turbine Generator (WTG) assembly: - Cromarty Firth, Invergordon, Nigg - Ardersier - Burntisland Other construction & marshalling activities from: - Aberdeen - Peterhead - Forth ports & estuary - Newcastle & other North of England ports - Dundee - Montrose - Leith Potential ports (Personnel, O&M): - Aberdeen - Peterhead - Montrose

REGULATOR / CONSULTEE	COMMENT	RESPONSE
		Please note this is not an exhaustive list. All ports are under consideration on the East coast of Scotland and North-East of England. Use of ports in Norway, the Netherlands, or the rest of the North Sea region cannot be ruled out at this stage.
MAU	We agree with utilising the existing administrative boundaries of Aberdeenshire as the basis for the study areas.	This is considered and expanded on in Section 19.4.1. The Socio-economics, Tourism and Recreation Study Area, as defined in the Scoping Report, is presented in Section 19.4.1
MAU	1.2. Consultation, stakeholder engagement, and primary data collection - We noted the consultation activities that have been conducted to date and planned future engagement mentioned in Chapter 6 of the Scoping Report. We also note in section 19.4 that stakeholder engagement appears to revolve primarily around statutory consultees.	Noted. A PAC event was organised that was open to the local community and additional non-statutory stakeholder consultation has also been carried out (see Section 19.4.3, and the PAC Report). The assessment presented within this Chapter has been informed by the outcomes of these consultations. Further consultation with local communities is planned and will follow government consultation advice.
	It is not clear whether local communities potentially affected by the development will be part of the consultation and engagement process. Academic research (e.g. Aitken et al 2016; Devine-Wright 2011; Firestone et al 2012; Howell 2018; Jijelava and Vanclay 2028; Langbroek and Vanclay 2012; Vanclay 2020) shows that it is important to involve local communities in social impact assessments and address any concerns communities might have. This decreases the delivery risks for projects. Following this research, we believe that the engagement of stakeholders (including local communities) is very important for the assessment of socio-economic impacts, as these communities might be directly impacted by the development. As described in the Annex 1, we recommend conducting a stakeholder mapping exercise to identify all potential stakeholders who	A comprehensive stakeholder mapping exercise was conducted in collaboration with Glic, Xodus, and the wider Cenos team. All relevant information was logged in the dedicated Stakeholder Mapping tool, Tractivity. This tool enabled assessment determination of the magnitude and sensitivity of potential socio-economic impacts. Additionally, it supports ongoing engagement by facilitating the creation of working groups, including local community councils, to ensure continuous dialogue and address any concerns effectively.

REGULATOR / CONSULTEE	COMMENT	RESPONSE
	might be affected by the development. These stakeholders need to be engaged for identification and assessment of potential impacts (e.g. creation of a working group with local community councils where magnitude and sensitivity of socio-economic impacts is discussed).	
MAU	It is important not only to inform members of the general public about the development but also gather their views of how they might be affected (primary data collection). Please note that this approach is important not only for the assessment of socio-cultural impacts, but also other social and economic impacts (e.g. communities' views on potential impacts on employment, housing, local services). We recommend that potential socio-economic impacts are discussed with members of the general public and their assessment is fed into the report.	A PAC event was held in October 2024 that was open to the local community, and additional non-statutory stakeholder consultation has also been carried out (see Section 19.4.3, and the PAC Report). The assessment presented within this Chapter has been informed by the outcomes of these consultations. Further consultation with local communities is planned and will follow government consultation advice.
MAU	We believe that engagement and research with communities is proportionate to large infrastructure projects, such as offshore wind farms. Moreover, there are examples of how social research has been implemented in practice by some OWFs.	A PAC event was held in October 2024 that was open to the local community, and additional non-statutory stakeholder consultation has also been carried out (see Section 19.4.3, and the PAC Report). The assessment presented within this Chapter has been informed by the outcomes of these consultations. Further consultation with local communities is planned and will follow government consultation advice.
MAU	We encourage the developer to engage trained social researchers with experience in qualitative methods to conduct research and primary data collection with communities to ensure that the social science research methods are designed and executed correctly so that the engagement is delivered in as ethical and meaningful way as possible.	The consultation undertaken to date is outlined in EIAR Vol. 2, Chapter 6: Stakeholder Consultation. The Applicant has aimed to consult with all stakeholders that may have an interest in the Project, including organisations, individuals, and communities. To date, the Applicant has engaged with statutory and non-statutory stakeholders and will continue this engagement throughout the lifecycle of the Project. Glic have been contracted and involved in primary data collection for the Project from local communities, via the PAC event, stakeholder mapping and consultation, for example interviews. Further

REGULATOR / CONSULTEE	COMMENT	RESPONSE
		consultation with local communities is planned and will follow government consultation advice.
MAU	We are open to developers working together to mitigate the issue of stakeholder fatigue. The SOWEC developer collaboration project, may be a vehicle for such a collaborative approach moving forward. We would like to note, however, that it is the responsibility of developers to ensure that the SEIA includes the results of SOWEC project, as the MAU does not support signposting to participation in the project as sufficient for the assessment.	Flotation Energy has participants in the SOWEC developer project, however Cenos does not have a representative at this time.
MAU	MAU believe that the engagement of stakeholders (including local communities) is very important for the assessment of socio-economic impacts, as these communities might be directly impacted by the development. As described in the Annex 1, we recommend conducting a stakeholder mapping exercise to identify all potential stakeholders who might be affected by the development. These stakeholders need to be engaged for identification and assessment of potential impacts (e.g. creation of a working group with local community councils where magnitude and sensitivity of socio-economic impacts is discussed).	As recommended, a comprehensive stakeholder mapping exercise was conducted in collaboration with Glic, Xodus, and the wider Cenos team. All relevant information was logged in our dedicated Stakeholder Mapping tool, Tractivity. This tool enabled an assessment and determination of the magnitude and sensitivity of potential socio-economic impacts. Additionally, the tool supports ongoing engagement by facilitating the creation of working groups, including local community councils, to ensure continuous dialogue and address any concerns effectively.
MAU	1.3. Data sources – Please provide a list of data sources used to assess potential socio-economic impacts (see Annex 1 for examples). Please use the most up-to-date data sources.	Noted. See Section 19.4.2 for further information.
MAU	MAU note that in the Scoping Report some socio-economic impacts are discussed as part of the socio-economics, and some are discussed in the Appendix 19A as part of human health (community identity, education and training, etc). We would like the analyses of all socio-economic issues to be discussed in one place (socioeconomics chapter) to ease the assessment.	Noted. All socio-economic impact pathways scoped in are presented in Section 19.5.1, for reference, including those relating to human health. Sections 19.6 and Section 19.7 present the assessment of impacts.

REGULATOR / CONSULTEE	COMMENT	RESPONSE
MAU	MAU disagree with scoping out community safety, transport and access, and social participation.	As assessment of the impacts on Community safety, transport and access, and social participation is included in potential socio-cultural effects (Sections 0 and 19.6.2.7).
MAU	MAU broadly agree with the scoping report's proposed approach for assessing economic impacts in gross valued added terms, in particular that the assessment will include direct, indirect and induced impacts for all phases of the project. It's recommended that the assessment takes into account deadweight, leakage, displacement and substitution, and that sensitivity analysis will be performed to account for risk, uncertainty and optimism bias.	Deadweight, leakage, displacement and substitution have been accounted for (Sections 19.6.1.1, 0, 19.6.2.1, 19.6.2.2, 19.6.3.1, 19.6.3.2, 19.7.2.1, 19.7.3.1). (please see EIAR Vol. 4, 30: Detailed Socio-Economic Methodology for the supporting assessment methodology).
MAU	The scoping report outlines that employment impacts will be assessed at each phase of the project in terms of years of employment and jobs. If it is possible to supply additional information about the types of jobs that are expected to be created (e.g. part-time, full-time, skilled, unskilled etc) and how these compare to the existing jobs in the study area, this will add further depth to the analysis.	Employment impacts have been assessed for each phase of the Project (Sections 19.6.1.1, 19.6.2.1, 19.6.3.1). Additional information about the types of jobs that are expected to be created has not been included due to current data limitations.
MAU	MAU expect to see a detailed description of the methodology used to assess economic impacts in the assessment, including specific details about the methodological approach taken and any key assumptions that underpin any estimates. This may be supplied in a technical annex if necessary.	Noted. Please see EIAR Vol. 4, 30: Detailed Socio-Economic Methodology for the supporting methodologies to this impact assessment, including key assumptions.
MAU	We expect to see a detailed description of the methodology used to assess economic impacts in the assessment, including specific details about the methodological approach taken and any key assumptions that underpin any estimates. This may be supplied in a technical annex if necessary.	A socio-economics methodology is included see EIAR Vol. 4, 30: Detailed Socio-Economic Methodology for the supporting methodologies to this impact assessment, including key assumptions.

REGULATOR / CONSULTEE	COMMENT	RESPONSE
MAU	MAU conclude that they broadly agree with the scoping report's proposed approach for assessing economic and social impacts. We would like to encourage the developer to conduct more engagement and social research with local communities. We recommend that you employ a social researcher with qualitative research expertise to collect primary data from communities to understand their responses to potential socio-economic changes resulting from the development. We recommend that community safety, transport and access, and social participation are scoped into the assessment.	Noted. Glic have been contracted and involved in primary data collection for the Project from local communities, via the PAC event, stakeholder mapping and consultation, for example interviews.
MAU	Annex 1: General Advice for Socio-Economic Impact Assessment Marine Analytical Unit (MAU) Marine Directorate December 2023.	With regards to Annex 1, this guidance document was provided as part of the Scoping Response, and has been considered throughout the development of the methodology.
Scoping Workshop – 29th February 2024		
MAU	Disagree to scope out impacts on tourism and leisure. MD-LOT would also like to know the impact of the scheme on local services e.g. housing and subsequent knock-on effects on tourism e.g. if developers were housing workers in tourist accommodation it would be unavailable. MD-LOT would also like to see demographic changes as a result of an influx of construction workers required for the project, e.g. population changes, settlement patterns. MD-LOT generally advise developers to supplement desk based research with primary research with community. Citizen panels, surveys, focus groups etc.	Impacts on tourism and leisure are assessed within Section 19.6.1.5 and Section 19.6.2.5. Impacts on housing are assessed in Section 19.6.1.3 and Section 19.6.2.3. Data sources used, including information on primary research, can be found in Section 19.4.2.
MAU	Happy that employment and GVA will be considered within the socio-economic assessment. Encourage collaboration with other projects in relation to ports.	Flotation Energy has participants in SOWEC developer project to encourage collaboration with other projects. However Cenos does not have a representative at this time.

19.4 Baseline characterisation

This Section outlines the current baseline for Socio-economics, Tourism and Recreation within the Study Area defined in Section 19.4.1. The baseline focuses on data and indicators to evidence the following:

- Demographics, including the size and structure of the population and relevant trends;
- Labour supply, considering economically active and inactive residents and job density;
- Economic performance, including GVA and household earnings;
- Size and structure of the economy, including analysis of the business base and industry size;
- The profile of supply chain sectors, including industry pertaining to the offshore wind sector;
- The value of the tourism sector, including business tourism;
- Access to recreational activities;
- The value and scale of the marine commercial industry;
- Measures of community viability, including housing supply, school capacities, National Health Service (NHS) capacities, and public transportation and infrastructure;
- Socio-cultural matters including lifestyle and quality of life, social problems, and community character or image; and
- Distributional effects, including gender equality and housing.

To gather the data and information required to create the baseline, desk-based research and consultations were undertaken:

- Desk-based research was conducted to obtain data across the indicators highlighted above using a variety of published, validated sources. The specific sources used are listed through the document; and
- Community and stakeholder consultations were conducted using a combination of an in-person event, survey, and targeted interviews.

Throughout the baseline characterisation, column totals in tables may not sum exactly due to rounding.

19.4.1 Study Area

The selection of a Socio-economics, Tourism and Recreation Study Area considers the spatial scale at which effects on various receptors are expected to occur. Since effects may differ across different receptors, a spatial hierarchy is necessary. The definitions of 'local areas' used to assess effects follows the guidance provided by Marine Scotland (2022), this is outlined in Section 19.2.

The epicentres of socio-economic activity created by the Project are the major ports that will be used to facilitate the construction, operation and maintenance, and decommissioning of the Project. A list of potential construction ports is provided below, however the list of ports provided is not exhaustive. All ports are under consideration on the East coast of Scotland and North-East of England. Use of ports in Norway, the Netherlands, or the rest of the North Sea region cannot be ruled out at this stage. The likely ports for majority of construction activity FTU substructure integration and WTG assembly are:

- Cromarty Firth;
- Invergordon;
- Nigg;
- Ardersier; and
- Burntisland.

Other construction and marshalling ports include:

- Aberdeen;
- Peterhead;
- Forth ports & estuary;
- Newcastle & other North of England ports;
- Dundee;
- Montrose; and
- Leith.

Potential ports (personnel, operation and maintenance) include:

- Aberdeen;
- Peterhead; and
- Montrose.

Of this short list of ports, Forth ports & estuary, Newcastle & other North of England ports, Dundee, Montrose and Leith are considered to likely only experience minor activity in the construction phase. Ardersier and Burntisland are currently not yet capable of hosting major construction-based activity (although may in the future). Therefore, Aberdeen, Peterhead, Cromarty Firth, Invergordon and Nigg are assessed to be the main epicentres for construction effects. Noting Cromarty Firth, Invergordon and Nigg. Aberdeen, Peterhead, and Montrose have been identified as potential ports for the operation and maintenance phase of the Project however only Aberdeen and Peterhead are expected to experience major activity. Therefore, Aberdeen and Peterhead are assessed to be the main epicentres for the operation and maintenance effects. For decommissioning effects, Aberdeen, Scotland and UK will be the main epicentres.

The Socio-economics, Tourism and Recreation Study Area is defined as:

- Local: Within the Project Area; Peterhead locality; Inner Moray Firth (IMF) locality; Aberdeen City Council; Aberdeenshire Council; Highland Council;
- Regional: Combined Aberdeenshire Council and Aberdeen City Council areas; Highland Council; and
- National: Scotland; UK.

The different Study Areas have been applied across the socio-economic assessments as relevant and based on the granularity of information available.

The Socio-economics, Tourism and Recreation temporal scope is defined as the entire lifetime of the Project, including construction, operation and maintenance, and decommissioning.

As summarised in Section 19.2, the offshore renewables sector is important to both Scottish and UK Government economic policies and, as such, the potential impacts from the Project are relevant to Scotland and the UK. It is also relevant to present baseline information for Scotland and the UK as the national data provides a benchmark against which local baseline data can be compared.

Based on MD-LOT guidance (Marine Scotland, 2022), the combined Aberdeenshire Council and Aberdeen City Council area was selected at the most appropriate spatial area for assessing effects on investment, the supply chain, the economy, and employment. In accordance with MD-LOT guidance (Marine Scotland 2022), The Highland Council has been included for assessing effects on investment, the supply chain, the economy, and employment during the construction phase of the Project. Peterhead, the IMF, Aberdeen City Council and Aberdeenshire Council areas were selected as the most appropriate spatial areas for assessing socio-economic effects. A five km radius of the Project site was considered to be the most appropriate spatial area for assessing potential effects on recreation and tourism.

19.4.2 Data sources

The existing data sets and literature with relevant coverage to the Project, which have been used to inform the baseline characterisation for Socio-economics, Tourism and Recreation are outlined in Table 19-3. Project specific data obtained and used to inform this topic assessment are presented in Section 19.4.3.

Table 19-3 Summary of key datasets and reports

TITLE	SOURCE	YEAR	AUTHOR
Population size and age structure	Scotland's Census	2001, 2011, 2022	Scotland's Census
		2001, 2011, 2022	Office for National Statistics (ONS)
	Aberdeen City Council Area Profile: Population Estimates Aberdeenshire Council Area Profile: Population Estimates	2001 to 2021	National Records of Scotland
	Population projections Scotland	2020	National Records of Scotland
Economic activity	Nomis	2023 to 2024	ONS
GVA	Regional gross value added (balanced) per head and income components	2022	ONS
	All data related to Subregional productivity in the UK: June 2023	2024	ONS
	Regional gross domestic product: local authorities	2024	ONS
Employment type	Nomis	2022	ONS

TITLE	SOURCE	YEAR	AUTHOR
Employment by occupation	Nomis	2023 to 2024	ONS
Underemployment	Nomis	2024	ONS
Apprenticeships	Article: Modern Apprenticeships		SDS
Job density	Nomis	2022	ONS
Household earnings	Nomis	2023	ONS
Entrepreneurism	Nomis	2023	ONS
Enterprise size	Nomis	2023	ONS
GVA by summarised industry sector	Regional gross value added (balanced) by industry: all ITL regions	2022	ONS
Jobs by industry sector	Nomis	2022	ONS
Supply chains	Business Register and Employment Survey	2022	ONS
Housing	Aberdeen City Council and Aberdeenshire Council Housing need and Demand Assessment 3: 2023 to 2028	2023	Aberdeen City Council and Aberdeenshire Council
	Highland Council Housing need and Demand Assessment 2020	2021b	Highland Council
	Aberdeenshire Council Local Housing Strategy: 2024 to 2029	2024	Aberdeenshire Council
	Aberdeen City Council Local Housing Strategy: 2023 to 2028	2018	Aberdeen City Council
	Highland Council Local Housing Strategy: 2023 to 2028	2023	Highland Council
	Housing prices by local authority area	2024	ONS
Socio-cultural	Population Needs Assessment 2023	2021	Community Planning Aberdeen
	Offshore wind farm developments - public perceptions: survey	2022	Scottish Government
	Vision and Action Plan 2016 to 2021	2016	Peterhead Development Partnership
	Peterhead Vision and Action Plan	2024	Aberdeenshire Council
	Peterhead Locality Plan 2020 to 2030	2020	Aberdeenshire Community Planning Partnership
	Peterhead Strategic Needs Assessment	2021	Aberdeenshire Council

TITLE	SOURCE	YEAR	AUTHOR
	Local Outcome Improvement Plan	2016	Community Planning Aberdeen
	Aberdeen Gender Inequality and Poverty Project	2024	Scottish Women's Budget Group
	Article: Strengthened focus on gender inequality and poverty	2024	Aberdeen City Council
	Article: New project launched to boost number of women working in offshore wind	2022	Offshore Wind Industry Council
	Developing Aberdeenshire Council Equality Outcomes 2025-2029	2024	Aberdeenshire Council
NHS capacities	NHS Grampian: Surgery list	2020	NHS Scotland
	NHS Grampian	2024	NHS Grampian
	Scotland's service directory	2024	NHS Inform
	Waiting times information	2024	NHS Grampian
	Delayed discharges in NHS Scotland monthly	2024	Public Health Scotland
	NHS Grampian outpatient waiting times	2024	NHS Inform
School capacities	Aberdeen City Council: Schools pupil roll forecasts	2020	Aberdeen City Council
	Aberdeenshire Council: School roll forecasts	2023	Aberdeenshire Council
	Highland Council: School roll forecasts	2024b	Highland Council
Public transport and infrastructure	Aircraft movements 2023	2023	Civil Aviation Authority
	Arrivals and departures flight information	2024	Aberdeen Airport
	HIAL Annual Report and Accounts	2023	Highlands and Islands Airports Limited
	Booking information	2024	NorthLink Ferries
	Route information	2024	ScotRail
	Bus information	2024	Aberdeenshire Council
	Article: Stagecoach to cut bus services in north Scotland	2024	BBC News
	A947 route improvement strategy	2019	Aberdeenshire Council
	Community based transport services	2024	Aberdeenshire Council
	Regional Transport Strategy: At a glance	2022	Nestrans
Tourism	Aberdeen and Aberdeenshire STEAM Tourism Economic Impacts 2023 Year in Review Summary	2024	VisitAberdeen
	Scottish Tourism Statistics & Research	2024	VisitScotland

TITLE	SOURCE	YEAR	AUTHOR
	Scottish Accommodation Occupancy Survey	2023	VisitScotland
	Tourism Business Improvement District Business Plan	2024	Visit Inverness Loch Ness
	Destination Aberdeen and Aberdeenshire: A framework for growth 2022 to 2030	2022	VisitAberdeen
Human rights	Article: What are the rights implications of wind energy?	2022	Institute For Human Rights and Business
	Policy: Human rights		Scottish Government

19.4.3 Project site-specific consultations

Over and above published data, additional insights on local receptors have been obtained from individuals and groups in the community. Methods used to generate community feedback on the Project have included:

- Formal consultations events, such as the PAC event. This exhibition provided an opportunity for the local community to give valuable feedback on the Project. There was also a survey which asked respondents to consider potential impacts of the Project in relation to Socio-economics, Tourism and Recreation. 10 responses to the survey were received. These responses contributed to establishing the sensitivity of receptors and evaluating the magnitude of effect;
- Communication channels. This includes a website with key information about the Project as well as a regular news section which provides information and updates on the Project's progress; and
- Non-statutory stakeholder consultation. Consultation (interviews, meetings, and email correspondence) was conducted with non-statutory stakeholders to establish views on any potential positive or negative impacts of the Project. This consultation contributed to characterising the baseline and evaluating sensitivity of receptors. 11 non-statutory stakeholders were contacted, three of which were consulted via interview.

Table 19-4 Summary of non-statutory stakeholder consultation

NON-STATUTORY STAKEHOLDER	COMMENT
SDS	If all jobs are concentrated in the Peterhead area this would cause a negative impact. Sentiment would be that 'outsiders' have taken 'local people's' jobs. However, if recruitment was focused across the city and Shire this would be seen as a positive impact. Fishing was noted as the major employment route in the Peterhead locale. This development could provide an alternative viable career path, and increase job diversity.
SDS	Liaising with centres such as ETZ would be beneficial. They have experience of engaging with local communities and encouraging individuals to consider local job opportunities.
SDS	Very little cultural element is seen to be associated with potential employment changes, however a workforce development plan would help to secure the biggest social impact.
SDS	There is the opportunity and infrastructure already present in nearby Fraserburgh to train workers with institutions such as North East Scotland College and Score. Given time

NON-STATUTORY STAKEHOLDER	COMMENT
	available prior to the start of construction, it is integral to begin having conversations with these institutions and local schools to develop pipelines soon. To do this an understanding of the skills needed across the lifetime of the Project is key.
SDS	How the Project could help bring those far from the workplace back into work should be considered (e.g. getting mothers back into work via flexible working offers).
SDS	If all elements of employment, including project management roles, are considered, the Project and others in the area could have a legacy impact. Currently, people recruited for higher-earning roles are likely to come into the area from outside of it, causing potential issues.
SDS	SDS has a specific team that supports mapping of potential skills needed when considering inward investment into the area.
VisitAberdeenshire	In 2023, tourism in Aberdeen and Aberdeenshire was very buoyant and the Shire saw significant growth, outperforming the rest of Scotland overall.
VisitAberdeenshire	In terms of accommodation availability, Aberdeen and Aberdeenshire have a lot more accommodation options compared to other areas, with significant accommodation provision in the city. It is also possible to see what accommodation stock there is at a local level. Bed and breakfasts are more common than large hotels in Peterhead.
VisitAberdeenshire	There is not a high density of leisure marine craft. Cruden Bay can be a hotspot, but this is far from the construction and landfall site.
VisitAberdeenshire	Leisure angling happens along the coast but not in proximity to the construction and landfall site.
VisitScotland	There is ongoing work to understand the bed stock across Aberdeenshire and Aberdeen City. The bed stock in Aberdeen differs from the Peterhead locale, which may lead to displacement at a local level. Seasonality is also something to consider.
VisitScotland	The tourism market in Aberdeenshire and Aberdeen City is generally growing. The area is producing record numbers and it is a priority growth sector for the region. However, by nature the tourism industry can be volatile.
VisitScotland	The micro area of Peterhead is more reliant on domestic tourism than international tourism. In general, the domestic tourism market is more subdued than international.
VisitScotland	New major investment in Peterhead is likely to have a tourism focus.
VisitScotland	A regional coastal path network is currently in development along Aberdeenshire's coastline. Any development around this area must not affect people's current reasons for visiting it.

19.4.4 Existing baseline

A review of literature and available data sources, (augmented by consultation and Project site-specific consultation) has been undertaken to describe the current baseline environment for Socio-economics, Tourism and Recreation.

19.4.4.1 Demographics

19.4.4.1.1 Population

Aberdeen City had the eighth largest population in 2022 of the 32 council areas in Scotland, while Aberdeenshire and Highland had the sixth and seventh highest populations respectively. Table 19-5 shows population movements from 2001 to 2022 at the IMF, Peterhead, Aberdeen City, Aberdeenshire, Highland, Scotland, and Great Britain (GB) levels (National Records of Scotland, 2001; 2011; 2022).

Table 19-5 Population summary, 2001 to 2022

	2001	2011	2022	2001 TO 2011	2011 TO 2022	2001 TO 2022
				Change (%)		
IMF	133,490	153,293	#[1]	14.8	3.2	18.5
Peterhead	18,100	18,639	19,791	3.0	6.2	9.3
Aberdeen City	211,910	222,793	224,021	5.1	0.6	5.7
Aberdeenshire	226,940	252,973	262,690	11.5	4.2	16.2
Highland	208,920	232,730	235,710	11.4	1.2	12.8
Scotland	5,062,011	5,299,900	5,447,700	4.6	2.9	7.6
GB	57,103,927	61,382,000	65,121,000	7.5	6.0	14.0

In all local authority areas there has been population growth over this period, with robust population growth in the 2001 to 2011 period, with IMF, Aberdeen City, Aberdeenshire and Highland growing faster than Scotland and GB. Growth in Aberdeenshire has been higher than in Aberdeen City over the period 2001 to 2022. This could be due to increased numbers of residents favouring towns and villages surrounding Aberdeen City over the city itself.

Population growth slows in the period following 2011 in all territories excluding Peterhead, where recent developments in the energy sector are likely to be the cause of accelerating population growth. Deaths continue to outstrip births in all reviewed areas with inbound migration impacted by multiple events since 2019. These include the Coronavirus Disease 2019 (COVID-19) pandemic, changes in immigration patterns following the withdrawal of the UK from the European Union (EU), the cost-of-living crisis impacting on decision-making around family size, and an ongoing lack of affordable accommodation.

[1] *A hash sign (#) is given where data was not available; 2022 population data is not available for IMF.*

Whilst 2022 population data is not available for the IMF, HIE (2020) provides an estimate of the IMF population in 2020 based on the 2011 figure at 158,253. This is the figure that will be used for the purposes of this assessment.

19.4.4.1.2 Age structure

Table 19-6 presents the populations in each age category; Table 19-7 shows this as a percentage of the total population (National Records of Scotland, 2022).

Table 19-6 Demographic age structures (2022)

	AGED 0 TO 15	AGED 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
Aberdeen City	35,194	150,600	*185,794*	38,225	224,021
Aberdeenshire	48,483	159,263	*207,746*	54,944	262,690
Peterhead	3,936	12,167	*16,103*	3,688	19,791
Highland	37,245	142,307	*179,552*	56,158	235,710
Scotland	832,300	3,512,700	*4,345,000*	1,102,700	5,447,700
GB	12,029,165	41,705,239	*53,734,404*	11,386,596	65,121,000

Table 19-7 Demographic age structures (2022) (%)

	AGED 0 TO 15	AGED 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
Aberdeen City	15.7	67.2	82.9	17.1	100
Aberdeenshire	18.5	60.6	79.1	20.9	100
Peterhead	19.9	61.5	81.4	18.6	100
Highland	15.8	60.4	76.2	23.8	100
Scotland	15.3	64.5	79.8	20.2	100
GB	18.1	64.0	82.5	17.5	100

The demographic profiles for Aberdeen City, Peterhead, and Aberdeenshire are broadly in line with Scottish and GB norms. Highland has a higher proportion of people aged 65+ than all other areas highlighted and a lower proportion of those aged 0 to 15; this could potentially worsen the population growth rate in Highland in the future.

The data listed in Table 19-6 and Table 19-7 is not available for the IMF. However, HIE (2020) has provided estimates of the demographic age structures in 2020, at 26,903 people aged 0 to 15 (17.0%), 98,116 people aged 16 to 64 (62.0%), totalling 125,019 people aged 0 to 64 (79.0%), and 33,234 people aged 65+ (21.0%).

Table 19-8 to 19-11 show how the demographic profile of discrete communities has changed in the period 2001 to 2022 (National Records of Scotland, 2001; 2022).

Table 19-8 Demographic changes: Aberdeen City (2001 to 2022)

	AGED 0 TO 15	AGED 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
2001	34,690	144,778	179,468	32,442	211,910
2022	35,454	150,298	185,752	38,438	224,190
Change (%)	2.2	3.8	3.5	18.5	5.8
Scotland (%)	-8.1	5.2	-0.9	36.0	7.6
GB (%)	4.2	20.8	16.9	44.7	21.3

Aberdeen City has a growing population aged 0 to 15 (in contrast to the rest of Scotland), and the population aged 0 to 64 has shown growth (in contrast to the rest of Scotland). The growth in the population aged 65+ is half of what is documented across Scotland and 40% of the growth seen across GB. Reasons for this demographic profile could include the presence of universities in the city; a diverse range of job opportunities in the energy, technology, health, and education sectors; and strong travel connectivity to the rest of the UK and overseas.

Table 19-9 Demographic changes: Aberdeenshire (2001 to 2022)

	AGED 0 TO 15	AGE 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
2001	47,572	146,858	194,430	32,510	226,940
2022	48,483	159,263	185,752	56,004	263,750
Change (%)	1.9	8.4	6.6	72.3	16.2
Scotland (%)	-8.1	5.2	-0.9	36.0	7.6
GB (%)	4.2	20.8	16.9	44.7	21.3

Like Aberdeen City, Aberdeenshire has a growing population aged 0 to 15 (in contrast to the rest of Scotland), and the population aged 0 to 64 has shown growth (in contrast to the rest of Scotland). The growth in the population aged 65+ is double what is documented across Scotland and significantly ahead of GB. Reasons for this demographic profile could include the rural nature of the territory being attractive to older residents; the desirability of the locale as a retirement destination; declining birth rates; and established health and social services that are tailored to meet the needs of an older population.

Table 19-10 Demographic changes: Highland Council (2001 to 2022)

	AGE 0 TO 15	AGE 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
2001	40,889	133,241	174,130	34,790	208,920
2022	37,245	142,307	179,552	56,158	235,710
Change (%)	-8.9	6.8	3.1	61.4	12.8
Scotland (%)	-8.1	5.2	-0.9	36.0	7.6
GB (%)	4.2	20.8	16.9	44.7	21.3

Unlike Aberdeen City and Aberdeenshire, the population of 0 to 15 year olds in Highland has declined faster than Scottish levels. However, growth in the 16 to 64 population has created an overall positive growth rate of the population aged 0 to 64, unlike the negative rate at the Scotland level but significantly lower that GB values. As with Aberdeenshire, the population aged 65+ has had a significantly higher growth rate than Scotland and GB rates.

Table 19-11 Demographic changes: Peterhead (2001 to 2022)

	AGE 0 TO 15	AGE 16 TO 64	AGED 0 TO 64	AGED 65+	TOTAL
2001	3,688	11,514	15,202	2,745	17,947
2022	3,494	11,570	15,064	3,817	19,791
Change (%)	-5.3	0.5	-0.9	39.0	10.3
Scotland (%)	-8.1	5.2	-0.9	36.0	7.6
GB (%)	4.2	20.8	16.9	44.7	21.3

The demographic change for the 0 to 64 population in Peterhead is the same as Scotland at -0.9%. The breakdown of the population change is however very different, with the population aged 16 to 64 staying almost static in Peterhead, and a slower decrease in the population aged 0 to 15 than comparisons to Scotland. The total percentage growth in Peterhead has outstripped that of Scotland, but lags GB.

19.4.4.2 Labour market

19.4.4.2.1 Employment and economic activity

Labour market indicators provide a measure of the potential spare capacity of labour markets in discrete locales. Table 19-12 shows the economic activity and inactivity of Aberdeen City, Aberdeenshire, Highland, Scotland, and GB (Nomis, 2024a; 2024b).[2]

[2] *All percentages shown in this table are the percentage of the total population aged 16 to 64 (including unemployment). A hash sign (#) is given where data was not available on NOMIS.*

Table 19-12 Economic activity (April 2023 to March 2024)

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND		SCOTLAND	GB
	('000)	%	('000)	%	('000)	%	%	%
Economically active								
Employees	114.3	72.3	120.9	72.1	99.4	67.6	65.9	66.1
Self-employed	6.1	3.9	18.2	10.8	12.0	8.2	8.0	9.2
Unemployed	6.5	4.1	2.0	1.2	3.4[3]	2.3	3.8	3.9
Total	126.9	80.3	142.2	84.7	115.5	78.5	77.1	78.6
Economically inactive								
Student	7.3	4.6	1.7	1.0	#	#	5.7	5.7
Family / home	6.7	4.2	5.3	3.2	1.9	1.3	3.7	4.1
Temporary sick	#	#	#	#	#	#	0.6	0.4
Long-term sick	10.8	6.8	6.3	3.8	12.5	8.5	7.5	5.9
Retired	3.5	2.2	8.0	4.8	3.5	2.4	3.3	2.9
Other	2.1	1.3	3.4	2.0	8.3	5.6	2.1	2.5
Total	31.1	19.7	25.6	15.3	31.6	21.5	22.9	21.4
Total population (16-64)	160.2	100.0	172.0	100.0	147.1	100.0	100.0	100.0

Aberdeen City, Aberdeenshire, and Highland all have higher levels of economically active individuals than the Scottish and GB norms in both the employee and self-employed sectors. The rate of self-employment in Aberdeenshire is double that of Aberdeen City; this characteristic is typical of rural areas. The lower rate of self-employment in the predominately rural Highland area could be affected by employment opportunities in Inverness. Over a quarter of the population of Highland lives in and around Inverness.

Whilst unemployment in Aberdeenshire and Highland is below Scottish and GB levels, unemployment in Aberdeen City is above the Scottish and GB levels. Review of historical trends shows that unemployment in Aberdeen City has remained at or around 4% since the early 2000s. Traditionally this rate of unemployment has been below the national norms but recent economic structural changes (such as the decline of the oil and gas sector) could be creating a negative impact. Other growth sectors including advanced manufacturing and life sciences have not grown to the scale necessary to accommodate displaced workers. This scenario could be due to misaligned skills in the labour market.

[3] *Model estimation provided by NOMIS.*

The popularity of Aberdeenshire as a retirement destination is evidenced by the high percentage of individuals noted as retired; this is ahead of Aberdeen City, Highland, Scottish and GB norms.

Of those who are economically inactive, a higher percentage of individuals in Aberdeen City and Aberdeenshire are seeking employment when compared to Scottish and GB norms. This indicates a potential labour pool is available to take opportunities as they arise. Training of these individuals is likely to be required. There is a smaller percentage of economically inactive individuals seeking employment in the Highlands when compared to Scottish and GB norms.

19.4.4.2.2 Employment type

In both Aberdeen City and Aberdeenshire, the ratio of full-time employment to part-time employment is greater than Scottish and GB norms. The opposite is the case for Highlands, Table 19-13 highlights this (Nomis 2024a; 2024b).

Table 19-13 Worker type profile (2022)

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND		SCOTLAND	GB
	('000)	%	('000)	%	('000)	%	%	%
Full-time	111.0	70.3	67.0	67.7	72.0	64.3	67.3	68.8
Part-time	47.0	29.7	32.0	32.3	40.0	35.7	32.7	31.2

There are no published statistics on the use of zero-hours contracts by local authorities.[4] In Scotland, c4% of workers are on zero-hours contracts, higher than the UK figure (c3%) (Zero Hours Justice, 2023). Specific data for the spatial areas cannot be isolated, but it has been assumed that the national norm applies in the locale given the prevalence of such contracts in Scotland.

Zero-hours contracts are often associated with sectors like hospitality, retail, and social care, and can result in underemployment and income instability, more common among women, younger workers, and those from marginalised communities. Assuming that 4% of the workforce is on zero-hours contracts, we estimate these values at 4,630 in Aberdeen City, 4,930 in Aberdeenshire, and 3,980 in Highland.

Aberdeen City, Aberdeenshire, Scotland, and GB all have relatively similar rates of part-time employment while Highland has a higher rate. This may be due to a reliance on the tourism sector (hospitality in particular). This may be creating underemployment and highlights a potential weakness in the labour market. Table 19-14 shows the job type profile in the locale using the UK Standard Occupational Classification (Office for National Statistics, 2023a).

[4] *Zero-hour contracts refer to the employment arrangement where an employer is not obligated to provide a minimum number of working hours and the employee is not required to accept any particular hours offered.*

Table 19-14 Job type profile (April 2024 to March 2024)

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND		SCOTLAND	GB
	('000)	%	('000)	%	('000)	%	%	%
Major group 1-3	**67.7**	**55.3**	**75.6**	**52.5**	**53.2**	**43.4**	**50.6**	**52.8**
1. Managers, directors and senior officials	8.3	6.8	13.0	8.9	11.8	9.6	8.0	10.8
2. Professional occupations	42.3	34.5	36.1	24.9	266.7	21.6	26.4	26.6
3. Associate professional occupations	17.1	14.0	26.5	18.3	14.7	11.9	16.1	15.3
Major group 4-5	**19.2**	**15.7**	**30.5**	**21.2**	**21.8**	**17.8**	**18.8**	**18.3**
4. Administrative & secretarial occupations	10.2	8.3	13.6	9.4	9.8	7.9	9.5	9.6
5. Skilled trades occupations	9.0	7.3	16.9	11.7	12.0	9.7	9.3	8.7
Major group 6-7	**20.4**	**16.7**	**16.4**	**11.4**	**20.5**	**16.8**	**15.4**	**14.4**
6. Caring, leisure and Other Service occupations	13.7	11.2	9.6	6.6	12.0	9.7	9.0	8.2
7. Sales and customer service	6.7	5.5	#	#	#	#	6.4	6.2
Major group 8-9	**15.2**	**12.4**	**21.5**	**14.9**	**27.0**	**22.0**	**15.2**	**14.5**
8. Process plant & machine operatives	#	#	10.3	7.1	9.4	7.6	5.5	5.4
9. Elementary occupations	9.7	7.9	11.2	7.7	17.5	14.2	9.7	9.0

The analysis indicates that the workforce in both Aberdeen City and Aberdeenshire has a significant cohort of senior and professional staff. The number of skilled trades workers in Aberdeen City is lower than the Scottish average. As the number of skills trades workers recorded in Aberdeenshire is higher than the national norm, individuals working in Aberdeen City may be commuting in from Aberdeenshire.

Highland has a lower percentage of major groups 1-5 than Scotland and a higher percentage of major groups 6-9. This is potentially due to the prevalence of tourism and farming sector employment in the local economy, both of which are covered by these groups.

19.4.4.2.3 Job density

Aberdeen City has a job density[5] of 1.11; this is higher than Scotland (0.81) and GB (0.87) (Nomis, 2024a). Aberdeenshire has a comparatively lower job density (0.74) (Nomis, 2024b). This, in combination with high levels of economic activity and low levels of unemployment in Aberdeenshire, suggests that there is a net positive number of workers commuting out of Aberdeenshire for work and that the available labour pool in Aberdeenshire is limited, making it potentially challenging to recruit staff from the locale.

Highland has a job density of 0.94, higher than both Scotland and GB. This is partly influenced by higher rates of economic activity, this suggests that workers could be commuting into the area for work from conurbations including Oban, Perth and the Moray.

19.4.4.2.4 Qualifications, skills and training

There are multiple education and training providers in the Aberdeenshire and Aberdeen City areas that give support to create a suitably trained and educated workforce for key local industries. With regards to the energy sector, institutes that have specific expertise include:

- ASET International Energy Training Academy, located in Aberdeen;
- North East Scotland College, the largest provider of vocational education and training in the region, specifically at the ETZ skills hub;
- Robert Gordon University, one of two universities in Aberdeen, with courses relevant to the energy industry. The university also has a dedicated National Subsea Centre dedicated to the study of subsea engineering and the development of innovative and sustainable technologies;
- The University of Aberdeen, with an academic focus on the energy transition including Master of Science (MSc) Decommissioning – the world's first Masters degree in decommissioning oil rigs, platforms and offshore structures. The university has a long and close history with the energy industry;
- 3T Training, with an Aberdeen facility that provides training on oil and gas and wind power technologies; and
- Maersk Training, with a Portlethen facility that offers training in offshore survival, emergency response firefighting, and generic industry-based (offshore) safety courses.

A lower proportion of Aberdeenshire's workforce holds high-level qualifications than Aberdeen, as shown in Table 19-15, however, the workforce does have a high level of vocational and skills qualifications. Aberdeen City has a highly educated, professional and vocational workforce. Highland has a lower level of qualifications at all levels than Aberdeen City, Aberdeenshire, and Scotland (Nomis, 2024a; 2024b).

[5] *Density figures represent the ratio of total jobs to population aged 16 to 64. Total jobs includes employees, self-employed, government-supported trainees and HM Forces.*

Table 19-15 Workforce qualifications profile (population trends 2001 to 2022) (%)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
RQF4 and above	61.1	50.1	48.7	55.1	47.3
RQF3 and above	76.9	73.8	70.9	73.7	67.8
RQF2 and above	91.2	90.7	84.7	87.1	86.5
RQF1 and above	93.2	91.1	87.9	87.9	89.0
No qualifications	#[6]	6.9	8.2	8.2	6.5

With regard to on-the-job training, there is significant uptake of the Modern Apprenticeships scheme[7] in Aberdeenshire, with completion rates above the Scottish norm. Completion rate in Aberdeen City is marginally below the norm. Table 19-16 shows key performance indicators associated with the offer (Skills Development Scotland, 2024a; UK Government, 2024b).

Table 19-16 Modern Apprenticeships profile (April 2023 to March 2024)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
Starts	746	1,100	1,410	25,365	
In training	1,133	1,966	2,238	38,607	
Achievements	539	901	1,118	20,013	
Completion (%)	73.8	78.2	78.4	76.0	54.3

In 2021 to 2022, SDS reported that there were 163 Graduate Apprenticeships[8] registered in Aberdeen City, 81 registered in Aberdeenshire, and 68 in Highland (Skills Development Scotland, 2024b; 2024c; 2024d).

[6] Data not available; NOMIS notes that the sample size is too small for a reliable estimate.
[7] Modern Apprenticeships is a work-based training programme open to people aged over 16 years across multiple sectors. The programme allows individuals to earn a wage while gaining industry-recognised qualifications, splitting time between on-the-job training with an employer and off-the-job learning, often at a college or training centre.
[8] Graduate Apprenticeships is a work-based learning opportunity that allows people to earn a degree while working full-time with an employer through partnerships between employers and universities designed to meet the needs of the employer.

19.4.4.3 Economic performance

19.4.4.3.1 GVA

ONS publishes the GVA of UK local authorities as an indication of the size of the local economy and its local contribution to national output (Office for National Statistics, 2024a). The contribution of a project to the local, regional, and national GVA is a key metric showing its contribution to economic growth. In 2022, Aberdeen City had a GVA of £10.8 billion with Aberdeenshire at £7.1 billion (Office for National Statistics, 2024b). As a combined GVA of £17.9 billion, this represents 10.8% of the Scottish economy and 0.8% of the UK economy. Highland has a similar GVA to Aberdeenshire at £7.0 billion, representing 4.2% of the Scottish economy.

The combined Aberdeen City and Aberdeenshire GVA per capita in 2022 was estimated at £36,800 with the comparable values for Scotland and the UK at £30,400 and £33,200 respectively (Office for National Statistics, 2024c). This analysis indicates the higher productivity rate of the territories driven by the balance of employment by sector. The latest reported GVA per capita for Highland is £23,000.

The Highland region's GVA per capita reflects its economic structure, with notable contributions from sectors like tourism, energy, and public services. It remains below the national UK average; this is often attributed to its rural and geographically dispersed population, which can lead to lower per capita productivity due to the distribution of industries and employment patterns across the area.

Table 19-17 shows the impact of employment sectors in Aberdeen City, Aberdeenshire, and Highland. Aberdeen City has a higher reported performance than Aberdeenshire that is marginally in excess of the Scottish norm (Office for National Statistics, 2023b). This data shows that whilst Aberdeen City is more productive than the Scottish average, the difference is not as pronounced as the GVA per capita figure. Highland has a lower productivity than Aberdeenshire, Aberdeen City, and Scotland. The GVA per hour worked figure gives a more accurate indication of regional productivity.

Table 19-17 GVA (£) per hour worked (2022)

	GVA PER HOUR	% OF UK AVERAGE
Aberdeen City	38.9	97.9
Aberdeenshire	37.6	94.7
Highland	36.8	92.5
Scotland	38.5	96.9
UK	39.7	100.0

19.4.4.3.2 Household earnings

Average earnings of a full-time worker by local authority are measured by the ONS as workplace-based earnings and residence-based earnings, with the difference between the two categories caused by workers commuting into and out of the local authority. This difference can be more significant when commuting from another locale or when periodic working away from home is a significant feature of the labour market. Table 19-18 shows the measures for Aberdeen City, Aberdeenshire, Highland, Scotland, and GB (Nomis, 2024c).

Table 19-18 Household income (2023) (£ per annum)

	WORKPLACE-BASED	% OF UK AVERAGE	RESIDENCE-BASED	% OF UK AVERAGE
Aberdeen City	37,355	106.8	35,153	100.5
Aberdeenshire	33,779	96.6	36,304	103.8
Highland	33,944	97.1	35,941	102.8
Scotland	35,518	101.6	35,518	101.6
GB	35,001	100.1	35,004	100.1

The analysis shows that residence-based earnings in Aberdeen City, Aberdeenshire and Highland are around or above Scottish and GB national norms, while workplace earnings in Aberdeenshire and Highland are lower than national norms. The variance between workplace and residence-based earnings in Aberdeenshire and Highland can be explained by sectoral variances and by individuals commuting out of these areas to work.

19.4.4.4 Size and structure of the economy

19.4.4.4.1 Entrepreneurism

Business density and business birth rates can highlight the relative dynamism of regions and local areas. Table 19-19 shows entrepreneurism at the local, regional and national levels. It indicates that the Aberdeen City, Aberdeenshire, and Highland locales are entrepreneurial, with significant rates of businesses per capita compared to Scottish and GB national norms (Nomis, 2024a; 2024b).

Table 19-19 Number of businesses (2023)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
Number of businesses	7,705	12,615	10,710	171,350	2,648,660
Businesses per 1,000 capita (16 to 64 population)	51.3	79.2	75.3	48.8	63.5

Table 19-20 shows a business birth rate in Aberdeen City that is higher than Scotland but lower than GB. Both Aberdeenshire and Highland have lower business birth per capita rates than Scotland and GB while having higher total businesses per capita, suggesting that the businesses that are created in those areas are more stable (Office for National Statistics, 2023c).

Table 19-20 Number of business births (2022)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
Number of business births	895	840	810	18,870	331,540
Business births per 1,000 capita (16 to 64 population)[9]	5.95	5.27	5.69	5.37	7.95

19.4.4.4.2 Enterprise size

Table 19-21 shows a profile of enterprise size in the locale, evidencing that Aberdeen City, Aberdeenshire, and Highland are dominated by micro-businesses. Aberdeen City has a higher proportion of larger organisations (small to large, 15.1%) than the Scottish (12.7%) and GB (10.9%) national norms; this is a function of the sectoral profile of work and a legacy of the oil and gas industry (Nomis, 2024a; 2024b).

Table 19-21 Enterprise by employee number profile (2023)

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND		SCOTLAND	GB
		%		%		%	%	%
Micro (0 to 9)	6,545	84.9	11,405	90.4	9,430	88.0	87.3	89.1
Small (10 to 49)	885	11.5	1,030	8.2	1,105	10.3	10.6	9.0
Medium (50 to 249)	215	2.8	150	1.2	150	1.4	1.6	1.6
Large (250+)	65	0.8	30	0.2	25	0.2	0.4	0.4
Total	7,705	100.0	12,615	100.0	10,710	100.0	100.0	100.0

19.4.4.4.3 Jobs by industry sector

Table 19-22 shows the number and percentage of employee jobs by industry sector in Aberdeen City, Aberdeenshire, Highland, and Scotland, and GB (Nomis 2024a; 2024b). Local hotspots (sectors with at least double the GB representation of employment) are shown in orange and cold spots (sectors with less than half the GB rate of representation) are shown in blue.

[9] *Number of business births divided by the population aged 16 to 64, multiplied by 1000 (Glic calculation)*

Table 19-22 Employee jobs by industry sector (2022) (%)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
Total employee jobs	158,000	99,000	111,000	2,918,000	36,142,000
B: Mining and Quarrying	12.7	3.0	0.4	1.0	0.1
C: Manufacturing	5.1	13.1	5.4	6.9	6.9
D: Electricity, Gas, Steam and Air Conditioning	0.3	0.6	0.9	0.8	0.3
E: Water Supply; Sewerage, Waste Management and Remediation Activities	0.3	0.7	2.0	0.7	0.7
F: Construction	3.8	8.1	7.2	5.7	5.8
G: Wholesale and Retail Trade	9.5	14.1	14.4	12.9	12.8
H: Transportation and Storage	4.4	3.5	4.1	4.1	5.2
I: Accommodation and Food Service Activities	8.2	7.1	13.5	8.4	7.6
J: Information and Communication	1.9	1.8	2.3	3.2	4.5
K: Financial and Insurance Activities	0.6	0.7	0.8	3.3	3.2
L: Real Estate Activities	0.9	0.9	1.4	1.3	1.9
M: Professional, Scientific and Technical Activities	12.7	12.1	5.4	7.4	9.5
N: Administrative and Support Service Activities	8.2	6.1	5.4	8.1	8.3
O: Public Administration and Defence; Compulsory Social Security	4.4	3.5	5.4	6.5	4.6

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND	GB
P: Education	6.3	9.1	8.1	8.8	8.2
Q: Human Health and Social Work Activities	17.1	9.1	17.1	15.7	13.6
R: Arts, Entertainment and Recreation	1.9	3.0	3.6	3	3.0
S: Other Service Activities	1.3	1.5	1.4	1.6	2.6

Across Aberdeen, Aberdeenshire and Highland there are specific strengths in the energy and utilities related activity, with lower levels of activity in the service, financial, professional and information sectors. In Highland, the strength of the tourism sector is shown, being 160% of the Scottish and 177% of the GB norms.

The three largest industry sectors in Aberdeenshire are wholesale and retail; manufacturing; and professional, scientific, and technical activities. In Aberdeen City these are human health and social work activities; mining and quarrying (includes support industries for oil and gas); and professional, scientific and technical activities. In Highland, the three largest industry sectors are human health and social work activities; wholesale and retail trade; and accommodation and food services.

The legacy of the oil and gas sector heavily impacts the profile of activity in Aberdeen and Aberdeenshire. *B: Mining and Quarrying* relates to the oil and gas sector, with this activity dominating private sector activity. Aberdeenshire is significant in the production of machinery and equipment for the energy sector, particularly in oil exploration and extraction. This has fostered a culture of advanced manufacturing and engineering excellence.

Beyond energy-related manufacturing, Aberdeenshire is home to robust food and drink production sectors. Its agricultural output, particularly in seafood and livestock (such as Aberdeen Angus beef) supports a significant food processing and manufacturing industry. Peterhead, for example, is one of Europe's largest fishing ports, which further boosts local seafood processing.

Remediation work at Dounreay is a driver of the significant activity in the water supply; sewerage, waste management and remediation activities sectors. Dounreay was the UK's centre of fast reactor research and development from 1955 until 1994; it is now Scotland's largest nuclear clean-up and demolition project. After four decades of operation, significant remediation and management of toxic waste is needed. Today, Dounreay is a site of construction, demolition and waste management, all of it designed to leave the site in a safe condition. The experimental nature of many of its redundant facilities means the clean-up and demolition requires innovative approaches as well as great care.

19.4.4.4.4 GVA by industry sector

Table 19-23 and Table 19-24 shows the ranked GVA of summarised sectors in Aberdeen City, Aberdeenshire, and Highland and the percentage of the discrete GVA of summarised sectors to total GVA of the locales (Office for National Statistics, 2024d). This analysis highlights:

- The importance of highly productive sectors to the economy of Aberdeen City and Aberdeenshire. This analysis contrasts with much of Scotland and GB where public sector activity dominates; and
- The importance of the primary industry and the public sector to the Highland economy.

Table 19-23 GVA summarised by industry sector (£M) (2022)

	ABERDEEN CITY	ABERDEENSHIRE	ABERDEEN CITY AND ABERDEENSHIRE	HIGHLAND
Agriculture, mining, electricity, gas, water and waste	1,053	930	1,983	680
Manufacturing	972	910	1,882	544
Construction	337	361	698	551
Wholesale and retail trade; repair of motor vehicles	923	704	1,627	559
Transportation and storage	503	137	640	198
Accommodation and food service activities	387	106	493	400
Information and communication	288	105	393	214
Financial and insurance activities	191	59	250	69
Real estate activities	759	881	1,640	898
Professional, scientific and technical activities	1,374	850	2,224	224
Administrative and support service activities	577	245	822	183
Public administration and defence	504	249	753	429
Education	508	321	829	276
Human health and social work activities	1011	301	1,312	771
Arts, entertainment and recreation	106	46	152	98
Other service activities	105	52	157	105
Activities of households	9	11	20	8
Total	9,607	6,268	15,875	6,207

In Table 19-24, where the percentage of GVA of a sector is higher in the locale than the UK norm, it has been highlighted to show the sectors with relative strengths in the locale.

Table 19-24 Percentage of GVA by industry sector (%) (2022)

	ABERDEEN CITY	ABERDEEN-SHIRE	ABERDEEN CITY AND ABERDEEN-SHIRE	HIGHLAND	SCOTLAND	UK
Agriculture, mining, electricity, gas, water and waste	14.8	11.0	12.5	11.0	6.3	3.6
Manufacturing	14.5	10.1	11.9	8.8	10.4	9.7
Construction	5.8	3.5	4.4	8.9	5.9	6.2
Wholesale and retail trade; repair of motor vehicles	11.2	9.6	10.2	9.0	8.7	10.1
Transportation and storage	2.2	5.2	4.0	3.2	3.3	3.4
Accommodation and food service activities	1.7	4.0	3.1	6.4	3.3	3.0
Information and communication	1.7	3.0	2.5	3.4	4.9	7.5
Financial and insurance activities	0.9	2.0	1.6	1.1	7.9	8.4
Real estate activities	14.1	7.9	10.3	14.5	11.9	13.1
Professional, scientific and technical activities	13.6	14.3	14.0	3.6	6.6	8.2
Administrative and support service activities	3.9	6.0	5.2	2.9	4.3	5.0
Public administration and defence	4.0	5.2	4.7	6.9	6.8	4.8
Education	5.1	5.3	5.2	4.4	6.4	5.7
Human health and social work activities	4.8	10.5	8.3	12.4	10.7	7.9
Arts, entertainment and recreation	0.7	1.1	1.0	1.6	1.3	1.4
Other service activities	0.8	1.1	1.0	1.7	1.5	1.7
Activities of households	0.2	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

19.4.4.5 Supply chain

To assess the regional supply chain capacities, the concentration and relative strength of the industries in the offshore wind supply chain was analysed using Location Quotients (LQs) at the Aberdeenshire, Aberdeen City, Highland, and Scotland levels. The LQ is a metric that compares the concentration of a particular industry in a regional setting to its concentration on the UK level. If the LQ is > 1, this indicates that the particular industry is relatively strong and concentrated within the region, where as an LQ of less than 1 indicates that the particular industry is relatively weak.

Relative concentration of each industry has been determined by the 2022 employment levels based on Standard Industry Classification (SIC) categories used by ONS. Analysis shows a robust match between the sectors required to complete the Project and the skills and capability in the Aberdeenshire, Aberdeen City, Highland, and Scotland territories. This analysis, and the sectors required to complete the Project, is presented in Table 19-25 and Table 19-26 (Nomis, 2022).

Table 19-25 Employment levels for relevant supply chain industries

	SIC CODE	ABERDEEN CITY	ABERDEEN-SHIRE	HIGHLAND	SCOTLAND	GB
Fabricated metal products	25	1,720	1,385	750	18,900	289,500
Electrical control apparatus	271	150	25	30	1,250	23,000
Wiring & wiring devices	273	175	0	0	1,000	12,000
General purpose machinery	281	300	225	50	4,000	53,000
Electricity generation & transmission	351	350	600	1,000	17,000	92,000
Construction of utility projects	422	400	10	50	1,500	14,000
Other civil engineering projects	429	600	600	700	11,000	116,000
Electrical plumbing installation	432	2,000	2,000	2,250	42,000	473,000
Hotels and similar accommodation	551	2,250	2,250	7,000	50,000	357,000
Food & beverage services	56	10,500	4,800	6,350	156,000	2,064,000
Management consultancy	702	1,500	1,000	450	20,000	532,000
Architectural & engineering activities	711	11,000	7,000	2,250	63,000	508,000
Other professional & scientific services	749	700	800	500	12,000	126,000
Total employment		*143,800*	*123,300*	*127,240*	*2,675,000*	*32,595,000*

Table 19-26 LQs for relevant supply chain industries (LQ 0.7 or less in green, LQ 1.3 or greater in blue)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND
Fabricated metal products	1.3	1.3	0.7	0.8
Electrical control apparatus	1.5	0.3	0.3	0.7
Wiring & wiring devices	3.3	0.0	0.0	1.0
General purpose machinery	1.3	1.1	0.2	0.9
Electricity generation & transmission	0.9	1.7	2.8	2.3
Construction of utility projects	6.5	0.2	0.9	1.3
Other civil engineering projects	1.2	1.4	1.5	1.2
Electrical plumbing installation	1.0	1.1	1.2	1.1
Hotels and similar accommodation	1.4	1.7	5.0	1.7
Food & beverage services	1.2	0.6	0.8	0.9
Management consultancy	0.6	0.5	0.2	0.5
Architectural & engineering activities	4.9	3.6	1.1	1.5
Other professional & scientific services	1.3	1.7	1.0	1.2

Note: Industries with an LQ of 1.3 and above have been highlighted blue to represent a strong concentration of the industry in the spatial area. Industries with an LQ of 0.7 or less have been highlighted green to represent the relative weak concentration of the industry in the spatial area. In summary, there is evidence of an appropriate mix of skills and capability across the territories of Aberdeen City, Aberdeenshire and Highland.

19.4.4.6 Interactions with locally important industries

The following Section considers the industries where there is the potential for negative effects from the Project on existing locally important business activity. Two industries have been identified for consideration: tourism and recreational activities, and marine commercial activities.

19.4.4.6.1 Tourism

Tourism is a vital part of Scotland's economy, contributing to the country's wealth, job creation, and its international reputation. 2023 was an important year for the sector as performance was ahead of 2019 for the first time since the COVID-19 pandemic (BBC, 2024). The sector employed c185,000 people, contributing approximately 9% of total national employment (VisitScotland, 2024a). GVA in this period is estimated at between £4 billion and £4.5 billion (based on published Scottish Government economic indicators). International tourism played a key role, with 3.9 million international visitors spending a total £3.6 billion. This total is a 23% increase in international visitors compared to the previous year (VisitScotland, 2024b).

Work by HIE (2024) highlights four megatrends that currently impact the tourism sector and require consideration for the sector to remain competitive and relevant in a globally highly competitive industry. These include:

- Offering more genuine experiences and helping visitors to be more than 'tourists';
- Marketing the whole of Scotland, not just the favoured places;
- Recognising the many different types of visitors, both culturally and demographically; and
- Using widely available technology and data capture to improve and influence the visitor experience.

Tourism is important to Aberdeen City and Aberdeenshire. The economic impact of tourism in Aberdeen and Aberdeenshire in 2023 was worth £1.1 billion according to independent research conducted by Global Tourism Solutions (2024) using the Scottish Tourism Economic Activity Monitor model (VisitScotland, 2024c). This highlights a 32% increase in economic impact since 2019 for tourism in the region and a 14.8% increase on 2022. The Scottish Government (2024) reported that the sustainable tourism industry in Aberdeen City and Aberdeenshire generated a GVA of £292.7 million in 2021; on the Scotland level the sustainable tourism industry in 2021 generated a GVA of £3,365.8 million.

Comparable research in Highland (VisitScotland, 2024c) shows that tourism in the area was worth £1.5 billion in 2023. VisitScotland (2024d) reports that the areas welcomed 1.3 million overnight visitors, generating 6.0 million bed nights. Domestic overnight guests (1.1 million visits) spent an average of £66 per night and enjoyed a short break of c3.4 nights. International guests (0.3 million) spent an average of £56.83 per night and enjoyed an extended stay of 11.2 nights. It is estimated that the region welcomed 2.5m day visitors. This activity supported 11,000 full-time equivalent (FTE) jobs (5.2% of the economically active population). The Scottish Government (2024) reported that the sustainable tourism industry generated a GVA of £278 million in 2021.

Comparable research in Highland (VisitScotland, 2024e) shows that the areas welcomed 2.3 million overnight visitors, generating 7.6 million bed nights. Domestic overnight guests (1.8 million visits) spent an average of £89 per night and enjoyed a short break of c2.8 nights. International guests (0.5 million visits) spent an average of £122 per night and enjoyed an extended stay of 5.1 nights. This activity supported 18,000 FTE jobs (11.9% of the economically active population).

Whilst there are objectives towards extending the length of time that visitors stay, the short-stay market is a growing part of the UK tourism sector. A survey by RSM (2024) found that, despite cost-of-living concerns, travel remains a priority for the majority of residents in the UK. Sykes Cottages (2024), one of the largest providers of short breaks, reports an 8% increase in bookings for 2024 over 2023. Their most popular destinations are rural and coastal; given the rural and coastal nature of much of Aberdeenshire and Highland, the area is well placed to continue to be an attractive location.

Tourism in Aberdeen City and Aberdeenshire is marketed by VisitAberdeenshire, co-funded by Opportunity North East and Aberdeen City and Aberdeenshire Councils. Its role is threefold:

1. To promote high quality visitor experiences in North-east Scotland to targeted audiences in the UK and overseas;
2. To help to grow the visitor economy through initiatives that help tourism businesses to understand and meet demand from an ever-changing market; and
3. To provide strategic leadership for the tourism sector in the region.

The tourism product in Aberdeen City and Aberdeenshire includes key features such as:

- Heritage and castles: Aberdeenshire has over 260 castles, including Balmoral, Dunnottar, Crathes, and Fyvie Castles. The Castle Trail is a popular product that packages visits to famous historic sites;
- Outdoor and adventure tourism: Aberdeenshire extends into Cairngorms National Park, offering products around hiking, wildlife watching, skiing, and adventure tourism. The North East 250 is a scenic route, similar to the North Coast 500, offering coastal drives, whisky distilleries, castles, and local towns;
- Whisky tourism: The region is home to several distilleries including Glen Garioch and Glendronach. The distilleries typically offer tours, tastings, and insights into the whisky-making process
- Golf: Aberdeenshire has numerous golf courses, including world-famous venues like Trump International Golf Links and Royal Aberdeen Golf Club. Golf packages and experiences are a major draw for international visitors;
- Food and drink experiences: The region is celebrated for its local produce, including Aberdeen Angus beef, fresh seafood, and farm-to-table dining experiences. Aberdeenshire is also involved in Scotland's growing craft beer and gin industries, with tours and tastings at facilities such as BrewDog's flagship brewery; and
- Cultural and event tourism: Events such as the Braemar Gathering attract tourists to experience traditional Scottish culture, including athletics, music, and royal connections.

The organisation has published a strategic plan, *Destination Aberdeen & Aberdeenshire: A Framework for Growth 2022-2030*, to support the sector. The strategy notes the following as key areas of focus:

- Business events and conferences;
- Culture and heritage;
- Festivals and events;
- Natural environment; and
- Outdoor activities.

To deliver environmentally sustainable growth, the organisation notes the need for investment in key enablers:

- Digital transformation and providing robust internet coverage;
- People and skills development for individuals working in visitor experience;
- Travel connectivity including public transport and travel alternatives including rental bikes, electronic charging points, and local small-scale tours; and
- Accessibility, specifically for older travellers and those with disabilities.

With regard to business tourism (including conferences and events), this industry resulted in over 43,655 bed nights in the region in 2023; at an average of 2.6 nights per visitor, this is c16,800 guests (Visit Inverness Loch Ness, 2024). VisitAberdeenshire (2024) estimates the gross value of business tourism at £12 million per annum. This is a spend per visitor of £715 per trip (£275 per night) – 3.5 times the recorded average spend on recreational tourism.

For the IMF area, the Destination Management Organisation (DMO) is Visit Inverness Loch Ness (VILN). VILN collaborates closely with VisitScotland to promote tourism, manage resources, and support sustainable tourism development in the region. Key responsibilities of the DMO include:

- Marketing and promotion: Showcasing the IMF, Loch Ness, and surrounding attractions through regional campaigns aimed at domestic and international visitors;
- Sustainable tourism: Implementing practices to minimise environmental impact while maximising visitor experience and local benefit;
- Supporting local tourism businesses: Working with accommodation providers, tour operators, and other local businesses to enhance visitor services and ensure a high-quality visitor experience; and
- Infrastructure and community engagement: Collaborating with local councils and organisations to improve tourism infrastructure and ensure that tourism growth aligns with community interests.

VILN and VisitScotland are supported by HIE for economic development while the Highland Council plays a role in regulatory and infrastructure projects related to tourism. Together, they aim to make the IMF a sustainable and attractive destination for visitors. With regard to engagement with the industry, the DMO has:

- Attended 23 national and international trade events to promote the destination to international buyers;
- Facilitated multiple tourism events, conferences and incentive travel resulting in an economic benefit of over £3 million; and
- Assisted in securing the Scottish Golf Tourism Week, estimated to bring a further £3 million of economic benefit.

The Strategic Plan for the next five years will see VILN work with partners and stakeholders to:

- Ensure that the destination remains front of mind for both domestic and international visitors;
- Continue to promote the value and importance of tourism to the local economy;
- Continue working towards a year-round tourism economy;
- Continue to develop the relationship between tourism and the communities it serves; and
- Enhance the visitor experience and reputation of the destination.

Data for occupancy rates is provided by the VisitScotland (2023) in the Scottish Accommodation Occupancy Survey. Specific data on occupancy rates by month is not available for the Aberdeen City and Aberdeenshire spatial area, data has instead been presented for the Aberdeen and Grampian region which covers a similar area (including Moray).

Annual hotel occupancy in the Aberdeen and Grampian region was 68.4% in 2023, up from 61.0% in 2022 (+12.1%) and marginally ahead of the Scottish performance (65.4% in 2023 and 60.9% in 2022). Annual hotel occupancy in the Highland region remained constant at 72.1% in 2023 from 72.5% in 2022, this is ahead of the Scottish and Aberdeen performance.

Table 19-27 Hotel bed occupancy by month (September 2023 to August 2024, VisitScotland, 2024a) (%)

	2023				2024							
	S	O	N	D	J	F	M	A	M	J	J	A
Aberdeen and Grampian	74.0	56.5	58.0	43.5	33.3	46.6	45.2	55.8	73.9	74.7	73.1	82.9
Highland	77.6	56.8	28.1	46.8	42.5	52.5	63.4	59.8	89.0	83.8	79.3	82.9
Scotland	71.9	63.0	48.5	51.4	44.3	53.2	62.7	64.0	78.9	79.1	77.5	79.6

Table 19-27 highlights the seasonal variation in occupancy rates for visitor accommodation with a peak season lasting from May to September with occupancy rates around double that of the lowest month (January). August was the peak month for the Aberdeen and Grampian region at 82.9%; May was the peak month for the Highland region at 89.0%; and August was the peak month on the Scotland level at 79.6% (May in a close second).

The total estimated bed space in the Aberdeen and Grampian region is c32,000, with c35,000 in the Highland region[10] and 323,000 on the Scotland level (VisitScotland, 2023).

19.4.4.6.2 Recreational activities

Aberdeen City and Aberdeenshire offer a myriad of recreational activities. These are highlighted in Table 19-28:

[10] Total regional annual visitor nights from the VisitScotland Visitor Survey were used to calculate the average number of visitors staying per night. This was then divided by the average bed occupancy rate to achieve an estimate for the total number of bed spaces.

Table 19-28 Recreational activities in Aberdeen City and Aberdeenshire

CATEGORY	ACTIVITY	DESCRIPTION
Outdoor and adventure activities	Hiking and walking	• Cairngorms National Park: Access for hikes, gentle walks and climbing; • Bennachie: A popular hill for hiking with marked trails; and • Coastal trails: Including the Aberdeenshire Coastal Trail, with access to cliffs and beaches.
	Cycling	• Deeside Way: A cycle path that follows the old railway line from Aberdeen to Ballater; and • Mountain biking: Trails in the Cairngorms and at Glenlivet Mountain Bike Trails offer various levels of difficulty for cyclists.
	Golf	• The region is known for its golf courses including a number of world-class links courses.
	Water sports	• Surfing and paddleboarding: Aberdeen Beach and nearby beaches like Newburgh are popular for surfing, windsurfing, and paddleboarding; and • Fishing: Both freshwater and sea fishing are popular in the area.
	Snow sports	• The Cairngorms area has opportunities for skiing and snowboarding, particularly at The Lecht and Glenshee Ski Centres.
Wildlife and nature exploration	Birdwatching	• The Ythan Estuary and Forvie Sands are renowned for birdwatching.
	Dolphin watching	• Aberdeen Harbour and the coastline offer opportunities to see dolphins, especially at Torry Battery.
	Nature reserves	• Reserves include Loch of Strathbeg and Glen Tanar.
Cultural and historical activities	Castle tours	• Aberdeenshire has over 250 castles including Balmoral Castle, Dunnottar Castle, and Craigievar Castle.
	Museums and galleries	• Points of interest include the Aberdeen Art Gallery, the Tolbooth Museum, and Aberdeen Maritime Museum.
	Historical sites	• Standing stones and Pictish relics can be found throughout the area, such as the Maiden Stone and Sunhoney Stone Circle.
Festivals and events		• Aberdeen International Youth Festival and the Nuart Festival (street art) are notable cultural events in Aberdeen; and • Braemar Gathering: One of the most famous Highland Games in Scotland, held in Aberdeenshire.
Shopping and dining		• Union Street, Union Square, and the West End offer a variety of shopping and dining experiences.
Theatre and music		• Aberdeen City has several cultural venues, such as His Majesty's Theatre, Music Hall, and The Lemon Tree, which host concerts, performances, and events.

Recreational activity receptors have also been identified within 5 km of landfall. These are outlined in Table 19-29.

Table 19-29 Recreational activity receptors within 5 km of landfall

RECREATIONAL ACTIVITY RECEPTOR	DISTANCE TO LANDFALL
Longhaven Cliffs Nature Reserve	3.4 km
Slains Castle	3.4 km
Cruden Bay Golf Club	4.6 km
Cruden Bay Beach	4.1 km
Port Erroll Harbour	4.1 km
Bullers of Buchan hiking area	1.2 km
Buchan Ness Lighthouse	3.6 km
Boddam Castle	3.0 km
Boddam Recreation Park	3.3 km

A small group of recreational cold-water divers (Aberdeen Divers) use Boddam harbour as a base for diving in the area. They are usually concentrated around the Buchan Ness Lighthouse, although a small number dive on a wreck to the north of Longhaven Bay directly from boats. There are water sports activities that occur in Cruden Bay.

Recreational marine vessels mostly use the coastal water off Peterhead. Peterhead Harbour hosts a sailing club, a Sea Cadet Unit, and three Royal Yachting Association training centres. Given this activity, it is anticipated that cruising routes and places of refuge for yachts are potentially located within the recreation Study Area. Sea angling trips (offered by Misty Angling Trips) may also utilise the area within the recreation Study Area, sailing from Buchaness throughout the summer.

Following scoping and consultation, no further recreational activities are expected to occur within the recreational Study Area that may be impacted by offshore activities. EIAR Vol. 3, Chapter 15: Shipping and Navigation notes the potential for recreational activities in the Study Area however there are no 'general boating areas'[11] in proximity.

19.4.4.6.3 Marine commercial activities

It had been identified in EIAR Vol. 3, Chapter 14: Commercial Fisheries and EIAR Vol. 3, Chapter 17: Infrastructure and Other Users that the only marine commercial activity likely to face potential significant effects as a result of the Project is the commercial fishing sector.

The ONS' Business Register and Employment Survey (Nomis, 2022) provides data on employment in the fishing industry, including both employees and self-employed workers. There are 50 persons employed in the fishing industry

[11] *A general boating area may indicate non-AIS recreational traffic presence.*

in Aberdeen City and 2,250 employed in Aberdeenshire. On the Scotland level, there are 5,000 persons employed in the fishing industry, and 8,000 in GB.

19.4.4.6.3.1 Commercial fishing activities

The key methods and commercial fish and shellfish species relevant to the socio-economics chapter are contained in the complete baseline found in EIAR Vol. 3, Chapter 14: Commercial Fisheries. A summary of this baseline is presented below.

Vessel Monitoring System (VMS) effort and value data for all gear types is low to moderate and there is limited evidence of Automatic Identification System (AIS) fishing vessels within the Array Area. The most commonly operated gear type in the Array Area is demersal trawls followed by pelagic trawlers and demersal seines. The most commonly landed species in the Array Area is *Nephrops*. In the Export/Import Cable Corridor (EICC), the most commonly operated gear type inshore is demersal trawlers and pots and traps with some scallop dredging. With increasing distance offshore along the EICC, the most commonly operated gear type is demersal trawlers, followed by demersal seines and pelagic trawlers. The most commonly landed species inshore are crab (*Cancer pagurus*), haddock (*Melanogrammus aeglefinus*), and *Nephrops* and with increasing distance offshore, the most commonly land species are *Nephrops*, followed by haddock and herring (*Clupea harengus*). VMS effect and value data for all gear types is low to moderate along the EICC with limited evidence of AIS fishing vessel tracks along the length of the EICC, with AIS data shoeing vessels activity decreases with increasing distance offshore.

The species associated with the highest landings value and their annual landings values from 2018 to 2022 in the socio-economic Study Area (Aberdeen City and Aberdeenshire) are listed in Table 19-30 (Scottish Government, 2023).[12]

[12] *The fishing districts of Aberdeen, Fraserburgh, and Peterhead are included in the Study Area. Only species with a landings value of over £1 million in 2022 are presented in Table 19-30.*

Table 19-30 Value of landings by species (2018 to 2022) (£000s)

	2018	2019	2020	2021	2022
Cod (*Gadus morhua*)	28,015	23,475	16,135	13,766	16,470
Haddock	26,788	25,594	21,696	16,199	19,372
Hake (*Merluccius merluccius*)	9,927	9,135	4,996	3,701	4,970
Ling (*Molva molva*)	3,413	2,882	1,578	1,518	2,200
Monkfish (*Lophius piscatorius*)	16,248	11,220	9,582	11,626	11,731
Pollack (*Pollachius pollachius*)	1,094	1,167	1,005	376	1,334
Saithe (*Pollachius virens*)	12,158	12,778	7,158	4,890	6,434
Whiting (*Merlangius merlangus*)	9,090	9,928	9,676	10,547	9,549
Other demersal	10,240	8,879	7,924	5,045	5,128
Total demersal	116,973	105,057	79,749	67,668	77,188
Blue whiting (*Micromesistius poutassou*)	3,158	2,799	2,666	4,282	3,723
Herring	10,221	9,984	10,706	13,215	17,185
Mackerel (*Scomber scombrus*)	67,196	65,782	69,240	76,399	76,734
Other pelagic	1,206	303	628	287	363
Total pelagic	81,780	78,868	83,240	94,183	97,994
Edible crabs	3,173	3,489	1,948	2,872	3,277
Nephrops (*Nephrops norvegicus*)	19,135	35,224	16,863	32,981	41,245
Scallops (*Pecten maximus*)	3,363	2,607	2,852	3,680	1,762
Squid	3,533	4,968	2,449	1,649	1,546
Lobsters (*Homarus gammarus*)	3,078	2,891	2,270	2,578	1,917
Other shellfish	1,435	2,093	1,281	1,733	1,209
Total shellfish	33,717	51,271	27,663	45,493	50,956
Total landings	232,471	234,197	190,651	207,344	226,139

The data shows an increase in the value of shellfish and pelagic fish over the reference period and a decrease in value for demersal fish. Despite year-on-year variation, the total value of landings has remained relatively constant over the reference period. As of 2022, *Nephrops*, mackerel (*Scomber scombrus*), and haddock were the most valuable species by catch in Aberdeen City and Aberdeenshire.

EIAR Vol. 3, Chapter 14: Commercial Fisheries considers the potential for displacement of fishing activity from within the Project Area to adjacent waters. This has been defined by the International Council for the Exploration of the Seas (ICES) rectangles within which the Project is located, these are 45E7, 45E8, 45E9, 45F0, 45F1, 44E7, 44E8, 44E9, 44F0, 44F1, 44F2, 43E7, 43E8, 43E9, 43F0, 43F1, 43F2, 42E7, 42E8, 42E9, 42F0, 42F1, and 42F2. Table 19-31 shows the catch value of commercial fishing activities that occur within the ICES rectangles.

Table 19-31 Value of landings by species (2018 to 2022) (£000s)

	2018	2019	2020	2021	2022
Demersal trawlers	29,473	48,338	26,516	35,748	42,290
Pelagic trawlers	3,979	9,447	13,230	2,068	7,260
Scallop dredgers	2,717	2,325	2,676	3,879	1,721
Passive gears	9,124	9,226	6,025	7,778	7,190
Other	2,934	7,177	6,587	1,495	2,742
Total	48,226	76,511	55,034	50,969	61,204

There has been some variation in the total catch value overall and for the various commercial fishing activities that occur within the relevant ICES rectangles. However, the overall trend shows that the majority of the value is in demersal trawlers, with other activities being relatively minor.

19.4.4.6.3.2 Onshore processing

The ONS' Business Register and Employment Survey (Nomis, 2022) provides data on employment in the onshore fish processing industry (processing and preserving of fish, crustaceans and molluscs) in Aberdeen City, Aberdeenshire, Scotland, and GB. Industry employment is 400 in Aberdeen City, 2,250 in Aberdeenshire, 7,000 in Scotland, and 14,000 in GB.

19.4.4.7 Measures of community viability

19.4.4.7.1 Housing

A recently published Housing Need and Demand Assessment (HNDA) projects demand in Aberdeen City and Aberdeenshire from 2023 to 2028 (Aberdeen City Council and Aberdeenshire Council, 2023), representing two housing market areas. The scale of the need and demand for new housing is largely driven by the scale of population and household growth. This in turn is dependent on a range of factors including the current population and household structures, rates of economic growth, migration, and incomes. The HNDA feeds into a Local Housing Strategy (LHS) for each of the market areas.

The *Aberdeenshire Council Local Housing Strategy 2024 to 2029* highlights that, as of 2021, there were 120,682 dwellings for a population of 262,690, with 113,861 households. Future housing estimates for Aberdeenshire suggest

a requirement for around 10,330 new homes over the period 2023 to 2042. The most pressured settlements in Aberdeenshire are Inverurie, Westhill, Stonehaven, Peterhead and Fraserburgh. The key priorities for the LHS are:

- Increasing supply of housing in Aberdeenshire;
- Providing a range of housing options for those who wish to live in Aberdeenshire;
- Preventing homelessness where possible (where it cannot be, using a Rapid Rehousing approach to resolve cases);
- Increasing the supply of appropriate housing and support to ensure health and wellbeing across all of Aberdeenshire's communities; and
- Working towards net zero and a reduction in fuel poverty in Aberdeenshire.

With an updated strategy currently being drafted, the *Aberdeen City Council Local Housing Strategy 2018 to 2023* highlights six overarching strategic outcomes:

- There is an adequate supply of housing across all tenures and homes are the right size, type and location that people want to live in, with access to suitable services and facilities;
- Homelessness is prevented and alleviated;
- People are supported to live, as far as is reasonably practicable, independently at home or in a homely setting in their community;
- Consumer knowledge, management standards and property condition is improved in the private rented sector;
- Fuel poverty is reduced which contributes to meeting climate change targets; and
- The quality of housing of all tenures is improved across the city.

The strategy highlights that Aberdeen City has adapted to increasing populations and households with appropriate increases in dwellings. For example, the number of households in Aberdeen increased by 10.2% between 2001 and 2016 (from 96,848 to 106,749). Over the same period the number of dwellings increased by 10.6% (from 104,030 to 115,080).

In the Highland Council area, a new LHS was approved in 2023 (Highland Council, 2023a) which aimed to build on the outcomes identified in the previous LHS 2017 to 2022. The LHS 2023 to 2028 highlights that limited housing options are a concern for many households in Highland. When asked about local housing challenges, 75% of local residents highlighted limited housing options for young people and families and 73% highlighted limited alternative housing options (such as low-cost home ownership, shared ownership or mid-market rent options). Much of the already limited housing stock is also considered ineffective (e.g. empty or second homes), putting further pressure on housing in Highland.

The new outcomes for the LHS 2023 to 2028 are:

- Housing supply enables strong economic growth and creates resilient communities and places;
- Health and wellbeing outcomes improve by investing in housing solutions which enable everyone in Highland to live independently in the community they prefer;
- People in Highland have access to a wider range of housing options and choices as well as the support they need; and
- Partnership and innovation builds capacity in Highland so that housing condition and energy efficiency improve and all homes move towards net zero.

A study conducted by HIE (2022) evaluating the impact of COVID-19 found that the priority issue for many communities across the region was housing, especially housing for local families.

The most recent HNDA for Highland (Highland Council, 2021) estimates that the current existing need in Highland requires 2,236 stock additions, which will take 10 years to clear. Across the region housing pressure varies significantly, with Nairn and Inverness, and Skye and Lochalsh facing the greatest pressures and Caithness the least.

19.4.4.7.2 School capacities

Table 19-32 below gives a study of schools within five km of the Aberdeen and Peterhead ports, showing capacity for a potential influx of new pupils should families move to the area for jobs created during the Project (Aberdeen City Council, 2022; Aberdeenshire Council, 2023a; Highland Council, 2024). A new campus in Peterhead is planned across multiple sites, with the expectation that the new academy element will open in 2025.

Table 19-32 School capacity within 5 km of relevant ports

SCHOOL	PORT	<50%	50 TO 75%	>75%	OVERCAPACITY
Primary					
Ashley Road	Aberdeen			X	
Broomhill	Aberdeen				X
Cornhill	Aberdeen			X	
Ferryhill	Aberdeen			X	
Gilcomstoun	Aberdeen			X	
Hanover	Aberdeen				X
Kirkhill	Aberdeen			X	
Kittybrewster	Aberdeen			X	
Mile End	Aberdeen			X	
Riverbank	Aberdeen			X	
Seaton	Aberdeen			X	
Skene Square	Aberdeen			X	
St Peter's RC	Aberdeen			X	
St Joseph's RC	Aberdeen			X	
Sunnybank	Aberdeen			X	
Tullos	Aberdeen				X
Woodside	Aberdeen			X	
Boddam	Peterhead	X			

SCHOOL	PORT	<50%	50 TO 75%	>75%	OVERCAPACITY
Buchanhaven	Peterhead			X	
Burnhaven	Peterhead	X			
Clerkhill	Peterhead			X	
Dales Park	Peterhead			X	
Meethill	Peterhead		X		
Peterhead Central	Peterhead	X			
Park Primary	Cromarty Firth		X		
South lodge	Cromarty Firth		X		
Hill of Fearn	Nigg			X	
Hilton of Cadboll	Nigg		X		
Secondary					
Aberdeen Grammar	Aberdeen			X	
Harlaw Academy	Aberdeen			X	
St Machar Academy	Aberdeen			X	
Peterhead Academy	Peterhead		X		
Invergordon Academy	Cromarty Firth		X		
Tain royal academy	Nigg		X		

Aberdeenshire Council (2024b) has concluded that it needs to make better use of its learning estate, whilst reducing assets and ensuring education provision is aligned with current and future pupil population. The estate will undertake transformation in a phased approach over the coming years.

19.4.4.7.3 NHS capacities

Both Aberdeen City and Aberdeenshire are covered by the NHS Grampian health board. The major hospital in the area is the Aberdeen Royal Infirmary (ARI) located in Aberdeen City. This hospital has an Accident and Emergency (A&E) department and a minor injuries unit and offers a range of specialist inpatient and outpatient services. The ARI has an average of 703 staffed beds available at any given time. There also a number of smaller hospitals in the area, however no other A&E departments. There are minor injuries units in Peterhead Community Hospital, Jubilee Hospital (Huntly) and Fraserburgh Hospital.

There are further smaller community-based hospitals that combine General Practice (GP) surgeries, community nursing teams and several outpatient clinics. These are located in:

- Aboyne Hospital (Aboyne);
- Chalmers Hospital (Banff);
- City Hospital (Aberdeen)
- Glen O' Dee Hospital (Banchory);
- Insch War Memorial Hospital (Insch);
- Inverurie Hospital (Inverurie);
- Turner Memorial Hospital (Keith);
- Turriff Hospital (Turriff);
- Ugie Hospital (Peterhead); and
- Woodend Hospital (Aberdeen).

Other specialist treatment facilities in the area include:

- Roxburghe House, a dedicated palliative care hospital;
- Royal Aberdeen Children's Hospital on the ARI campus, with its own A&E department and a range of specialist inpatient and outpatient services for children and young people;
- Royal Cornhill Hospital, the main centre for the care and treatment of people with mental health treatment needs;
- The ANCHOR Centre, a new facility on the ARI campus for dedicated day-patient and outpatient care in oncology and haematology alongside offering space for research and teaching; and
- Baird Family Hospital, a new facility on the ARI campus that provides maternity and related services such as gynaecology, neonatology and reproductive medicine.

These hospitals and their associated range of services provide a comprehensive system of care and treatment for the people of Aberdeen City and Aberdeenshire. There is also significant provision of primary care across the area of study, with 28 GP surgeries in Aberdeen City and 30 in Aberdeenshire.

In the Highland Council area, healthcare services are managed and delivered by the NHS Highland health board. NHS Highland is responsible for a large geographical area that is disparately populated. As such, their service provision is significant but spread out. For the purpose of this assessment, focus will be given to the services and infrastructure provided in the Inverness, Sutherland and Ross-shire areas as these are most relevant to the area of study. It is worth noting that any statistical analysis offered on the health board will reflect all activity in the Highlands and Islands. Raigmore Hospital is the district general hospital for NHS Highland, located in Inverness with an A&E department. This hospital offers a wide range of specialised inpatient and outpatient services. Raigmore Hospital has an average of 368 staff beds available at any given time. There is a number of smaller hospitals and community-based facilities in the area, but no other A&E departments. These facilities provide a range of inpatient and outpatient services, and are staffed with a combination of GPs, community nurses and allied health professionals. These are:

- County Community Hospital (Invergordon);
- Migdale Hospital (Bonar Bridge);
- Ross Memorial Hospital (Dingwall);
- Lawson Memorial Hospital (Golspie); and
- Royal Northern Infirmary Community Hospital (Inverness).

There are also specialist treatment facilities in the area, including New Craigs Hospital (Inverness) that provides acute psychiatric care and treatment. The National Treatment Centre – Highland (Inverness) is a new purpose-built facility that delivers ophthalmology and orthopaedic care. This facility was designed to reduce waiting times for patients across the Highlands and relieve pressure on Raigmore Hospital. There is also a specialist rheumatology unit based in Dingwall that offers multi-professional assessment, treatment, monitoring and ongoing support for people with rheumatic diseases.

These hospitals and their associated range of services provide a comprehensive system of care and treatment. This secondary care provision is supplemented and supported by significant primary care provision across the area, with approximately 30 GP surgeries.

NHS efficiency can be measured, in part, by assessing the wait times for patients to receive treatment. NHS Scotland commits to seeing and treating as many patients as possible within 18 weeks of initial referral. NHS Inform (2024) reports that, on average, people wait 44 days to receive outpatient care within the NHS Grampian health board, only marginally longer than the NHS Scotland average (42 days). 64.6% of patients are treated within the 18-week referral window. However, there are longer waiting times in the following outpatient service areas:

- Neurology: 1,105 patients seen with a median waiting time of 32 weeks;
- Anaesthetics: 320 patients seen with a median waiting time of 37 weeks;
- Dermatology: 1,161 patients seen with a median waiting time of 23 weeks; and
- Orthodontics: 90 patients seen with a median waiting time of 28 weeks.

NHS Highland outpatients wait an average of 50 days to receive treatment, this is longer than the NHS Scotland average of 42 days (NHS Inform, 2024). 64.7% of patients in NHS Highland are seen within the 18-week referral to treatment target, however some outpatient services have longer waiting times:

- Orthodontics: 121 patients seen with a median wating time of 40 weeks;
- Paediatric surgery: 57 patients seen with a median waiting time of 23 weeks;
- Neurosurgery: 60 patients seen with a median waiting time of 36 weeks; and
- Orthopaedics: 1,236 patients seen with a median waiting time of 34 weeks

With regard to A&E department capacity and efficiency, NHS Scotland aims for people to be treated within four hours of arrival. Across NHS Scotland, 69.6% of people are seen within this timeframe. NHS Grampian has a marginally lower rate at 67.2% (this includes minor injury units), whilst the A&E department in the ARI scores significantly worse, with only 47.1% of patients seen in this window. This suggests that NHS Grampian is running at comparable levels to the rest of Scotland in terms of A&E capacity, but the ARI is significantly more strained, most likely as it is the only A&E department in the region and therefore covers a large population.

In the A&E department at Raigmore Hospital, 68.1% of people are seen within four hours of arrival, comparable to national averages. NHS Highland broadly sees 83.5% of attendees to A&E within this timeframe. These statistics shows that NHS Highland is generally efficient in their treatment of A&E patients with minimal excessive waiting. This highlights that despite the significant geographic area that Raigmore Hospital serves, its A&E department is still working effectively and is not under substantial pressure.

Another key metric for assessing NHS efficiency is the extent to which a health board experiences delayed discharges (any discharge considered later than is clinically necessary). Table 19-33 shows the numbers of delayed discharges in NHS Grampian and NHS Highland in a single month (Public Health Scotland, 2024).

Table 19-33 Delayed discharges in NHS Grampian (April 2024)

	NHS SCOTLAND	NHS GRAMPIAN	NHS HIGHLAND
Number of delays at census point	1,912	173	208
Median length of delay at census point	28	38	43
Median length of stay prior to delay	46	65	56

Analysis shows that NHS Grampian performs worse than NHS Scotland as a whole, with patients experiencing longer delays and stays more generally prior to their set discharge date. NHS Highland also experiences issues with delayed discharges with a longer length of median delay, although patients experience shorter stays prior to their delay. This means that patients spend more time in hospital than needed, which can have negative impacts on individual health and wellbeing and wider repercussions for new patient admissions (the more beds that are occupied with delayed discharge patients, the less space there is available for new patients).

Delayed discharges occur for a number of reasons, but are often due to a lack of appropriate care or services available in the community. For example, there may not be space for a patient to be discharged into a local care home or their house may require modifications for supported living. This suggests that there is not sufficient integration between local health and social care systems in Aberdeen City and Aberdeenshire.

19.4.4.7.4 Public transport and infrastructure

Like many rural areas in Scotland, Aberdeenshire faces challenges in public transport and linking small communities. There are major links directly from Aberdeen to the Central Belt and the Highlands, but the majority of communities within Aberdeenshire are served by bus links into Aberdeen. Similarly, the Highlands struggle with limited transport connections. There are links to a number of major cities from Inverness, via road, rail and air. There are also train links and bus links connecting the smaller settlements throughout the Highlands.

Aberdeen International Airport offers flights to both domestic and European destinations. In 2023, the airport recorded over 74,000 aircraft movements and 2.3 million passengers (Aberdeen International Airport, 2023). Inverness Airport is markedly smaller, offering primarily domestic flights. The airport offers links to a number of Scottish islands, the Central Belt and the rest of the UK. There is also a limited number of international flights. During the 2022 to 2023 period, 749,908 passengers flew out of Inverness Airport with a total of 26,931 flight movements (Highlands and Islands Airports Limited, 2023).

There is a port in Aberdeen, from which NorthLink operates a major customer route from the mainland to the Orkney and Shetland islands.

There is a single rail route to Aberdeen, with links to Glasgow, Edinburgh, Dundee and Inverness. However, this does not extend beyond Aberdeen and travel to Peterhead and Fraserburgh by public transport requires a bus from Aberdeen. The train station in Inverness offers links with a number of major Scottish cities, including Aberdeen,

Edinburgh and Glasgow, and links with London via the Caledonian Sleeper train. There is a rail service that runs from Inverness to Thurso in the north, with stops at stations along the east coast of the Highland region, including Dingwall, Alness, Invergordon, Fearn and Tain.

The major bus companies around Aberdeen and Aberdeenshire are First Aberdeen and Stagecoach, with coach companies such as FlixBus and Megabus providing routes to UK cities. However, Stagecoach (2024) reported that it is cutting services due to "a combination of tender losses, reduced passenger demand and higher costs". Commercial bus services throughout the Highlands are primarily operated by Stagecoach. These buses operate primarily between Inverness, Dingwall, Easter Ross and the Black Isle. There is limited service to the more rural areas of the Highlands, particularly the west coast and central Sutherland. Citylink provide services that connect the Highlands with the rest of Scotland. There are some limitations to the provision of this bus network, with concerns raised about the frequency of some services and the fact that there are significant location gaps that receive no service.

With regard to road infrastructure, there are two major roads: the A90 (Dundee to Fraserburgh, through Peterhead) and the A96 (Aberdeen to Inverness). Upgrades are planned across the region, including the extension of the A90 as a dual carriageway and upgrades to make the A947 a major link to more communities of Aberdeenshire, particularly to Banff. The major trunk road through the Highlands is the A9, running from Perth through Inverness and up the east coast to Thurso. There are currently major works ongoing to make the A9 a full dual carriageway up to Inverness. This aims to alleviate pressure on the road, reduce journey times, minimise road accidents and strengthen a vital link between the Highlands and the rest of Scotland.

Nestrans, the Regional Transport Partnership for Aberdeen and Aberdeenshire, works to "*provide a safer, cleaner, more inclusive, accessible and resilient transport system in the North East, which protects the natural and built environment and contributes to healthier, more prosperous and fairer communities*". The partnership published its Regional Transport Strategy (Nestrans 2040) in 2021 to address the challenges involved in the use of sustainable transport, exacerbated by the COVID-19 pandemic. It gives four overarching goals:

1. Equality: Promoting equality across the North East;
2. Climate: Reducing impacts on climate change and protecting the environment;
3. Prosperity: Helping deliver inclusive economic growth across the North East; and
4. Improving health, safety and wellbeing across the North East.

The Strategy lists 18 policies and actions to work towards its aims, including managing demand, encouraging behavioural change and improving accessibility in rural areas.

Highlands and Islands Transport Partnership (HITRANS) is the Highland equivalent, a public statutory body responsible for the support and improvement of transport services and infrastructure across the Highlands and Islands. HITRANS published a regional transport strategy in 2008 that was subsequently updated in 2018. The core vision of this strategy is "to deliver connectivity across the region which enables sustainable economic growth and helps communities to actively participate in economic and social activities". This overall aim is underpinned by the following transport objectives:

1. Reducing journey times and improve reliability and resilience;
2. Improving safety of transport and travel;
3. Tackling capacity constraints;
4. Improving the quality and accessibility (availability, affordability, information and integration) of travel;
5. Protecting the environment and mitigate adverse impacts of transport and travel; and
6. Increasing physical activity and participation to improve health and wellbeing.

19.4.4.8 Socio-cultural

Relevant socio-cultural impacts defined in the MAU's general advice were used in the development of this baseline:

- Lifestyles and quality of life;
- Social problems (e.g. crime, ill-health, deprivation); and
- Community character or image; stress and conflict and integration, cohesion and alienation.

19.4.4.8.1 Lifestyles and quality of life

There is a number of groups and organisations in Aberdeen City that focus on promotion and support for community participation that promote involvement in identified areas of interest and raise awareness of key issues.

Local Empowerment Groups operate in north, south and central Aberdeen. These groups feed into the Local Outcome Improvement Plan (LOIP), a ten-year plan which is reviewed in consultation with partners every two to three years. The recent plan (Community Planning Aberdeen, 2024) references an engagement activity that aimed to understand what people in Aberdeen thought of the city using a scoring exercise. The activity highlighted the five elements of their place that they currently value, and the five elements of their place they believe could be improved.

Table 19-34 Elements identified in the LOIP (2023)

CURRENTLY VALUED ELEMENTS	ELEMENTS FOR FUTURE IMPROVEMENT
Natural space	Moving around
Identity and belonging	Public Transport
Feeling safe	Streets & Space
Play and recreation	Natural space
Housing and community	Play and recreation

Aberdeenshire has consistently reported high levels of life satisfaction, often surpassing the Scottish average. Residents also frequently rank among the top in Scotland in terms of feeling that their lives are worthwhile. While happiness levels fluctuate, they generally exceed the national average. Additionally, anxiety levels in Aberdeenshire have remained relatively stable over time, with many respondents reporting good or very good wellbeing. Across all

metrics it is worth noting that dips are evident at points of key global events such as the COVID-19 pandemic (2020 to 2021) and the global oil crisis (2015 to 2017) (Aberdeenshire Council, 2023b). However, even with these dips, the area shows higher scores than many other local authorities across all metrics.

By evaluating the level of access that households in the IMF have to services and amenities we can understand their lifestyle and quality of life. Compared to the wider Highlands and Islands region, residents of the IMF are more likely to have local access to important facilities such as schools, bus services, convenience stores, and supermarkets. This availability contributes positively to their everyday convenience and overall lifestyle, allowing residents to meet their daily needs without long travel times or significant disruptions. Access to healthcare services is another crucial factor influencing quality of life in the region. The majority of households can reach a GP (86%) and a dentist (73%) within a 20-minute drive. However, there is a notable gap in access to mental health services, with only 37% of households able to access these services in person and nearly half (49%) unaware of where such services are located.

Many people who move to the Highlands do so for improved quality of life, with access to local outdoor green spaces being a key factor. The Highlands is home to one of Scotland's four Green Health Partnerships, which promote the natural environment as a valuable resource for addressing health issues. In addition to the natural landscape, most households in the region report being able to access sports facilities, gyms, leisure centres, or libraries within a 20-minute drive. However, fewer residents have access to evening classes (58%) or theatres or spaces for live performances (55%). Access to such facilities is notably lower in remote rural areas.

In a 2021 Scottish Government study, communities that live close to offshore wind developments were surveyed about their perceptions and experiences of living near the developments. When asked about specific impacts, the impact had been largely neutral in most cases. In particular, 75% said that the local offshore wind farm had no impact on their livelihood and 63% reported no impact on their quality of life, with a combined 25% reporting a positive impact compared to only 4% reporting a negative impact.

19.4.4.8.2 Social problems

The Scottish Index of Multiple Deprivation (SIMD) (Scottish Government, 2020f) provides a relative measure of deprivation across Scotland's 6,976 data zones. Aberdeenshire scores highly on the SIMD, with only nine of its 340 data zones falling within the 20% most deprived zones, of which two are in the lowest 10% and none are in the lowest 5% of data zones.

The areas that are in the lowest 20% are largely concentrated in Peterhead and Fraserburgh, with particularly low scores in criteria on education and crime. Nine of the 23 Peterhead data zones lie in the lowest 5% of Aberdeenshire's 340 data zones indicating that it is significantly and more densely deprived relative to the rest of Aberdeenshire. The most deprived data zones are found in the Peterhead Harbour area.

Areas of higher deprivation are more likely to exhibit higher crime rates and incidence of antisocial behaviour than in areas of low deprivation, and residents have lower incomes, fewer qualifications, and lower life expectancy rates. These outcomes are persistent over time.

The city of Aberdeen is a relatively affluent city, with 40% of Aberdeen's data zones in the 20% least deprived zones in Scotland. However, areas of deprivation remain (8% of Aberdeen's data zones are in the 20% most deprived zones

in Scotland), and 20.5% of children in Aberdeen were living in poverty in 2021/22, an increase from 18.3% in the previous year.

Within the IMF area there are 209 relevant data zones. Of these, four data zones are recognised as being in the 5% most deprived in Scotland, 11 in the 10% most deprived and 24 in the 20% most deprived (these figures are inclusive; the 5% most deprived are also counted in the 10% most deprived). Most of these are in Inverness, including three of the four areas in the 5% most deprived and more than half of the areas in the 20% most deprived.

Seven domains comprise the SIMD: income, employment, education, health, access, crime and housing. If the IMF area shared the same distribution of deprivation as with Scotland as a whole, it would be expected that 10 data zones would fall within the lowest 5% deprivation (meaning most deprived) for each domain.[13] The number of actual data zones in the IMF area that fall within the lowest 5% of deprived data zones for each domain is shown in Table 19-35.

Table 19-35 Number of expected and actual IMF data zones across SIMD domains

DOMAIN	NUMBER OF DATA ZONES IN THE LOWEST 5% DEPRIVATION	
	Expected	Actual
Access	10	45
Crime	10	14
Education	10	6
Employment	10	5
Health	10	4
Housing	10	1
Income	10	4

This analysis draws attention to two lower performing domains within the IMF area. 45 of the 209 IMF data zones are in the lowest 5% for the access domain, significantly higher than the expected total. This is unsurprising given its rural nature, with public transport being a noted issue at a remote rural level. Secondly, 14 of the 209 IMF data zones are in the lowest 5% for the crime domain, this is higher than the expected total would be.

Overall, the IMF area is one of the least deprived areas in Scotland however it should be noted that the SIMD does not accurately measure incidence of deprivation in rural areas due to low population density. The ranking of an area within the 20% most deprived relies on there being a high proportion of the population in a single data zone experiencing deprivation of some kind. In rural areas, of which a large proportion of the IMF is, the sparse distribution of residents can mean that pockets of deprivation are missed.

[13] *This figure was determined by calculating 5% of 209, then rounding the result. Here, 5% represents the proportion used to identify the most deprived communities, while 209 refers to the total number of data zones in the IMF.*

19.4.4.8.3 Community character or image

In Aberdeen, many groups and organisations focus on promoting, raising awareness of, and supporting community participation in areas of interest and local issues. There are 29 established community councils (Aberdeen City Council, 2024), and 1,347 organisations are in membership with Aberdeen City Voluntary Organisations (Aberdeen's Third Sector Interface), including community groups, voluntary organisations, faith and equalities groups, charities, social enterprises, co-operatives, community interest companies, and housing associations.

In Aberdeenshire, the Council's most recent annual review of its Local Outcomes Improvement Plan (April 2022 to March 2023) highlighted that, in pursuing its aim for *Connected and Cohesive Communities*, multiple initiatives have been delivered in the area for the local population to stimulate active community participation (Aberdeenshire Community Planning Partnership, 2023).

In Peterhead, multiple community groups have completed large community projects in recent years. One instance is Peterhead Area Community Trust's Victoria Park project, which transformed an unused and abandoned area to an attractive and functional green space for use by the local population.

The Peterhead Development Partnership Vision and Action Plan (2016 to 2021) identifies three key themes for directing change in the area: boosting local economy (with particular mention on marine industries and using local resource to become a recognised international hub of maritime innovation); integrating communities (through community organised events); and connecting, reinforcing and rediscovering Peterhead's town centre (through redevelopment and community space creation) (Aberdeenshire Council, 2024c).

As a result of the action plan, offshore wind developers have worked on an educational programme with Peterhead Academy, all feeder primary schools, teachers, young people and the community to inform them about opportunities in the locale.

A report by HIE (2022) reported that 52% of residents in the IMF take part in activities in their local community. This community participation typically includes attending local community events, local groups or sports clubs or volunteering for a charity, social enterprise or community group. This level of participation also extends to wider Highland region.

Across the wider Highland region there is mixed feeling towards community involvement in local decision-making, with a third in agreement that local people can influence local decision making, a third in disagreement and the remaining third in neither agreement nor disagreement (Highlands and Islands Enterprise, 2022). Those who do feel empowered to influence local decisions may experience a stronger sense of belonging and responsibility. For residents who believe their voices are not being heard, there may be a sense of frustration or disconnection, which can contribute to feelings of alienation. This division and split of opinion could strain community cohesion overall.

19.4.4.9 Distributional effects

Analysis of potential distributional effects considers the potential for the Project to generate effects on specific groups in society, including groups with protected rights. The potential for effects on gender-based income and local housing markets is considered.

19.4.4.9.1 Gender-based income

The ONS publishes data from the Annual Survey of Hours and Earnings which includes data on income equality (Nomis, 2024c), with data available on the Aberdeen City, Aberdeenshire, Highland, Scotland, and UK levels. Table 19-36 shows the average hourly pay (excluding overtime) in the relevant spatial areas for male workers, female workers, and workers overall.

Table 19-36 Average hourly rates of pay (2023) (£)

	MALE	FEMALE	ALL WORKERS
Aberdeen City	17.02	18.84	18.21
Aberdeenshire	17.54	19.02	18.12
Highland	18.16	17.80	18.02
Scotland	18.17	18.00	18.09
UK	18.02	16.64	17.40

Using the hourly rates of pay for full-time workers (excluding overtime) metric, male workers earn 8% more than female workers in the UK. This drops to less than 1% on the Scotland level. Highland has a greater income gap than Scotland, but smaller than the UK, with male workers earning 2% more than female workers. Aberdeen City and Aberdeenshire have the highest income gaps of all spatial areas, but in the reverse to the income gaps on the Scotland and UK levels – female workers earn 11% and 8% more per hour than male workers in Aberdeen City and Aberdeenshire respectively.

In June 2024, Aberdeen City Council appointed the Scottish Women's Budget Group to advise the Council on tackling gender-based inequality in Aberdeen.

With regard to the Offshore Wind sector, a new joint research project between the Offshore Wind Council and the University of East Anglia, *Clearing the Pathway for Women in Wind*, noted that women only account for 18% of jobs in offshore wind, highlighting a significant gender imbalance in the sector.

19.4.4.9.2 Housing

Regional data is published on regional data on average house and monthly rent prices by local authority (Office for National Statistics, 2024e; 2024f). Aberdeenshire has a similar average house price to Scotland while Aberdeen City has a significantly lower house price (at £202,000 and £137,000, respectively). Highlands has a higher average house price than the Scottish average at £214,000. The average Scottish house price is £200,000, significantly lower than the average house price in GB at £296,000.

The average monthly rent in Aberdeen City and Aberdeenshire is £822, and in Highlands and Islands is £678. This is lower than the Scottish average of £969 and lower still than the UK average of £1,286, indicating relatively affordable accommodation in the Aberdeen City and Aberdeenshire area and even greater affordability in Highlands.

There are further details on the housing strategy of the varies local authorities in Section 19.4.4.7.

19.4.5 Future baseline

The future baseline presents projections as to how key socio-economic receptors are likely to evolve over time, providing a comparison point for assessing future effects that the Project may have on the socio-economic baseline. Population, housing, and school roll projections are highlighted as key, evolving socio-economic receptors and indicators for future demand on local services.

19.4.5.1 Population projections

Table 19-37 shows the estimated population in 2024 and 2040 on the Aberdeen City, Aberdeenshire, Highland and Scotland levels, showing limited population growth expected over the 16 years period (National Records of Scotland, 2024).

Table 19-37 Projected population change

	2024	2040	CHANGE (%)
Aberdeen City	228,592	232,795	1.8
Aberdeenshire	266,050	267,912	0.7
Highland	236,709	234,050	-1.1
Scotland	5,504,866	5,574,675	1.3

19.4.5.2 Age structure projections

Table 19-38 and Table 19-39 and Table 19-39 show the projected age structure for Aberdeen City, Aberdeenshire, Highland and Scotland in 2024 and 2040 (National Records of Scotland, 2024). Scotland is projected to see a decline in all age groups except in the population aged 65 and over, which is expected to increase significantly. A similar structure is projected for Aberdeenshire and Highland. Aberdeen City is expected to increase its populations aged 16 to 24 and aged 45 to 64. This has the potential to provide greater future workforce capability.

Table 19-38 Projected age structure change

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND		SCOTLAND	
	2024	2040	2024	2040	2024	2040	2024	2040
Aged 0 to 15	35,033	31,476	48,459	43,373	36,865	33,323	898,497	824,145
Aged 16 to 24	26,497	27,690	22,958	22,926	20,645	17,966	548,326	530,318
Aged 25 to 44	75,522	70,067	63,025	58,205	54,517	51,608	1,470,121	1,394,042
Aged 45 to 64	53,021	58,635	75,043	72,544	66,666	61,111	1,454,239	1,429,313
Aged 65 to 74	20,723	21,208	30,084	33,462	30,315	31,710	601,965	660,974
75 and over	17,796	23,719	26,481	37,402	27,701	38,332	531,718	735,883

Table 19-39 Projected age structure change (2024 to 2040: %)

	ABERDEEN CITY	ABERDEENSHIRE	HIGHLAND	SCOTLAND
Aged 0 to 15	-10.2	-10.5	-9.6	-8.3
Aged 16 to 24	4.5	-0.1	-13.0	-3.3
Aged 25 to 44	-7.2	-7.6	-5.3	-5.2
Aged 45 to 64	10.6	-3.3	-8.3	-1.7
Aged 65 to 74	2.4	11.2	4.6	9.8
75 and over	33.3	41.2	38.4	38.4

19.4.5.3 Housing demand projections

Table 19-40 shows housing projections based on default, principal growth, and high migration scenarios over the next 20 years as reported in most recent HNDAs (Aberdeen City Council and Aberdeenshire Council, 2023; Highland Council, 2021). The figures for the default scenario have been selected as the primary baseline for this assessment. The total is the projection across timeframe of the HNDA and per annum refers to the projection yearly over that timeframe.

Table 19-40 20-year housing demand projections

	ABERDEEN CITY		ABERDEENSHIRE		HIGHLAND	
	TOTAL	PER ANNUM	TOTAL	PER ANNUM	TOTAL	PER ANNUM
Default	6,745	338	8,390	420	7,173	359
Principal growth	7,080	355	8,425	423	8,560	428
High migration	10,650	534	10,330	517	10,043	502

19.4.5.4 School roll projections

Table 19-41 shows year-on-year school roll projections in Aberdeenshire, Aberdeen City, Highland and Scotland from 2024 to 2027 (Scottish Government, 2016). There are a few schools in Aberdeenshire where it is expected that enrolment will increase over the time period, however these tend to be smaller schools where it is more difficult to predict trends. Secondary schools in Aberdeen City and Aberdeenshire are not expected to see any change over this period whereas primary schools are projected to see a decrease in pupils. The trends in Highland and Scotland are similar to one another with a moderate decrease in secondary school roll over this period and a larger decrease in primary school roll. Given the greater decline in primary school roll, it is expected that the decline in secondary school roll will increase beyond 2027.

Table 19-41 Secondary school roll projections (2024 to 2027)

	2024	2025	2026	2027	CHANGE: 2024 TO 2027 (%)
Aberdeen City	10,800	10,800	10,800	10,800	0
Aberdeenshire	16,100	16,200	16,200	16,100	0
Highland	14,100	14,000	13,900	13,800	-2.1
Scotland	316,200	314,700	312,400	309,700	-2.0

Table 19-42 Primary school roll projections (2024 to 2027)

	2024	2025	2026	2027	CHANGE: 2024 TO 2027 (%)
Aberdeen City	13,500	13,300	13,100	12,900	-4.4
Aberdeenshire	20,400	20,100	19,800	19,600	-3.9
Highland	15,800	15,600	15,300	15,100	-4.4
Scotland	370,500	365,000	359,600	354,900	-4.2

19.4.6 Summary and key issues

Table 19-43 Summary and key issues for Socio-economics, Tourism and Recreation

SUMMARY AND KEY ISSUES	PROJECT AREA
	Population • Aberdeen City, Aberdeenshire, and Highland have all seen population growth between 2001 and 2022, but Aberdeenshire's and Highland's population increase is more substantial compared to both Aberdeen City and Scotland overall; and • While Aberdeen City's growth has slowed and its older population has grown at a slower rate than Scotland's, Aberdeenshire's population aged 65 and over has surged at double the rate of Scotland, while Highland has also shown a significantly larger increase in its population aged 65 and over, driven by its rural appeal and desirability as a retirement destination.
	Labour supply • Aberdeen City and Aberdeenshire both boast high levels of economic activity and employment with a lower unemployment rate than the national level when combined. Similarly, Highland has a higher level of economic activity than the national level, but falls behind Aberdeen City and Aberdeenshire. Unemployment is lower in Highland than the national level; • Job densities indicate that workers commute between Aberdeen City and Aberdeenshire and into Highland from surrounding areas; and • Aberdeen City and Aberdeenshire boast strong qualifications and skills, although Highland generally lags behind national levels.
	Economic performance • In terms of GVA per hour worked, the combined Aberdeen City and Aberdeenshire area is approximately as productive as the Scottish average whereas Highland falls slightly behind; and • Household earnings are broadly comparable between areas.
	Size and structure of the economy • Aberdeen City and Highland both have stronger rates of business births than the Scottish average whereas Aberdeenshire falls behind. All three are behind the GB average; and • Compared to the national baseline, there is high employment in mining and quarrying and manufacturing industries in Aberdeenshire and Aberdeen City, and Highland has high employment in accommodation and food services.
	Supply chain • There are indications of a robust match between some of the sectors required to complete the Project and the skills and capabilities in Aberdeen City, Aberdeenshire and Highland.
	Tourism • In 2023, tourism in Aberdeen and Grampian generated over £1.1 billion and £1.5 billion in Highland; • Aberdeen and Grampian had a greater hotel occupancy rate than Scotland and Highland had a greater hotel occupancy rate than both Scotland and Aberdeen City and Aberdeenshire; and • It is estimated that the Aberdeen and Grampian region has 32,000 available bed space and Highland has 35,000.
	Recreational activities • Several marine recreational activities that may occur within proximity to the EICC were identified, including cold-water diving, recreational vessels, and sea angling.

Marine commercial activities

- Significant commercial fishing activities were identified both in Aberdeen City and Aberdeenshire and in ICES rectangles that may be affected by the Project; and
- Relatively significant onshore processing industries were identified in Aberdeenshire.

Housing

- There is a need for 10,330 new homes by 2042 in Aberdeen City and Aberdeenshire; and
- There is a need for 10,440 new homes over the period 2023 to 2038.

School capacities

- Most schools in the locale of the key ports are operating at over 75% capacity.

NHS capacities

- Aberdeen City and Aberdeenshire are served by NHS Grampian, with ARI as the main hospital offering A&E and a variety of specialist services;
- While NHS Grampian performs similarly to NHS Scotland in key areas such as outpatient care and A&E waiting times, the ARI struggles with A&E efficiency and delayed discharges remain an issue, indicating gaps in integration between local health and social care systems;
- Highland is served by NHS Highland. Raigmore Hospital is the district general hospital, located in Inverness with an A&E department; and
- NHS Highland has longer waiting times for outpatient care, but performs at a similar level for A&E efficiency. Delayed discharges are an issue for NHS Highland.

Public transport and infrastructure

- Aberdeenshire faces challenges with public transport, especially in linking smaller rural communities, while Aberdeen City has better connections via its airport, port, and train services; and
- Public transport across Highland varies as a result of its diverse geography. In and around Inverness, there are rail routes out of Highland and up to the north of Scotland, and a bus service operates in the areas surrounding the potential ports for the Project.

Socio-cultural

- Aberdeenshire shows low levels of deprivation overall, however Peterhead faces significant challenges, including high crime rates and low educational outcomes;
- Community initiatives in Peterhead highlight local engagement, however issues such as health-related concerns and the need for higher-skilled jobs remain;
- There is mixed feeling towards community engagement across Highland;
- Highland Council ranks as the 23rd least deprived local authority of the 32 local authorities in Scotland. Levels of deprivation have increased since 2016 (but by fewer than 2 percentage points); and
- Half of residents in the IMF take part in activities in their local community.

Distributional

- Gender hourly income inequalities in Highland were higher than Scotland, but lower than UK levels (men earn more than women), in Aberdeen City and Aberdeenshire the gap was greater than Highland, Scotland and UK levels (women earn more than men); and
- Housing prices are generally lower in the Aberdeen City and Aberdeenshire area than the Scottish average, and higher in Highland.

19.4.7 Data gaps and uncertainties

The baseline data presented in this chapter is based on a review of evidence from national and local data sources including published sources and data collected specifically for the Project. Where possible, the same data sources have been used across spatial areas. The most recent data sets have been used. For smaller spatial areas (such as Peterhead and the IMF) there is variance on data sources used against larger areas such as Aberdeen City, Aberdeenshire and Highland, however, the data sets used are still considered to be comparable and have been highlighted where relevant. Examples of this include:

- Population data: 2022 Census data was not available at the IMF level; and
- Community character and image: Councils use different reporting and strategy tools to capture data in this area.

Consultation efforts included engagement with community members and non-statutory stakeholders to gather a broad range of perspectives. However, there were gaps in reaching certain key receptors, notably for the housing and socio-cultural receptors. This limited abilities to fully understand the needs and priorities of these groups, indicating a need for more targeted outreach strategies in future consultations.

Certain data on tourism was unavailable, including:

- Aggregated occupancy figures for all accommodation types together. As such, hotel occupancy figures were used as a suitable representation of the type of serviced accommodation most likely used as temporary accommodation for Project workers;
- Total bed space figures. This has been estimated by Glic using available data on number of nights in temporary accommodation and occupancy rates; and
- Spatial areas used by VisitScotland for recording and presenting data do not completely match to the spatial areas used for the purposes of assessment in this chapter. However, there is significant overlap in the spatial areas and so this data was considered to be suitable for the purposes of assessment.

19.5 Impact assessment methodology

19.5.1 Impacts requiring assessment

The impacts identified for consideration on Socio-economics, Tourism and Recreation receptors are listed in Table 19-44. Reflecting the Scoping Opinion, human health impacts are included in the assessment of socio-cultural receptors; demand for housing; and demand for education, healthcare, recreation resources, and other local services. Between them, these receptors include the human health impacts identified in the Scoping Report, these are:

- Education and training;
- Community safety;
- Social participation, interaction and support;
- Community identity, culture, resilience and influence;
- Transport, modes, access and connections;
- Housing / accommodation; and
- Open space leisure and play.

Information on the nature of impact (i.e. direct or indirect) is also described.

Table 19-44 Impacts required in the assessment for Socio-economics, Tourism and Recreation

POTENTIAL IMPACT	NATURE OF IMPACT
Construction	
Project activities leading to an effect on employment	Direct (positive)
Project activities leading to an effect on economic output (GVA)	Direct (positive)
Project activities leading to an effect on demand for housing	Indirect (negative)
Project activities leading to an effect on demand for education, healthcare, recreation resources, and other local services	Direct and indirect (positive / negative)
Project activities leading to an effect on tourism and recreation	Indirect (negative)
Project activities leading to an effect on marine commercial activity components located onshore	Indirect (negative)
Project activities leading to socio-cultural impacts	Indirect (negative)
Project activities leading to distributional impacts	Indirect (negative)
Operation and maintenance	
As per construction	Direct and indirect
Decommissioning	
In the absence of detailed information regarding decommissioning, and unless otherwise stated, the impacts during decommissioning are considered analogous with, or likely less than, those of the construction phase. Where this is not the case, decommissioning impacts have been listed separately and have been assessed in Section 19.6.3.	

Due to the nature of the receptors, spatial scope for the assessment of potential and cumulative effects of the Project vary between receptors. Table 19-45 describes the spatial scope for the assessment of effects on each receptor, in line with guidance provided by Marine Scotland (2022) highlighted in Section 19.4.1.

Table 19-45 Spatial scope of impacts for Socio-economics, Tourism and Recreation

POTENTIAL IMPACT	SPATIAL SCOPE	JUSTIFICATION
Effects on employment	• Aberdeen City and Aberdeenshire; • Highland[14]; • Scotland; and • UK.	Given the location of major ports that are expected to be used during the construction, operation and maintenance, and decommissioning of the Project, Aberdeen City and Aberdeenshire and Highland are likely to experience many of the economic effects associated with the Project. There is not sufficient secondary data to conduct robust analysis at a more granular level than at the local authority level. Given that it is difficult to predict exactly where jobs will be created (Aberdeen City or Aberdeenshire), and given labour force migration patterns between the two local authorities, assessing effects on the combined Aberdeen City and Shire region was considered most appropriate. Scotland and the UK were applied as the wider national Study Areas.
Effects on GVA	• As with employment.	As with employment.
Effects on demand for housing	• As with employment.	Given the spatial area of the additional employment effects, which ultimately drives the assessment for housing demand, it was considered most appropriate to apply the same spatial areas for employment to the effects on demand for housing.
Effects on demand for education, healthcare, and other local services	• As with employment.	As with demand on housing.
Effects on tourism and recreation	• Five km around the Project Area; • Aberdeen City and Aberdeenshire; • Highland[15]; • Scotland; and • UK.	Five km around the Project Area was deemed the most appropriate spatial area for considering the potential for effects on marine recreational activities as identified in the Scoping Report. Further assessment and consultations have suggested that it is not anticipated that marine recreational activities will be impacted outside of this radius. Aberdeen City and Aberdeenshire and Highland were considered to be the most appropriate spatial areas for assessing wider effects on the tourism industry and recreational activities. This is because they are the spatial areas that are considered for economic effects and are directly involved in the various Project phases. Scotland and the UK were applied as the wider national Study Areas.
Effects on marine commercial activity	• Aberdeen City and Aberdeenshire;	Given the offshore areas that may be affected by the Project construction phase, as outlined in EIAR, Vol. 3,

[14] *Construction only, as major ports in this spatial area are only expected to be used significantly during this Project phase.*
[15] *Construction only, as major ports in this spatial area are only expected to be used significantly during this Project phase.*

POTENTIAL IMPACT	SPATIAL SCOPE	JUSTIFICATION
	• Scotland; and • UK.	Chapter 14: Commercial Fisheries[16], it is expected that the majority of socio-economic impacts will concern receptors in Aberdeen City and Aberdeenshire (for example, commercial fisheries, onshore processing). Whilst there may be residual effects in Highland, these are expected to be negligible and are not scoped into this assessment. Scotland and the UK were applied as the wider national Study Areas.
Socio-cultural effects	• Peterhead; • Aberdeen City; • Aberdeenshire; • IMF[17]; and • Highland[17].	Peterhead, Aberdeen City and Aberdeenshire are identified as potential locations for construction, marshalling and operational activities. Ports within and near the IMF and Highland are identified as potential locations for construction.
Distributional effects	• Aberdeen City and Aberdeenshire; and • Highland[17].	Given that the assessment of distribution effects draws heavily on the economic modelling undertaken at the Aberdeen City and Aberdeenshire spatial area, this was considered to be the most appropriate local spatial scope. On the national spatial areas, Scotland and the UK, employment created throughout the supply chain and as a result of induced effects are likely to be spread across a wide range of industries, geographies, and groups. As a result, it is not possible to make an assessment of the distributional effects on this spatial level.

19.5.2 Impacts scoped out of the assessment

Based on feedback received from stakeholders at the Scoping Report stage, there are no potential Project impacts related to Socio-economics, Tourism and Recreation receptors scoped out of the assessment.

19.5.3 Assessment methodology

Separate assessments of potential effects are provided for the construction, operation and maintenance, and decommissioning phases.

The assessment for Socio-economics, Tourism and Recreation is undertaken following the principles set out in EIAR Vol. 2, Chapter 7: EIA Methodology. The sensitivity of the receptor is combined with the magnitude to determine the significance of effect. Topic-specific sensitivity and magnitude criteria are assigned based on professional judgement, as described in Table 19-46 to Table 19-48.

[16] *ICES rectangles 45E7; 45E8; 45E9; 45F0; 45F1; 44E7; 44E8; 44E9; 44F0; 44F1; 44F2; 43E7; 43E8; 43E9; 43F0; 43F1; 43F2; 42E7; 42E8; 42E9; 42F0; 42F1; and 42F2.*

[17] *Construction phase only*

The quantification of Socio-economics, Tourism and Recreation effects was conducted primarily as a desk-based exercise using Project-specific information provided by Cenos Offshore Windfarm Ltd. and a range of publicly available data. Stakeholder engagement also contributed to quantification via conducting face-to-face engagement and via relevant non-statutory stakeholder consultation. Details of this activity are in Sections 19.3 and 19.4.3. Analysis was conducted for three potential Project options summarised below:

- Option 1: 95 15MW Floating Turbine Units (FTU)s; total installed capacity ~ 1350MW;
- Option 2: 80 18MW FTUs; total install capacity ~1350MW; and
- Option 3: 68 21MW FTUs; total install capacity ~1350MW.

These options considered the development, construction and installation of all the components of the FTUs (including WTG, floating substructure and mooring system) and also included the offshore and onshore substations, Inter-Array Cables (IAC) and Export/Import Cable. Further detail on Project assumptions are provided in EIAR Vol. 2, Chapter 5: Project Description.

The effects on direct, indirect, and induced GVA and employment were estimated using a bespoke economic model; this is outlined in the supporting study EIAR Vol. 3, A30: Detailed Socio-economic Methodology and is in line with all relevant guidance. The output of the model is based on expected levels of expenditure for each of the three Project options for each phase of the Project. Estimations for expenditure levels were then factored in for the spatial areas (Aberdeen City and Aberdeenshire, Highland, Scotland, and the UK).

It should be noted that the spatial distribution of the Project expenditure is subject to uncertainty, in large part because suppliers have yet to be finalised. The approach aims to address these uncertainties by presenting an informed judgement on the minimum and maximum realistic levels of Project expenditure that could reasonably be expected to accrue in the different spatial areas. As such, spatial expenditure has been estimated for a high, medium, and low case. The model is designed for each spatial area to represent the specific local conditions. Published national datasets were used for the model's development, including:

- Scottish Government Input-Output Tables;
- Scottish Annual Business Statistics;
- UK Input-Output Tables; and
- UK National Accounts.

The quantification of the potential increase in employment in each spatial area has been used to assess the potential effects of the Project on additional demand for housing and local services. The quantification of expected employee income has been used to assess the potential distributional effects of the Project.

An expanded explanation of the approach taken to the Project scenarios development and the assumptions used in the estimation of effects for indicators such as employment and GVA are described in the supporting study EIAR Vol. 3, A30: Detailed Socio-economic Methodology.

Table 19-46 Sensitivity criteria

SENSITIVITY OF RECEPTOR	DEFINITION
High	• The receptor is identified as a strategic or policy priority; • There is evidence of considerable socio-economic or socio-cultural challenge for the receptor in the Study Area; and • The receptor has little or no ability to recover from or adapt to change.
Medium	• The receptor is identified as a strategic or policy priority; • There is evidence of moderate socio-economic or socio-cultural challenge for the receptor in the Study Area; and • The receptor has either limited or delayed ability to recover from or adapt to change.
Low	• The receptor is not identified as a strategic or policy priority; • There is evidence that the receptor is resilient and / or there is little or no evidence of a particular challenge or under-performance or vulnerability for the receptor in the Study Area; and • The receptor has a well-developed ability or inherent capacity to recover from or adapt to change.
Negligible	• The receptor is not identified as a strategic or policy priority; and • There is evidence of good levels of performance and no particular weakness for the receptor in the Study Area.

Table 19-47 Magnitude criteria

MAGNITUDE CRITERIA	DEFINITION
High	• A large (greater than 1.0%) change in baseline conditions in terms of absolute and / or proportionate change.
Medium	• A moderate (greater than 0.5% and up to 1.0%) change in baseline conditions in terms of absolute and / or proportionate change.
Low	• A minor (greater than 0.1% and up to 0.5%) change in baseline conditions in terms of absolute and / or proportionate change.
Negligible	• Either no change from the baseline condition or change up to 0.1% in baseline conditions.
No change	• No change from baseline conditions.

The sensitivity and magnitude is then used to determine the consequence of effect using the matrix provided in Table 19-48 below. The determination of significance may be quantitative or qualitative and is be informed by expert judgement. In general, effects that are moderate or higher are considered significant.

Table 19-48 Consequence of effect

Consequence of effect		Magnitude				
		No change	Negligible	Low	Medium	High
Sensitivity	Negligible	No change	Negligible	Negligible	Negligible	Negligible
	Low	No change	Negligible	Minor	Minor	Minor
	Medium	No change	Negligible	Minor	Moderate	Moderate
	High	No change	Negligible	Minor	Moderate	Major

19.5.4 Embedded mitigation

As described in EIAR Vol. 2, Chapter 7: EIA Methodology, certain measures (primary and tertiary mitigation) have been adopted as part of the Project development process to reduce the potential for effects on the environment, as presented in Table 19-49. These have been accounted for in the assessment presented below. The requirement for additional mitigation measures (secondary mitigation) will be dependent on the significance of the effects on Socio-economics, Tourism and Recreation receptors.

Table 19-49 Embedded mitigation measures relevant to Socio-economics, Tourism and Recreation

CODE	MITIGATION MEASURE	TYPE	DESCRIPTION	SECURED BY
MM-006	Environmental Management Plan (EMP)	Tertiary	The EMP will set out procedures to ensure all activities with the potential to affect the environment are appropriately managed and will include a description of planned activities and procedures, roles and responsibilities, pollution control and spillage response plans, incident reporting, chemical usage requirements, waste management plans, plant service procedures, communication and reporting structures, and programme of work. It will detail the final design selected and take into account Marine Licence conditions and commitments. The EMP will additionally include an Invasive Non Native Species (INNS) Management Plan (INNSMP) and a Marine Pollution Contingency Plan (MPCP) and will be developed in consultation with stakeholders.	The EMP, including the INNSMP and MPCP, will be required under Section 36 Consent and/or Marine Licence conditions. An outline EMP is provided as part of the application EIAR Vol. 4 Appendix 32: Outline EMP.
MM-044	Crown Estate Scotland (CES) INTOG commitments, including production of a Supply Chain Development Statement (SCDS)	Primary	The Applicant will submit a SCDS as part of the application to enter an Option Agreement under the INTOG process with CES. The SCDS will detail the scale and nature of project expenditure. The information within the SCDS will be available to a range of stakeholders.	Will be provided to CES by the Applicant in advance of Option Agreements being executed.
MM-045	Supply chain engagement	Primary	Existing supply chain initiatives will be utilised and new ones created to alert potential regional and local suppliers to the types, scale, and timing of services that are likely to be required to develop and install the Project. Such engagement seeks to ensure that economic benefits associated with the Project are realised regionally and locally.	Secured via the SCDS.

CODE	MITIGATION MEASURE	TYPE	DESCRIPTION	SECURED BY
MM-046	Community benefits fund	Primary	A funded mechanism supporting local skills and training is expected to be included as a key element of the community benefits fund currently being developed for the Project. The fund seeks to ensure the local workforce is adequately skilled and trained.	Secured via the SCDS
MM-047	Community Liaison Officer (CLO)	Primary	A CLO has been appointed for the Project and acts as the face of the Project with the local community. The CLO reports and monitors any concerns raised in the local community. This role will remain active and will continue to grow As the Project progresses. The CLO's role will be carried out in line with the Applicant's ESG standards.	Secured via the SCDS.
MM-048	Skills and Employment Plan	Primary	A Skills and Employment Plan will be prepared prior to the Project commencing operation.	Secured via the SCDS.

19.5.5 Worst-case scenario

As detailed in EIAR Vol. 2, Chapter 7: EIA Methodology, this assessment considers the worst-case scenario for the Project parameters which are predicted to result in the greatest environmental effect, known as the 'realistic worst-case scenario'. The worst-case scenario represents the greatest potential for change, for any given receptor and potential effect on that receptor, the scenario that would result in the greatest potential for change.

Given that the worst-case scenario is based on the design option (or combination of options) that represents the greatest potential for change, confidence can be held that development of any alternative options within the design parameters will give rise to no worse effects than measured in this impact assessment. Section 19.6 of this chapter presents the worst-case scenario for potential effects on Socio-economics, Tourism and Recreation receptors during construction, operation and maintenance, and decommissioning.

Table 19-50 provides a Project timeline, showing periods of Development Expenditure (DEVEX), Capital Expenditure (CAPEX), and Operational Expenditure (OPEX). Employment impacts will be presented for the CAPEX and DEVEX periods over the total 11-year period in the form of total number of FTEs generated. As expenditure will not be spread evenly across these periods, the temporary employment impacts in the construction phase will be based on the year with peak employment for the purpose of this assessment. This will include employment generated by both CAPEX and OPEX in that year.

Construction is expected to be completed five years after OPEX begins, with OPEX lasting a total of 39 years (noting the Applicant is seeking a 35 year consent for the Project from Scottish Ministers). For the purpose of assessment, the OPEX associated with a typical year will be considered.

Table 19-50 Project expenditure timeline

YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	...
Phase	DEVEX (5 years; pre-construction)					CAPEX (6 years; construction)															
							OPEX (39 years; beginning in Y2 of construction, ending at the end of the 35-year operation and maintenance period)													

Table 19-51 Worst-case scenario specific to Socio-economics, Tourism and Recreation impact assessment

POTENTIAL IMPACT	WORST-CASE SCENARIO	JUSTIFICATION
Construction		
Effects on employment	It is anticipated that (low case% and high case%): • Between 10% to 20% of DEVEX and 5% to 10% of CAPEX will occur in Aberdeen City and Aberdeenshire; • Between 0% to 5% of DEVEX and 5% to 20% of CAPEX will occur in Highland; • Between 10% to 15% of DEVEX and 5% to 10% of CAPEX will occur in the rest of Scotland; and • Between 20% and 40% of DEVEX and 10% to 30% of CAPEX will occur in the rest of the UK. Thus, for each Project option, as outlined in Section 19.5.3, there is a high case and a low case of expected expenditure, employment and GVA.	The worst-case scenario for the employment receptor is the outcomes expected under the low case of the development option with the lowest expected job creation. This is because an increase in the number of jobs available is widely regarded as beneficial and the scale of effects is lowest under the low case scenario.
Effects on GVA	As with employment.	As with employment.
Effects on housing demand	As with employment.	The worst-case scenario for the housing demand receptor is the outcomes expected under the high case of the development option with the highest expected job creation. This is because the Project construction is expected to require an inflow of workers moving to the area to take advantage of employment opportunities created during the construction phase of the Project. This has the potential to put pressures on the housing market in the short-term which is considered to be negative.
Effects on healthcare, education, and other local services	As with employment.	The worst-case scenario for this receptor varies based on the spatial scoping. In Aberdeen City and Aberdeenshire spatial area, the worst-case scenario for the employment receptor is the outcomes expected under the low case of the development option with the lowest expected job creation. This is because some local services in Aberdeen City and

POTENTIAL IMPACT	WORST-CASE SCENARIO	JUSTIFICATION
		Aberdeenshire are currently under capacity and an increase in their usage would make them more viable. In Highland, Scotland and the UK, the worst-case scenario for the employment receptor is the outcomes expected under the high case of the development option with the highest expected job creation. This is due to the wider strain on public services at a national level, in which increased demand would be considered to have a negative effect.
Effects on tourism and recreation	As with employment.	Given that competition for short-term accommodation is the potential variable impact associated with the tourism and recreation receptors, the justification is the same as for housing demand.
Effects on marine commercial activities	As with EIAR Vol. 3, Chapter 14: Commercial Fisheries	The assessment of the Project's effects on commercial fisheries receptors as assessed in EIAR Vol. 3, Chapter 14: Commercial Fisheries is the driving factor when assessing the socio-economic effects on marine commercial activities.
Socio-cultural effects	As with employment.	The worst-case scenario for the socio-cultural receptors is the outcomes expected under the high case of the development option with the highest expected employment. This is because the Project construction is expected to require an inflow of workers moving to the area to take advantage of employment opportunities created during the construction phase. Research shows that an increase in population could affect the socio-economics of communities (e.g. levels of crime and anti-social behaviour and community character (Sadigov, 2022)).
Distributional effects	As with employment.	The worst-case scenario for the distributional receptors is the outcomes expected under the high case of the development option with the highest expected employment. This is because the Project construction has the potential to increase the affordability of local housing and thereby affect lower income households disproportionately.

POTENTIAL IMPACT	WORST-CASE SCENARIO	JUSTIFICATION
Operation and maintenance		
Effects on employment	It is expected that (low case% and high case%): • Between 15% and 80% of OPEX will occur in Aberdeen City and Aberdeenshire; • Between 40% and 10% of OPEX will occur in the rest of Scotland; and • Between 20% and 5% of OPEX will occur in the rest of UK. Thus, for each Project option, as outlined in Section 19.5.3, there is a high case and a low case of expected expenditure, employment and GVA.	As with the construction phase.
Effects on GVA	As with employment.	As with the construction phase.
Effects on housing	As with employment.	As with the construction phase.
Effects on healthcare, education, and other local services	As with employment.	As with the construction phase.
Effects on tourism and recreation	As with employment.	As with the construction phase.
Effects on marine commercial activities	As with EIAR Vol. 3, Chapter 14: Commercial Fisheries.	As with the construction phase.
Socio-cultural effects	As with employment.	As with the construction phase.
Distributional effects	As with employment.	As with the construction phase.
Decommissioning		
In the absence of detailed decommissioning activities, the implications for Socio-economics, Tourism and Recreation are similar, or likely less, to the worst-case scenarios for those outlined during the construction phase. Therefore, the worst-case parameters defined for the construction phase also apply to the decommissioning phase. More details are available on the decommissioning approach in EIAR Vol. 2, Chapter 5: Project Description.		

19.6 Assessment of potential effects

19.6.1 Potential effects during construction

19.6.1.1 Employment

The worst-case scenario for the consideration of the employment receptor relates to the additional number of jobs created during the development and construction phases that are associated with Option 3 and the low case scenario. The effects considered include those that are involved in the development, construction, manufacture, and installation of the Project's structures and components.

Job creation is a strategic and policy priority for both Scottish and UK Governments and for Aberdeenshire Council, Aberdeen City Council, and Highland Council. The baselining activities conducted on the labour markets in Aberdeen City and Aberdeenshire suggest a high level of employment resilience in the combined region with high levels of economic activity and a rate of employment for the spatial area comparable to the national norm. Aberdeen City has a higher unemployment rate than Aberdeenshire, suggesting higher resilience in Aberdeenshire.

The Aberdeen City and Aberdeenshire spatial area boasts a highly educated workforce when compared with Scottish and UK baselines. There are concerns about the adaptability of the labour market due to the concentration of employment around particular industries (such as O&G and tourism and recreation). The baselining activities conducted on the labour markets in Highland also shows a high level of employment resilience in the area with lower unemployment than Scotland and GB levels, and higher levels of economic activity.

The rate of employment is lower in Highland than on the Aberdeen City and Aberdeenshire levels. The rate of part-time work in Highland is higher than Scotland and GB levels, suggesting that there is potential underemployment and sensitivity in the labour market. Part-time work is more common in the accommodation and food services sector, which is a larger sector of the economy in Highland than the Scottish norm. The Highland economy is also heavily concentrated around the production sector, highlighting concerns around adaptability in the labour market. Qualification rates are lower in Highland than Scotland, potentially further limiting the adaptability of the labour market. On the national level, the labour market has a high level of adaptability.

Given the policy priorities and available evidence on resilience, adaptability, and challenges, the sensitivity of the receptors is assessed to vary by the different spatial areas of the Study Area as follows:

- Aberdeen City and Aberdeenshire: Low sensitivity;
- Highland: Medium sensitivity;
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

Table 19-52 to Table 19-54 below show the total FTEs created over the entire pre-construction and construction period (6 years) for each potential option and for low, mid, and high case scenarios. Figures are rounded to the nearest whole number. The column totals may not sum exactly due to rounding errors.

Estimates are presented as direct FTEs, indirect FTEs, and induced FTEs where:

- Direct FTEs are those held by people employed by the main contractors working on the Project construction;
- Indirect FTEs are those held by people working on the construction of the Project employed by sub-contractors and jobs elsewhere in the supply chain for the Project that are attributable to the project expenditure; and
- Induced FTEs are additional jobs that are created by the increased household expenditure as a result of the remuneration earned by the direct and indirect workforce.

For complex construction development, it is difficult to accurately project which roles will be undertaken by main contractors and which will be sub-contracted. Hence, direct and indirect jobs have been combined as a single figure. Figures in bold represent the worst-case scenario.

Table 19-52 Total FTEs generated over the pre-construction and construction phase – Option 1

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	1,842	3,684	3,684	1,568	4,856	6,424	6,591	12,623	16,704	15,105	29,910	41,394
Induced	160	319	319	112	344	456	1,287	2,422	3,256	4,637	9,177	12,600
Total	2,002	4,003	4,003	1,680	5,200	6,880	7,878	15,045	19,961	19,742	39,087	53,995

Table 19-53 Total FTEs generated over the pre-construction and construction phase – Option 2

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	1,859	3,700	3,700	1,573	4,871	6,445	6,615	12,668	16,763	15,162	30,023	41,552
Induced	161	321	321	113	346	458	1,294	2,435	3,274	4,661	9,224	12,665
Total	2,010	4,021	4,021	1,686	5,217	6,903	7,909	15,103	20,037	19,823	39,247	54,216

Table 19-54 Total FTEs generated over the pre-construction and construction phase – Option 3

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	1,883	3,666	3,666	1,558	4,826	6,384	6,552	12,548	16,603	15,010	29,723	41,135
Induced	159	318	318	112	343	318	1,282	2,413	3,245	4,620	9,142	12,552
Total	1,992	3,984	3,984	1,670	5,168	3,984	7,834	14,961	19,848	19,630	38,865	53,688

The total number of (full-time) jobs created in each year can be projected based on the estimated expenditure distribution by year over the construction period. This is used to identify the peak year for employment. The peak number of annual (full-time) jobs are presented in Table 19-55. Peak employment occurs during the construction phase when CAPEX peaks and after OPEX begins (OPEX begins in the second year of the construction phase). Thus, peak employment figures include elements associated with both CAPEX and OPEX. These peak employment figures have been used as the basis for assessing potential effects.

Table 19-55 Total number of FTEs generated in the peak employment year of construction

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Option 1	519	1,478	1,588	453	1,066	1,403	2121	3,877	4,941	4,658	8,940	12,110
Option 2	495	1,360	1,452	435	1,061	1,398	2,018	3,706	4,761	4,512	8,706	11,846
Option 3	471	1,256	1,335	417	1,044	1,378	1,918	3,536	4,571	4,347	8,425	11,502

Depending on the case presented and the potential for future investment in the supply chain, there is potential for higher employment than is presented in the worst-case scenario.

For the Aberdeen City and Aberdeenshire spatial area, it is estimated that the expenditure in the worst-case scenario, in this instance the low case of Option 3, would create a peak employment of 471. The current employment baseline shows FTEs[18] in the spatial area at 219,200. Thus, the estimated change in the baseline is 0.21% which is assessed to be of low magnitude.

[18] *Baseline FTEs are calculated from baseline employment data presented in Section 19.4. This includes both self-employed workers and employees. Part-time workers are treated as 0.5 FTEs and full-time workers are treated as 1 FTE in line with the Scottish Government's methodology for input-output tables.*

At the Highland level, under the worst-case scenario, the estimated employment generated by the expenditure is 417 FTEs. This is only 0.46% of the current baseline (91,500) and is thus assessed to be of **low magnitude**.

At the Scotland level, under the worst-case scenario, the estimated employment generated by the expenditure is 1,918 FTEs. This is only 0.09% of the current baseline (2,146,300) and is thus assessed to be of **negligible magnitude**.

At the UK level, under the worst-case scenario, the estimated employment generated by the expenditure is 4,402 FTEs. This is only 0.02% of the current baseline (25,826,600) and is thus assessed to be of **negligible magnitude**.

The significance of the employment effect during construction for the worst-case varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **low sensitivity** receptor and **low magnitude** produces a **minor consequence** that is beneficial and **not significant** in EIA terms;
- Highland: The combination of a **medium sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is beneficial and **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	Low	Minor (beneficial)	Not significant
Highland	Medium	Low	Minor (beneficial)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.1.2 GVA

The worst-case scenario from the perspective of the GVA receptor is economic value generation associated with the low case and Option 3. The GVA receptor includes the direct, indirect, and induced GVA created directly and indirectly by all construction and pre-construction activities including the associated supply chain and associated household income generated by increased employment. Effects associated with the GVA receptor are beneficial.

Economic growth and output generation are both policy priorities for Scottish and UK Governments as well as for Aberdeen City and Aberdeenshire Councils and Highland Council. The combined Aberdeen City and Aberdeenshire spatial area has a GVA per-hour worked that is equivalent to the UK average and higher than the Scottish average, indicating a strong level of labour productivity compared with a Scottish baseline. GVA per capita is higher than UK and Scottish levels. Although this is likely in part due to high levels of economic activity, it also evidences strong levels of GVA productivity in the combined spatial area. Business births per capita is also higher than Scotland and UK levels. This indicates a high level of adaptability for economic output in the spatial area. Productivity in Highland is lower than Scotland and UK levels, evidenced by a lower GVA per hour worked, although no data is available for GVA per capita. Business births per capita in the combined Aberdeen City and Aberdeenshire spatial area and Highland Council is higher than Scottish levels, but lower than UK levels. However, total number of businesses per capita in these regional spatial areas is higher than both Scotland and UK levels, indicating a degree of flexibility and adaptability in the regional economy. At the national level, the business economy displays a high level of flexibility and adaptability.

Given the policy priorities and available evidence on resilience, adaptability, and challenges, the sensitivity of the receptors is assessed to vary by spatial area of the Study Area as follows:

- Aberdeen City and Aberdeenshire: Low sensitivity;
- Highland: Medium sensitivity,
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

Table 19-56 to Table 19-58 detail the estimates for GVA expected to be generated within each Study Area during the construction phase for each potential option and each low, mid, and high case scenario. GVA estimates are presented as direct, indirect, and induced, where the definitions are as previously described in Section 19.6.1.1. All prices are struck at a 2024 level. The GVA figures will be spread over the 11-year pre-construction and construction phase (5 years pre-construction, 6 years construction). As such these impacts will be temporary; they will not continue after the construction phase.

As with the employment effects, direct and indirect GVA have been combined into a single figure. Values are rounded to the nearest £0.1 million, so values given as £0.0 million may not equal zero. The column totals may not sum exactly due to rounding. Figures in bold represent the worst-case scenario.

Table 19-56 Total GVA generated over the pre-construction and construction phase – Option 1 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	176	352	352	179	550	729	621	1,245	1,637	1,195	2,377	3,289
Induced	12	23	23	9	26	35	120	226	303	434	860	1,182
Total	188	376	376	188	576	764	740	1,471	1,940	1,630	3,236	4,471

Table 19-57 Total GVA generated over the pre-construction and construction phase – Option 2 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	177	354	354	180	553	733	624	1,251	1,645	1,200	2,387	3,304
Induced	12	24	24	9	26	35	120	227	305	437	864	1,188
Total	189	378	378	189	579	768	744	1,478	1,950	1,637	3,251	4,492

Table 19-58 Total GVA generated over the pre-construction and construction phase – Option 3 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	175	351	351	179	548	727	618	1,240	1,630	1,189	2,364	3,272
Induced	12	23	23	9	26	35	119	225	302	433	856	1,177
Total	187	374	374	187	574	762	737	1,465	1,932	1,622	3,221	4,449

Peak GVA is presented in Table 19-59. Peak GVA occurs during the construction phase when CAPEX peaks and after OPEX begins (OPEX begins in year 2 of the construction phase). Thus, peak GVA figures include elements of both CAPEX and OPEX.

Table 19-59 Total GVA generated during the peak expenditure year of the construction phase (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			HIGHLAND			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Option 1	46	126	134	46	117	155	197	363	462	396	756	1,018
Option 2	45	117	124	45	117	155	188	351	449	383	736	996
Option 3	43	109	115	44	116	153	180	337	434	369	712	967

Depending on the case presented and the potential for future investment in the supply chain, there is potential for considerably higher GVA than is presented in the worst-case scenario.

For the Aberdeen City and Aberdeenshire spatial area, it is estimated that the expenditure in the worst-case scenario, in this instance the low case of Option 3, would create a GVA of £43 million. The current baseline[19] shows GVA in the spatial area at £20,474 million. Thus, the estimated change in the baseline is 0.21%, equating to **low magnitude**.

At the Highland level, under the worst-case scenario, the estimated GVA generated by the expenditure would be £44 million. The current baseline shows GVA in the spatial area at £7,955 million. Thus, the estimated change in the baseline is 0.55%, equating to **medium magnitude**.

At the Scotland level, under the worst-case scenario, the estimated GVA generated is £180 million compared to a baseline of £189,483 million. This is a 0.09% change and is therefore assessed to be of **negligible magnitude**.

At the UK level, under the worst-case scenario, the estimated GVA generated is £369 million compared to a baseline of £2,591,113 million. This is a 0.01% change and is therefore assessed to be of **negligible magnitude**.

The significance of the GVA effects during construction for the worst-case varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is beneficial and **not significant** in EIA terms;
- Highland: The combination of a **medium sensitivity** receptor and a **medium magnitude** produces a **moderate consequence** that is beneficial and **significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

[19] *In 2024 prices.*

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	Low	Minor (beneficial)	Not significant
Highland	Medium	Medium	Moderate (beneficial)	Significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – SIGNIFICANT for Highland (beneficial), NOT SIGNIFICANT for other areas				

19.6.1.3 Demand for housing

The impact of the construction phase of the Project on demand for housing is linked to:

- The number of direct and other jobs expected to be created during the construction phase; and
- The proportion of these jobs that are taken up by workers who already reside in the area.

Aberdeen City and Aberdeenshire Councils' LHSs evidence an ability to adapt to housing demand. In addition, the previous Aberdeenshire Council LHS (2018-2023) identified and exceeded its target to deliver market housing. The new LHS (2024-2029) from Aberdeenshire Council (2024a) also identifies that there is a substantial amount of land available for housing development over its 5-year delivery period. However, the organisations do state concerns about being unaware of how the energy transition may affect demand for housing stock. Given the development is planned for Peterhead we assume that the majority of the demand will be at an Aberdeenshire level.

In Highland, housing is a key area of focus for the council. The 2020 HNDA (Highland Council, 2021) identifies a demand of 10,440 new houses over the period 2023 to 2038. When compared with the Housing Land Audit (Highland Council, 2023b) where 11,352 housing units are programmed for delivery, this creates a surplus of 912 housing units.

Research conducted by Homes for Scotland (2024) on the existing housing demand assessment methods makes the argument that the methods for assessing demand do not account for all housing demand, meaning demand is higher than previously reported at a Scotland level.

Short-term accommodation is another element that has been considered as part of the area sensitivity, as there will be periods during construction of high and low job demand. This means that over the construction period there will be points where demand for short-term accommodation is higher than for permanent housing options as workers only need to be in the area for a short period of time.

Given the evidence regarding existing service delivery, resilience, and demand, the sensitivity of housing demand receptor is assessed to vary by spatial area as follows:

- Aberdeen City and Aberdeenshire: Low sensitivity;
- Highland: Low sensitivity; and
- Scotland: High sensitivity.

A position has been taken that demand would have an overall adverse effect on housing. As such, a worst-case scenario would be high case of Option 1 in the peak employment year. Peak employment figures are presented in Table 19-55. Induced employment is deemed to have no impact on housing as it is unlikely that additional workers will need to be brought in to take these jobs, this will hence be removed from the worst-case scenario. Employment (without induced employment) in the high case of Option 1 (the worst-case scenario) is 1,483 FTEs on the Aberdeen City and Aberdeenshire level, 1,287 FTEs on the Highland level and 4,106 FTEs on the Scotland level.

Temporary employment during the construction phase in Aberdeen City and Aberdeenshire will likely be split between local residents and workers relocating to the area for new roles created by the Project. This influx of non-local workers is expected to drive increased housing demand. However, most of the required workforce will be specialists, required for short-term or intermittent periods. These specialists are expected to prefer serviced or non-serviced accommodation options (such as hotels, bed and breakfast facilities, or self-catering) units rather than private rental housing.

In this assessment, the worst-case scenario assumes that only 10% of housing demand will be for private rental housing, with the majority met by alternative accommodation such as serviced or non-serviced accommodation. This assumption is based on a review of evidence from local uptake of workers needed for large scale infrastructure projects.

148 new dwellings would be required in Aberdeen City and Aberdeenshire. The most recent joint HNDA by Aberdeen City Council and Aberdeenshire Council (2023) identified that, from 2028 to 2037, the demand for private rented and owner-occupied dwellings will be 1,480 per annum, a 10% increase in demand. The magnitude of housing demand during the construction phase is therefore concluded to be high for Aberdeen City and Aberdeenshire under the worst-case scenario.

129 new dwellings would be required in Highland. The most recent HNDA by Highland Council (2021) identifies that from 2019/20 to 2038/39 the demand for owner occupation, private rent, below market rent and social rent housing units will be 696 per annum. This would be a 19% increase in demand. The magnitude of housing demand during the construction phase is therefore concluded to be high for Highland under the worst-case scenario.

It is not appropriate to conduct a quantitative impact assessment at a Scotland level. Instead, a qualitative impact assessment has been carried out that concludes that magnitude of housing demand during the construction phase is concluded to be low in Scotland under the worst-case scenario. This considers that a large proportion of employment required at a rest of Scotland (excluding Aberdeen City, Aberdeenshire, and Highland) level is unlikely to be imported to meet labour and skills demand of the construction. An imported workforce is likely only needed for the employment required in Aberdeen City, Aberdeenshire, and Highland to facilitate the construction on the Project. The large proportion of employment created on the Scotland level is within the downstream supply chain associated with industries directly involved in the construction process. These industries are likely already established and unlikely to require an imported workforce, with local recruitment or recruitment within the projected changes to the labour supply over this period. Therefore, this will not generate additional demand for housing.

The significance of the potential effects during construction on the housing and local services receptors for the worst-case scenario varies for each of the areas under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **low sensitivity** receptor and a **high magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Highland: The combination of a **low sensitivity** receptor and a **high magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms; and
- Scotland: The combination of a **high sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Highland	Low	High	Minor (adverse)	Not significant
Scotland	High	Low	Minor (adverse)	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.1.4 Other services

Education, healthcare and public transport service provision has a significant impact on individuals' lives. A temporary population increase can raise the demand for these services, in some cases helping to maintain services that might otherwise risk cutbacks, however in areas with limited resources the added pressure can overwhelm already stretched services.

The effect of the construction phase of the Project on demand for services such as education, healthcare and public transport is linked to:

- The number of direct and other jobs expected to be created during the construction phase; and
- The proportion of these jobs that are taken up by workers who already reside in the area.

Only three of the 34 schools near potential construction ports are currently over-capacity, these three are primary schools in Aberdeen. Most of the remaining schools are at above 75% capacity in Aberdeen City whilst in Aberdeenshire and Highland, most are below 75% capacity. In general, the Aberdeenshire education estate is currently underutilised and going through transformation with a focus on reducing its assets.

Transport service provision varies across the region. The rural nature of Aberdeenshire creates difficulties with regard to access to public transport and transport links. There is little rail infrastructure across the region, and key potential port towns such as Peterhead are only served by bus links. Aberdeen City has strong transport links with multiple public transport options to other major cities and towns. It is also a focal start and end destination for local Aberdeenshire routes. Public transport across Highland varies as a result of its diverse geography. In and around Inverness, there are rail routes out of Highland and up to the north of Scotland, and a bus service operates in the areas surrounding the potential ports for the Project.

Healthcare service and hospital provision is offered by NHS Grampian and NHS Highland. With regard to efficiency, the health boards perform comparably to NHS Scotland on wait times for outpatient care and A&E services, but worse in delayed discharges (NHS Inform, 2024), demonstrating a potential disconnect between local health and social care systems.

Local government services at a national level have adapted quickly to meet new demands, maintain essential services and implement new ways of working, and have strengthened partnerships with communities as well as the third and private sectors (Improvement Service, 2024). This shows that, nationally, other services are adaptable and generally resilient to change.

Given the available evidence for existing local service delivery, resilience, and demand, the sensitivity of the other services receptors is assessed to vary by spatial area as follows:

- Aberdeen City and Aberdeenshire: Medium sensitivity;
- Highland: Medium sensitivity; and
- Scotland: Low sensitivity.

A position has been taken that increased demand on other services would have an overall beneficial effect on other services in Aberdeen City and Aberdeenshire. This position has been taken given the underutilisation of other services in the spatial area. Therefore, a worst-case scenario would be Option 3 and the low case. This would see a net number of 471 employment opportunities in the spatial area during the peak year. The magnitude of effect for demand on other services during the construction phase is therefore concluded to be negligible for Aberdeen City and Aberdeenshire under the worst-case scenario.

On a Highland and Scotland level, a position has been taken that increased demand on other services would have an adverse effect on other services. Hence a worst-case scenario would be Option 1 and high case.

In Highland this would see a net number of 1,403 employment opportunities in the spatial area during the peak year. However, some of this demand would be covered by workers from outside the area and the opportunities may only be available for a short time period. The magnitude of effect for demand on other services during the construction phase is therefore concluded to be low for Highland under the worst-case scenario.

In Scotland the worst-case scenario would see a net number of 4,941 employment opportunities in the spatial area during the peak year. As a proportion of the current Scottish population, this would be a percentage change of 0.1%. The magnitude of effect for demand on other services during the construction phase is therefore concluded to be negligible for Scotland under the worst-case scenario.

The significance of the potential effects during construction on the housing and local services receptors for the worst-case scenario varies for each of the areas under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **medium sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** and is **not significant** in EIA terms;
- Highland: The combination of a **medium sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse but **not significant** in EIA terms; and
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Medium	Negligible	Negligible	Not significant
Highland	Medium	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.1.5 Tourism and recreation

Tourism is an important industry in Aberdeen City, Aberdeenshire, Highland, and Scotland, and local recreational activities have positive effects both for the local population and for the tourism economy. Activities within the Project's construction phase have the potential to affect these activities. The worst-case scenario for this receptor is the scenario associated with the highest level of activity and employment; this is the high case of Option 1.

There are three main mechanisms through which the construction phase of the Project may affect tourism and recreation receptors:

- Affecting the visitor perceptions of the Study Areas as destinations for outdoor activities;
- Creating competition for tourism accommodation (i.e. if the Project generates a need to accommodate a construction workforce in accommodation that would otherwise be used by visitors in the area); at peak times for tourism, any such competition could potentially displace visitors to the area, to the detriment of businesses that depend on visitor expenditure for income (such as tourist attractions and local shops); and
- Disrupting marine recreational activities.

The Project Array Area is 200 km from the coast. It has been assessed in the scoping report that there will be no relevant seascape, landscape, or visual receptors impacted by the Project. As such, there will be no negative effects on tourism and recreation receptors arising from visual impacts from with the Project.

There is the potential for change in visitor perceptions linked to the Project construction phase if construction activities lead to a temporary obstruction or disruption of marine recreational activities and possibly by additional road traffic that may be required to bring construction materials, equipment, and parts to construction sites. Onshore recreational activities are not expected to be affected and are therefore not subsequently discussed in this Section. In Highland,

no effects are expected to arise from disruption of marine activities, as areas of construction activities are far away from the Highland Study Area.

Tourism is considered a key economic sector in Aberdeen City, Aberdeenshire, Highland, and Scotland and is considered a key priority supporting relatively high levels of employment. There are several marine recreational activities that may occur within five km of the Project Area and may be affected by potentials impact arising from the Project, as identified in the baseline. These include cold water diving, recreational marine vessels, and sea angling trips. It should be noted that none of these activities exclusively use the five km Study Area for recreational activities. From consultation, VisitScotland noted that the tourism industry in Aberdeenshire is generally growing, producing record numbers, and is a priority sector for the region. The sector is receiving investment and there is major investment in Peterhead with a likely tourism focus. VisitScotland also noted that the industry can be volatile by nature.

The baseline identifies a range of visitor and recreational activities in Aberdeen City and Aberdeenshire which fall outside of the areas of potential effects arising from the Project's construction phase. Highland has a wide range of onshore and offshore tourism and recreation receptors. Onshore recreation receptors are not expected to be affected. Furthermore, there is not expected to be any effect on marine recreation receptors. Finally, there are limited visitor receptors in the areas surrounding the ports at Cromarty and Nigg that have been identified as a potential epicentre for construction activities. As such, the Highland tourism and recreation receptors are less exposed when the particular geographies where effects are likely to occur are considered.

The baseline for occupancy rates of hotels shows that, in both the Aberdeen City and Aberdeenshire spatial area and Highland spatial area, occupancy rates are higher than Scotland-wide levels. This suggests greater levels of demand relative to supply in these spatial areas when compared to the Scotland norm. However, the analysis of occupancy rates by month show that occupancy rates drop significantly across all spatial areas during the off-peak months and spike during the high-peak period. Occupancy rates average to under 75% for all spatial areas.

Assumptions and sensitivity levels have been informed by stakeholder consultation with VisitAberdeenshire and VisitScotland.

Given the policy priorities and available evidence on resilience, adaptability, and challenges, the sensitivity of the tourism and recreation receptors vary by spatial area, as follows:

- Five km from Project Area: Medium sensitivity;
- Aberdeen City and Aberdeenshire: Medium sensitivity;
- Highland: Medium sensitivity;
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

As mentioned, there are several marine recreational activities that occur within five km of the Project Area. EIAR Vol. 3, Chapter 15: Shipping and Navigation also notes that there may be a limited number of recreational vessels that pass through the spatial area, with a comment from the Royal Yacht Association that the EICC is not a concern for recreational vessels. Furthermore, any displacement of recreational activity in the EICC, if any, would likely be very localised and time-limited. This may include activities such as sea angling however effects are not expected to be significant.

This assessment has been supported by VisitAberdeenshire. There are water sports activities on bays close to the EICC and within the five km spatial area, however, after consultation, it has been assessed that these activities will be far enough away as to not be affected. EIAR Vol. 3, Chapter 15: Shipping and Navigation notes that it is anticipated that recreational vessels will choose to routinely travel around rather than through the Array Area. It also notes that recreational vessel traffic data indicates that the volumes of activity are very low within the Array Area, expected due to the distance from shore. As such, the displacement effects on recreational vessels is expected to be minimal.

Peterhead Port is located within the Study Area. EIAR Vol. 3, Chapter 15: Shipping and Navigation notes that there may be some minor and temporary effects on pilot and boarding operations, however, Peterhead Port Authority was consulted and stated no concerns, assuming forward planning and communication. All receptors assessed in EIAR Vol. 3, Chapter 15: Shipping and Navigation had a risk significance no greater than Tolerable and as low as reasonably practicable (ALARP) during construction. On this basis, the magnitude on the five km spatial area is assessed to be low.

From Scotland, VisitScotland noted that a regional coastal path network is currently in development along Aberdeenshire's coastline and that any development around that area should not affect people's reasons for visiting. As previously discussed, there are no expected significant visual effects arising as a result of the Project.

Beyond those marine recreational activities identified in the five km spatial area, there is not expected to be any other major effects on recreational receptors in the Aberdeen City and Aberdeenshire spatial area. Other than recreational receptors, increased traffic may have effects on visitor perceptions. However, it is expected that any increase in traffic will be localised and transient and thus unlikely to significantly affect visitor perceptions. Hence, no major effects on visitor perceptions are expected and thus no major effect on tourism receptors. This assessment has been echoed by VisitAberdeenshire.

Beyond effects on recreational receptors and visitor perceptions, there is the potential for an increase in demand for temporary local accommodation (similar to the potential effects on housing demand) driven by a temporary influx in workers required for the construction phase. For example, visiting contractors, specialists, and workers whose labour services are of limited duration or are episodic may be accommodated in tourist accommodation. This could have:

- Positive effects on the accommodation component of the local tourism economy by driving up local demand, as well as on other services such as retail and food and beverage services that might be frequented by workers. This is particularly the case during the low season, where tourism accommodation occupancy rates are historically low, and may have a lesser effect during the high season when there may be competition with tourists for accommodation (creating displacement); and
- Negative effects on other receptors in the tourism sector where the construction workforce is likely to spend less money than tourists if competition for accommodation occurs between the Project construction workforce and tourists. This will lead to the displacement of income and economic activity in elements of the tourism sector.

A worst-case scenario is that up to 10% of the temporary workforce may need to utilise tourist accommodation during peak tourist season, where there may be a displacement effect on tourist visits to the Study Area. Induced employment is deemed to have no effect on temporary accommodation as it is unlikely that additional workers will need to be brought in to take these jobs, this will hence be removed from the worst-case scenario.

Section 19.6.1.1 assesses expected peak employment (without induced employment) in Aberdeen City and Aberdeenshire in the high case of Option 1 (worst-case scenario for the tourism and recreational activities receptor) to be 1,483. This would equate to the use of 148 beds in the worst-case scenario. According to the baselining assessment, there are 32,000 beds available in the Aberdeenshire and Grampian region, representing a 0.46% decrease from the baseline for accommodation available for tourists. It should be noted that VisitAberdeenshire does not expect any negative displacement effects during the construction phase as there are high levels of visitor accommodation in Aberdeenshire. However, VisitScotland noted that on some localised spatial areas, such as Peterhead, where there is less available accommodation, displacement may occur from even a small numbers of beds being used.

The expected peak employment in Highland in the high case of Option 1 (worst-case scenario for the tourism and recreational activities receptor) is 1,287. This would equate to the use of 129 beds in the worst-case scenario. According to the baselining assessment, there are 35,000 beds available in the Highland region, representing a 0.37% decrease from the baseline for accommodation available for tourists.

It should be noted that such decrease in the accommodation baseline represents a decrease greater than the potential decrease in economic activity within tourism receptors, given that there will likely still be significant expenditure in tourism receptors as a result of construction worker use of tourist accommodation. Furthermore, the reduction in tourist accommodation does not necessarily mean an equivalent displacement of tourists would materialise. As such, considering effects on visitor perceptions, tourist accommodation, and marine recreational activities:

- Magnitude on the Aberdeen City and Aberdeenshire spatial area is assessed to be low; and
- Magnitude on the Highland spatial area is assessed to be low.

On the Scotland spatial area, it is unlikely that many temporary employees will be required within Scotland but outside of Aberdeen City, Aberdeenshire, and Highland. This is because the majority of employment generated on the Scotland spatial area (discounting Aberdeen City, Aberdeenshire, and Highland) is further down the supply chain and induced. These industries are likely already established and less likely to require an imported workforce. The caveats surrounding tourist displacement described for the Aberdeen City, Aberdeenshire, and Highland spatial areas also apply to the Scotland spatial area. The logic for the Scotland spatial area also holds true for the UK spatial area. As such, considering effects on visitor perceptions, tourist accommodation, and marine recreational activities:

- Magnitude on the Scotland spatial area is assessed to be negligible; and
- Magnitude on the UK spatial area is assessed to be negligible.

The significance of the effects on the tourist and recreation receptors during the construction phase for the worst-case varies for each area under consideration:

- Five km from Project Area: The combination of a **medium sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Aberdeen City and Aberdeenshire: The combination of a **medium sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse that is **not significant** in EIA terms;
- Highland: The combination of a **medium sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
5 km from Project Area	Medium	Low	Minor (adverse)	Not significant
Aberdeen City and Aberdeenshire	Medium	Low	Minor (adverse)	Not significant
Highland	Medium	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.1.6 Marine commercial activities

The construction phase of the Project has the potential to influence marine commercial activities in a number of ways. The baseline identified that the marine commercial activities that could potentially be indirectly affected are:

- Commercial fisheries;
- Processing or other value-adding activities of fish caught and landed in the Study Area; and
- The onshore supply chain that provides goods and services to the fishing industry in the Study Area.

The baselining activities conducted for the marine commercial activities in Aberdeen City and Aberdeenshire identified moderately significant economic activity and employment in the commercial fisheries and seafood processing industries in Aberdeen City and Aberdeenshire. These industries represented a significant proportion of the UK and Scotland totals. However, despite this, fishing and associated industries represent a relatively small proportion of total employment in the spatial area and less than other major industries outlined in the baseline such as energy and tourism. The fishing industry, associated supply chain and value-adding industries are particularly concentrated and dependent on local catch in the spatial area. Commercial fisheries are noted as a key economic sector in Aberdeen City Council and Aberdeenshire Council's policy and strategy documentation. On the Scotland

and UK levels, the economic significance of commercial fisheries and associated industries is less than the Aberdeen City and Aberdeenshire spatial area and has greater adaptability.

Given the policy priorities, economic significance, and available evidence on resilience, adaptability, and challenges, the sensitivity of the marine commercial activities receptors is assessed to vary by spatial area, as follows:

- Aberdeen City and Aberdeenshire: High sensitivity;
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

The potential interactions between commercial fisheries activity and the Project construction phase is assessed in EIAR Vol. 3, Chapter 14: Commercial Fisheries, and includes:

- Displacement of fishing efforts to other areas during construction;
- Temporary loss of or restricted access to fishing grounds during construction;
- Interference with fishing activities as a result of increased vessel traffic during construction;
- Increased steaming times and distances for fishing vessels during construction;
- Increased risk of loss or damage to fishing gear (snagging risk) during construction; and
- Changes to exploited fish and shellfish resources during construction.

The chapter considers these various effects for five categories of commercial fishing activity receptors: demersal trawlers; pelagic trawlers; scallop dredgers; passive gears; and non-UK vessels.

The pathway to potential effects on processing / other value-adding activities and the onshore supply chain arises if the construction phase of the Project were assessed to be likely to generate significant levels of direct effects on commercial fishing vessels that operate within the commercial fisheries Study Area for the Project.

EIAR Vol. 3, Chapter 14: Commercial Fisheries concludes that all receptors have either minor or negligible (not significant) consequences with the exception of passive gears, which have moderate (significant adverse) consequence due to temporary loss of or restricted access to fishing grounds and displacement of fishing efforts to other areas. The chapter notes that there is a low to moderate number of vessels operating passive gears within ICES rectangles 44E8 and 43E8, covering landfall and a portion of the EICC, with a maximum annual average of 30 vessels between 2017 and 2021. 'Rolling' safety zones will be implemented around Project vessels and partially constructed infrastructure. Whilst this will be highly localised, temporary, and transient in nature, there is limited mobility of passive gears within the Study Area and the moderate efforts of fleets operating passive gears within the limit of ICES rectangles 44E8 and 43E8. As a result, EIAR, Vol. 3, Chapter 14: Commercial Fisheries has considered passive gears to be of medium sensitivity for both temporary loss of or restricted access to fishing grounds and displacement of fishing efforts to other areas during construction. Additionally, the effect on these activities of passive gears is assessed in EIAR, Vol. 3, Chapter 14: Commercial Fisheries to be of a high magnitude.

However, EIAR, Vol. 3, Chapter 14: Commercial Fisheries includes secondary mitigation to address the moderate consequences. This mitigation details that construction works will adhere to Fishing Liaison with Offshore Wind and Wet Renewables Group (FLOWW) guidance by developing a cooperation agreement with impacted fishers where applicable, thus ensuring that impacted fishers will be appropriately compensated for loss of commercial fishing activities. The residual consequence is assessed to be minor.

Given the assessment and mitigation measures from EIAR Vol. 3, Chapter 14: Commercial Fisheries, socio-economic effects on commercial fisheries and their associated supply chain in the Study Area are likely to be minor or negligible.

A reduction in seafood catch may have indirect effects on the processing or other value-adding activity of the fish caught in the Study Area. The baseline identifies that there are 2,650 workers in the seafood processing industry in Aberdeen City and Aberdeenshire. It is assessed that commercial fishing activities with a minor or negligible consequence are unlikely to have significant adverse effects on the processing industry. The only moderate consequence regards the passive gears catch in ICES rectangles 44E8 and 43E8. In 2022, this catch was valued at £2.4 million by the Marine Management Organisation. The total value of landings in the onshore Study Area (Aberdeenshire and Aberdeen City) is £226.1 million Thus, the potential disruption is unlikely to reduce the value of landings in Aberdeen City and Aberdeenshire by more than 1.1% and thus unlikely to cause any major effect on the processing and value- adding industries.

Combining assessments for commercial fisheries, their associated supply chain, and onshore processing and other value-adding activities, the magnitude for the marine commercial activities receptor in the socio-economic Study Area (Aberdeen City and Aberdeenshire) is assessed to be low.

Given the significant scale of commercial fishing, associated supply chain, and onshore processing and other value-adding activities in Scotland, the magnitude for the marine commercial activities receptor in this area is assessed to be negligible.

The significance of the employment effect during the construction for the worst-case varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a high sensitivity receptor and a low magnitude produces a minor consequence that is adverse and not significant in EIA terms;
- Scotland: The combination of a low sensitivity receptor and a negligible magnitude produces a negligible consequence that is not significant in EIA terms; and
- UK: The combination of a low sensitivity receptor and a negligible magnitude produces a negligible consequence that is not significant in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.1.7 Socio-cultural

The Project is likely to have a limited effect on socio-cultural receptors. Existing socio-cultural receptors such as lifestyle and quality of life; social problems (e.g. crime, ill-health, deprivation); community stress and conflict; integration, cohesion and alienation; and community character or image are unlikely to be negatively or positively affected by the Project. This is due to the relatively low increase in workers required for construction and the low sensitivity of the spatial areas being impacted.

The location of port infrastructure is a fundamental consideration in the assessment of socio-cultural receptors. This is because the social and economic characteristics of each area will vary in ways that will change not only the scale of effects that will occur but also how they are felt in these communities. For the analysis of socio-cultural effects, the five spatial areas that have been used differ from the other receptors considered in this chapter. These areas are Peterhead, the IMF, Aberdeen City, Aberdeenshire and Highland.

The size of the spatial area can also directly influence its sensitivity, and was also considered throughout baselining. Larger areas can respond more easily to changes without effects on the existing baseline while smaller areas may be more sensitive to change.

The key findings from the baseline characterisation that are pertinent to the assessment of the sensitivity of socio-cultural receptors in these areas are:

- In SIMD terms, Aberdeenshire shows relatively low levels of deprivation, with only nine of the data zones falling in the 20% most deprived, of which two fall in the lowest 10% and none are in the lowest 5%;
- Peterhead falls in the lowest ranked 20% for deprivation, with particularly low scores in education and crime;
- Nine of the 23 Peterhead data zones lie in the lowest 5% of the 340 data zones in Aberdeenshire. The most deprived data zones are found in the Peterhead Harbour area;
- Aberdeen is a relatively affluent city;
- All chosen spatial areas in the North East have relatively large populations, being a city (Aberdeen), the sixth most populated local authority area in Scotland (Aberdeenshire) or the largest town in the local authority area (Peterhead);
- Peterhead has been identified as having strong community cohesion and character, with groups that successfully deliver projects and show a strong presence in the community. Additionally, where there has been offshore wind presence in the past, the community has embraced this via developer collaborations with the education system;
- There is a strong sense of identity and belonging in Aberdeen City, along with feelings of safety and community cohesion;
- Half of residents in the IMF take part in activities in their local community;
- There is mixed feeling towards community engagement across the Highlands;
- Highland Council ranks as the 23rd least deprived local authority of the 32 local authorities in Scotland. Levels of deprivation have increased in Highland since 2016 (but by fewer than 2 percentage points); and
- In the IMF, 24 of the 209 data zones fall in the 20% most deprived or lower decile. Inverness contains the majority of these areas, including three of the four areas in the bottom 5% and more than half of the areas under 20%.

There is secondary stakeholder consultation available that considers the lived experience of those in communities near offshore wind farms (Scottish Government, 2022d). This data shows that the effect has been largely neutral, especially in areas of livelihood, community character and community relations. In addition, those surveyed said that offshore wind farms had a positive effect on their feelings about the future.

From the baseline characterisation evidence, the sensitivity of receptors across all spatial areas are as follows:

- Peterhead: **Medium sensitivity**;
- IMF: **Low sensitivity;**
- Aberdeen City: **Low sensitivity**;
- Aberdeenshire: **Low sensitivity**; and
- Highland: **Low sensitivity:**

The worst-case scenario for the consideration of socio-cultural receptors relates to the influx of workers and how this may influence the strong community fabric and belonging that is present in these spatial areas. Given this, effects will be considered based on the additional number of jobs created via Option 1 and the high case.

Of the five spatial areas considered in the assessment for socio-cultural receptors, it is not clear where the largest proportion of construction phase activity would occur. However, a worst-case scenario would be that it is conducted 100% in a single spatial area. This assessment will use the current population numbers as the baseline for this analysis.

Under the worst-case scenario, the conclusions for magnitude with respect to construction phase employment and the socio-cultural receptors were concluded to be as follows:

- Peterhead: **Medium magnitude**. There is no specific estimate for Peterhead with respect to employment generation, however if all Aberdeen City and Aberdeenshire employment generated by construction took place in Peterhead this would result in an assessment of high magnitude. However, the primary mitigation of a community benefit fund reduces this effect;
- IMF: **Low magnitude**. There is no specific estimate for the IMF with respect to employment generation, this assessment uses the scenario that all Highland employment generated by construction takes place in the IMF;
- Aberdeen City and Aberdeenshire: **Low magnitude**;
- Aberdeenshire: **Low magnitude**; and
- Highland: **Low magnitude**.

The significance of the potential effects during construction on the socio-cultural receptors for the worst-case scenario varies for each area under consideration:

- Peterhead: The combination of a **medium sensitivity** receptor and a **medium magnitude** produces a **moderate consequence** that is adverse and **significant** in EIA terms;
- IMF: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms; and
- Aberdeen City: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Aberdeenshire: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms; and
- Highland: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms.

The evaluation of significance for construction phase effects for the socio-cultural receptors for each area is summarised below.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Peterhead	Medium	Medium	Moderate (adverse)	Significant
IMF	Low	Low	Minor (adverse)	Not significant
Aberdeen City	Low	Low	Minor (adverse)	Not significant
Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Highland	Low	Low	Minor (adverse)	Not significant
Impact significance – SIGNIFICANT for Peterhead, NOT SIGNIFICANT for the other areas				

Section 19.11 provides further information on the secondary mitigation applied to ensure the residual impact is not significant.

19.6.1.8 Distributional effects

The potential distributional effects on the Project during the construction phase have been considered at the Aberdeen City and Aberdeenshire and Highland spatial levels.

There are several ways in which the construction and pre-construction phase of the Project may generate distributional effects:

- The creation of well-paid local jobs could increase local inequalities, particularly if opportunities to access these employment opportunities are not readily available to the local population;
- The creation of well-paid jobs could also exacerbate gender income inequalities if job opportunities are captured by a disproportionate number of one group over another; and
- If an increased workforce needs to be accommodated for the temporary construction, there may be additional housing demand which could in turn temporarily increase the cost of housing which could negatively affect its affordability for the local population.

The worst-case scenario from the perspective of the distributional effects receptors is associated with the scenario with the highest number of jobs created; this is the high case of Option 1. This is because the greater the number of additional jobs, the greater the potential for negative effects created from increased housing demand, local inequalities, and gender income inequalities if an above average proportion of the construction workforce is expected to be a particular gender.

Estimates for the expected labour costs and employee earnings are provided through economic modelling. The average earnings of employees working on the Project construction in the worst-case scenario is estimated to be £48,064 per annum, which is significantly higher than the current baseline in Aberdeen City and Aberdeenshire. On the Highland spatial area this is estimated to be £49,659 per annum, which is also significantly higher than the current baseline. As such, workers relocating to this area are likely to pay more for housing than local residents.

It has been reported that only 19.25% of jobs in the offshore wind industry are held by women (Offshore Wind Industry Council, 2022). Since the estimated annual average earnings of the construction workforce is significantly higher than the local average, this may have a disproportionately large effect on salaries earned by men and may affect gender income distributions in the spatial area. A new research project, *Clearing the Pathway for Women in Wind*, by Offshore Wind Industry Council and the University of East Anglia began in 2022 with aims to tackle the gender imbalance in the offshore wind industry by ensuring that more women have greater access to the sector. This project is part of the Offshore Wind Sector Deal agreed with UK Government (2020), which includes a commitment to ensuring that women comprise at least 33% of the workforce by 2030.

The housing market and supply is relatively stable in Aberdeen City and Aberdeenshire compared to the Scottish average, lower average monthly rents and house prices than the Scottish average. In Highland, the housing market is overall relatively stable with localised pockets of increased demand due to its rural appeal. Average prices are higher than on the Scotland level, partly due to the aforementioned increased demand. Tourism and short-term rentals have also decreased potential supply for local buyers and renters. Due to rising prices in some areas there are challenges in local affordability as rising prices push out local buyers. However, Highland Council is taking steps to restrict short-term rentals, which could moderate housing markets over time. Furthermore, given the expected population decrease in the Highlands and expected surplus in housing supply (as discussed in Section 19.6.1.3), there may be less pressure on housing prices over time. The average annual income is slightly higher on the Aberdeen City, Aberdeenshire and Highland levels than the Scottish average. Deprivation levels around the major ports is low. On this basis, and given the income gap analysis in the baseline, the sensitivity of the distributional effects receptors is assessed to be:

- Aberdeen City and Aberdeenshire: **low sensitivity**; and
- Highland: **low sensitivity**.

With respect to the potential adverse distributional effect in Aberdeen City and Aberdeenshire and Highlands during the construction phase, potential negative effects could occur as a result of increasing local income inequalities and gender income inequalities. These increases would come from the introduction of a construction workforce with significantly higher average annual earnings than the local average. Furthermore, there may be negative effects on housing as the incoming workforce may have significantly more disposable income to spend on housing. Such an increase in housing demand may have a detrimental effect, particularly for residents in the lower income quartile. Given the worst-case scenario of the highest number of jobs created, the magnitude of the distributional effects is assessed to be:

- Aberdeen City and Aberdeenshire: **high magnitude**; and
- Highland: **high magnitude**.

The significance of the potential effects during construction on the distributional receptors for the worst-case scenario varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **low sensitivity** receptor and a **high magnitude** produces a **minor consequence** effect that adverse and **not significant** in EIA terms;
- Highland: The combination of a **low sensitivity** receptor and a **high magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms; and

The evaluation of significance for construction phase effects for the socio-cultural receptors for each area is summarised below.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Highland	Low	High	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.2 Potential effects during operation and maintenance

19.6.2.1 Employment

The worst-case scenario for the consideration of the employment receptor relates to the additional number of jobs created and GVA generated during the operation and maintenance phases that are associated with Option 3 and the low scenario. The effects considered include those that are involved in the operation and maintenance of the Project infrastructure, machinery, and apparatus. The Project effects associated with the employment receptor during the operational phases are considered to be beneficial.

Job creation is a strategic and policy priority for both Scottish and UK Governments and for Aberdeen City Council and Aberdeenshire Council. Assessment of the baseline and sensitivity on the Aberdeen City and Aberdeenshire spatial level yields the same results as with the construction employment effects. However, given the longer-term shift to net zero and the transition away from oil and gas, there is a potential for job losses in the oil and gas sector over coming decades. Therefore, sensitivity in Aberdeen City and Aberdeenshire is assessed to be high. On the national level, the labour market has a high level of adaptability.

Given the policy priorities and available evidence on resilience, the sensitivity of the receptor is assessed to vary by spatial areas as follows:

- Aberdeen City and Aberdeenshire: High sensitivity;
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

Table 19-60 to Table 19-62 detail the number of estimated FTEs expected to be created within each area during the operation and maintenance phase for each potential option and each low, mid, and high case scenario; this is equivalent to the number of full-time jobs created. Estimates are presented as direct FTEs, indirect FTEs, and induced FTEs where:

- Direct FTEs are those held by people employed by the main contractors working on the Project operation and maintenance;
- Indirect FTEs are those held by people working on the operation and maintenance of the Project employed by sub-contractors and jobs elsewhere in the supply chain for the Project that are attributable to the Project expenditure; and
- Induced FTEs are additional jobs that are created by the increased household expenditure as a result of the remuneration earned by the direct and indirect workforce.

As with the assessment of employment effects in the construction phase, direct and indirect jobs have been combined into a single figure. Figures are rounded to the nearest whole number. The column totals may not sum exactly due to rounding errors. Figures in bold represent the worst-case scenario.

Table 19-60 Total FTEs generated over the operation and maintenance phase – Option 1

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	129	600	686	450	818	881	633	1,039	1,216
Induced	7	34	39	90	114	118	208	335	379
Total	136	634	725	540	932	999	842	1,373	1,594

Table 19-61 Total FTEs generated over the operation and maintenance phase – Option 2

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	108	506	578	379	689	742	533	875	1,024
Induced	6	28	33	76	96	99	175	282	319
Total	114	534	610	455	785	841	709	1,156	1,343

Table 19-62 Total FTEs generated over the operation and maintenance phase – Option 3

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	92	430	491	322	585	631	453	743	870
Induced	5	24	28	65	82	84	149	239	84
Total	97	454	519	387	667	715	603	983	1,141

Depending on the case presented and the potential for future investment in the supply chain, there is potential for considerably higher employment than is presented in the worst-case scenario.

For the Aberdeen City and Aberdeenshire spatial area, it is estimated that the operation and maintenance expenditure in the worst-case scenario, in this instance the low case of Option 3, would create yearly employment of 97 FTEs. The current employment baseline shows FTEs[20] in the spatial area at 219,200. Therefore, the estimated change in the baseline is 0.04% which is assessed to be of **negligible magnitude**.

At the Scotland level, under the worst-case scenario, the estimated employment generated by the expenditure would be 387 FTEs. This is only 0.02% of the current baseline, which is 2,146,300 FTEs. Thus, it is assessed to be of **negligible magnitude**.

At the UK level, under the worst-case scenario, the estimated employment generated is 603 FTEs compared to a baseline of 25,826,600 FTEs. This is a 0.00% change and therefore is assessed to be of **negligible magnitude**.

The significance of the employment effect during the construction for the worst-case varies for each of the areas under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **high sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

[20] Baseline FTEs are calculated from baseline employment data presented in Section 19.4. This includes both self-employed and employees. Part-time workers are treated as 0.5 FTEs and full-time workers are treated as 1 FTE in line with the Scottish Governments methodology for input-output tables.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.2.2 GVA

The worst-case scenario for the GVA receptor is economic value generated with the low case and Option 3. The GVA receptor includes the direct, indirect, and induced GVA created directly and indirectly by all operation and maintenance activities including the associated supply chain and associated household income generated by increased employment. Effects associated with the GVA receptor are beneficial.

The assessment of sensitivity follows the same logic taken for GVA effects in the construction phase and the same additional logic taken for employment in the operation and maintenance phase. As such, sensitivity by spatial area is as follows:

- Aberdeen City and Aberdeenshire: **High sensitivity**;
- Scotland: **Low sensitivity**; and
- UK: **Low sensitivity**.

Table 19-63 to Table 19-65 detail the estimates for annual GVA expected to be generated within each area during the operation and maintenance phase for each potential option and each low, mid, and high case scenario. GVA estimates are presented as direct, indirect, and induced, where the definitions are as previously described in Section 19.6.1.1. All prices are struck to 2024 level.

As with the employment effects, direct and indirect GVA have been combined into a single figure. Values are rounded to the nearest £0.1 million, so values stated as £0.0 million may not be zero. The column totals may not sum exactly due to rounding. Figures in bold represent the worst-case scenario.

Table 19-63 Total annual GVA generated over the operation and maintenance phase – Option 1 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	**10**	45	52	**41**	64	8	**56**	89	101
Induced	**1**	2	3	**8**	11	11	**19**	31	35
Total	**10**	48	55	**49**	75	79	**75**	120	137

Table 19-64 Total annual GVA generated over the operation and maintenance phase – Option 2 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	8	38	44	34	54	57	47	75	85
Induced	0	2	2	7	9	9	16	26	30
Total	9	40	46	41	63	67	63	101	115

Table 19-65 Total annual GVA generated over the operation and maintenance phase – Option 3 (£ million)

	ABERDEEN CITY AND ABERDEENSHIRE			SCOTLAND			UK		
	LOW	MID	HIGH	LOW	MID	HIGH	LOW	MID	HIGH
Direct and indirect	7	32	37	29	46	49	40	64	73
Induced	0	2	2	6	8	8	14	22	25
Total	7	34	39	35	54	57	54	86	98

Depending on the case presented and the potential for future investment in the supply chain, there is potential for considerably higher employment than is presented in the worst-case scenario.

For the Aberdeen City and Aberdeenshire spatial area, it is estimated that the expenditure in the worst-case scenario, in this instance the low case of Option 3, would create a GVA of £7 million. The current baseline[21] shows GVA per annum in the spatial area at £20,474 million. Thus, the estimated change in the baseline is 0.03% and the magnitude is assessed to be negligible.

At the Scotland level, under the worst-case scenario, the estimated GVA per annum generated by the expenditure would be £35 million. This is only 0.02% of the current baseline, which is £189,483 million. Thus, the significance is assessed to be negligible.

At the UK level, under the worst-case scenario, the estimated GVA per annum generated would be £54 million compared to a baseline of £2,591,113 million. This is a 0.00% change and the significance is therefore assessed to be negligible.

[21] *In 2024 prices.*

The significance of the GVA effect during the operation and maintenance for the worst-case varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **high sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.2.3 Demand for housing

The effect of the operation and maintenance phase of the Project on housing demand in each area is linked to:

- The number of permanent direct and other jobs expected to be created during the phase; and
- The proportion of these jobs that are likely to be taken up by workers who will reside within the area.

Evidence of current needs and expected future demand for housing was presented and discussed in Section 19.4. Given the evidence available regarding existing service delivery, resilience, and demand, the sensitivity of housing during the operation and maintenance phase by area is assessed as follows:

- Aberdeen City and Aberdeenshire: **Low sensitivity**; and
- Scotland: **High sensitivity**.

In contrast to the temporary effects seen during the construction phase, the employment opportunities arising from the operation and maintenance phase are expected to drive a long-term demand in housing and local services. This is particularly relevant in regions that accommodate the operational workforce or experience a consistent rise in employment needs over the Project's operational lifespan.

During operation and maintenance and under the Option 1 high scenario, the worst-case scenario regarding housing demand would be if the entire workforce demand was met by workers hired from outside the spatial area. These workers may decide to relocate during the Project's operational phase. Expected annual employment figures over the operation and maintenance period are presented in Tables 19-60 to 19-62. Additional employment in the high case of Option 1 is 686 on the Aberdeen City and Aberdeenshire level and 1,216 on the Scotland level.

Unlike the construction phase, jobs created during the operation and maintenance phase are expected to lead to permanent demand for housing in the areas that host the direct, indirect, and induced operational workforce over the operational life of the Project. As such, the worst-case scenario from the perspective of the housing demand receptor is that 100% of the workforce created during the operation and maintenance phase will require housing.

The HNDA produced by Aberdeen City Council and Aberdeenshire Council (2023) predicts that 15,135 additional dwellings will be required between 2023 and 2042. Contributing an additional demand for up to 686 dwellings would represent an increase in demand of around 4.5% over this period. The magnitude of effect for housing demand during the operation and maintenance phase is therefore concluded to be high for Aberdeen City and Aberdeenshire under the worst-case scenario.

Similar to construction, it is not appropriate to conduct a quantitative impact assessment at a Scotland level. Instead, a qualitative impact assessment has been carried out that concludes that magnitude of housing demand during the operation and maintenance phase to be low in Scotland under the worst-case scenario. This uses the same logic presented in Section 19.6.1.3.

The significance of potential effects during the operation and maintenance phase on the housing receptors for the worst-case scenario varies for each of the area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a low sensitivity receptor and a high magnitude produces a minor consequence that is adverse but not significant in EIA terms; and
- Scotland: The combination of a high sensitivity receptor and a low magnitude produces a minor consequence that is adverse and not significant in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Scotland	High	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.2.4 Other services

The effect of the operation and maintenance phase of the Project on demand for other services such as education, healthcare and public transportation is linked to:

- The number of direct and other jobs expected to be created during the operation and maintenance phase; and
- The proportion of these jobs that are taken up by workers who already reside within the area.

Evidence of current needs and expected future demand for other services such as education, healthcare and public transportation was presented and discussed in Section 19.4. Given the available evidence regarding existing service delivery, resilience, and demand, the sensitivity of other services during the operation and maintenance phase by area is assessed as follows:

- Aberdeen City and Aberdeenshire: Medium sensitivity; and

- Scotland: **Low sensitivity**.

As with construction, a position has been taken whereby increased demand on other services in Aberdeen City and Aberdeenshire would have an overall beneficial effect. Therefore, a worst-case scenario would be Option 3 and low case. This would see 97 additional FTEs posts created in the spatial area. As a proportion of the current population of Aberdeen City and Aberdeenshire this would be a percentage change of 0.02%. The magnitude of effect for demand on other services during the operation and maintenance phase is therefore concluded to be **negligible** for Aberdeen City and Aberdeenshire under the worst-case scenario.

For Scotland, a position has been taken that increased demand on other services would have an adverse effect. Hence a worst-case scenario would be Option 1 and high case. This would see 1,373 additional FTE posts created in the spatial area. As a proportion of the current Scottish population this would be a percentage change of 0.02%. The magnitude of effect for other services demand during the operation and maintenance phase is therefore concluded to be **negligible** for Scotland under the worst-case scenario.

The significance of the potential effects during construction on the other services receptors for the worst-case scenario varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **medium sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Medium	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.2.5 Tourism and recreation

Tourism is an important industry in Aberdeen City, Aberdeenshire, Highland, and Scotland, and local recreational activities have positive effects both for the local population and for the tourism economy. Activities within the Project's operation and maintenance phase have the potential to affect these activities. The worst-case scenario for this receptor is the scenario associated with the highest level of activity and employment; this is the high case of Option 1. The mechanisms through which the Project may affect tourism and recreation receptors is the same as with the construction phase.

The sensitivity of the tourism and recreation receptors for the operation and maintenance phase of the Project in each spatial area is the same as per the construction phase. This is assessed to be as follows:

- Five km from Project Area: Medium sensitivity;
- Aberdeen City and Aberdeenshire: Low sensitivity;
- Scotland; Low sensitivity; and
- UK; Low sensitivity.

As described in EIAR Vol. 3, Chapter 15: Shipping and Navigation, cable maintenance within the EICC is not expected to lead to any notable displacement or disruption with effects being infrequent, localised to the spatial area immediately around the vessels, and temporary in nature. As mentioned with the effects during the construction phase, there are very limited numbers of recreational vessels navigating through the Array Area due to its distance offshore and vessels that do pass through will likely elect to navigate around the Array Area. For these reasons the displacement effects on recreational activities are expected to be negligible.

Peterhead Port sits within the Study Area. As with the construction phase, EIAR Vol. 3, Chapter 15: Shipping and Navigation notes that there may be some minor and temporary effects on pilot and boarding operations, however, Peterhead Port Authority was consulted and stated "no concerns", assuming forward planning and communication. There will be no effects on port access from the laid cables, and any maintenance requiring surface activity is likely to be an infrequent occurrence. On this basis, the magnitude on the five km spatial area is assessed to be negligible.

Beyond marine recreational activities identified in the five km spatial area, there is not expected to be any other major effects on recreational receptors in the Aberdeen City and Aberdeenshire spatial area. Hence, it is not expected that there will be any major effect on visitor perceptions and thus no major effect on tourism receptors. This assessment has been echoed by VisitAberdeenshire.

As with the construction phase, there are potential displacement effects in the tourism sector with regards to accommodation. A worst-case scenario is that up to 10% of the temporary workforce may require use of tourist accommodation during peak tourist season which may lead to displacement on tourist visits to the Study Area. However, it should be noted that the operational workforce is much smaller than the construction phase workforce, and most workers will likely reside permanently in the area. There may be small need for managers or specialists normally based outside the area, but it is expected that that this would be relatively few in number and would be episodic.

Section 19.6.1.1 assesses expected annual employment (excluding induced) in Aberdeen City and Aberdeenshire in the high case of Option 1 (worst-case scenario for the tourism and recreational activities receptor) to be 686. This equates to 69 extra beds in the worst-case scenario. According to the baselining assessment, there are 32,000 beds available in the Aberdeenshire and Grampian region, representing a 0.22% decrease from the baseline for accommodation available for tourists. VisitAberdeenshire does not expect there to be any negative displacement effects during the operation and maintenance phase as there are high levels of visitor accommodation in Aberdeenshire.

It should be noted that this decrease in the accommodation baseline represents a decrease greater than the potential decrease in economic activity within tourism receptors given that there will likely still be significant expenditure in tourism receptors resulting from workers' use of tourist accommodation. Furthermore, the reduction in available

tourist accommodation does not necessarily mean that an equivalent displacement of tourists would materialise. As such, considering effects on visitor perceptions, tourist accommodation, and marine recreational activities, magnitude on the Aberdeen City and Aberdeenshire spatial area is assessed to be **negligible.**

On the Scotland spatial area, it is unlikely that many temporary employees will be required within Scotland but outside of Aberdeen City and Aberdeenshire. This is because most of the employment generated on the Scotland spatial area (discounting Aberdeen City and Aberdeenshire) is down the supply chain and induced. These industries are likely already well-established and less likely to require an imported workforce. The caveats surrounding tourist displacement described for the Aberdeen City and Aberdeenshire spatial area also apply to the Scotland spatial area. The logic for the Scotland spatial area also holds true for the UK spatial area. As such, considering effects on visitor perceptions, tourist accommodation, and marine recreational activities:

- Magnitude on the Scotland spatial area is assessed to be **negligible**; and
- Magnitude on the UK spatial area is assessed to be **negligible.**

The significance of the effects on the tourist and recreation receptors during the construction phase for the worst-case varies for each area under consideration:

- Five km from Project Area: The combination of a **medium sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms;
- Aberdeen City and Aberdeenshire: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
5 km from Project Area	Medium	Negligible	Negligible	Not significant
Aberdeen City and Aberdeenshire	Low	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – **NOT SIGNIFICANT**				

19.6.2.6 Marine commercial activities

As with the construction phase, the operation and maintenance phase of the Project could influence marine commercial activities in a number of ways. The sensitivity of these receptors is the same as in the construction phase:

- Aberdeen City and Aberdeenshire: High sensitivity;
- Scotland: Low sensitivity; and
- UK: Low sensitivity.

The potential effects during the operation and maintenance phase on commercial fisheries is assessed in EIAR Vol. 3, Chapter 14: Commercial Fisheries, which gives an assessment on potential interactions between the operation and maintenance phase of the Project and the commercial fishing activities in the socio-economics offshore (12-200 NM) Study Area, including:

- Displacement of fishing efforts to other areas during operation and maintenance;
- Temporary loss of or restricted access to fishing grounds during operation and maintenance;
- Interference with fishing activities as a result of increased vessel traffic during operation and maintenance;
- Increased steaming times and distances for fishing vessels during operation and maintenance;
- Increased risk of loss or damage to fishing gear (snagging risk) during operation and maintenance;
- Changes to exploited fish and shellfish resources during operation and maintenance.

The chapter considers these various effects for five categories of commercial fishing activity receptors: demersal trawlers; pelagic trawlers; scallop dredgers; passive gears; and non-UK vessels.

The pathway to potential effects on processing / other value-adding activities and the onshore supply chain arises if the operation and maintenance phase of the Project was assessed to be likely to generate significant levels of direct effects on commercial fishing vessels that operate within the offshore Study Area. EIAR Vol. 3, Chapter 14: Commercial Fisheries concludes that all receptors have either minor or negligible consequences (not significant). Given this assessment, the socio-economic effects on commercial fisheries and their associated supply chain are likely to be minor or negligible. The reduction in seafood catch is also likely to be minor, as is the effect on processing and value-adding industries.

Combining the assessments for commercial fisheries, their associated supply chain, and onshore processing and other value-adding activities, the magnitude for the marine commercial activities receptor in the Aberdeen City and Aberdeenshire spatial area is assessed to be low.

Given the significant scale of commercial fishing, associated supply chain, and onshore processing and other value-adding activities in Scotland, the magnitude for the marine commercial activities receptor is assessed to be negligible.

Given the significant scale of commercial fishing, associated supply chain, and onshore processing and other value-adding activities in the UK, the magnitude for the marine commercial activities receptor is assessed to be negligible.

The significance of the employment effect during the operation and maintenance phase for the worst-case scenario varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The combination of a **high sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant

Impact significance – **NOT SIGNIFICANT**

Section 19.11 provides further information on the secondary mitigation applied to ensure the residual impact is not significant.

19.6.2.7 Socio-cultural

As in the construction phase, the Project is likely to have a limited effect on socio-cultural receptors. The spatial areas studied in this assessment differ from construction. Peterhead, Aberdeen City and Aberdeenshire were identified based on the location of potential operation and maintenance ports.

Sensitivity for the socio-cultural receptors is assessed to be the same (in rationale and result) in the operation and maintenance phase as in the construction phase:

- Peterhead: **Medium sensitivity**;
- Aberdeen City: **Low sensitivity**; and
- Aberdeenshire: **Low sensitivity**.

The worst-case scenario for socio-cultural receptors relates to the influx of workers and how this may influence the strong community fabric and sense of belonging in these spatial areas. Given this, effects are considered based on the additional number of jobs created via Option 1 and the high case.

Of the three spatial areas, it is not clear where the largest proportion of operation and maintenance activity would occur. However, a worst-case scenario would be that 100% takes place in a singular spatial area, equating to an influx of 681 workers. This assessment uses the current population numbers detailed in Section 19.4 as the baseline for analysis:

- Peterhead: Population is 19,791 which gives a percentage change of 3.44%;
- Aberdeen City: Population is 224,041 which gives a percentage change of 0.3%; and
- Aberdeenshire: Population is 262,690 which gives a percentage change of 0.3%.

Based on the above assumptions, conclusions for magnitude for the socio-cultural receptors are as follows:

- Peterhead: **High magnitude,** however with consideration of the primary mitigation of a community benefit fund this would be reduced to **medium magnitude**;
- Aberdeen City: **Low magnitude**; and
- Aberdeenshire: **Low magnitude**.

The significance of the potential effects during operation and maintenance on the socio-cultural receptors for the worst-case scenario varies for each of the areas under consideration:

- Peterhead: The combination of a **medium sensitivity** receptor and a **medium magnitude** produces a **moderate consequence** that is adverse and **significant** in EIA terms;
- Aberdeen City: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms; and
- Aberdeenshire: The combination of a **low sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Peterhead	Medium	Medium	Moderate (adverse)	Significant
Aberdeen City	Low	Low	Minor (adverse)	Not significant
Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Impact significance – **SIGNIFICANT**, for Peterhead. **NOT SIGNIFICANT** for other areas				

19.6.2.8 Distributional effects

The potential distributional effects of the Project during the operation and maintenance phase are considered at the Aberdeen City and Aberdeenshire spatial levels. There are several ways in which this phase may generate distributional effects:

- The creation of highly-paid local jobs could increase local inequalities, particularly if opportunities to access these employment opportunities are not readily available to the local population;
- The creation of highly-paid jobs could also exacerbate gender income inequalities if job opportunities are captured by a disproportionate number of one group over another; and
- If an increased workforce needs to be accommodated for the temporary construction, there may be additional demand for housing which could in turn temporarily increase the cost of housing which could negatively affect the affordability of housing for the local population.

The worst-case scenario with regard to the distributional effects receptors is associated with the scenario where the highest number of jobs is created, the high case of Option 1. This is because the greater the number of additional jobs, the greater the potential for negative effects due to increased housing demand and local inequalities, as well as gender income inequalities if an above-average proportion of the workforce is expected to be a particular gender.

Estimates for the expected labour costs and employee earnings are provided through economic modelling. The average earnings of employees working on the operation and maintenance of the Project in the worst-case scenario is estimated to be £31,256 per annum, which is lower than the current baseline in Aberdeen City and Aberdeenshire. As such, workers relocating to this area are less likely to price local residents out of the housing market.

As discussed in Section 19.6.1, housing in Aberdeen City and Aberdeenshire is generally cheaper than the Scottish average, income is slightly higher than the Scottish average, and deprivation around key ports is low. On this basis, the sensitivity of the distributional receptor is assessed to be low on the Aberdeen City and Aberdeenshire level.

The operation and maintenance phase of the Project is unlikely to cause significant adverse effects on local or gender income inequalities, as the operation and maintenance workforce's earnings are expected to be below the local average, minimising effect on income disparities in Aberdeen City and Aberdeenshire. There may still be negative effects on housing prices due to increased demand, but not to the extent that there would be if the workforce was earning significantly more than local residents. An increase in housing demand may still have a detrimental effect on local residents in the lower income quartile. On the basis of the worst-case scenario, where the highest number of jobs is created, the magnitude of the distributional effects is assessed to be low.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.6.3 Potential effects during decommissioning

Effects on Socio-economics, Tourism and Recreation receptors associated with decommissioning are anticipated to result from the full removal of the Project components. Decommissioning activities will be subject to consultations and further assessments closer to the time of decommissioning to understand technical feasibility, safety and risk, and environmental considerations in detail. These details will be included in a Decommissioning Programme which will be developed post-consent and updated over the life of the Project.

The decommissioning of the Project intends to complete the full removal of offshore infrastructure to below the mudline (where safe/practicable to do so), in line with the OSPAR Convention and forthcoming guidance from OSPAR's North-East Atlantic Environmental Strategy 2030. The majority of decommissioning works are likely to be undertaken in reverse to the sequence of construction works and involve similar or lesser levels of effects to construction.

A Decommissioning Programme will be prepared prior to construction, in line with the requirements of Section 105 of the Energy Act 2004 (as amended) and any applicable guidance available at the time. Currently it is assumed that:

- FTU substructure and WTG components will be removed and towed to port;
- Mooring lines will be removed, and where possible piles will be removed or cut to a suitable distance below the mudline such that the upper portion is removed;
- Cables no longer required will be removed where safe to do so; where they cross live third-party assets, they may be cut and left in situ to prevent damage to third-party operations; and
- The OSCP(s) will be decommissioned and the jacket and topside(s) will be towed to shore. The piles will be cut a suitable distance below the mudline.

The sensitivities and effect magnitudes for decommissioning are considered to be comparable to those identified for the construction phase. Therefore, in the absence of detailed information regarding decommissioning works, the effects during the decommissioning of the Project are considered analogous with, or likely less than, those of the construction phase.

Furthermore, it is not possible to accurately predict the location of the supply chain, equipment, skills, and workforce required for decommissioning after a period of over 35 years. It is therefore not possible to estimate any likely spatial distribution of expenditure.

Due to these uncertainties, it is not possible to quantify estimates for the employment or GVA effects of the decommissioning phase of the Project. To assess the potential effects, it has been noted that decommissioning activities are relatively similar to those of the construction phase, but with a likely lower magnitude. As such, the significance of the effects on employment and GVA during the construction phase can be used as a basis for assessing significance of effects on employment and GVA during the decommissioning phase. Such logic can also be applied to the effect on housing demand and demand for other services, although there is a greater degree of uncertainty surrounding housing supply dynamics in the next 35 years; it has been assumed that due to the slowing population growth rates that the sensitivity of these receptors will not worsen.

Similarly, effects of the decommissioning phase of the Project on tourist and recreation receptors are likely to be relatively similar to that in the construction phase, but with a lower magnitude. Although, it should be noted that the exact status of the tourism and possible marine recreational activities in the Study Area in the next 35 years is uncertain, it has been assumed that the sensitivity of the industry will not worsen with respect to the receptors under consideration. Furthermore, it is assumed that visitor bed space (one of the drivers in the assessment of magnitude) will not have decreased.

As with the effects of the decommissioning phase on the tourism industry, the status of the commercial marine activities industry in the next 35 years is highly uncertain. It is possible that other marine commercial activities that are not currently present become active in the Study Area in future. However, assuming this is not the case, EIAR Vol. 3, Chapter 14: Commercial Fisheries assesses the significance of effects on commercial fisheries to be analogous with that of the construction phase. Given this, the significance of effects in the construction phase are used as a basis for assessing the significance of effects during the decommissioning phase.

The socio-cultural conditions, distributional conditions, and the state of other local services over 35 years into the future is largely unpredictable at this point in time. As such, accurate assessments of significance cannot be presented.

The significance of the potential effect on employment, GVA, and housing demand is assessed below. Given the limited knowledge on sensitivity and exact magnitude of these receptors in the time period of decommissioning effects, only the assessment of significance (based on the receptors that were assessed to be significant during the construction phase) is given.

19.6.3.1 Employment

The effects on employment during the decommissioning phase are likely to be beneficial. Given a lower magnitude than during the construction phase, significance at each spatial area under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Negligible consequence that is beneficial and not significant in EIA terms;
- Scotland: Negligible consequence that is not significant in EIA terms; and
- UK: Negligible consequence that is not significant in EIA terms.

19.6.3.2 GVA

The effects on GVA during the decommissioning phase are likely to be beneficial. Given a lower magnitude than during the construction phase, significance at each spatial area under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Negligible consequence that is beneficial and not significant in EIA terms;
- Scotland: Negligible consequence that is not significant in EIA terms; and
- UK: Negligible consequence that is not significant in EIA terms.

19.6.3.3 Demand for housing

The effects on housing demand during the decommissioning phase are likely to be adverse. Given a lower magnitude than during the construction phase, significance at each spatial area under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Minor consequence that is adverse and not significant in EIA terms; and
- Scotland: Minor consequence that is adverse and not significant in EIA terms.

19.6.3.4 Other services

The effects on demand for other local services during the decommissioning phase are likely to be beneficial. Given a lower magnitude than during the construction phase, significance at each spatial area under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Negligible consequence that is adverse and not significant in EIA terms; and
- Scotland: Negligible consequence that is adverse and not significant in EIA terms.

19.6.3.5 Tourism

The effects on tourism and recreational activities receptors during the decommissioning phase are likely to be adverse. Given a lower magnitude than during the construction phase, significance at each spatial area under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Minor consequence that is adverse and not significant in EIA terms; and
- Scotland: Negligible consequence that is adverse and not significant in EIA terms.

19.6.3.6 Marine commercial activities

The effects on marine commercial activities during the decommissioning phase are likely to be adverse. Given an analogous magnitude (as with the construction phase), significance at the spatial areas under consideration is assessed to be:

- Aberdeen City and Aberdeenshire: Minor consequence that is adverse and not significant in EIA terms; and
- Scotland: Negligible consequence that is adverse and not significant in EIA terms.

19.6.4 Summary of potential effects

A significant effect on socio-cultural receptors was identified from change in socio-cultural conditions at a Peterhead local level. Therefore, secondary mitigation measures have been proposed to reduce the significance of effect from moderate to minor.

A summary of outcomes from the assessment of potential effects for the construction, operation and maintenance of the Project is provided in Table 19-66 to Table 19-74.

Table 19-66 Summary of potential effects in Peterhead only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Medium	Medium	Moderate (adverse, significant)	Once further engineering and supply chain analysis has been conducted, comprehensive community consultation and engagement will be undertaken to ensure that the work of the CLO and the community benefit fund is focused on the areas of greatest need. Specific attention will be given to areas with the most deprived data zones. This additional analysis will be documented within the SCDS to demonstrate how the benefits of the fund are focused where the local community require.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Medium	Medium	Moderate (adverse, significant)	Once further engineering and supply chain analysis has been conducted, comprehensive community consultation and engagement will be undertaken to ensure that the work of the CLO and the community benefit fund is focused on areas with the greatest need. Specific attention should be given to areas with the most deprived data zones. This additional analysis will be documented within the SCDS to demonstrate how the benefits of the fund are focused where the local community require.	Minor (not significant)

Table 19-67 Summary of potential effects in the IMF only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

Table 19-68 Summary of potential effects in Aberdeen City only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)

Table 19-69 Summary of potential effects in Aberdeenshire only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)

Table 19-70 Summary of potential effects within 5 km of Project Area only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in the volume and value of tourism	Tourism	Medium	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

Table 19-71 Summary of potential effects in Aberdeen City and Aberdeenshire combined area

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment	Employment	Low	Low	Minor (beneficial, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in GVA	GVA	Low	Low	Minor (beneficial, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Medium	Negligible	Minor (beneficial, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Change in distributional conditions	Distributional	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Increase in employment	Employment	High	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in GVA	GVA	High	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Medium	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Change in distributional conditions	Distributional	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

Table 19-72 Summary of potential effects in Highland

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment	Employment	Medium	Low	Minor (beneficial, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Increase in GVA	GVA	Medium	Medium	Moderate (beneficial, significant)	None required above existing embedded mitigation measures.	Moderate (significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in distributional conditions	Distributional	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

Table 19-73 Summary of potential effects in Scotland

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment	Employment	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in GVA	GVA	Low	Low	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible(not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Operation and maintenance						
Increase in employment	Employment	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in GVA	GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

Table 19-74 Summary of potential effects in the UK

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment	Employment	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in GVA	GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Operation and maintenance						
Increase in employment	Employment	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Increase in GVA	GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

19.7 Assessment of cumulative effects

19.7.1 Introduction

Potential effects from the Project have the potential to interact with those from other projects (developments), plans and activities, resulting in cumulative effects on Socio-economics, Tourism and Recreation receptors. The general approach to the cumulative effects assessment is described in EIAR Vol. 2, Chapter 7: EIA Methodology and in EIAR Vol. 4, Appendix 31: Cumulative Effects Assessment Methodology and further detail is provided below.

Offshore projects (developments) in specific categories may compete for resources and workforce critical to the ability of the Scottish and local supply chains to contribute to the Project. If supply chain capacity becomes constrained, the share of Project content expected to originate from Scotland or nearby areas could fall below the levels assumed in the Project's standalone assessment. As such, the cumulative assessment considers the following types of offshore projects (developments) situated in northern Scottish waters:

- Other offshore wind farms;
- Other types of marine renewable energy developments;
- Carbon capture and storage infrastructure;
- Oil and gas developments;
- Pipe laying and cable laying developments; and
- Port and harbour developments.

Offshore projects (developments) within the 5 km Study Area of the Project have been noted to assess cumulative effects on tourism and recreation receptors within this area.

Table 19-75 List of developments considered for the Socio-economics, Tourism and Recreation cumulative effect assessment

LOCATION	PROJECT TYPE	PROJECT NAME	DISTANCE TO PROJECT (km)	STATUS	CONFIDENCE[22]
United Kingdom	Ports and Harbours	Peterhead South Quay Extension	4.06	Pre-Application (Early Development)	Low
United Kingdom	Disposal	North Buchan Ness	1.56	Operational	Low
United Kingdom	Disposal	Peterhead	1.57	Operational	Low
United Kingdom	Disposal	Peterhead Harbour	4.06	Operational	Low
United Kingdom	Cable	Eastern Green Link 2	0	Consented	Medium
United Kingdom	Cable	Eastern Green Link 3	0	Pre-Application (Scoping)	Low
United Kingdom	Cable	Central North Sea Electrification (CNSE) Project	0	Pre-Application (Scoping)	Low
United Kingdom	Cable	Tampnet CNSFTC	0	Operational	High
United Kingdom	Cable	North Sea Link	3.86	Operational	High
United Kingdom	Offshore Wind	Salamander Offshore Wind Farm	0	Application	Low
United Kingdom	Offshore Wind	Flora Offshore Wind Farm	3.98	Pre-Application (Early Development)	Low
United Kingdom	Offshore Wind	Hywind Scotland Pilot Park (Hywind)	0	Operational	High
United Kingdom	Offshore Wind	Green Volt Offshore Wind Farm	0	Consented	Medium

[22] *Confidence ratings have been applied to each cumulative development where: 'Low' = pre-application or application, 'Medium' = consented and 'High' = under construction or operational. Disposal sites are an exception to this; despite being operational, they are marked as 'Low' owing to uncertainty over frequency of use.*

LOCATION	PROJECT TYPE	PROJECT NAME	DISTANCE TO PROJECT (km)	STATUS	CONFIDENCE[22]
United Kingdom	Offshore Wind	CampionWind	0.21	Pre-Application (Early Development)	Low
United Kingdom	Offshore Wind	MarramWind	0	Pre-Application (Scoping)	Low
United Kingdom	Offshore Wind	Muir Mhòr Offshore Wind Farm	0	Application	Low

The effects identified as requiring consideration for cumulative effects are the same as those identified in Section 19.5.1 and are listed in Table 19-44.

19.7.2 Cumulative construction effects

19.7.2.1 Employment and GVA

There is the potential for cumulative effects on the employment and GVA receptors during the construction phase of the Project. This could occur as a result of the Project competing with other projects (developments) for resources, supply chain capacity, or the workforce being sourced from within the Study Area included in the cumulative assessment. An example of this would be competing access to ports or harbours, vessels, and skilled workers between the Project and other offshore activities.

This competition for resources has the potential to create local supply side constraints. If this happens then a greater proportion of resources required by the Project may need to be sourced from elsewhere or may cause a similar displacement effect in other developments. This could in turn reduce the net additional employment and GVA generation in the given spatial area.

However, simultaneously, the increasing scale of current and future offshore wind energy developments also provides the potential for the development of domestic supply chains relevant to the Project, generating inwards investment and value-adding capacity. A strong pipeline of projects (developments) may encourage the private sector to commit additional investment into national, regional, and local supply chain capacity for the offshore wind sector. This could include both capital and training and development of local workforces that would create additional employment and value-adding activity.

Another potential cumulative effect relates to the areas of overlap between the technology, materials, and skills required for offshore oil and gas extraction and those relevant to the development of the offshore wind sector. Given the expected decline of the Scottish offshore oil and gas sector, there is the potential for the release of industrial and workforce capacity to augment the existing domestic supply chains for the offshore wind development sector. This potential has been noted in Scottish Government policy documentation (included in Section 19.2), with the offshore renewables sector identified as important to help Scotland to replace thousands of jobs that will be lost following the decline of the offshore oil and gas sector.

There are significant uncertainties when considering the cumulative assessment of employment and GVA including inherent uncertainties in predicting, in quantitative terms, the likely scale and spatial pattern of procurement that would be associated with the list of developments included in the cumulative assessment. There is also uncertainty concerning the potential timing of construction of the projects (developments) listed in the cumulative assessment. Finally, there is uncertainty surrounding the potential future expansion and development of the local supply chain relevant the Project's construction phase.

Such uncertainties prevent the quantification of the scale of potential cumulative effects during the construction phase. Overwhelming demand on local resources and supply chain could create displacement effects and ultimately reduce net effects in the spatial locale. On the other hand, investment into the supply chain (whether by the private sector or by Scottish / UK Governments) could cause expenditure in local supply chain industries to increase. This would then cause employment and GVA to increase (shifting towards the high case outlined in Section 19.6). Given this, the most likely outcome of the cumulative effects is likely to fall within the high and low cases for each option outlined in Section 19.6, with the worst-case outcome being that the effects tend towards the lower end of this scale for estimated GVA and employment receptors.

Therefore, the significance of effects for the employment and GVA receptors reported in Section 19.6 is unlikely to change substantially as a result of consideration of cumulative effects. As such the significance assessment for each spatial area under consideration is:

- Aberdeen City and Aberdeenshire: Consequences for the receptor are expected to remain **minor (beneficial)** and **not significant** in EIA terms;
- Highland: Consequences for the receptor are expected to remain **minor (beneficial)** and **not significant** in EIA terms;
- Scotland: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms; and
- UK: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	Low	Minor (beneficial)	Not significant
Highland	Medium	Low	Minor (beneficial)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.2 Demand for housing

An increase in local employment has the potential to affect the housing demand receptor. As described in Section 19.6, the effects on housing demand were assessed to be adverse with the magnitude being positively related to the number of new jobs. As such, the high case was used in assessing the worst-case scenario.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects could mean that a greater proportion of Project content is supplied from outside the Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce. For this reason, the assessed magnitude on the housing demand receptor is that there would be no increase compared to the assessment in Section 19.6.

Therefore, the significance of effects on the housing demand receptor reported in Section 19.6 is assessed to be the same as a result of cumulative effects being considered in the worst-case. The significance for each spatial area is:

- Aberdeen City and Aberdeenshire: Consequences for the receptor are expected to remain **minor** (adverse) and **not significant** in EIA terms;
- Highland: Consequences for the receptor are expected to remain **minor** (adverse) and **not significant** in EIA terms; and
- Scotland: Consequences for the receptor are expected to remain **minor** (adverse) and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Highland	Low	High	Minor (adverse)	Not significant
Scotland	High	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.3 Other services

An increase in local employment has the potential to affect the other local services receptor. As described in Section 19.6, the effects were assessed to be beneficial with the magnitude increasing with the number of new jobs. As such the low case of Option 3 was used when assessing the worst-case scenario of the other local services effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects could mean that a greater proportion of Project content is supplied from outside the Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce. If this occurs, then the scale of benefits to other local services may not occur in full. However, it is likely that the scale of beneficial effects on the other local services receptor would still be within the range of low, mid and high cases for each of the three options.

Therefore, the cumulative effects are assessed as having no significance on the local services receptors, as assessed in Section 19.6. As such the significance assessment for each spatial area is:

- Aberdeen City and Aberdeenshire: The consequence of the receptor remains **negligible** and **not significant** in EIA terms;
- Highland: The consequence of the receptor remains **minor (adverse)** and **not significant** in EIA terms; and
- Scotland: The consequence of the receptor remains **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Medium	Negligible	Negligible	Not significant
Highland	Medium	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.4 Tourism and recreation

EIAR, Vol. 3, Chapter 15: Shipping and Navigation scoped out potential cumulative effects of port access and noted no additional cumulative effects associated with recreational vessels. It is not anticipated that there will be any further cumulative effects on recreational receptors from what has been identified in Section 19.6.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects could mean that a greater proportion of Project content is supplied from outside the spatial area of study. As such, the most likely cumulative effect would be a reduction in the local workforce. If this occurs, then the adverse displacement effects in the tourist accommodation market may not occur in full. However, it is likely that the scale of displacement effects on the tourism industry receptors would still be within the range of low, mid and high cases for each of the three options.

Therefore, the significance of effects on the tourism and recreation receptors reported in Section 19.6 is assessed to be the same as a result of cumulative effects being considered in the worst-case. As such the significance for each spatial area is:

- Five km from the Project Area: Consequences for the receptor are expected to remain **minor** (adverse) and **not significant** in EIA terms;
- Aberdeen City and Aberdeenshire: Consequences for the receptor are expected to remain **minor (adverse)** and **not significant** in EIA terms;
- Highland: Consequences for the receptor are expected to remain **minor (adverse)** and **not significant** in EIA terms;
- Scotland: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms; and
- UK: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
5 km from Project Area	Medium	Low	Minor (adverse)	Not significant
Aberdeen City and Aberdeenshire	Medium	Low	Minor (adverse)	Not significant
Highland	Medium	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.5 Marine commercial activities

The cumulative assessment undertaken in EIAR Vol. 3, Chapter 14: Commercial Fisheries assessed that no significant adverse cumulative effects were expected on commercial fisheries receptors during the construction phase except for passive gears. This was discussed in Section 19.6. Given these results, the mitigation provided in EIAR Vol. 3, Chapter 14: Commercial Fisheries and the conclusion of Section 19.6 on marine commercial activity including commercial fisheries, the associated supply chain, and processing industries, is assessed to also apply to the consideration of cumulative effects. That is:

- Aberdeen City and Aberdeenshire: Consequences for the receptor are expected to remain **minor** (adverse) and **not significant** in EIA terms;
- Scotland: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms; and
- UK: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.6 Socio-cultural

An increase in local employment has the potential to affect socio-cultural receptors. As described in Section 19.6, the effects were assessed to be adverse with the magnitude increasing with the number of new jobs. The high case was used when assessing the worst-case scenario of the socio-cultural effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects could mean that a greater proportion of Project content is supplied from outside the spatial area of study. As such, the most likely cumulative effect would be a reduction in the local workforce.

Therefore, the cumulative effects are assessed to have no effect on the significance of effects on the socio-cultural receptors, as assessed in Section 19.6. As such the significance assessment for each spatial area under consideration is:

- Peterhead: The consequence of the receptor remains **moderate** (adverse) and **significant** in EIA terms;
- IMF: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms;
- Aberdeen City: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms;
- Aberdeenshire: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms; and
- Highland: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Peterhead	Medium	Medium	Moderate (adverse)	Significant
IMF	Low	Low	Minor (adverse)	Not significant
Aberdeen City	Low	Low	Minor (adverse)	Not significant
Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Highland	Low	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.2.7 Distributional effects

An increase in local employment has the potential to affect the distributional receptor. As described in Section 19.6, the distributional effects were assessed to be adverse with the magnitude increasing with the number of new jobs. As such, the high case was used when assessing the worst-case scenario of the distributional effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects could mean that a greater proportion of Project content is supplied from outside the spatial Study Area. As such, the most likely cumulative effect would be a reduction in the new, higher paid, local workforce. For this reason, the assessed effect on the distributional receptor is that there would be no increase in magnitude compared to the assessment in Section 19.6.

The significance of the potential effects during construction on the distributional receptors for the worst-case scenario varies for each area under consideration:

- Aberdeen City and Aberdeenshire: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms; and
- Highland: The consequence of the receptor remains **minor** (adverse) and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Highland	Low	High	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.3 Cumulative operation and maintenance effects

19.7.3.1 Employment and GVA

There is the potential for cumulative effects on the employment and GVA receptors during the operation and maintenance phase of the Project. This could occur as a result of the Project competing with other projects (developments) for resources, supply chain capacity, or from workforce sourced from within the Study Area included in the cumulative assessment.

The potential cumulative effects on employment and GVA receptors during the operation and maintenance phase are analogous with those in the construction phase. As with the construction phase, there are significant uncertainties when considering the cumulative assessment of employment and GVA including inherent uncertainties in predicting, in quantitative terms, the likely scale and spatial pattern of procurement that would be associated with the list of developments included in the cumulative assessment. There is also uncertainty surrounding the potential future expansion and development of the local supply chain relevant to the Project's operation and maintenance phase.

Such uncertainties prevent the quantification of the scale of potential cumulative effects during the operation and maintenance phase. Overwhelming demand on local resources and supply chain could create displacement effects and ultimately reduce net effects in the spatial locale. On the other hand, investment into the supply chain (whether by the private sector or by Scottish / UK Governments) could cause increased expenditure in local supply chain industries. This would increase employment and GVA (shifting towards the high case outlined in Section 19.6). Given this, the most likely outcome of the cumulative effects is likely to fall within the high and low cases for each option outlined in Section 19.6, with the worst-case outcome being that the effects tend towards the lower end of this scale for estimated GVA and employment receptors.

Therefore, the significance of effects of the employment and GVA receptors reported in Section 19.6 is unlikely to change substantially as a result of consideration of cumulative effects. As such the significance assessment for each spatial area under consideration is:

- Aberdeen City and Aberdeenshire: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms;
- Scotland: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms; and
- UK: Consequences for the receptor are expected to remain **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant

Impact significance – NOT SIGNIFICANT

19.7.3.2 Demand for housing

An increase in local employment has the potential to affect the housing demand receptor. As described in Section 19.6, the effects on housing demand were assessed to be adverse with the magnitude being positively related to the number of new jobs. As such, the high case was used in assessing the worst-case scenario of housing demand effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects (developments) could mean that a greater proportion of Project content is supplied from outside the spatial Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce. For this reason, the assessed effect on the housing demand receptor is that there would be no increase in magnitude compared to the assessment in Section 19.6.

Therefore, the significance of effects on the housing demand receptor reported in Section 19.6 is assessed to be the same as a result of cumulative effects being considered in the worst-case. As such the significance for each spatial area is:

- Aberdeen City and Aberdeenshire: The consequence of the receptor is expected to remain **minor (adverse)** and **not significant** in EIA terms; and
- Scotland: The consequence of the receptor is expected to remain **minor (adverse)** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	High	Minor (adverse)	Not significant
Scotland	High	Low	Minor (adverse)	Not significant

Impact significance – NOT SIGNIFICANT

19.7.3.3 Other services

An increase in local employment has the potential to affect the other local services receptor. As described in Section 19.6, the effects were assessed to be beneficial with the magnitude increasing with the number of new jobs. As such the low case of Option 3 was used when assessing the worst-case scenario of the other local services effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects (developments) could mean that a greater proportion of Project content is supplied from outside Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce. If this occurs, then the scale of benefits to other local services may not occur in full. However, it is likely that the scale of beneficial effects on the other local services receptor would still be within the range of low, mid and high cases for each of the three options.

Therefore, the cumulative effects have no significance of effects on the local services receptors, as assessed in Section 19.6. As such the significance assessment for each spatial area is:

- Aberdeen City and Aberdeenshire: The consequence of the receptor remains **negligible** and **not significant** in EIA terms; and
- Scotland: The consequence of the receptor remains **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Medium	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.3.4 Tourism and recreation

EIAR Vol. 3, Chapter 15: Shipping and Navigation scoped out potential cumulative effects of port access and noted no additional cumulative effects associated with recreational vessels. It is not anticipated that there will be any further cumulative effects on recreational receptors from what has been identified in Section 19.6.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects (developments) could mean that a greater proportion of Project content is supplied from outside the Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce. If this occurs, then the adverse displacement effects in the tourist accommodation market may not occur in full. However, it is likely that the scale of displacement effects on the tourism industry receptors would still be within the range of low, mid and high cases for each of the three options. However, it should be noted that the operational phase workforce is much smaller than the construction phase workforce, and most workers will likely reside permanently in the area. There may be a small requirement for managers or specialists to relocate from outside of the area, but this is expected to be relatively few and episodic.

Therefore, the significance of effects on the tourism and recreation receptors reported in Section 19.6 is assessed to be the same as a result of cumulative effects being considered in the worst-case. As such the significance for each spatial area is:

- Five km from Project Area: The consequence of the receptor remains **negligible** and **not significant** in EIA terms;
- Aberdeen City and Aberdeenshire: The consequence of the receptor remains **negligible** and **not significant** in EIA terms;
- Scotland: The consequence of the receptor remains **negligible** and **not significant** in EIA terms; and
- UK: The consequence of the receptor remains **negligible** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
5 km from Project Area	Medium	Negligible	Negligible	Not significant
Aberdeen City and Aberdeenshire	Low	Negligible	Negligible	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.3.5 Marine commercial activities

The cumulative assessment undertaken in **EIAR Vol. 3, Chapter 14: Commercial Fisheries** found that no significant adverse cumulative effects on commercial fisheries receptors were expected during the operation and maintenance phase. This was discussed in Section 19.6. Given the conclusion of Section 19.6 on marine commercial activity including commercial fisheries, the associated supply chain, and processing industries, this is assessed to also apply to the consideration of cumulative effects. That is:

- Aberdeen City and Aberdeenshire: The combination of a **high sensitivity** receptor and a **low magnitude** produces a **minor consequence** that is adverse and **not significant** in EIA terms;
- Scotland: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms; and
- UK: The combination of a **low sensitivity** receptor and a **negligible magnitude** produces a **negligible consequence** that is **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	High	Low	Minor (adverse)	Not significant
Scotland	Low	Negligible	Negligible	Not significant
UK	Low	Negligible	Negligible	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.3.6 Socio-cultural

An increase in local employment has the potential to affect the socio-cultural receptors. As described in Section 19.6, the effects were assessed to be adverse with the magnitude increasing with the number of new jobs. The high case was used when assessing the worst-case scenario of the socio-cultural effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects (developments) could mean that a greater proportion of Project content is supplied from outside the Study Area. As such, the most likely cumulative effect would be a reduction in the local workforce.

Therefore, the cumulative effects are assessed to have no significance of effect on the socio-cultural receptors, as assessed in Section 19.6. As such the significance assessment for each spatial area under consideration is:

- Peterhead: The consequence of the receptor remains **moderate (adverse)** and **significant** in EIA terms;
- Aberdeen City: The consequence of the receptor remains **minor (adverse)** and **not significant** in EIA terms;
- Aberdeenshire: The consequence of the receptor remains **minor (adverse)** and **not significant** in EIA terms; and

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Peterhead	Medium	Medium	Moderate (adverse)	Significant
Aberdeen City	Low	Low	Minor (adverse)	Not significant
Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.3.7 Distributional effects

An increase in local employment has the potential to affect the distributional receptor. As described in Section 19.6, the distributional effects were assessed to be adverse with the magnitude increasing with the number of new jobs. As such, the high case was used when assessing the worst-case scenario of the distributional effects.

As discussed with the potential cumulative effects on the employment receptor, competition from other projects (developments) could mean that a greater proportion of Project content is supplied from outside the spatial Study Area. As such, the most likely cumulative effect would be a reduction in the new local workforce. As noted in Section 19.6, the jobs generated during the operation and maintenance phase were expected to be of a lower salary than the current baseline for Aberdeen City and Aberdeenshire. Therefore, the primary distributional effect would be an increase in local house prices due to increasing demand, not employment. With a reduction in the new local workforce, these effects would likely lessen. For this reason, the assessed effect on the distributional receptor is that there would be no increase compared to the assessment in Section 19.6.

Therefore, the cumulative effects are assessed to have no significance of effect on the distributional receptors. In the Aberdeen City and Aberdeenshire spatial area, the consequences as assessed to remain **minor (adverse)** and **not significant** in EIA terms.

AREA	SENSITIVITY	MAGNITUDE OF EFFECT	CONSEQUENCE	IMPACT SIGNIFICANCE
Aberdeen City and Aberdeenshire	Low	Low	Minor (adverse)	Not significant
Impact significance – NOT SIGNIFICANT				

19.7.4 Cumulative decommissioning effects

The decommissioning of the Project intends to complete the full removal of offshore infrastructure to below the mudline (where safe/practicable to do so). The majority of decommissioning works are likely to be undertaken in reverse to the sequence of construction works. However, there is limited information on the details around decommissioning of the Project and around the lifecycle of other developments. Considering this, it is assumed that decommissioning involves similar or lesser levels of effects to construction.

A Decommissioning Programme will be prepared prior to construction, in line with the requirements of Section 105 of the Energy Act 2004 (as amended) and any applicable guidance available at the time.

19.7.5 Summary of cumulative effects

A summary of the outcomes of the assessment of cumulative effects for the construction, operation and maintenance and decommissioning phases of the Project is provided in Table 19-76 to Table 19-84.

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Table 19-76 Summary of cumulative effects in Peterhead only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Medium	Medium	Moderate (adverse, significant)	Once further engineering and supply chain analysis has been conducted, comprehensive community consultation and engagement will be undertaken to ensure that the work of the CLO and the community benefit fund is focused on areas with the greatest need. Specific attention should be given to areas with the most deprived data zones. This additional analysis will be documented within the SCDS to demonstrate how the benefits of the fund are focused where the local community require.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Medium	Medium	Moderate (adverse, significant)	Once further engineering and supply chain analysis has been conducted, comprehensive community consultation and engagement will be undertaken to ensure that the work of the CLO and the community benefit fund is focused on areas with the greatest need. Specific attention should be given to areas with the most deprived data zones. This additional analysis will be documented within the SCDS to demonstrate how the benefits of the fund are focused where the local community require.	Minor (not significant)

Table 19-77 Summary of cumulative effects in the IMF only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

Table 19-78 Summary of cumulative effects in Aberdeen City only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)

Table 19-79 Summary of cumulative effects in Aberdeenshire only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)

Table 19-80 Summary of potential effects within 5 km of Project Area only

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Operation and maintenance						
Change in the volume and value of tourism	Tourism	Medium	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures	Minor (not significant)

Table 19-81 Summary of cumulative effects in Aberdeen City and Aberdeenshire combined area

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment and GVA	Employment; GVA	Low	Low	Minor (beneficial, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Medium	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in distributional conditions	Distributional	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Operation and maintenance						
Increase in employment and GVA	Employment; GVA	High	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Increase in demand for other services	Other services	Medium	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in distributional conditions	Distributional	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)

Table 19-82 Summary of cumulative effects in Highland

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment and GVA	Employment; GVA	Medium	Low	Minor (beneficial, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Increase in housing demand	Demand for housing	Low	High	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Increase in demand for other services	Other services	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Change in the volume and value of tourism	Tourism	Medium	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Change in socio-cultural conditions	Socio-cultural	Low	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures.	Minor (not significant)
Change in distributional conditions	Distributional	Low	High	Minor (adverse, not significant)		Minor (not significant)

Table 19-83 Summary of cumulative effects in Scotland

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment and GVA	Employment; GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Increase in demand for other services	Other services	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible(not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Operation and maintenance						
Increase in employment and GVA	Employment; GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Increase in housing demand	Demand for housing	High	Low	Minor (adverse, not significant)	None required above existing embedded mitigation measures	Minor (not significant)
Increase in demand for other services	Other services	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

Table 19-84 Summary of cumulative effects in the UK

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Construction						
Increase in employment and GVA	Employment; GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Operation and maintenance						
Increase in employment and GVA	Employment; GVA	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)
Change in the volume and value of tourism	Tourism	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

POTENTIAL EFFECT	RECEPTOR	SENSITIVITY OF RECEPTOR	MAGNITUDE OF EFFECT	CONSEQUENCE (SIGNIFICANCE OF EFFECT)	SECONDARY MITIGATION REQUIREMENTS	RESIDUAL CONSEQUENCE (SIGNIFICANCE OF EFFECT)
Change in the value of onshore business activity linked to marine commercial activities	Marine commercial activities	Low	Negligible	Negligible (not significant)	None required above existing embedded mitigation measures.	Negligible (not significant)

19.8 Inter-related effects

Inter-related effects are the potential effects of multiple impacts, that affect one receptor or group of receptors. Inter-related effects include interactions between the impacts of the different phases of the Project (i.e. interaction of impacts across construction, operation and maintenance, and decommissioning), as well as the interaction between impacts on a receptor within a Project phase.

19.8.1 Inter-related effects between Project phases

The successive Project phases have some potential to generate impacts on certain Socio-economics, Tourism and Recreation receptors.

The potential for investment in infrastructure, supply chain capacity, and workforce development within Scotland that could be expected in the construction phase of the Project may contribute to the generation of socio-economic benefits in the operation and maintenance and decommissioning phases, including:

- The development of port / harbour capacity for construction phase activities could be relevant during the Project's decommissioning activities;
- The skills and expertise developed in the development (pre-construction) phase of the Project (such as surveys and environmental monitoring) will also be required during the construction, operation and maintenance, and decommissioning phases of the Project; and
- The development of industrial capacity and skills in the supply chain for equipment and components used in the construction phase may also be utilised during the operation and maintenance phase as components and parts may require replacement due to expected wear and tear or failure.

Inter-related effects on housing demand, other local services, tourism and recreation, socio-cultural, and distributional receptors are assessed to be minimal.

Minimal potential for inter-related effects between the Project phases and the various commercial fisheries receptors is assessed in EIAR Vol. 3, Chapter 14: Commercial Fisheries. With respect to onshore business activities linked to commercial fishing activity, the potential for onshore inter-related between Project phases is also expected to be minimal.

19.8.2 Inter-related effects within a Project phase

There are various inter-related effects between the different socio-economic receptors during each Project phase. This has been assessed extensively throughout this chapter. Inter-related effects are assessed to occur between the effects on the employment receptor and other receptors, including:

- Local demand for housing;
- Local demand for other local services;
- Effects on tourism and recreation;
- Effects on socio-cultural receptors; and
- Effects on distributional receptors.

These inter-related effects are inherent to the assessment and have been considered throughout assessment of the Project's socio-economic receptors. No additional inter-related effects between the Project's phases are considered to exist that have not already been taken into account.

19.8.3 Inter-relationships

Inter-relationships are defined as the interaction between the impacts assessed within different topic assessment chapters on a receptor. The other chapters related to the assessment of potential effects on Socio-economics, Tourism and Recreation receptors are provided in Table 19-85.

Table 19-85 Socio-economics, Tourism and Recreation inter-relationships

CHAPTER	IMPACT	DESCRIPTION
EIAR Vol. 3, Chapter 14: Commercial Fisheries	Impacts on economically important local industries.	Impacts of the Project on commercial fisheries receptors could affect onshore business activity relevant to the commercial fishing industry, such as fish processing companies.
EIAR Vol. 3, Chapter 15: Shipping and Navigation	Impacts on recreational activities.	Displacement and other effects on recreational vessels could impact recreational activities.
EIAR Vol. 3, Chapter 17: Infrastructure and Other Users	Impacts on recreational activities.	Displacement and other effects on recreational vessels could impact recreational activities.

19.9 Whole Project assessment

Please refer to EIAR Vol. 2, Chapter 7: EIA methodology for the full description of the whole Project assessment. onshore project activity impacts that relate to this Socio-economics, Tourism and Recreation assessment are considered in the already consented NorthConnect (2018) EIAR as part of Chapter 21: Local Community and Economy. The receptors assessed were:

- Direct employment;
- Indirect employment;
- Local residents;
- Navigation and shipping and commercial fisheries;
- Recreation – impacts on coastal paths and climbers;
- Recreation – impacts on core paths;
- Recreation – impacts on recreational sailors; and
- Energy market.

Throughout this chapter, the onshore and offshore effects on Socio-economics, Tourism and Recreation receptors from the Project have been assessed. This is due to both offshore and onshore project expenditure and other offshore activities, including those that affect onshore receptors, being within the scope of this assessment. Given this, there is potential that the receptors and effects assessed in Chapter 21 of the NorthConnect (2018) EIAR may have a shared impact pathway and overlap with our assessment. There is also potential for a different impact pathway to the effects on the receptors considered in this assessment and the NorthConnect (2018) EIAR, resulting potentially in a greater effect when considering the Project as a whole. An analysis of Chapter 21 of the NorthConnect (2018) EIAR was conducted and has detailed where these assessments receptors have: (1) a shared pathway; (2) an overlap; and (3) an effect on the whole Project assessment. The methodology for how this was determined is as follows:

Table 19-86 Whole Project assessment methodology

RECEPTOR	SHARED PATHWAY	OVERLAP	WHOLE PROJECT ASSESSMENT
Individual receptors assessed in this chapter	• Yes, when common areas are explored. • No, when common areas are not explored.	• Yes, when same assessment of spatial area and activity. • No, when different assessment of spatial area and activity.	• No shared pathway and no overlap = greater effect (combination of the outcomes detailed in this assessment and Chapter 21 of NorthConnect (2018) EIAR). • Shared pathway and no overlap = no greater effect (the outcomes detailed in this assessment). • Shared pathway and overlap = no greater effect (the outcomes detailed in this assessment). • Not reported in Chapter 21 of NorthConnect (2018) EIAR = no greater effect (the outcomes detailed in this assessment).

Using this methodology, Table 19-87 Whole project assessment presents a whole Project assessment.

Table 19-87 Whole project assessment

RECEPTOR	SHARED PATHWAY	OVERLAP	WHOLE PROJECT ASSESSMENT
Employment	Yes	Overlap	No greater effect
GVA	No: Not reported in Chapter 21 of NorthConnect (2018) EIAR	No: Not reported	No greater effect
Demand for housing	No: Not reported in Chapter 21 of NorthConnect (2018) EIAR	No: Not reported	No greater effect
Other services	No: Not reported in Chapter 21 of NorthConnect (2018) EIAR	No: Not reported	No greater effect
Tourism and recreation	No	No	Greater effect
Marine commercial activities	Yes	Overlap	No greater effect
Socio-cultural	No	No	Greater effect
Distributional effects	No: Not reported in Chapter 21 of NorthConnect (2018) EIAR	No: Not reported	No greater effect

This whole Project assessment concludes that the tourism and recreation and socio-cultural receptors will have a greater effect when combined with the NorthConnect (2018) EIAR. However, analysis of the impacts of both assessments concludes that this will not affect the overall significance of effect that is reported within this assessment.

19.10 Transboundary effects

Transboundary effects arise when impacts from a development within one European Economic Area (EEA) state's territory affects the environment of another EEA state(s).

There is the potential for transboundary effects upon Socio-economics, Tourism and Recreation receptors during construction, operation and maintenance, and decommissioning of the Project. The potential transboundary effects for Socio-economics, Tourism and Recreation receptors include:

- Employment;
- GVA;
- Demand for housing; and
- Other local services.

The following impacts have no potential for transboundary effects on Socio-economics, Tourism and Recreation receptors:

- Tourism and recreation;
- Marine commercial activities (following the assessment in EIAR Vol. 3, Chapter 14: Commercial Fisheries);
- Socio-cultural; and
- Distributional effects.

Given that a significant proportion of Project expenditure (particularly during the construction phase) is expected to occur outside of the UK, it is expected that there will be beneficial transboundary effects on the employment and GVA receptors. However, this is highly unlikely to be significant given the scale of international markets.

There is the potential for transboundary effects on housing demand and other local services. This cannot be quantified but are highly unlikely to be significant.

Based on the findings above and the Scoping Report (which identifies that no effects on socio-economic receptors are likely to be transboundary and can be scoped out of the assessment), the implications of Transboundary effects are not considered further.

19.11 Summary of mitigation and monitoring

Embedded mitigation relevant to the Socio-economics, Tourism and Recreation assessment is summarised in Table 19-88. Secondary mitigation has been identified to reduce potentially significant impacts on socio-cultural receptors to acceptable levels. It has also been identified for demand for housing receptors at the Scotland level to ensure that it remains at an acceptable level. This mitigation has been identified in Section 19.6 and Section 19.7.

Table 19-88 Secondary mitigation requirements

CODE	SECONDARY MITIGATION MEASURE	TYPE	DESCRIPTION	SECURED BY
MM-057	Conduct comprehensive community consultation and engagement	Secondary	Once further engineering and supply chain analysis has been conducted, comprehensive community consultation and engagement will be undertaken to ensure that the work of the CLO and the community benefit fund is focused on areas with the greatest need. Specific attention should be given to areas with the most deprived data zones. This additional analysis will be documented within the SCDS.	Secured via the SCDS.

No monitoring is currently proposed for Socio-economics, Tourism and Recreation.

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