

# BERWICK BANK WIND FARM ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Volume 2, Chapter 18: Socio-economics and  
Tourism

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## 18. SOCIO-ECONOMICS AND TOURISM

### 18.1. INTRODUCTION

1. This chapter of the Offshore Environmental Impact Assessment (EIA) Report presents the assessment of the likely significant effects (as per the “EIA Regulations”) on the environment of the Berwick Bank Wind Farm offshore infrastructure which is the subject of this application (hereafter referred to as “the Proposed Development”) on socio-economics and tourism receptors. Specifically, this chapter considers the potential impacts of the Proposed Development seaward of Mean High Water Springs (MHWS) during the construction, operation and maintenance, and decommissioning phases.
2. Likely significant effect is a term used in both the “EIA Regulations” and the Habitat Regulations. Reference to likely significant effect in this Offshore EIA Report refers to “likely significant effect” as used by the “EIA Regulations”. This Offshore EIA Report is accompanied by a Report to Inform Appropriate Assessment (RIAA) (SSER, 2022c) which uses the term as defined by the Habitats Regulations Appraisal (HRA) Regulations.
3. This chapter also assesses the likely significant effects of the Proposed Development on onshore receptors (landward of Mean Low Water Springs (MLWS)) during the construction, operation and maintenance, and decommissioning phases.
4. In the case of socio-economics assessment of effects, there is a complexity with the impacts associated with offshore and intertidal activities primarily manifesting onshore. This chapter’s approach is focused on the ‘source’ of the impact, rather than the ultimate location of the physical infrastructure. This is consistent with the broader approach to separating onshore and offshore effects:
  - **Offshore:** if physical infrastructure and civil works are located offshore, any resulting impacts are categorised as offshore.
  - **Onshore:** if physical infrastructure and civil works are located onshore, any resulting impacts are categorised as onshore.
5. The potential impacts from the construction, operation and maintenance, and decommissioning of the onshore components (namely the onshore substation and associated infrastructure) of the Project on socio-economics and tourism receptors are considered as part of the of the Berwick Bank Wind Farm Onshore EIA Report (SSER, 2022a).
6. The assessment presented is informed by the following EIA Report Chapters:
  - volume 2, chapter 12: Commercial Fisheries;
  - volume 2, chapter 13: Shipping and Navigation;
  - volume 2, chapter 15 Seascape and Visual Resources; and
  - volume 2, chapter 17: Infrastructure and Other Users.
7. This chapter draws significantly on the Technical Impact Report contained within volume 3, appendix 18.1 (Berwick Bank Wind Farm: Socioeconomic Technical Report, BVG Associates).
8. Volume 3, appendix 18.1 sets out an economic analysis of the Proposed Development, and has been prepared to inform the socio-economics and tourism assessment of effects.
9. Volume 3, appendix 18.1 also considers direct, indirect and induced employment and Gross Value Added (GVA) effects at local, Scotland and United Kingdom (UK) level across a detailed breakdown of phases and supply chain categories. The Technical Impact Report considers effects of offshore and onshore activity, and presents total effects based on an aggregation of both.

### 18.2. PURPOSE OF THIS CHAPTER

10. The primary purpose of the Offshore EIA Report is outlined in volume 1, chapter 1. It is intended that the Offshore EIA Report will provide the Scottish Ministers, statutory and non-statutory stakeholders with sufficient information to determine the likely significant effects of the Proposed Development on the receiving environment.
11. In particular, this Socio-economics and Tourism EIA Report chapter:
  - presents the existing environmental baseline established from desk studies and consultation with stakeholders;
  - identifies any assumptions and limitations encountered in compiling the socio-economics and tourism information;
  - presents the likely significant environmental impacts on socio-economics and tourism receptors arising from the Proposed Development and reaches a conclusion on the likely significant effects on socio-economics and tourism based on the information gathered and the analysis and assessments undertaken; and
  - highlights any necessary monitoring and/or mitigation measures recommended to prevent, minimise, reduce or offset likely significant adverse environmental effects of the Proposed Development on socio-economics and tourism receptors.

### 18.3. SOCIO-ECONOMICS AND TOURISM STUDY AREAS

12. The identification of the study areas for the socio-economics and tourism impact analysis has taken account of the spatial scale at which impacts upon different receptors are likely to materialise. This is likely to vary across receptors and will therefore require a localised study area and a larger regional/national study area, separated between socio-economic and tourism receptors. The level at which impacts upon different receptors are likely to materialise is as follows:
  - socio-economics receptors: local and national; and
  - tourism: local.

#### 18.3.1. SOCIO-ECONOMICS LOCAL STUDY AREA(S)

13. It is necessary that the socio-economics local study area is linked to the selection of construction (and decommissioning), and operation and maintenance ports that will support the associated supply of a range of inputs and services for the Proposed Development. These ports, and their socio-economic catchment areas are anticipated to form epicentres of impact on socio-economic receptors. The selection process associated with the identification of ports, inputs and services will not conclude until much later in the development of the Project, which is typical for offshore wind farms.
14. The following approach has been followed to define socio-economics local study area(s):
  - **Step 1:** identify port and harbour facilities that are viable options for construction and/or operation and maintenance bases.
  - **Step 2:** assess socio-economics local study area(s) associated with each port and harbour facility.

Step 1 – Identify port and harbour facilities that are viable options for construction and/or operation and maintenance bases

15. The Applicant, having conducted an exploratory facilities assessment, identified a shortlist of ports and harbours as potential locations for each phase of the Proposed Development. Potential facilities are listed in Table 18.1.

16. Identified port and harbour facilities deemed to be suitable bases for the construction phase are also assumed to be suitable for the decommissioning phase.

**Table 18.1: List of Potential Construction, Operation and Maintenance, and Decommissioning Port and Harbour Facilities**

Construction/Decommissioning Phases	Operation and Maintenance Phase	Operation and Maintenance Support Harbours
Port of Nigg	Aberdeen Harbour	Cockenzie Harbour
Aberdeen Harbour (including Aberdeen South Harbour)	Montrose Port	Dunbar Harbour
Port of Dundee	Port of Dundee	Eyemouth Harbour
Port of Leith	Methil	
	Burntisland	
	Port of Rosyth	
	Port of Leith	

Note: henceforth each facility will be referred to by its location only to aid readability (e.g. Aberdeen Harbour will be referred to as Aberdeen).

17. Three support harbours – Cockenzie, Dunbar and Eyemouth – have been identified as unsuitable as the primary operation and maintenance phase base facility but could provide additional capacity to support the primary base facility.
18. The Port of Nigg (hereon referred to as Invergordon) has not been included in the list of potential operation and maintenance ports mainly due to distance from the site being too far for usual operational activities to occur. Also, Invergordon's layout includes large construction compounds and a deep draft which make it a more suitable facility for use during the construction/decommissioning phases.
19. The final selection of port and harbour facilities required for the Proposed Development has not yet been determined. The Applicant is exploring Scottish ports and harbours and supporting infrastructure and labour markets to understand the potential capabilities, capacities and availability of each. Subject to these findings, the most likely scenario is that either a single port or multiple ports along the east coast of Scotland will be used to support primary elements of the construction, operation and maintenance, and decommissioning phases of the Proposed Development as part of a wider supply chain (with Cockenzie, Dunbar and Eyemouth harbours potentially providing additional support capacity). Final selection of port and harbour facilities will be subject to ongoing engineering and procurement considerations, and the use of potential facilities for the purposes of this assessment does not indicate any preference or imply any decision. Potential manufacturing and fabrication suppliers have not yet been identified – this process will be subject to further procurement decisions post-consent. Therefore, facilities relating to this aspect of the

construction process cannot be considered as part of the approach to defining socio-economics local study areas.

Step 2 – Assess socio-economics local study area(s) associated with each facility

20. On the basis of the port and harbour facilities listed, the socio-economics local study area associated with each facility has been derived from labour catchments<sup>1</sup> by using a 60 minute drive time catchment as a proxy<sup>2</sup>.
21. Adopting a methodology which defines the socio-economics local study area(s) on the basis of local authority areas is necessary given that government data sources are structured to reflect conditions at local authority level. Below this level of governance, data becomes increasingly scarce and can be less reliable when dealing with survey based data, for example.
22. Therefore, 60 minute drive time catchments for each facility have been converted to best fit local authority areas. Inclusion of local authority areas in a given socio-economics local study area is based on an analysis of the share of the local authority area population within the bounds of a given 60 minute drive time catchment. Local authorities with more than 50% of their population falling within a 60 minute drive time catchment of a facility have been included in the socio-economics local study area for that given facility. The results of this analysis are shown in volume 3, appendix 18.3.
23. Each port and harbour facility's socio-economics local study area is shown in Figure 18.1 to Figure 18.9.
24. There are differences in transport infrastructure which effects drive-time catchments – this is particularly the case when comparing locations with predominantly rural surrounds versus those with predominantly urban surrounds (especially locations in or near the Central Belt). Professional judgement has been used to qualify each facility's socio-economics local study area. Results have also been corroborated through comparison with 2011 Travel to Work Areas (TTWA).
25. A summary of socio-economics local study areas based on the above approach is set out in Table 18.2.
26. Socio-economics local study areas are not mutually exclusive, with a number of local authority areas of commonality.

<sup>1</sup> Labour catchment areas are commonly defined based on the locations from which people are typically drawn to an employment location such as a business, an employment centre (such as a port), or an entire town or city.

<sup>2</sup> As per non-binding guidance in Glasson, J. *et al.* (2020)

**Table 18.2: Socio-Economics Local Study Area(s) Definitions**

Facility	Phase <sup>3</sup>			Socio-Economics Local Study Area – Local Authority-based Definition	Comments
	C	O	D		
Invergordon	✓		✓	<ul style="list-style-type: none"> <li>Highland.</li> </ul>	<b>Highland</b> <ul style="list-style-type: none"> <li>Invergordon's 60 minute drive time catchment does not meet the 50% threshold of any local authority. However, it is fully within the Highland local authority area. 2011 TTWAs do not provide a suitable local authority-based match. Therefore, Highland local authority area is the only available option as the Socio-economics local study area for Invergordon.</li> </ul>
Aberdeen	✓	✓	✓	<ul style="list-style-type: none"> <li>Aberdeen; and</li> <li>Aberdeenshire.</li> </ul>	<b>Aberdeen</b> <ul style="list-style-type: none"> <li>facility (Aberdeen) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>part of Aberdeen 2011 TTWA, indicating functional economic linkages.</li> </ul> <b>Aberdeenshire</b> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>part of Aberdeen 2011 TTWA, indicating functional economic linkages.</li> </ul>
Montrose		✓		<ul style="list-style-type: none"> <li>Aberdeen;</li> <li>Aberdeenshire;</li> <li>Angus; and</li> <li>Dundee City.</li> </ul>	<b>Aberdeen</b> <ul style="list-style-type: none"> <li>does not meet the 50% population threshold; and</li> <li>Aberdeen is the focal point of the Aberdeen 2011 TTWA area. It is a sprawling TTWA area, therefore inclusion of Aberdeen local authority is deemed appropriate based on the facility's (Montrose) proximity to the southern tip of the Aberdeen 2011 TTWA boundary.</li> </ul> <b>Aberdeenshire</b> <ul style="list-style-type: none"> <li>does not meet the 50% population threshold; and</li> <li>large parts of Aberdeenshire form the rump of the Aberdeen 2011 TTWA. It is a sprawling TTWA area, therefore inclusion of Aberdeenshire local authority is deemed appropriate based on the facility's (Montrose) proximity to the southern tip of the Aberdeen 2011 TTWA boundary.</li> </ul> <b>Angus</b> <ul style="list-style-type: none"> <li>facility (Montrose) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>60 minute drive time labour catchment analysis extends far beyond boundary of Arbroath and Montrose 2011 TTWA, indicating consideration of functional economic linkages should be broadened.</li> </ul>

Facility	Phase <sup>3</sup>			Socio-Economics Local Study Area – Local Authority-based Definition	Comments
	C	O	D		
					<b>Dundee City</b> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>Dundee is the focal point of Dundee 2011 TTWA, which covers much of the Angus local authority area. This indicates functional economic linkages with areas surrounding the facility (Montrose).</li> </ul>
Dundee	✓	✓	✓	<ul style="list-style-type: none"> <li>Angus;</li> <li>Dundee City;</li> <li>Fife; and</li> <li>Perth and Kinross.</li> </ul>	<b>Angus</b> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>Dundee City is the focal point of Dundee 2011 TTWA, which covers much of the Angus local authority area. This indicates functional economic linkages.</li> </ul> <b>Dundee City</b> <ul style="list-style-type: none"> <li>facility (Dundee) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>part of Dundee 2011 TTWA, indicating functional economic linkages.</li> </ul> <b>Fife</b> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>2011 TTWAs that cover Fife local authority area (St Andrews and Cupar, Dunfermline and Kirkcaldy) are largely covered by the 60 minute drive-time catchment for the facility (Dundee).</li> </ul> <b>Perth and Kinross</b> <ul style="list-style-type: none"> <li>meets the 50% population threshold;</li> <li>60 minute drive time catchment for the facility (Dundee) encroaches significantly on Perth 2011 TTWA, indicating functional economic linkages; and</li> <li>inclusion is deemed appropriate based on the facility's (Dundee) proximity to the eastern boundary of the Perth 2011 TTWA.</li> </ul>
Methil		✓		<ul style="list-style-type: none"> <li>Clackmannanshire;</li> <li>Dundee City;</li> <li>Falkirk;</li> <li>Fife;</li> <li>Perth and Kinross;</li> <li>Stirling; and</li> <li>West Lothian.</li> </ul>	Sprawling nature of 60 minute drive time catchment across multiple local authority and 2011 TTWA boundaries, particularly in the Central Belt, means that 50% population threshold forms the basis for local authority inclusion here. All local authority areas meet the 50% population threshold.

<sup>3</sup> C = Construction, O = Operation and maintenance, D = Decommissioning

Facility	Phase <sup>3</sup>			Socio-Economics Local Study Area – Local Authority-based Definition	Comments
	C	O	D		
Burntisland		✓		<ul style="list-style-type: none"> <li>City of Edinburgh;</li> <li>Clackmannanshire;</li> <li>East Dunbartonshire;</li> <li>Falkirk;</li> <li>Fife;</li> <li>Midlothian;</li> <li>North Lanarkshire;</li> <li>Perth and Kinross;</li> <li>Stirling; and</li> <li>West Lothian.</li> </ul>	Sprawling nature of 60 minute drive time catchment across multiple local authority and 2011 TTWA boundaries, particularly in the Central Belt, means that 50% population threshold forms the basis for local authority inclusion here. All local authority areas meet the 50% population threshold.
Rosyth		✓		<ul style="list-style-type: none"> <li>City of Edinburgh;</li> <li>Clackmannanshire;</li> <li>East Dunbartonshire;</li> <li>East Lothian;</li> <li>East Renfrewshire;</li> <li>Falkirk;</li> <li>Fife;</li> <li>Glasgow City;</li> <li>Midlothian;</li> <li>North Lanarkshire;</li> <li>Perth and Kinross;</li> <li>Renfrewshire;</li> <li>South Lanarkshire;</li> <li>Stirling;</li> <li>West Dunbartonshire; and</li> <li>West Lothian.</li> </ul>	Sprawling nature of 60 minute drive time catchment across multiple local authority and 2011 TTWA boundaries, particularly in the Central Belt, means that 50% population threshold forms the basis for local authority inclusion here. All local authority areas meet the 50% population threshold.
Leith	✓	✓	✓	<ul style="list-style-type: none"> <li>City of Edinburgh;</li> <li>East Lothian;</li> <li>Midlothian; and</li> <li>West Lothian.</li> </ul>	<p><b>City of Edinburgh</b></p> <ul style="list-style-type: none"> <li>facility (Leith) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>East Lothian</b></p> <ul style="list-style-type: none"> <li>meets the 50% population threshold;</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>Midlothian</b></p> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>West Lothian</b></p> <ul style="list-style-type: none"> <li>does not meet the 50% population threshold; and</li> <li>Livingston 2011 TTWA is relatively self-contained. However, inclusion is deemed appropriate based on the facility's (Leith) proximity to the eastern boundary of the Livingston 2011 TTWA.</li> </ul>

Facility	Phase <sup>3</sup>			Socio-Economics Local Study Area – Local Authority-based Definition	Comments
	C	O	D		
Support harbours (Cockenzie, Dunbar, and Eyemouth)		✓		<ul style="list-style-type: none"> <li>East Lothian;</li> <li>Scottish Borders;</li> <li>City of Edinburgh;</li> <li>Midlothian; and</li> <li>West Lothian.</li> </ul>	<p><b>East Lothian</b></p> <ul style="list-style-type: none"> <li>two support harbours (Cockenzie, Dunbar) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>Scottish Borders</b></p> <ul style="list-style-type: none"> <li>one support harbour (Eyemouth) located within local authority boundary;</li> <li>meets the 50% population threshold; and</li> <li>split across multiple 2011 TTWAs making comparison problematic.</li> </ul> <p><b>City of Edinburgh</b></p> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>Midlothian</b></p> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>part of Edinburgh 2011 TTWA, indicating functional economic linkages.</li> </ul> <p><b>West Lothian</b></p> <ul style="list-style-type: none"> <li>meets the 50% population threshold; and</li> <li>Livingston 2011 TTWA is relatively self-contained. However, 60 minute drive time labour catchment analysis suggests potential for linkages to exist, therefore inclusion is deemed appropriate.</li> </ul>



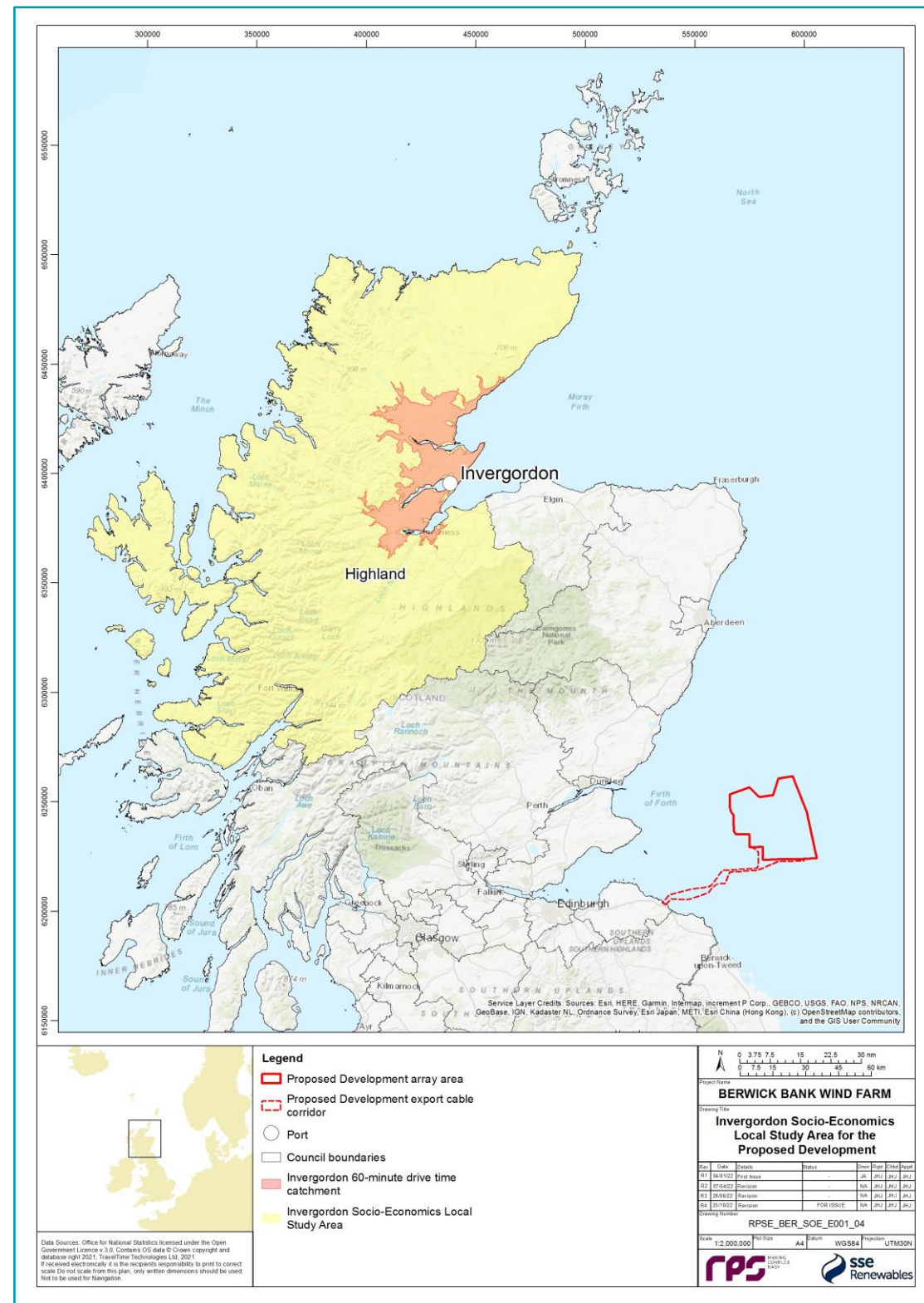


Figure 18.1: Invergordon Socio-Economics Local Study Area for the Proposed Development

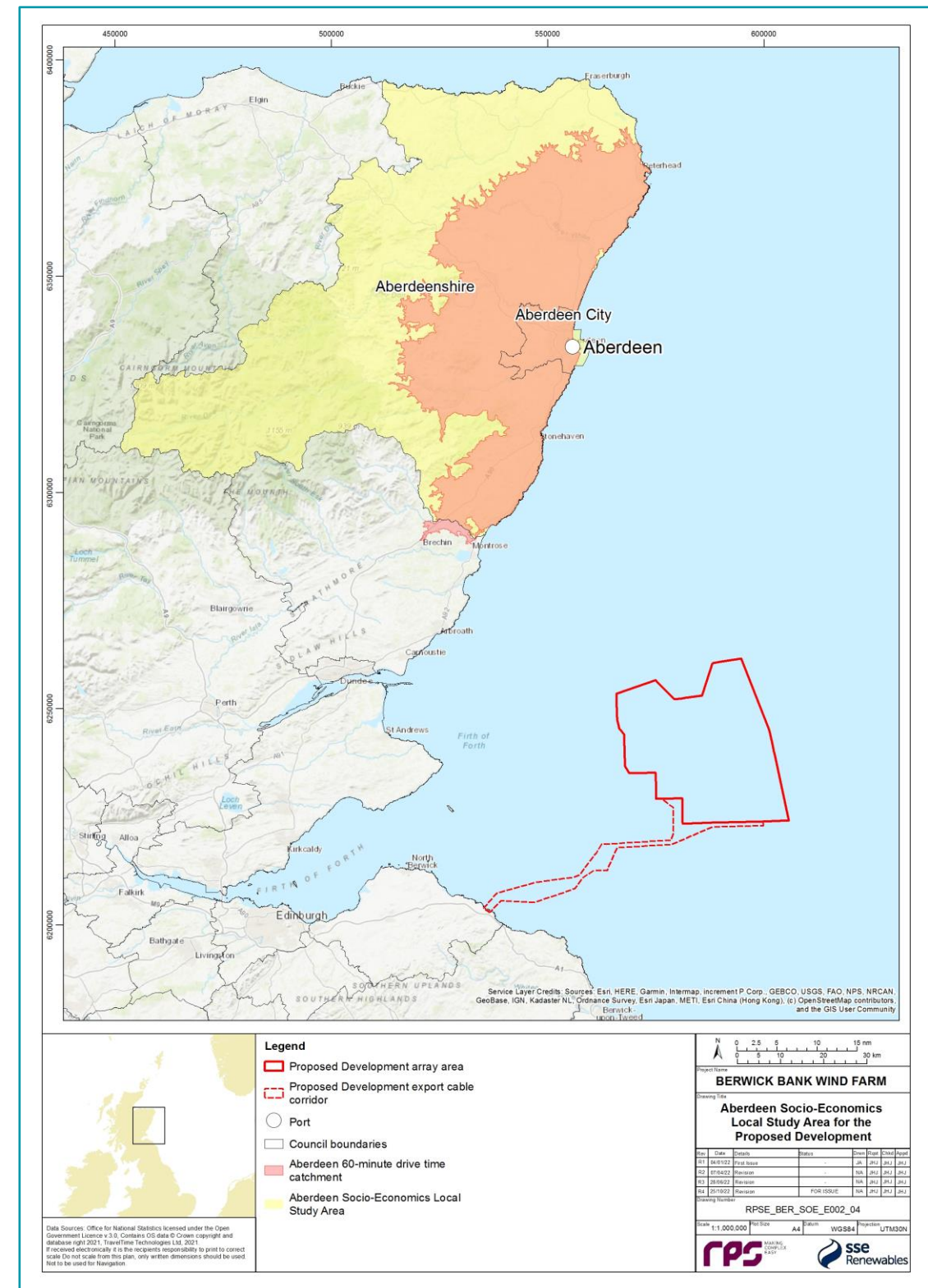


Figure 18.2: Aberdeen Socio-Economics Local Study Area for the Proposed Development



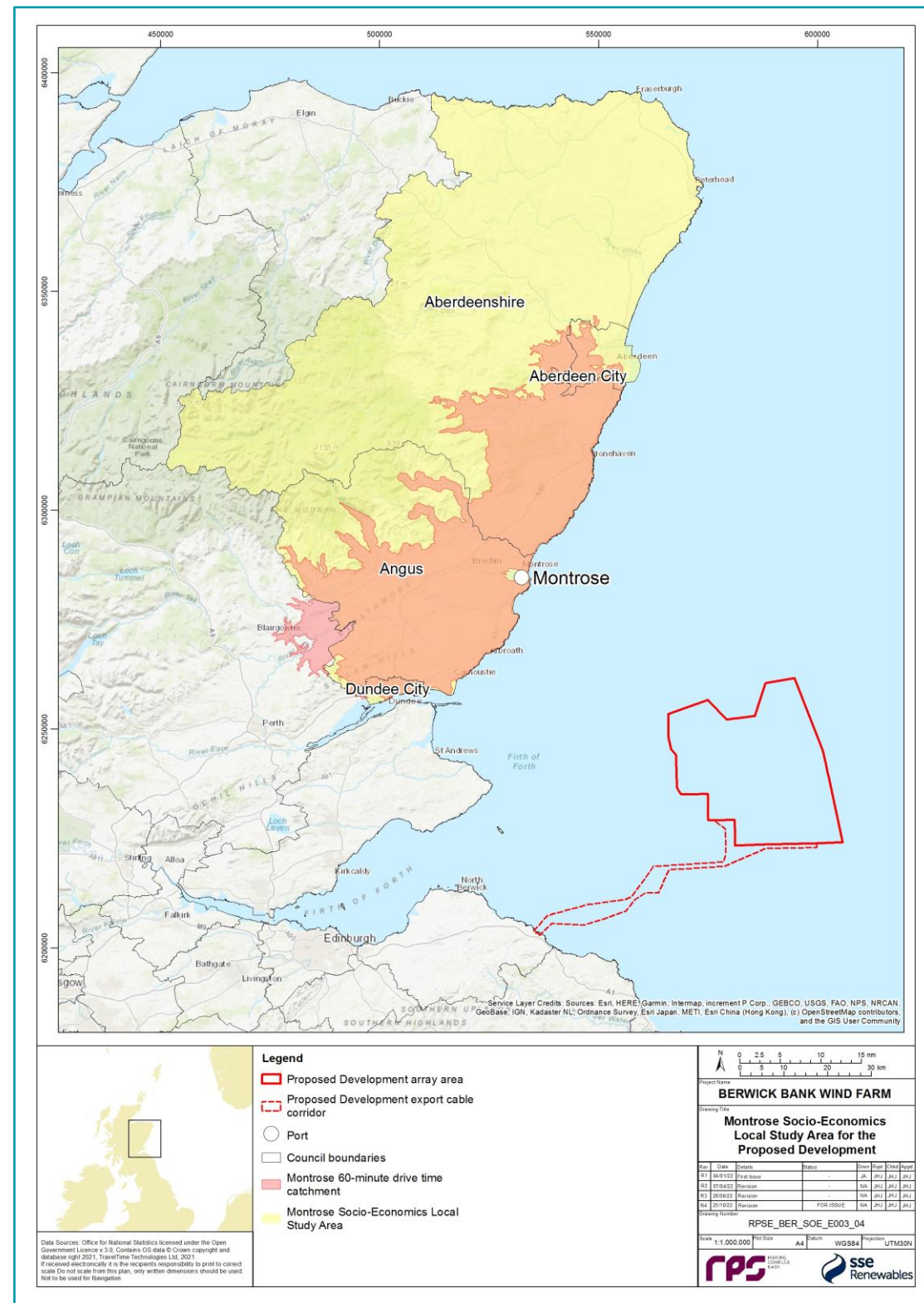


Figure 18.3: Montrose Socio-Economics Local Study Area for the Proposed Development

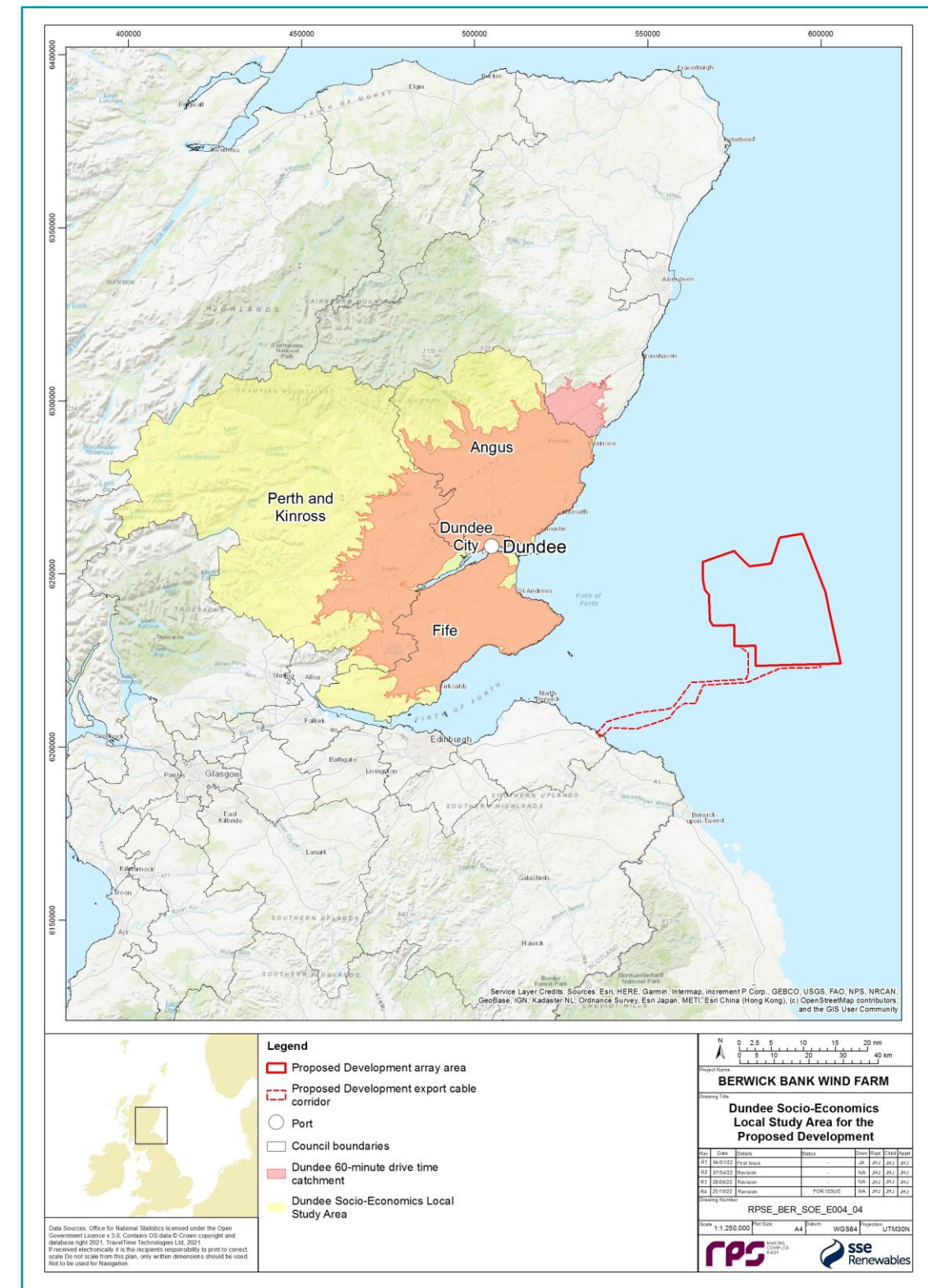


Figure 18.4: Dundee Socio-Economics Local Study Area for the Proposed Development



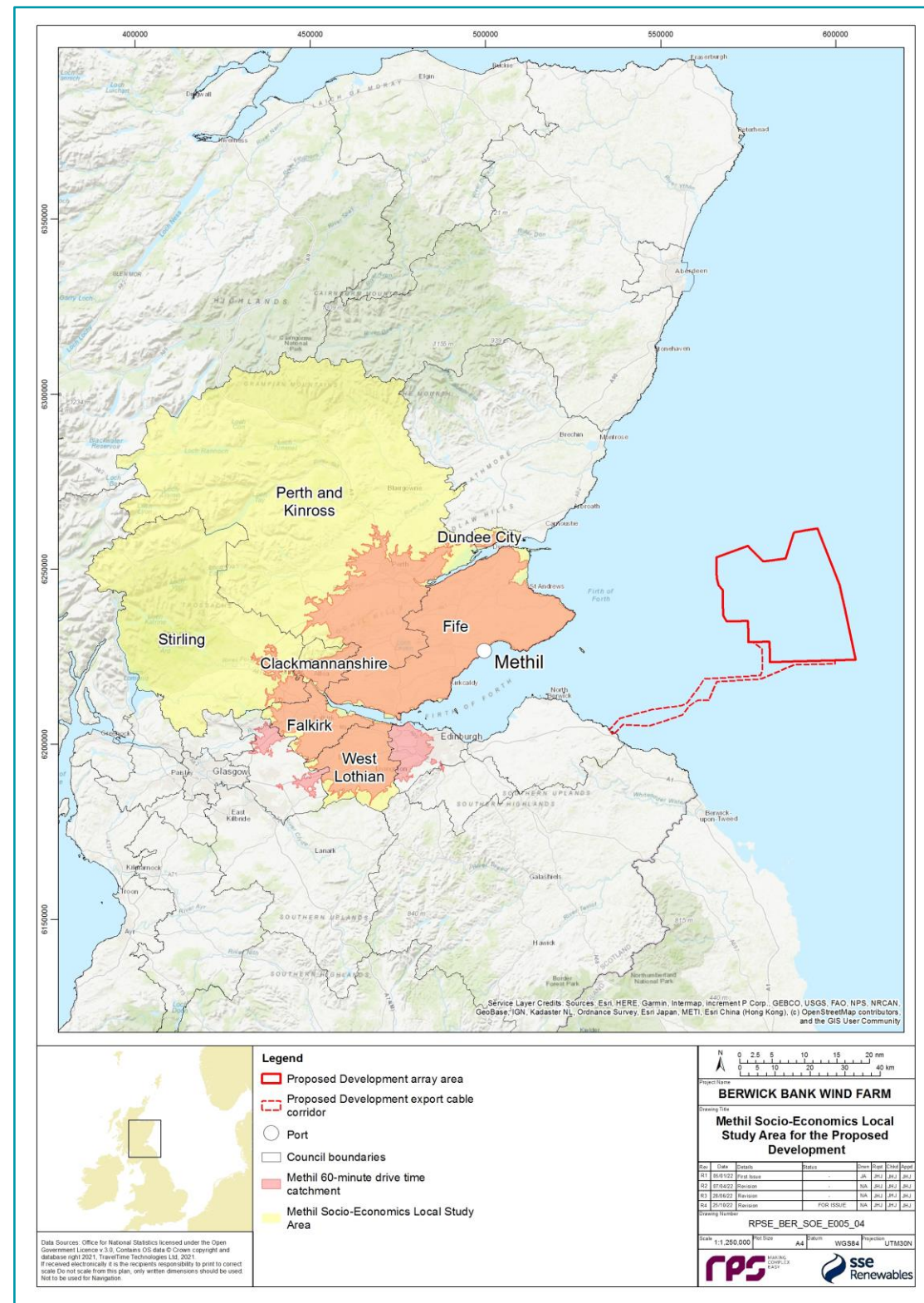


Figure 18.5: Methil Socio-Economics Local Study Area for the Proposed Development

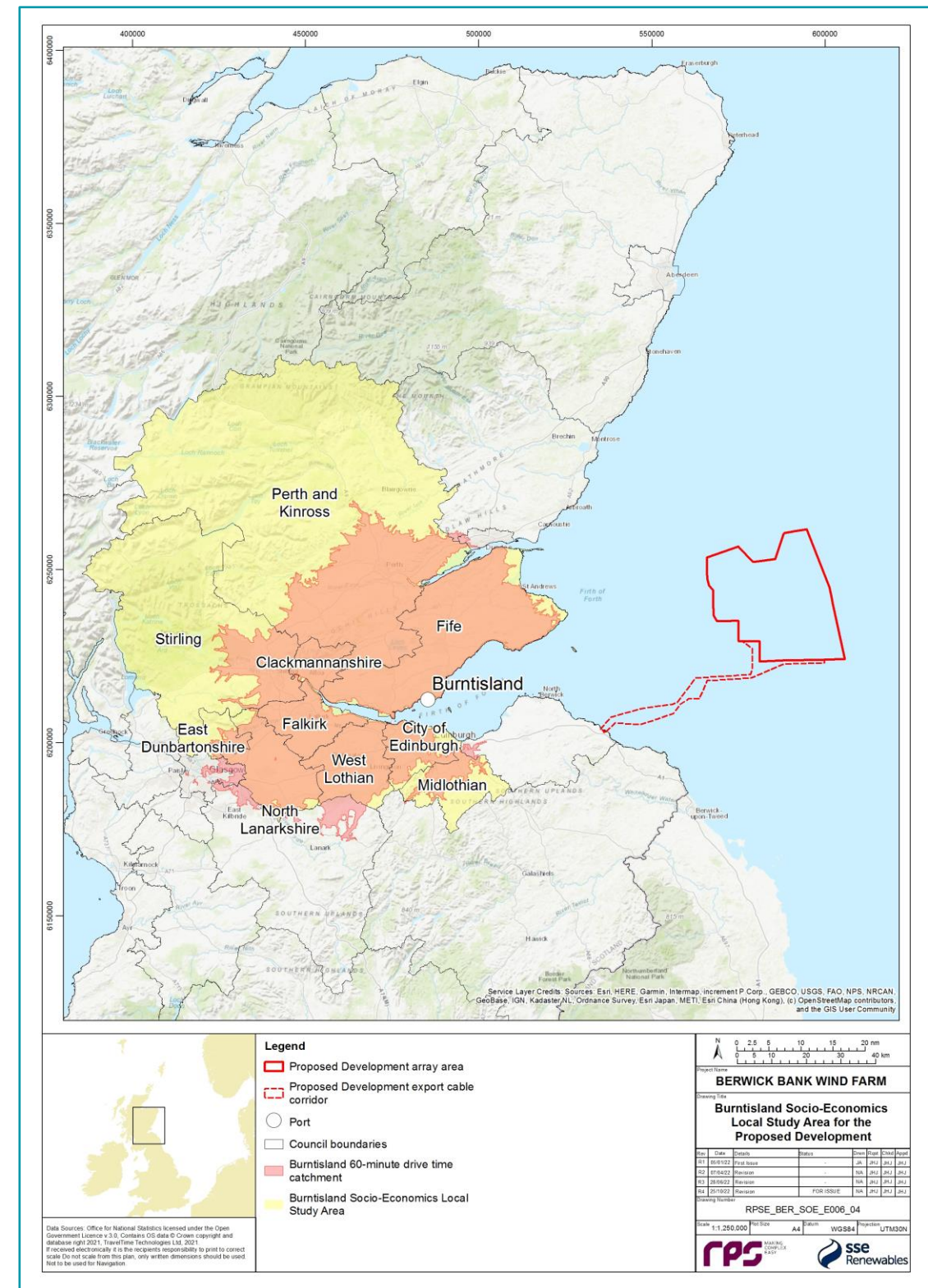
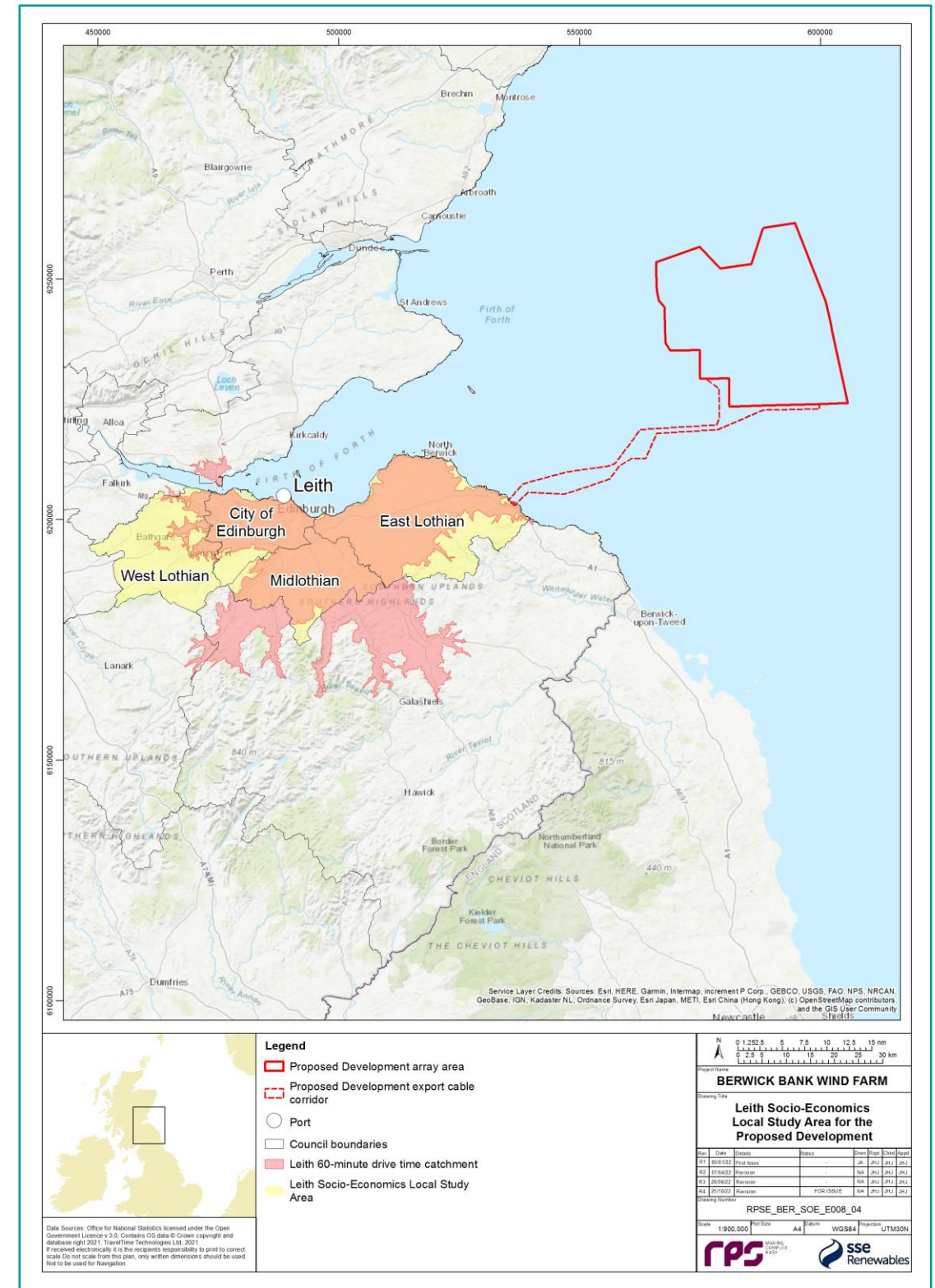


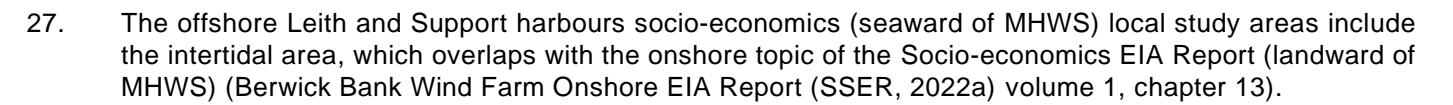
Figure 18.6: Burntisland Socio-Economics Local Study Area for the Proposed Development





**Figure 18.8: Leith Socio-Economics Local Study Area for the Proposed Development**





28. A larger national socio-economics impact area is defined to reflect the wider reach of GVA and employment impacts that may materialise through the supply chain and demand for labour across Scotland.

- wind turbine manufacturing and supply – blades, nacelle, hub, tower;
- balance of plant manufacturing and supply – foundations, inter-array cables, Offshore Substation Platforms (OSPs)/Offshore converter station platforms, offshore export cables; and
- construction and installation of wind turbine and balance of plant – wind turbine, foundation, inter-array cable, and other installation.

- wind turbine, balance of plant, and transmission maintenance and servicing.
- vessel and crew activity:
- Service Operation Vessels (SOV); and
- guard vessels.

32. The socio-economics national study area is defined as Scotland.

33. The offshore socio-economics (seaward of MHWS) national study area includes the intertidal area. This intertidal area overlaps with the onshore topics of the socio-economics EIA Report (landward of MHWS) (Berwick Bank Wind Farm Onshore EIA Report (SSER, 2022a): volume 1, chapter 13).

34. Potential impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development on tourism and recreation are indirect in nature. It is necessary to derive an assessment of significance of effects on tourism and recreation from the findings elsewhere in the Offshore EIA Report, namely:

- **Accommodation, housing and local services:** the effect of the construction (installation), operation and maintenance, and decommissioning of the Proposed Development on the availability of overnight accommodation has the potential to impact the tourism sector and its capacity to accommodate visitors. Therefore, the assessment of significance of effects on housing, accommodation, and local services considered in volume 2, chapter 18 will inform a related assessment of significance of effects on tourism and recreation.
- **Seascape, landscape and visual impact:** the potential visual impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development will be one of the most important

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- considerations when assessing significance of effects on tourism and recreation. As such, the findings set out in volume 2, chapter 15 will inform a related assessment of significance on tourism and recreation.
- Infrastructure and other users:** the construction, operation and maintenance, and decommissioning of offshore infrastructure has the potential to impact other water users. Therefore, the findings set out in volume 2, chapter 17 will inform a related assessment of significance on tourism and recreation.
  - Shipping and navigation:** the construction, operation and maintenance, and decommissioning of the Proposed Development has the potential to impact on recreational boating activities. Therefore, the findings set out in volume 2, chapter 13 will inform a related assessment of significance on tourism and recreation.
35. Given the multiple disciplines that will feed into the assessment of significance of effects on tourism and recreation, it is important to define a tourism local study area that will ensure the potential impacts most likely to effect tourism and recreation are given due consideration. As such – and in cross-reference to assessments set out in relevant topic chapters – the rationale for tourism local study area selection is set out in Table 18.3.

**Table 18.3: Consideration of Potential Significant Environmental and Cumulative Effects Across Disciplines Impacting Tourism and Recreation**

Relevant Topic	Potential Significant Environmental Effects in EIA Terms	Potential Significant Cumulative Effects in EIA Terms	Consideration as Part of Tourism Local Study Area
Socio-economics and tourism – impact on accommodation, housing and local services (volume 2, chapter 18)	None	None	Low priority
Seascape, landscape and visual impact (volume 2, chapter 15)	Some	Some	High priority
Infrastructure and other users (volume 2, chapter 17)	None	None	Low priority
Shipping and navigation (volume 2, chapter 13)	None	None	Low priority

36. Therefore, the SLVIA topic chapter (volume 2, chapter 15) will be the primary driver of the tourism local study area definition. Consideration of the location of viewpoints, visual receptors, major settlements, and recreation routes subject to potential impacts will be of central importance in defining an appropriate tourism local study area.
37. On this basis, Figure 18.10 sets out the tourism local study area.

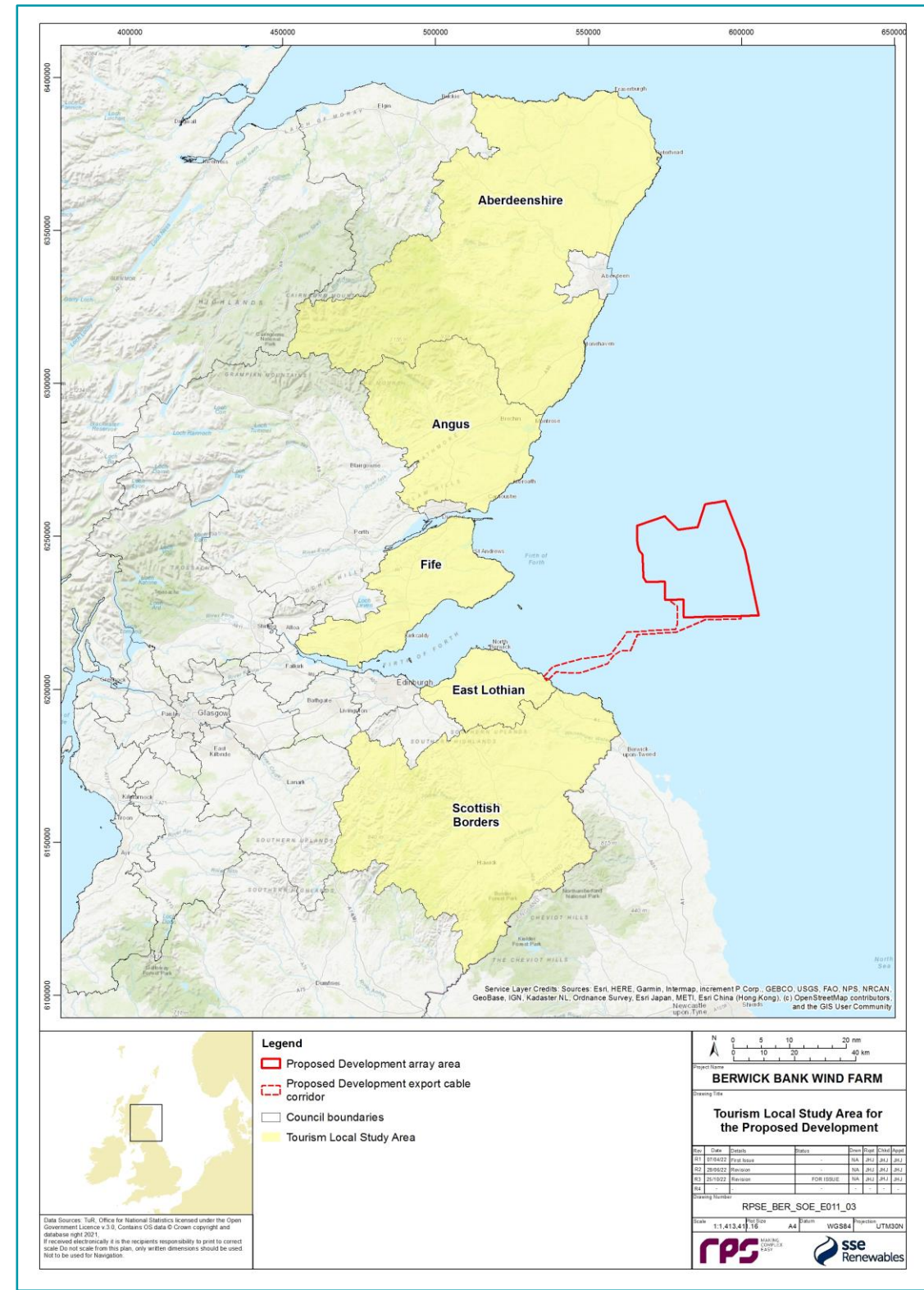


Figure 18.10: Tourism Local Study Area for the Proposed Development

38. The offshore tourism (seaward of MHWS) local study area includes the intertidal area. This intertidal area overlaps with the onshore topic of land use, tourism and recreation EIA chapter (Berwick Bank Wind Farm Onshore EIA Report (SSER, 2022a); volume 1, chapter 14).

## 18.4. POLICY AND LEGISLATIVE CONTEXT

39. Policy and legislation on renewable energy infrastructure is presented in volume 1, chapter 2 of the Offshore EIA Report. There is no legislation specifically in relation to the socio-economics and tourism assessment. Policy specifically in relation to socio-economics and tourism is contained in a number of strategic planning contexts. A summary of the relevant policy provisions is set out in Table 18.4.
40. All the policy and legislation provided in Table 18.4 is also relevant to the intertidal area.

**Table 18.4: Summary of Policy Provisions Relevant to Socio-Economics and Tourism**

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
<b>National</b>		
Scotland 2045: Our Fourth National Planning Framework (NPF) (draft) (Scottish Government, 2021b)	The NPF4 outlines the transition to net zero for each region in Scotland. In northern Scotland, 'Opportunity Cromarty Firth' and other projects, facilities and infrastructure will help ports such as Nigg to adapt to the transition from fossil fuels through oil and gas decommissioning to renewable energy, expanding local supply chains and providing employment and income for local businesses. North-east Scotland, including Aberdeen, sees offshore wind at the heart of the area's future economy. A £62 million Energy Transition Fund will support the creation of new jobs in this industry, targeting retraining and developing skills. In central Scotland, including Edinburgh, ports such as Leith will play a central role in expanding the offshore wind energy sector. NPF4 aims to promote 'productive places' that will "attract new investment, build business confidence, stimulate entrepreneurship and facilitate future ways of working – improving economic, social, and environmental wellbeing." The strategy is to build a wellbeing economy that benefits everyone, and every location, in Scotland. The transformations needed to tackle the climate and nature crises, together with the impact of the pandemic, means that green investment is a key priority for the coming years. The Framework intends to facilitate future business and employment that benefits communities and improves places and encourage development that supports the prosperity of key sectors, builds community wealth and creates fair work and good green jobs where they are most needed. Scottish Government wants to support the delivery of high quality, sustainable homes that meet the needs of Scottish people, and sets out how local development plans should support the delivery of sufficient quality housing to meet the needs of its residents.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Scotland's National Strategy for Economic Transformation (Scottish Government, 2022c)	The strategy sets out a programme of action to deliver growth for the Scottish economy. It details Scottish Government commitments to deliver on the ambitions of ScotWind and to expand the supply chain development programme to improve the capacity, capability and development of Scottish supply chains, including for the manufacture of high value goods and equipment.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Economic Recovery Implementation Plan	The economic recovery plan identifies priority sections of the economy to support through the Covid-19 pandemic whilst remaining aligned with	Policy priority for socio-economic investment

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
(Scottish Government, 2020a)	the incumbent national economic strategy. Six priority areas are identified to secure a jobs-focused economic recovery. Importantly, the recovery will be delivered through protecting jobs by supporting business recovery and green growth and creating jobs through businesses engagement and investment led sustainable growth.	relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Shaping Scotland's Economy: Inward Investment Plan (Scottish Government, 2020d)	This plan outlines the approach for attracting inward investment across Scotland and details the value it brings to the economy. The Scottish government recognise that inward investment delivers direct benefits such as job creation, as well as indirect benefits including spill over effects to local communities and businesses that gain access to new technology and finance. The energy transition is defined as an opportunity area in the plan. It recognises the role of the offshore wind sector in facilitating jobs growth and considers Scotland a highly attractive location for investment in renewables.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Budget Announcement 2021: Delivering Scotland's Economic Potential (Scottish Government, 2021)	The 2022-2023 Scottish Budget applies a particular focus to training, skills and supporting business. £225 million will be provided to Skills Development Scotland to support a range of national training interventions. The Budget allocates £370.5 million towards Scotland's enterprise agencies, up from £340 million in 2021/22. The Budget supports businesses taking advantage of new technologies, re-skilling employees and current and emerging businesses and markets.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Offshore Wind Sector Deal (UK Government, 2019)	The Sector Deal establishes the intention of the UK Government to commit to a sector target of 60% lifetime UK content in domestic offshore wind projects commissioned from 2030 onwards.	60% UK Content procurement scenario developed as part of technical assessment of effects.
Offshore Wind Policy Statement (Scottish Government, 2020b)	The Scottish government is committed to ensuring that supply chain benefits are felt in areas across Scotland. An Offshore Wind Supply Chain summit was held in 2019 to address the relatively low levels of Scottish content in projects to date. Since then, the government ask and expect firms in the offshore wind sector supply chain to continually reflect on their performance to ensure they remain competitive on price and deliverability. It also welcomes new entrants to the market. With regard to employment, the Scottish Government seeks to ensure that the skills landscape can meet the needs of the offshore wind industry. A £25 million National Transition Training Programme will support older workers at risk of redundancy into renewable sector jobs. The Energy Skills Alliance is aiming to deliver an integrated energy apprenticeship scheme by 2022 and produce a clear forecast of energy skills demand up to 2050, which will align training and standards across energy sectors and allow for the utilisation of skills and expertise of oil and gas industries. Through greater understanding of the skills needs in the offshore wind industries, the Scottish Government can react appropriately to industry requirements and ensure maximum employment benefit to Scotland's economy, especially in coastal and rural areas.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020c)	This plan sets out the spatial strategy for informing the seabed leasing process for commercial offshore wind developments in Scotland. Based on the Scottish Offshore Wind Energy Council's (SOWEC) ambitions and recommendations, the plan expects that through delivering 8GW of offshore wind by 2030, the number of wind jobs will increase to more than 6,000.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Scottish Offshore Wind Strategic Investment	The growth in offshore wind farms in Scotland has been below 2010–2020 projections, meaning that supply chains have not yet benefitted from these developments and subsequently the number of jobs created	Policy priority for socio-economic investment relevant to the Proposed



Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
Assessment (SOWEC, 2021)	<p>has fallen below expectations. So far, supply chains in Scotland have suffered from the lack of a reliable pipeline of offshore wind developments, which has dampened investment in the supply chain and led to difficulties in creating cost reductions.</p> <p>The Strategic Investment Assessment used a model to calculate the impact of deployment of a 1 GW wind farm. It is projected that it would create 21,000 full time equivalent (FTE) years to develop, build and operate. One third of these jobs would be required during the operation and maintenance phases. Another third would be expected for wind turbine manufacturing, highlighting the importance of strong Scottish manufacturing capabilities to secure offshore wind farm jobs in Scotland.</p> <p>The assessment outlines the role that ports can play in supporting offshore wind. Up to 2040, it is projected that between 175 ha and 300 ha of port area will be demanded for foundation and wind turbine component marshalling and cumulative installed capacity of offshore wind in Scotland. There is currently around 50 ha of port area available. The Strategic Investment Assessment identifies Nigg and Aberdeen ports as being well positioned to benefit from feasible long term expansion options linked to a cluster of wind farms in the North Sea. Montrose Port is not included in this group, but is identified as continuing to play a supporting role in wider offshore servicing needs. In the Forth and Tay cluster, Leith and Dundee are identified as having capacity for marshalling and assembly and boast future expansion opportunities. Ports including Burntisland, Rosyth and Methil are identified as being positioned to benefit from their proximity to the cluster.</p>	Development considered in assessment of sensitivity of receptors – see section 18.8.
Housing to 2040 (Scottish Government, 2021a)	<p>Scottish Government's housing strategy sets a vision of putting housing at the centre of its other objectives for Scottish people, including creating and supporting jobs and making sure people have connected, cohesive communities to live in.</p> <p>The rise in single person households and the ageing population are two of the primary factors driving the need for more housing at a national level.</p> <p>Through its housing strategy, the Scottish Government will:</p> <ul style="list-style-type: none"> <li>Continue to invest in the supply of affordable homes.</li> <li>Attract private investment to help deliver more homes.</li> <li>Take a place-based approach so that homes and places work together, and people can live in communities that meet their needs and support their health and wellbeing.</li> <li>Make changes to ensure the whole housing system works well to deliver affordable and good quality homes for people.</li> </ul>	Policy priority for housing development considered as part of assessment of potential effects on housing and accommodation receptors – see section 18.11.
A Scotland for the future: The opportunities and challenges of Scotland's changing population (Scottish Government, 2021)	<p>This paper has been produced by the Scottish Government's Ministerial Population Taskforce considering Scotland's future population challenges.</p> <p>The paper sets out Scotland's future population as being characterised by: an ageing population; falling fertility rates; and growth dependant on inward migration.</p> <p>The paper establishes addressing population change as a long-term policy ambition that will require sustained and cohesive actions across a range of policy areas. The principles that will underpin the approach to population change can be summarised as follows:</p> <p><i>"The Scottish Government's aim is to make communities across Scotland attractive places to live, work, bring up families and to move to;</i></p>	Policy priority of in-migration sustaining population growth considered as part of assessment of potential effects on housing, accommodation, and local services receptors – see section 18.11.

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
	<p><i>so that Scotland's population profile provides a platform for sustainable and inclusive economic growth and wellbeing."</i> (p6)</p> <p>Inward migration is currently the sole reason for Scotland's population growth, and is projected to be so in years to come. In addition to seeking to attract people from the European Union (EU) and internationally, Scottish Government will continue to look to attract individuals from elsewhere in the UK who may wish to reside in Scotland.</p> <p>Around 30% of the government's budget comes from income tax paid by people living and working in Scotland. Ensuring sufficient public funds are available to deliver quality public services such as health and education depends on having a well-skilled and resilient working-age population.</p> <p>Beyond the importance to government finances and the ability of the public sector to provide services to its population, Scotland's population is a driver of overall economic activity and growth. Scotland's business base, the domestic customers that provide them with demand, and the workforce required to supply that demand are all derived from its resident population.</p> <p>Population change is important at a local level as well as a national level. Declining population levels can impact on the sustainability of local communities, and the retention of key local services. A declining working age population means there are fewer people available to deliver key public services or to meet gaps in the workforce. Furthermore, the lack of working age families can threaten the sustainability of essential public services such as schools, which risks families moving elsewhere. Conversely, planning future development can be challenging in areas where demand is high and infrastructure is constrained.</p>	
Scotland Outlook 2030: Responsible tourism for a sustainable future (Scottish Government, Scottish Tourism Alliance, Visit Scotland, Highlands and Islands Enterprise, Scottish Enterprise, Skills Development Scotland; 2020)	<p>The Scottish Government's vision is for Scotland to be the leader in 21st century tourism. Tourism is acknowledged as having a significant role in delivering Scotland's wider economic strategy as it cuts across many sectors and touches many parts of Scotland's economy. The Scottish Government's ambition is that the tourism sector would go further, to: enrich the lives of those who live in and visit Scotland; to protect and preserve places, and be pioneering in delivering responsible tourism.</p>	Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.
<b>Regional</b>		
Highlands and Islands Enterprise 2019–2022 Strategy (Highlands and Islands Enterprise, 2019)	<p>The Highlands and Islands area has seen significant investment in ports and is now well placed to take advantage of offshore energy developments and stimulate supply chain opportunities. The Highlands and Islands Enterprise supports supply chain opportunities from energy developments such as major offshore wind farm developments.</p> <p>Tourism accounts for 15% of employment in the Highlands and Islands, highlighting the importance of the sector in the region. In particular, there is a strong focus on marine and outdoor tourism to showcase the beaches and islands.</p>	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.
Building Scotland's Future Today: Scottish Enterprise's Strategic	<p>Scottish Enterprise aims to build vibrant economic communities across Scotland, spreading increased wealth and wellbeing. This will be delivered through working with partners to invest in infrastructure and</p>	Policy priority for socio-economic investment relevant to the Proposed



Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
Framework 2019–2022 (Scottish Enterprise, 2019)	assets as a means of creating jobs with value in thriving places. Importantly, an Advanced Manufacturing Innovation District will be developed to help grow low carbon emission industries.	Development considered in assessment of sensitivity of receptors – see section 18.8.
<b>Local</b>		
Highland-wide Local Development Plan (The Highland Council, 2012)	The Highland Council is committed to encouraging economic development that creates new employment across key sectors such as energy and renewables. The plan highlights that existing onshore wind farms make substantial contributions to local and regional economies of the highlands, and there is interest by communities to take a share in larger schemes in the future. The Port of Nigg has planned developments to diversify its use from oil related uses to a range of energy based employment prospects. One option is to develop the port to a multi-use site including developing renewables based activities and the second option is for a Green Energy Park, which would utilise the entire site for renewable activities such as manufacturing of components. A key focus of the plan is to grow the population of the Highlands. It addresses that this policy adds strain to unmet housing needs and proposes allocating more land across the local authority area to increase the supply of affordable rented housing and low cost affordable homes. Tourism makes a significant contribution to the Highland economy and comprises mainly of outdoor activities. There is an aim to increase tourism in the region as well as provide more accommodation for tourists to stay.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for housing development considered as part of assessment of potential effects on housing and accommodation receptors – see section 18.11. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.
Aberdeen Local Development Plan 2017 (Aberdeen City Council, 2017)	The development of all types of renewable energy generating technology on all scales is supported in principle. Aberdeen Harbour is an important point of access for the offshore energy industry. Aberdeen is home to the Energetica Corridor, a programme of projects being undertaken to create a sustainable economic development corridor, and the Aberdeen Energy Park which is a centre for research and product development for oil, gas and renewable energy sectors. The latter is certified as a specialist employment area and the Energetica corridor will be supported for its diverse employment uses and attractiveness to inward investment. The plan outlines there is a need for affordable housing in Aberdeen. There are housing allowances for 21,000 homes on Greenfield sites up to 2035 and 7,500 homes on Brownfield sites up to 2026. New developments, including those relating to renewable energy, must not adversely impact tourism.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for housing development considered as part of assessment of potential effects on housing and accommodation receptors – see section 18.11. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.
Angus Local Development Plan (Angus Council, 2016)	Existing renewable energy developments contribute to sustainable economic growth in Angus. Montrose Port in particular plays an important employment role, accommodating activities associated with the offshore renewables sector. A new spine road to the port will improve accessibility and offset existing land constraints restricting larger scale developments. Further employment land is to be allocated in Montrose at the airfield to support the renewable energy sector. Tourism is a major source of employment and income to the local economy, so supporting new tourism related development that does not hinder environmental qualities attracting people to visit Angus is important.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
Dundee Local Development Plan (Dundee City Council, 2019)	Dundee is strategically placed to accommodate large scale offshore energy related developments, both geographically but also in terms of infrastructure, facilities and its skilled workforce. To further support the expansion of the broader energy sector, a large supply of employment land has been identified for this purpose. Port of Dundee is recognised by the Scottish Government as a Renewables Enterprise Area, with the aim of encouraging businesses in the offshore energy sector to set up and grow in Scotland. Dundee has developed a thriving tourism sector in recent years following the regeneration of the Waterfront, the opening of the V&A Dundee Museum and its extension of hotel accommodation. Tourists tend to remain in the city centre, so any additional provision of visitor accommodation is encouraged here.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.
Fife Local Development Plan (Fife Council, 2017)	The Fife Local Development Plan highlights ambitions for Fife to continue as a leading centre in the field of low carbon developments. These range from the Methil Energy Park, Rosyth Biomass proposals and the University of St Andrews' proposal for a research, development and industry centre. The plan recognises that previous investments in the renewable energy sector has brought wider economic benefits to the local community, so further reclamation of coastal employment sites near Methil Energy Park may occur to bring more jobs and provide continued support to the renewable energy industry. The importance of the tourism industry in Fife is a recurring theme throughout the Local Development Plan.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.
Edinburgh Local Development Plan (City of Edinburgh Council, 2016)	Leith Docks is an important site for the renewable energy industry. The docks have potential to be a suitable location for the manufacturing and servicing of wind turbines and other equipment to support the offshore renewables industry. To capitalise on the growing number of jobs and wider economic benefits from this sector, the Plan designates the north and eastern Docks as a Special Economic Area and Business and Industry Area, meaning the site can continue to provide jobs and support offshore wind developments. Historically there has been a shortage of housing supply in Edinburgh. Although the city is undergoing significant housebuilding, the Plan acknowledges that the rate at which housing sites are delivered is constrained by market conditions. Furthermore, there is a growing population in Edinburgh which puts additional strain on the local housing market.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.9. Policy priority for housing development considered as part of assessment of potential effects on housing and accommodation receptors – see section 18.11.
East Lothian Local Development Plan 2018 (East Lothian Council, 2018)	A very low employment density in East Lothian is a major challenge. Restriction of delivering new employment land has constrained the provision of new jobs in recent years. Furthermore, many residents living in rural areas are unable to access employment if they cannot reach public transport or do not have cars. Delivering new jobs which are accessible is a key focus in the Plan. The plan endorses support given to the area's offshore energy hub in the NPF3 and the council recognises the potential of the section of coastline between Cockenzie and Torness to be a renewable energy hub given that both locations have high voltage grid connections. Employment uses at the ports of Dunbar and Cockenzie have the potential to be diversified to service offshore wind farms, subject to support from the local fishing industry. There is sufficient land to meet housing requirements driven by a growing population in East Lothian, although the deliverability of housing sites is constrained by factors such as the strength of the housing market.	Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8. Policy priority for housing development considered as part of assessment of potential effects on housing and accommodation receptors – see section 18.11. Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Offshore EIA Report
	Tourism is an important employment sector in East Lothian and will be a growing source of employment opportunities in the future. The council highlights those sections of coastline near Cockenzie and Torness have significant natural heritage and cultural assets which are key to the local tourism sector.	effects on tourism receptors – see section 18.11.
Scottish Borders Local Development Plan (Scottish Borders Council, 2016)	<p>The Scottish Borders Plan supports proposals for large scale renewable energy developments after giving due regard to relevant community impact considerations.</p> <p>Tourism is important to the Scottish Borders economy. In particular, Eyemouth is an important tourist destination and has a working fishing port. There are plans for the area around the harbour to undergo major regeneration to make it a more sympathetic setting to encourage more tourism in the town.</p>	<p>Policy priority for socio-economic investment relevant to the Proposed Development considered in assessment of sensitivity of receptors – see section 18.8.</p> <p>Policy priority for tourism considered as part of assessment of potential effects on tourism receptors – see section 18.11.</p>

## 18.5. CONSULTATION

41. There has been broad consistency in the nature of relevant scoping comments received. The approach and methodology for this chapter has been refined and enhanced based on relevant scoping responses.
42. In addition, a range of key stakeholders were invited to participate in consultation to inform the socio-economic and tourism assessment. This included national and regional representative organisations as well as local authority officers and community council representatives within the socio-economics local study areas and the tourism local study area. Invitations were issued to 58 organisations, listed in volume 3, appendix 18.2.
43. A total of 15 stakeholder organisations participated in the socio-economics and tourism consultation process. The focus of each consultation was tailored to the areas of knowledge and expertise of the participants structured around the baseline conditions for receptors, and information relevant to the assessment of socio-economics and tourism impacts.
44. Table 18.5 summarises the key issues related to socio-economics and tourism raised during relevant consultation activities to date and sets out firstly where these issues have been considered as part of project development (where relevant), and secondly where they have been considered in this chapter.

### 18.5.1. COMMUNITY ENGAGEMENT

45. During the course of the project's development thus far, the Applicant has conducted four community engagement events:
  - **November 2020:** Introductory public virtual exhibition event. Due to public health restrictions in place due to the Covid-19 pandemic, the exhibition was held virtually. The online platform was free to access and allowed for visitors to submit written feedback via forms, or ask questions to the project team via a live chat function in real time. The event was open for contributions between 16 November – 7 December 2020. The virtual exhibition received 641 page views during the three week period. Across the four 'live chat' sessions the project team were asked a total of 29 questions from 12 individual community members. Three feedback forms were submitted to the project inbox.

- **October 2021:** Week long Community Roadshow between 25–29 October 2021 to provide information, introduce (or re-introduce) the project to the local community, and seek the views of members of the public and various stakeholder bodies. The format involved members of the project team visiting various locations across East Lothian to engage with members of the public. Across the week the team visited 17 different locations and engaged with approximately 200 community members during this period.
  - **December 2021:** Virtual and in-person public consultation event between 6–30 December 2021 to enable members of the public to speak directly with the project team via in-person public consultation and 'live chat' sessions. Purpose was to engage members of the community, and seek the views of the public and stakeholder bodies. A virtual exhibition remained live online between 6–30 December 2021, with two 'live chat' sessions on 8 December, and an in-person public consultations on 9 December 2021 at Innerwick Village Hall. Approximately 70 members of the community attended the in-person consultation event. A total of 25 feedback forms were submitted via the online platform, nine questions were received during live chat sessions, and the virtual exhibition received 463 views over the period.
  - **March 2022:** Virtual and in-person public consultation event between 7–31 March 2022 to enable members of the public to speak directly with the project team via in-person public consultation and 'live chat' sessions. This consultation event built on the information presented as part of the December 2021 consultation event (above) and confirmed to members of the public and stakeholders the proposals the Applicant wishes to submit for consenting purposes. A virtual exhibition remained live between 7–31 March 2022, with four 'live chat' sessions taking place on 9 and 10 March 2022. An in-person consultation event took place on 8 March 2022 at Innerwick Village Hall, attended by approximately 50 members of the community. At the request of the local Parish Council, the project team returned to Innerwick Village Hall on 29 March 2022 to host an open forum question and answer session with interested members of the community. The purpose of this session was to allow community members to ask further questions once they have had sufficient time to examine the information presented to date. Across the whole period, the virtual exhibition received 384 page views. Three feedback forms were submitted via the online platform, and a further eight questions were submitted during 'live chat' sessions.
46. Pre-planning application public consultation events have been arranged at the discretion of the Applicant (i.e. separate to mandatory public consultations post-planning application) to ensure community members firstly receive as much information as possible at each stage of the project's development, and secondly have the opportunity to comment, provide feedback, ask questions, make suggestions, and help shape the project as it progresses. Consultation with key stakeholders and the local community will continue as the project progresses.
  47. A variety of issues were raised during the course of these community engagement events. Issues raised relating to socio-economics and tourism have been considered within this chapter. The findings from these community engagement events are set out fully within the Pre-Application Consultation (PAC) Report which accompanies the Application.

**Table 18.5: Summary of Key Consultation of Relevance to Socio Economics and Tourism**

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
<b>Methodology and Approach</b>			
Undated	Marine Analytical Unit (MAU), Scoping Response	Onshore and offshore socio-economic impacts to be considered together	Whilst the onshore and offshore chapters are separate, these draw on a single technical report which sets out the combined, and component economic impacts. The Cumulative Effects Assessment (CEA) (Tier 1) also considers both combined onshore and offshore socio-economic effects.
Undated	MAU, Scoping Response	Consider epicentres of impact	The methodology has been designed to capture epicentres of impact through local study areas, rather than considering against a wide and unrepresentative study area and set of baseline conditions.
08 December 2021	Scottish Borders Council, Scoping Response	Consider inclusion of Scottish Borders within local impact area	This was taken into account when determining local study areas, and forms part of a local study area for both onshore and offshore socio-economics and tourism assessment.
Undated	MAU, Scoping Response	Consider additionality factors	The technical report considers a range of procurement scenarios to assess leakage of expenditure. The technical economic impact modelling then sets out direct, indirect and induced impacts on employment and GVA.
17 November 2021	Visit Scotland, Scoping Response	Include tourism assessment of effects	Tourism and recreation effects have formed a part of the assessment, drawing on evidence from other chapters to inform the assessment.
17 November 2021	Visit Scotland, Scoping Response	Recognise the value of tourism and the policy ambition for the sector	The value of tourism to both Scotland and local study areas is set out within the baseline. Relevant national, regional and local policy setting out the importance of tourism has been reviewed and included in the assessment.
17 November 2021	Visit Scotland, Scoping Response	Recognise the importance of scenery and natural environment to the tourism sector	Relevant evidence setting out the importance of scenery and natural environment has been reviewed and included as part of the baseline and informed the approach to assessment of effects.
17 November 2021	MAU and Visit Scotland, Scoping Response	Consider various baseline sources relevant to socio economics and tourism	All identified sources have been reviewed and cited where relevant or not superseded/addressed through alternative or more up to date evidence.
17 November 2021	MAU, Scoping Response	Ensure primary data collection including stakeholder consultation	Stakeholder consultation was undertaken across the identified local study areas and with national and regional stakeholders in addition to desk based analysis of secondary sources.
December 2021	Scottish Government Online consultation meeting	Many socio economic assessments are too optimistic and unrealistic. There is a need for realism.	Adoption of appropriate and realistic procurement scenarios for assessment.
<b>Sector Development and Supply Chain</b>			
December 2021	Scottish Government Online consultation meeting	Scottish Ministers particularly keen to see increase in Capital expenditure (CAPEX) retained within Scotland. Scotland already does well with Development expenditure (DEVEX) and Operational expenditure (OPEX).  Scotland doesn't have the supply chain to deliver everything. Not many Tier 2 and 3 suppliers. Need early engagement to understand how collectively can maximise benefit.	Adoption of appropriate and realistic procurement scenarios for assessment based on current and pipeline capability to consider increased Scottish retention of CAPEX.  Designed in measures to enhance beneficial economic impacts through early engagement.
December 2021	Highlands and Islands Enterprise Online consultation meeting	SSE has been exemplary in its dealings at Nigg as part of the Beatrice offshore wind farm project.	Designed in measures to enhance beneficial economic impacts through early engagement. Based on SSE track record.
December 2021	Scottish Government Online consultation meeting	Keen to maximise potential of ports. Limited number of ports that can be utilised.	Shortlist of construction phase ports based on scale/capacity.



Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
December 2021	Scottish Government Fife Council Online consultation meetings	Developers/contractors will want to get security. Need for sector to work collaboratively to dovetail port utilisation and create permanent capability, as well as clustering of activity.	The Applicant will establish a Stakeholder Engagement Plan, setting out initiatives to enhance opportunities for procurement from local and Scottish suppliers and to drive the investment in new facilities. The Applicant has held direct public meetings aimed specifically at members of Scottish supply chain
December 2021	Highlands and Islands Enterprise Online consultation meeting	Berwick Bank is at a scale of buying power that it will have influence over OEM location decisions.	Designed in measures to enhance beneficial economic impacts through early engagement.
December 2021	Highlands and Islands Enterprise Scottish Enterprise Dundee City Council Online consultation meetings	Need to use combined pipeline to create market certainty for investors to come in and establish new capabilities in Scotland.	Designed in measures to enhance beneficial economic impacts through early engagement.
December 2021	Dundee City Council Angus Council City of Edinburgh Online consultation meetings	Investment in port facilities and significant sites around existing port locations.	Considered as part of assessment of impacts and in selection of suitable port locations to identify local study areas.
November 2020	Introductory public virtual exhibition event	Information requested on procurement and supply chain processes, with emphasis on ensuring local businesses can easily tender for works associated with the Proposed Development.	<p>Project team took each individual's contact details and explained the set process in place for becoming an approved vendor with the Applicant.</p> <p>As of 08/12/2020, all participants were formally contacted by a member of the procurement and commercial team to explain this further.</p> <p>In addition, the project team explained that as the project progresses, there will be a series of 'Meet The Developer' events. Contact details for prospective suppliers have been kept on file and they will be personally invited to specific supply chain events.</p> <p>The Applicant will establish:</p> <p>Supply Chain Engagement Plan: setting out initiatives to enhance opportunities for procurement from local and Scottish suppliers and to drive the investment in new facilities.</p>
October 2021	Community Roadshow	Information requested on procurement and supply chain processes, with emphasis on ensuring local businesses can easily tender for works associated with the Proposed Development. Key focus on larger elements of supply chain such as blade and wind turbine manufacturing. Several community members commented on a desire of having these elements constructed within Scotland and the UK.	<p>Applicant's desire to create as much Scottish supply chain content as possible is on record.</p> <p>The Applicant's position remains that consenting multiple projects on a comparable scale to the Proposed Development will create business and investor confidence in the supply chain to deliver a greater level of content within the UK.</p> <p>The Applicant has commissioned a Socio-Economic report to help reliably inform realistic local content ambitions and has since held follow up engagements directly focused on the Supply Chain and will continue to engage with the Supply Chain throughout the development phase.</p>
December 2021	Virtual and in-person public consultation event	Information requested on procurement and supply chain processes, with emphasis on ensuring local businesses can easily tender for works associated with the Proposed Development. Key focus on larger elements of supply chain such as blade and wind turbine manufacturing. Several community members commented on a desire of having these elements constructed within Scotland and the UK.	<p>Applicant's desire to create as much Scottish supply chain content as possible is on record.</p> <p>The Applicant's position remains that consenting multiple projects on a comparable scale to the Proposed Development will create business and investor confidence in the supply chain to deliver a greater level of content within the UK.</p>

#### Skills and Labour Market



Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
December 2021	Scottish Government Dundee City Council Online consultation meetings	Opportunity to transition skilled workers from oil and gas, automotive and aerospace due to transferable skills.	Considered as part of assessment of effects on local workforce
December 2021	Scottish Government. Dundee City Council Online consultation meetings	New investments enabling workers to stay in locations where related industries are declining and work closer to home.	Considered as part of assessment of effects on local workforce
December 2021	Scottish Government Online consultation meeting	Not aware of firms struggling to recruit skilled workers in the sector. Tends to be well paid and fairly attractive.	Accords with findings of Skills Development Scotland as set out in Future Baseline. Considered as part of assessment.
December 2021	Angus Council Dundee City Council Online consultation meetings	Number of programmes aimed at providing skills for offshore wind sector from school level upwards.	Considered as part of assessment of effects on local workforce
December 2021	Highlands and Islands Enterprise Online consultation meeting	Many of the skills require for construction and commissioning are available within the Invergordon catchment area. Whilst it is less populated, there is a high density of skills to support the offshore wind sector.	Considered as part of assessment of effects on local workforce
December 2021	Fife Council Online consultation meeting	For operation and maintenance operations confident there is a local workforce in place. For construction, installation and decommissioning this is a work in progress. But could be met through growing own skills and bringing people in.	Considered as part of assessment of effects on local workforce
<b>Commercial Fisheries</b>			
March 2022	Virtual and in-person public consultation event	A representative from a local shellfish supplier visited the consultation to raise concerns that the Project could lead to an adverse impact on their business.	The Applicant noted the individual's concerns and arranged a follow-up meeting. This meeting took place in-person at the stakeholder's premises on 17/03/2022, with relevant members of the Applicant's Project team present.  After the meeting, the business owner was satisfied the Proposed Development would have negligible adverse impacts on their activities.
<b>Tourism, Recreation and Accommodation</b>			
December 2021	Dundee City Council Online consultation meeting	Limited waterfront recreational activity. Would not expect any conflict with use of Dundee port.	Considered as part of assessment of effects on tourism and recreation.
December 2021	Dundee City Council Online consultation meeting	Number of new hotels providing accommodation	Considered as part of assessment of effects on housing, accommodation and local services.
December 2021	City of Edinburgh Online consultation meeting	Do not see how this project would have a material impact on tourism sector in Edinburgh.	Considered as part of assessment of effects on tourism and recreation.
December 2021	Royal Yachting Association Scotland Online consultation meeting	Benefits to recreational harbour users from investment facilitated by projects of this nature.  Only potential concern relating to Eyemouth harbour if capacity reduced for recreational users. Mitigation may be possible.	Considered as part of assessment of effects on tourism and recreation.
December 2021	Royal Yachting Association Scotland Online consultation meeting	Majority of activity well out to sea. Overall would expect very limited or zero impact on range of recreational users. More about perception than reality. Importance of good communication. With normal good practice there should not be any major adverse impact.	Considered as part of assessment of effects on tourism and recreation.  Community engagement part of embedded mitigation by the Applicant.

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
March 2021	East Lothian Council Online consultation meeting	Views and vistas along the coast of East Lothian are a key selling point for the area's tourism offer.	Considered as part of assessment of effects on tourism and recreation.  Seascape, landscape and visual impact considered as high priority in defining Tourism local study area and defining tourism and recreation receptors of importance.
March 2021	East Lothian Council Online consultation meeting	Golf is a key economic contributor to the East Lothian tourism sector – most popular courses tend to be along the coast, with views and vistas being a key selling point of the offer.	Considered as part of assessment of effects on tourism and recreation.  Seascape, landscape and visual impact considered as high priority in defining Tourism local study area and defining tourism and recreation receptors of importance.
March 2021	East Lothian Council Online consultation meeting	Fishing is not a significant part of the tourism offer of East Lothian – it is an activity for local people.	Considered as part of assessment of effects on tourism and recreation.
November 2020	Introductory public virtual exhibition event	Limited local concern the view from the coast will be adversely impacted.	The Applicant committed to producing offshore visualisations for the next round of public consultation.  Seascape, landscape and visual impact considered as high priority in defining tourism local study area and defining tourism and recreation receptors of importance.
October 2021	Community Roadshow	Limited local concern that the view from the coast will be adversely impacted	As part of the roadshow, the project team presented a 3D model that showed the view from various points in East Lothian. This model was also used at future consultations.  Seascape, landscape and visual impact considered as high priority in defining tourism local study area and defining tourism and recreation receptors of importance.
December 2021	Virtual and in-person public consultation event	Visual impact.  Stakeholders were satisfied the visual impact from the coast would be 'insignificant'.	Presentation of full 3D model showing the view from various points in East Lothian. The model also showed offshore cable routes and Offshore Substation Platform (OSP)/Offshore convertor station platforms options.  Seascape, landscape and visual impact considered as high priority in defining tourism local study area and defining tourism and recreation receptors of importance.
March 2022	Virtual and in-person public consultation event	Visual impact.  Stakeholders were satisfied the visual impact from the coast would be 'insignificant'.	Presentation of full 3D model showing the view from various points in East Lothian. The model also showed offshore cable routes and OSP/Offshore convertor station platforms options.  Seascape, landscape and visual impact considered as high priority in defining tourism local study area and defining tourism and recreation receptors of importance.
<b>Social Impacts</b>			
March 2021	Fife Community Stakeholders Online consultation meeting	Additional overnight stays in Burntisland would be welcomed by the town's business community.	Considered as part of assessment of effects on tourism, recreation and accommodation.
March 2021	Fife Community Stakeholders Online consultation meeting	Good supply of housing in Fife.	Considered as part of assessment of effects on accommodation and local services.
December 2021	Scottish Government Angus Council Online consultation meetings	Whilst there are a lot of transient workers/contractors both the workers and the ports are used to this. Not aware of this being problematic at community level as long as jobs and benefits are secured locally.	Considered as part of assessment of effects on accommodation and local services.
December 2021	Scottish Borders Council Online consultation meeting	Have had other projects with influx of temporary workers. Impacts reported by local businesses are beneficial but temporary.	Considered as part of assessment of effects on tourism, recreation and accommodation.

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
October 2021	Community Roadshow	Community benefits – what could be created locally (out-with supply chain content).	The Applicant is committed to the creation of a Community Benefit Fund pending the grant of consent for the Project. A Berwick Bank Community Benefit Fund would be established in partnership with local stakeholders to ensure that local communities help set the priorities for the fund, as well as decide on what gets funded. The details of the Community Benefit Fund would be established after a consent determination has been made. Ahead of establishing any formal Fund, the Project team are keen to support local initiatives where possible and have invited local stakeholders to discuss opportunities directly with the Project team. To date the Project has supported various local organisations and initiatives such as the North Berwick Fringe By The Sea festival, the Scottish Seabird Centre and the National Merlin Rocket Yachting Championship, held in East Lothian.
December 2021	Virtual and in-person public consultation event	Community benefits – what could be created locally (out-with supply chain content).	As above.
March 2022	Virtual and in-person public consultation event	Community benefits – what could be created locally (out-with supply chain content).	As above.



## 18.6. METHODOLOGY TO INFORM BASELINE

48. This section summarises the methodology applied which informed the analysis of the baseline environments of the socio-economics local study area, socio-economics national study area, and tourism local study area.
49. The summary of baseline conditions aligns with the socio-economic and tourism impacts set out in Table 18.31, and will therefore cover the receptors set out below, along with associated indicators:
- Employment:
    - total employment in all industries (2019);
    - employment change in all industries (2015–2019);
    - total employment in impact industries (2019); and
    - employment change in impact industries (2015–2019).
  - GVA:
    - total GVA in all industries (2019);
    - GVA change in all industries (2015–2019);
    - total GVA in impact industries (2019); and
    - GVA change in impact industries (2015–2019).
  - Labour market:
    - economic activity (2019);
    - unemployment (2019); and
    - economically inactive individuals that want a job (2019).
  - Housing and local services:
    - population (2019);
    - dwellings (2019);
    - unoccupied Dwellings (2019); and
    - dwellings within the Private Rented Sector (2018).
  - Tourism and Recreation:
    - total tourism sector employment (2019);
    - total tourism sector GVA (2019);
    - overnight visits (2019);
    - tourism accommodation occupancy (2019); and
    - marine related tourism and recreation (various).
50. These indicators will be analysed on the basis of publicly available desktop sources as set out in Table 18.6.

### 18.6.1. INDUSTRY DEFINITIONS

51. The definitions of industry terms utilised throughout the offshore socio-economics and tourism EIA chapter are as follows:
- **All industries:** this industry definition includes all Standard Industrial Classification 2007 (SIC07) codes and can be thought of as the 'whole' economy.
  - **Impact industries:** various permutations of impact industries are utilised, each defined in volume 3, appendix 18.4. These impact industries should not be seen as representing only activity that currently

contributes to the offshore wind sector. Instead, these impact industries should be seen as representative activities in industries associated with the construction, operation and maintenance, and decommissioning of offshore energy infrastructure (i.e. not limited to offshore wind).

- **Offshore wind:** this industry definition represents activity that currently contributes to the offshore wind sector.

#### Impact industries

52. There is no widely agreed and accepted definition of the offshore wind industry based on SIC07. Enterprises within many SIC07 sectors can be active within the offshore wind industry.
53. Impact industries have been defined to represent employment and GVA in industries associated with the construction, operation and maintenance, and decommissioning of offshore energy infrastructure (i.e. not limited to offshore wind). These definitions can be found in volume 3, appendix 18.4.
54. There is variance in the level of detail that employment and GVA data can be obtained via publicly available data sources:
- Employment: data can be obtained via the Office for National Statistics (ONS) Business Register and Employment Survey (BRES). BRES reports data as detailed as SIC07 'subclasses' (or five digit SIC07), which is the most detailed level of standardised industry classification available.
  - GVA: data can be obtained via Regional GVA (balanced) by industry: local authorities by International Territorial Level 1 (ITL1) region. This dataset reports data as detailed as SIC07 'divisions' (or two digit SIC07), and in a number of cases aggregates a number of related divisions. This level of reporting is not as detailed as employment data available via BRES.
55. Because of these differences in statistical reporting, a more detailed definition of impact industries using SIC07 subclasses has been adopted for employment analysis, with SIC07 divisions (some aggregated) used for GVA analysis. Respective employment and GVA impact industries definitions are set out at volume 3, appendix 18.4.

### 18.6.2. DESKTOP STUDY

56. Information on socio-economics within the socio-economics local study area and socio-economics national study area, and tourism within the tourism local study area, was collected through a detailed desktop review of existing studies and datasets. These are summarised in Table 18.6 below.

**Table 18.6: Summary of Key Desktop Sources**

Title	Source	Year
Aberdeen Harbour Masterplan	Aberdeen Harbour	2020
Annual Population Survey	ONS	2021
Business Register and Employment Survey	ONS	2021
Estimates of Households and Dwellings in Scotland	National Records of Scotland	2021
Insight Department: Dundee and Angus Factsheet 2019	Visit Scotland	2020
Insight Department: Edinburgh and Lothians Factsheet 2019	Visit Scotland	2020
Insight Department: Fife Factsheet 2019	Visit Scotland	2020

Title	Source	Year
Insight Department: Grampian Factsheet 2019 (Aberdeen City, Aberdeenshire and Moray)	Visit Scotland	2020
Insight Department: Highland Factsheet 2019	Visit Scotland	2020
Insight Department: Scottish Borders Factsheet 2019	Visit Scotland	2020
Montrose Port Authority Annual Review 2019/20	Montrose Port Authority	2020
Nigg Development Masterplan	The Highland Council	2013
Opportunity Cromarty Firth (webpage)	Opportunity Cromarty Firth	2022
Population estimates - local authority based by single year of age	ONS	2021
Population Projections for Scottish Areas, 2018-based	National Records of Scotland	2020
Regional gross value added (balanced) by industry: local authorities	ONS	2021
Scottish Energy Ports Capability Directory (webpage)	Scottish Energy Ports Capability Directory	2022
Scottish Government announcements and policy (webpages)	Scottish Government	2022
Stock by Tenure 2018	Scottish Government	2021
The Economic Impact of Scotland's Renewable Energy Sector	Fraser of Allander Institute (FAI)	2021

### 18.6.3. SITE-SPECIFIC SURVEYS

57. No site-specific surveys have been undertaken to inform the socio-economics and tourism EIA. This is due to the availability of existing publicly accessible socio-economic data for the identified impact areas. Consultation has been undertaken with stakeholders across the identified local and national study areas.

## 18.7. BASELINE ENVIRONMENT

### 18.7.1. OVERVIEW OF BASELINE ENVIRONMENT

58. This section summarises relevant baseline data for the socio-economics local study area, socio-economics national study area, and tourism local study area under the following headings:

- employment;
- GVA;
- labour market;
- housing and local services; and
- tourism.

<sup>4</sup> This commonality means that in Table 18.7 Total Employment (2019) counts for socio-economics local study areas do not sum to the equivalent Scotland figure.

59. Some parts of Scotland's economy will be more impacted than others by the Proposed Development. The Proposed Development has the potential to be a catalyst for economic activity focused around the offshore wind sector.

### 18.7.2. EMPLOYMENT

60. Employment is a measure obtained by adding the number of working owners (not paid via Pay as You Earn (PAYE)) to the number of employees (full and part time). This is a measure of persons and not measured in full time equivalents (FTE).
61. The definitions of construction, operation and maintenance, and decommissioning employment impact industries on the basis of SIC07 classes/subclasses are set out in volume 3, appendix 18.4.
62. All industries employment in Scotland in 2019 was approximately 2.6 million (ONS, 2021b). Between 2015–2019, employed persons in Scotland increased by +36,000 (ONS, 2021b). This equates to an average annual growth of 0.3%.
63. The Invergordon and support harbours socio-economics local study areas have the smallest employment base across all industries. Rosyth socio-economics local study area has by far the largest employment base – as well as covering Edinburgh its 60 minute drive-time catchment includes other populous local authorities across the Central Belt, including Glasgow City and its surrounding local authorities. Dundee, Methil, Burntisland and Rosyth socio-economics local study areas have a high degree of commonality in terms of local authorities included in their labour catchments (except for the differences already noted regarding Rosyth)<sup>4</sup>.
64. Aberdeen, Montrose and Dundee socio-economics local study areas each saw a decline in employment over the period 2015–2019. This is partly linked to the decline in offshore oil and gas activity, which is strongly represented in these areas. All other socio-economics local study areas saw an increase in employment over the period 2015–2019.
65. The figures for each socio-economics local study area and socio-economics national study area are presented in Table 18.7.

**Table 18.7: All Industries Employment Count and Change – by Socio-Economics Local Study Area and Socio-Economics National Study Areas**

Study Area	Total Employment (2019) <sup>5</sup>	Change (2015–2019)
Invergordon	130,000	3,000
Aberdeen	280,000	(17,000)
Montrose	400,000	(17,000)
Dundee	320,000	(1,000)
Methil	500,000	6,000

<sup>5</sup> Total Employment (2019) counts for socio-economics local study areas do not sum to the equivalent Scotland figure due to commonalities between study areas as discussed in section 18.3.1. For example, the Fife local authority area is included in the Dundee, Methil, Burntisland, and Rosyth socio-economics local study areas.

Study Area	Total Employment (2019) <sup>5</sup>	Change (2015–2019)
Burntisland	960,000	35,000
Rosyth	1,700,000	51,000
Leith	490,000	29,000
Support harbours	540,000	30,000
<b>Scotland</b>	<b>2,600,000</b>	<b>36,000</b>

Source: Hardisty Jones Associates (HJA) analysis of Business Register and Employment Survey (BRES) (ONS, 2022)

Note: negative values in parentheses

66. Construction impact industries employment in Scotland in 2019 was approximately 77,000 (ONS, 2021b). Between 2015–2019, construction impact industries employment in Scotland decreased by 9,000 (ONS, 2021b). Operation and maintenance impact industries employment in Scotland in 2019 was approximately 64,000 (ONS, 2021b). Between 2015–2019, operation and maintenance impact industries employment in Scotland decreased by 4,000 (ONS, 2021b). Decommissioning impact industries employment in Scotland in 2019 was approximately 63,000 (ONS, 2021b). Between 2015–2019, decommissioning impact industries employment in Scotland decreased by 5,000 (ONS, 2021b).
67. With regards to construction impact industries, the Aberdeen socio-economics local study area has the largest employment base, and Montrose socio-economics local study area has an employment base of similar size (by virtue of both Socio-economics local study areas containing Aberdeen City and Aberdeenshire local authorities, there is significant commonality between the two). The Invergordon socio-economics local study area does not have a similar quantum of construction impact industries employment, however anecdotal evidence indicates there is a strong presence of offshore wind sector activity there related to the Beatrice and Moray East schemes.
68. With regards to operation and maintenance impact industries, the Aberdeen socio-economics local study area has the largest employment base, and Montrose socio-economics local study area has an employment base of similar size (for the same reasons as set out above). Montrose is currently the operation and maintenance base for the Seagreen offshore wind scheme. This large employment base in terms of both construction and operation and maintenance impact industries is a result of the area surrounding Aberdeen having an economic heritage with a very strong presence in the offshore oil and gas industry, and consequent supply chain strengths in activities that could be positioned to participate in the offshore wind sector.
69. Over the period 2015–2019, employment in construction impact industries has decreased in Aberdeen and Dundee socio-economics local study areas, increased in Leith socio-economics local study area, and remained constant in Invergordon socio-economics local study area.
70. Over the same period, employment in operation and maintenance impact industries has decreased in Aberdeen, Montrose and Dundee socio-economics local study areas, and increased in most of the

remaining socio-economics local study areas (level has remained constant in Methil socio-economics local study area).

71. Over the same period, employment in decommissioning impact industries has decreased in Aberdeen and Dundee socio-economics local study areas, increased in Leith socio-economics local study area, and remained constant in Invergordon socio-economics local study area.
72. The figures for each of the socio-economics local study areas and socio-economics national study area are presented in Table 18.8. Employment data is shown for ports under consideration for each phase<sup>6</sup>.

**Table 18.8: Construction, Operation and Maintenance, and Decommissioning Impact Industries Employment Count and Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Construction		Operation and Maintenance		Decommissioning	
	Employment (2019)	Change (2015–2019)	Employment (2019)	Change (2015–2019)	Employment (2019)	Change (2015–2019)
Invergordon	2,500	-			1,800	-
Aberdeen	36,000	(7,000)	35,000	(6,000)	33,000	(7,000)
Montrose			35,800	(6,100)		
Dundee	8,600	(1,300)	6,000	(100)	6,100	(300)
Methil			8,200	-		
Burntisland			10,900	600		
Rosyth			18,700	1,600		
Leith	5,100	600	3,400	400	3,600	400
Support harbours			3,700	500		
<b>Scotland</b>	<b>77,000</b>	<b>(9,000)</b>	<b>64,000</b>	<b>(4,000)</b>	<b>63,000</b>	<b>(5,000)</b>

Source: HJA analysis of BRES (ONS), 2022.

Note: negative values in parentheses.

73. Whilst there is no agreed Standard Industrial Classification 2007 (SIC07) based sector definition for offshore wind, a Scotland level study to estimate the total size of the sector, based on an ONS survey of businesses has been undertaken. Total direct, indirect and induced FTE employment supported by the offshore wind sector in Scotland in 2019 was estimated at 4,700 (FAI, 2021). No equivalent data for local impact areas is available.

<sup>6</sup> Where a port is not under consideration for a given phase (e.g. Nigg and the operation and maintenance phase), those cells are hatched.



### 18.7.3. GVA

74. The definitions of construction, operation and maintenance, and decommissioning GVA impact industries on the basis of SIC07 divisions are set out in volume 3, appendix 18.4.
75. All industries GVA in Scotland in 2019 was approximately £147 billion (ONS, 2021e). Between 2015–2019, GVA in Scotland increased by +£16 billion (ONS, 2021e). This equates to an average annual growth of 2.9%. UK annual average growth over the same period was 3.7%.
76. The Invergordon socio-economics local study area has the smallest GVA output across all industries, primarily as a result of its more rural economy focused on 'lower value' activities (value in terms of GVA, not importance). Rosyth socio-economics local study area has by far the largest employment base – as well as covering Edinburgh its 60 minute drive-time catchment includes other populous local authorities across the Central Belt, including Glasgow City and its surrounding local authorities.
77. Aberdeen and Montrose socio-economics local study areas each saw a decline in GVA output over the period 2015–2019. This is partly linked to the decline in offshore oil and gas activity, which is strongly represented in these areas. All other socio-economics local study areas saw an increase in GVA output over the period 2015–2019.
78. The figures for each socio-economics local study area and socio-economics national study area are presented in Table 18.9.

**Table 18.9: All Industries GVA and Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total GVA (£ million, 2019)	Change (£ million, 2015–2019)
Invergordon	£6,400	£900
Aberdeen	£17,200	£(1,000)
Montrose	£22,900	£(300)
Dundee	£17,500	£1,600
Methil	£28,000	£2,800
Burntisland	£59,800	£8,700
Rosyth	£98,200	£13,500
Leith	£32,600	£5,800
Support harbours	£35,000	£6,100
<b>Scotland</b>	<b>£147,000</b>	<b>£16,000</b>

Source: HJA analysis of regional gross value added (balanced) by industry: local authorities (ONS), 2022.

Note: negative values in parentheses.

79. Construction impact industries GVA output in Scotland in 2019 was approximately £27 billion. Between 2015–2019, construction impact industries GVA output in Scotland increased by £800 million. Operation and maintenance impact industries GVA output in Scotland in 2019 was approximately £19 billion. Between 2015–2019, operation and maintenance impact industries GVA output in Scotland increased by £500 million. Decommissioning impact industries GVA output in Scotland in 2019 was approximately £21 billion. Between 2015–2019, decommissioning impact industries GVA output in Scotland increased by £400 million (ONS, 2021).
80. With regards to construction and decommissioning impact industries, the Aberdeen socio-economics local study area has the largest GVA output. This is a result of the area's economic heritage of a very strong presence in the offshore oil and gas industry, and consequent supply chain strengths in activities that could be positioned to participate in the offshore wind sector. In operation and maintenance impact industries, Rosyth socio-economic and tourism local study area has the largest GVA output by virtue of its extensive 60 minute drive time catchment area including both City of Edinburgh and Glasgow City local authorities.
81. Over the period 2015–2019, GVA output in construction impact industries has decreased in Aberdeen socio-economics local study area and increased in the remaining socio-economics local study areas.
82. Over the same period, GVA output in operation and maintenance impact industries has decreased in Aberdeen and Montrose socio-economics local study areas, and increased in most of the remaining socio-economics local study areas (level has remained constant in support harbours socio-economics local study area).
83. Over the same period, GVA output in decommissioning impact industries has decreased in Aberdeen socio-economics local study area and increased in the remaining socio-economics local study areas.
84. The figures for each socio-economics local study area and socio-economics national study area are presented in Table 18.10. Employment data is shown for port and harbour facilities under consideration for each phase<sup>7</sup>.

**Table 18.10: Construction, Operation and Maintenance, and Decommissioning Impact Industries GVA and Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Construction		Operation and Maintenance		Decommissioning	
	GVA (£ million, 2019)	Change (2015–2019)	GVA (£ million, 2019)	Change (2015–2019)	GVA (£ million, 2019)	Change (2015–2019)
Invergordon	1,200	100			1,100	100
Aberdeen	5,100	(800)	4,100	(700)	4,300	(600)
Montrose			4,600	(600)		
Dundee	3,700	300	2,600	200	2,800	200
Methil			3,900	400		
Burntisland			6,700	800		
Rosyth			10,500	900		

<sup>7</sup> Where a port is not under consideration for a given phase (e.g. Nigg and the operation and maintenance phase), those cells are hatched.

Study Area	Construction		Operation and Maintenance		Decommissioning	
	GVA (£ million, 2019)	Change (2015–2019)	GVA (£ million, 2019)	Change (2015–2019)	GVA (£ million, 2019)	Change (2015–2019)
Leith	3,500	700	2,300	400	2,500	400
Support harbours			2,600	400		
<b>Scotland</b>	<b>26,800</b>	<b>800</b>	<b>19,100</b>	<b>500</b>	<b>21,200</b>	<b>400</b>

Source: HJA analysis of regional gross value added (balanced) by industry: local authorities (ONS), 2022.

Note: negative values in parentheses.

85. Whilst there is no agreed SIC based sector definition for offshore wind, a Scotland level study to estimate the total size of the sector, based on an ONS survey of businesses has been undertaken (FAI, 2021). Total direct, indirect and induced GVA supported by the offshore wind sector in Scotland in 2019 was estimated at £447 million (FAI). No equivalent data for socio-economics local study areas is available.

#### 18.7.4. LABOUR MARKET

86. Economic activity is a measure of those in employment or self-employment, as well as those actively looking for work. Economic inactivity is defined as people not in employment who have not been seeking work within the last four weeks and/or are unable to start work within the next two weeks. The ONS also reports on the rate of economically inactive individuals that want a job.
87. The economic activity rate in Scotland in 2019 was 77.5% (ONS, 2021a). The number of economically active individuals in Scotland increased by annual average of +0.1% between 2015–2019 (ONS, 2021a).
88. The share of those who were economically inactive at the time who wanted a job was 20.4% (ONS, 2021a). The number of economically inactive individuals who want a job in Scotland decreased by –3.9% between 2015–2019 (ONS, 2021a).
89. The figures for each socio-economics local study area are presented in Table 18.11. With the exception of the Rosyth socio-economics local study area (which is slightly below the Scotland average), all have higher economic activity rates than the Scotland average.

**Table 18.11: Economic Activity Rate and Economically Inactive Individuals That Want a Job – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Economically Active Individuals (2019)	Economic Activity (2019)	Economically Inactive Individuals that Want a Job (2019)	Share of Economically Inactive Individuals that Want a Job (2019)
Invergordon	110,000	81.2%	6,700	25.5%
Aberdeen	270,000	82.3%	13,200	23.1%
Montrose	390,000	79.8%	24,300	24.6%
Dundee	380,000	77.7%	22,600	21.0%
Methil	560,000	77.8%	29,000	18.0%

Study Area	Economically Active Individuals (2019)	Economic Activity (2019)	Economically Inactive Individuals that Want a Job (2019)	Share of Economically Inactive Individuals that Want a Job (2019)
Burntisland	1,000,000	78.3%	53,800	18.8%
Rosyth	1,700,000	76.9%	97,900	18.9%
Leith	470,000	78.6%	26,500	20.8%
Support harbours	520,000	78.6%	28,400	20.1%
<b>Scotland</b>	<b>2,700,000</b>	<b>77.5%</b>	<b>158,000</b>	<b>20.4%</b>

Source: HJA analysis of Annual Population Survey (ONS).

90. The ONS Annual Population Survey uses the International Labour Organization's (ILO) definition of 'unemployment' as follows: individuals without a job who are able to start work in the two weeks following their participation in the survey, and who had either looked for worked in the four weeks prior to survey, or were waiting to start a job they had already obtained. Unemployment rate is therefore the share of economically active individuals over the age of 16 years who are unemployed according to the ILO definition.
91. The number of unemployed individuals in Scotland in 2019 was 95,800 (ONS, 2021a).
92. The share of the total workforce that were unemployed was 3.5% (ONS, 2021a). The number of unemployed individuals in Scotland decreased by –40% between 2015–2019, at an average annual rate of –12% (ONS, 2021a).
93. The figures for each socio-economics local study areas are presented in Table 18.12. Invergordon, Aberdeen, Montrose, Burntisland, Leith, and support harbours socio-economics local study areas all have lower unemployment rates than the Scotland average. Dundee and Methil socio-economics local study areas have higher unemployment rates than the Scotland average. Rosyth socio-economics local study area has the same unemployment rate as the Scotland average.

**Table 18.12: Unemployed Individuals and Unemployment Rate – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Unemployed Individuals (2019)	Unemployment Rate (2019)	Change in Unemployed Individuals – Per Annum (2015–2019)
Invergordon	3,500	2.9%	(6%)
Aberdeen	8,000	2.9%	(2%)
Montrose	13,300	3.3%	(8%)
Dundee	14,700	3.8%	(14%)
Methil	21,200	3.7%	(14%)
Burntisland	35,500	3.3%	(13%)
Rosyth	61,200	3.5%	(13%)
Leith	12,200	2.5%	(16%)



Study Area	Unemployed Individuals (2019)	Unemployment Rate (2019)	Change in Unemployed Individuals – Per Annum (2015–2019)
Support harbours	13,900	2.6%	(16%)
<b>Scotland</b>	<b>95,800</b>	<b>3.5%</b>	<b>(12%)</b>

Source: HJA analysis of Annual Population Survey (ONS), 2022.

Note: negative values in parentheses.

#### 18.7.5. HOUSING, ACCOMMODATION AND LOCAL SERVICES

94. Scotland's population in 2019 was approximately 5.5 million (ONS, 2021c). This increased by approximately 90,000 over the period 2015–2019 at an average annual rate of +0.4%.
95. Methil, Burntisland and Rosyth socio-economics local study areas have the largest populations – as well as covering Edinburgh their 60 minute drive-time catchments include other populous local authorities across the Central Belt. Invergordon and support harbours socio-economics local study areas have the smallest populations by virtue of their more rural locations and catchment areas.
96. Burntisland, Rosyth, Leith, and support harbours socio-economics local study areas all saw an increase in population above the Scotland rate over the period 2015–2019. Invergordon, Dundee, and Methil socio-economics local study areas saw an increase in population over the period, but below the Scotland rate. Aberdeen and Montrose socio-economics local study areas are the only areas to have seen a decrease in population over the period 2015–2019.
97. The figures for each socio-economics local study area and socio-economics national study area are presented in Table 18.13.

**Table 18.13: Total Population and Population Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total Population (2019)	Total Population Change (2015–2019)	Average Annual Population Change (2015–2019)
Invergordon	236,000	1,700	0.2%
Aberdeen	490,000	(2,400)	(0.1%)
Montrose	755,000	(2,000)	(0.1%)
Dundee	791,000	7,900	0.3%
Methil	1,165,000	17,100	0.4%
Burntisland	2,083,000	52,000	0.6%
Rosyth	3,507,000	93,600	0.7%
Leith	908,000	39,800	1.1%
Support harbours	1,020,000	41,300	1.0%
<b>Scotland</b>	<b>5,460,000</b>	<b>90,300</b>	<b>0.4%</b>

Source: HJA analysis of Mid-Year Population Estimates (ONS), 2022.

Note: negative values in parentheses.

98. The National Records of Scotland provides data on *Estimates of Households and Dwellings in Scotland*. They provide useful inputs to a number of strategic planning outputs, including:
  - informing local authorities about housing need and provision of services;
  - information on housing in rural areas (including second homes and empty properties);
  - providing a baseline for local projections of household numbers; and
  - informing projections of future school rolls.
99. This makes it a relevant and useful data source for informing the following baseline conditions that characterise this receptor:
100. 'Total dwellings' is the total number of dwellings on the Council Tax valuation list. A 'dwelling' refers to the accommodation itself, for example a house or a flat and includes second homes that are not let out commercially. This data can provide the baseline for an area's overall dwelling stock, which can then be used for assessing share of private rented dwellings and unoccupied dwellings.
101. In 2019 Scotland had approximately 2.6 million dwellings (National Records of Scotland, 2021). This increased by approximately 80,000 over the period 2015–2019 at an average annual rate of +0.8%.
102. Methil, Burntisland and Rosyth socio-economics local study areas have the largest dwelling stock by virtue of their 60 minute drive time catchments covering many similar local authority areas across the Central Belt. Invergordon and support harbours socio-economics local study areas have the smallest dwelling stocks by virtue of their more rural locations and catchment areas.
103. Aberdeen, Montrose, Burntisland, Rosyth, Leith and support harbours socio-economics local study areas all saw an increase in dwelling stock above the Scotland rate over the period 2015–2019. Invergordon, Dundee and Methil socio-economics local study areas saw an increase in dwelling stock over the period, but below the Scotland rate. No socio-economics local study area saw a decrease in dwelling stock over the period.
104. The figures for each socio-economics local study area and the socio-economics national study area are presented in Table 18.14.

**Table 18.14: Total Dwellings and Dwelling Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total Dwellings (2019)	Total Dwellings Change (2015–2019)	Average Annual Dwellings Change (2015–2019)
Invergordon	119,000	4,000	0.8%
Aberdeen	240,000	9,000	1.0%
Montrose	370,000	12,000	0.8%
Dundee	380,000	10,000	0.6%
Methil	550,000	15,000	0.7%
Burntisland	970,000	33,000	0.9%
Rosyth	1,660,000	56,000	0.9%
Leith	420,000	19,000	1.2%

Study Area	Total Dwellings (2019)	Total Dwellings Change (2015–2019)	Average Annual Dwellings Change (2015–2019)
Support harbours	480,000	20,000	1.1%
<b>Scotland</b>	<b>2,600,000</b>	<b>80,000</b>	<b>0.8%</b>

Source: HJA analysis of Estimates of Households and Dwellings in Scotland (National Records of Scotland).

105. Understanding an area's private rented dwelling stock<sup>8</sup> can provide a useful profile of the type of accommodation that might be utilised by, for instance, temporary workers relocating to participate in construction phase activities.
106. In 2018, 371,000 dwellings were recorded within the private rented sector within the socio-economics national study area. This represented 14.2% of the total dwelling stock.
107. The absolute size of the private rented sector varies widely across the socio-economics local study areas, based on the varying scale of the areas and levels of urbanisation – as per Table 18.15 the private rented sector ranges from 14.2% to 19.0% at the local level.

**Table 18.15: Total Dwellings in Private Rented Sector – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total dwellings in private rented sector (2018)	Private Rented Sector as Share of Total Dwellings (2019)
Invergordon	17,000	14.6%
Aberdeen	33,000	14.2%
Montrose	61,000	16.6%
Dundee	63,000	16.6%
Methil	77,000	14.2%
Burntisland	145,000	15.1%
Rosyth	235,000	14.3%
Leith	80,000	19.2%
Support harbours	88,000	18.6%
<b>Scotland</b>	<b>371,000</b>	<b>14.2%</b>

Source: HJA analysis of Estimates of Households and Dwellings in Scotland (National Records of Scotland) and Stock Estimates by Tenure (Scottish Government, Housing Statistics).

108. 'Unoccupied dwellings' include unoccupied units that are exempt from Council Tax, and dwellings which are recorded on Council Tax systems as being long-term empty properties<sup>9</sup>. Understanding an area's

unoccupied dwelling stock can provide a useful profile of how easily (or not) an area might accommodate workers relocating to participate in construction, operation and maintenance, or decommissioning activities.

109. Scotland has approximately 85,000 unoccupied dwellings (National Records of Scotland, 2021) – this is around 3.2% of total dwelling stock. This increased by approximately 1,300 over the period 2015–2019 at an average annual rate of +1.9%.
110. Burntisland and Rosyth socio-economics local study areas have the largest stock of unoccupied dwellings by virtue of their 60 minute drive time catchments covering many similar local authority areas across the Central Belt. Invergordon and support harbours socio-economics local study areas have the smallest stocks of unoccupied dwellings by virtue of their more rural locations and catchment areas.
111. Invergordon, Aberdeen and Montrose socio-economics local study areas all saw an increase in unoccupied dwelling stock above the Scotland average annual rate over the period 2015–2019. Burntisland and Leith socio-economics local study areas saw an increase in unoccupied dwelling stock around the same level as the Scotland rate over the period 2015–2019. Dundee, Rosyth and support harbours socio-economics local study areas saw an increase in unoccupied dwelling stock over the period, but below the Scotland rate. Methil Socio-economics local study area saw a decrease in unoccupied dwelling stock over the period.
112. The figures for each socio-economics local study area and socio-economics national study area are presented in Table 18.6.

<sup>8</sup> The definition of 'private rented' does not include second homes which are let out e.g. Airbnb.

<sup>9</sup> National Records of Scotland data does not provide information on the habitability of unoccupied dwellings.

**Table 18.16: Total Unoccupied Dwellings and Unoccupied Dwelling Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total Unoccupied Dwellings (2019)	Unoccupied Dwellings as Share of Total Dwellings (2019)	Total Unoccupied Dwellings Change (2015–2019)	Average Annual Unoccupied Dwellings Change (2015–2019)
Invergordon	4,000	3.5%	1,300	9.3%
Aberdeen	11,000	4.6%	2,800	7.4%
Montrose	17,000	4.5%	3,000	5.0%
Dundee	14,000	3.7%	100	0.2%
Methil	17,000	3.1%	(200)	(0.2%)
Burntisland	27,000	2.8%	2,200	2.2%
Rosyth	43,000	2.6%	300	0.2%
Leith	12,000	2.8%	700	1.6%
Support harbours	15,000	3.0%	700	1.2%
<b>Scotland</b>	<b>85,000</b>	<b>3.2%</b>	<b>1,300</b>	<b>1.9%</b>

Source: HJA analysis of Estimates of Households and Dwellings in Scotland (National Records of Scotland)), 2022.

Note: negative values in parentheses.

113. In 2018, 371,000 dwellings were recorded within the private rented sector within the socio-economics national study area. This represented 14.2% of the total dwelling stock.
114. The absolute size of the private rented sector varies widely across the socio-economics local study areas, based on the varying scale of the areas and levels of urbanisation – as per Table 18.17 the private rented sector ranges from 14.2% to 19.0% at the local level.

**Table 18.17: Total Unoccupied Dwellings and Unoccupied Dwelling Change – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total dwellings in private rented sector (2018)	Private Rented Sector as Share of Total Dwellings (2019)
Invergordon	17,000	14.6%
Aberdeen	33,000	14.2%
Montrose	61,000	16.6%
Dundee	63,000	16.6%
Methil	77,000	14.2%
Burntisland	145,000	15.1%
Rosyth	235,000	14.3%
Leith	80,000	19.2%
Support harbours	88,000	18.6%

Study Area	Total dwellings in private rented sector (2018)	Private Rented Sector as Share of Total Dwellings (2019)
<b>Scotland</b>	<b>371,000</b>	<b>14.2%</b>

Source: HJA analysis of Estimates of Households and Dwellings in Scotland (National Records of Scotland) and Stock Estimates by Tenure (Scottish Government, Housing Statistics), 2022.

#### Overnight accommodation

115. Impacts are likely to materialise upon tourism receptors at the local level. Visit Scotland is a key source of statistical data on the tourism sector. Visit Scotland tourism 'regions' do not map directly to the identified tourism local study area for this assessment. The Visit Scotland regions that have been mapped to the tourism local study area are set out as per volume 3, appendix 18.5.
116. The tourism sector is an important industry in terms of employment and GVA across the tourism local study area.
117. The figures for each tourism region (as defined by Visit Scotland) are presented in Table 18.18.

**Table 18.18: Tourism Sector Employment and GVA (2018) – by Tourism Region**

Tourism Region	Tourism local study area coverage	Employment (2018)	Employment as a share of all industries (2018)	GVA (£ million, 2018)	GVA as a share of all industries (2018)
Grampian	Aberdeenshire	21,500	7%	450	2%
Dundee and Angus	Angus	8,700	8%	140	3%
Fife	Fife	11,100	8%	300	4%
Edinburgh and Lothians	East Lothian	45,800	9%	950	2%
Scottish Borders	Scottish Borders	4,100	9%	80	4%

Source: Visit Scotland, 2020; HJA analysis of BRES, 2022.

118. All parts of the tourism local study area are popular tourist destinations for overnight visitors. The figures for each tourism local study area are presented in Table 18.19.

**Table 18.19: Overnight Visits and Spend (2019) – by Tourism Region**

Tourism Region	Tourism Local Study Area Coverage	Total Overnight Visits (000s, 2019)	Total Nights – Overnight Visits (000s, 2019)	Total Spend – Overnight Visits (£ million, 2019)
Grampian	Aberdeenshire	1,300	4,400	320



Tourism Region	Tourism Local Study Area Coverage	Total Overnight Visits (000s, 2019)	Total Nights – Overnight Visits (000s, 2019)	Total Spend – Overnight Visits (£ million, 2019)
Dundee and Angus	Angus	400	1,600	110
Fife	Fife	700	2,600	200
Edinburgh and Lothians	East Lothian	5,300	20,700	1,980
Scottish Borders	Scottish Borders	400	1,300	70

Source: Visit Scotland, 2020.

119. There is some slack in tourism accommodation occupancy rates across the tourism local study area. Even during peak months of occupancy, there remains between 12%–21% vacancy in hotels across the tourism local study area.
120. The figures for annual average and peak occupancy across a range of accommodation types across the tourism local study area are presented in Table 18.20. The scale of variation over the period 2017-19 is also shown. This is measured as  $\pm$ %point difference across the years. This shows the level of variation within occupancy levels over the three year period.

**Table 18.20: Tourist Accommodation Occupancy Rates (2019) – by Tourism Region**

Tourism Region	Tourism Local Study Area Coverage	Hotel			Guest House/B&B			Hostel		
		Peak	Avg.	Var.	Peak	Avg.	Var.	Peak	Avg.	Var.
Grampian	Aberdeenshire	80%	56%	2%pt	-	45%*	10%pt	49%	35%	1%pt
Dundee and Angus	Angus	85%	70%	1%pt	51%	30%	11%pt	-	-	-
Fife	Fife	86%	66%	2%pt	-	56%*	0%pt	-	-	-
Edinburgh and Lothians	East Lothian	88%	74%	5%pt	98%	82%	23%pt	90%	72%	15%pt
Scottish Borders	Scottish Borders	79%	57%	26%pt	68%	39%	5%pt	-	-	-

Source: HJA analysis of Visit Scotland data (- where no data available).

\* 2018 data as no 2019 figures available.

## 18.7.6. TOURISM AND RECREATION

### Tourism

121. The Visit Scotland Visitor Experience Survey 2015/16 was completed to gain an understanding of the behaviour and experience of visitors to Scotland. When questioned on their motivation to travel to Scotland, Scenery and landscape was the most common reason given for travel to Scotland, with 50% of responses citing this as the main motivation for visiting. Scotland's scenery and landscape was a more common response among European (71%) and long haul visitors (53%) than domestic travellers, where 'closeness to home' and 'holidayed before and wanted to return' were answers that ranked similarly to scenery and landscape. It was also the top driver for repeat visits, with 47% of respondents citing this as a reason for returning. The scenery and landscape in Scotland are a significant factor in attracting both domestic and international tourists and therefore is a valuable asset to the tourism economy in Scotland.
122. The more recent Visit Scotland survey Seas the Day: Exploring the appeal of Scotland's coastal destinations for visitors (2021), offers an insight into what attracts tourists to coastal regions in Scotland. Visitors to coastal regions in Scotland are most likely to visit the south coast, with these areas attracting 29% of coastal trips between 2017 and 2019. The most popular activities during trips to the coast include active pursuits such swimming, sailing, water sports and adventure sports, which together make up 49% of visitors' activities. Walking is also a popular activity, with 39% of visitors taking part in the activity during their trip.

### Aberdeenshire

123. Aberdeenshire's tourism offer includes the following:
- cycling and walking: Mountain biking is popular in the Cairngorms National Park, with road cycling also popular in the area. There are over 30 Munros and Corbetts in Aberdeenshire, attracting visiting walkers. The Lairig Ghru is one of Scotland's most famous mountain passes, covering 19 miles of outstanding natural beauty from Braemar to Aviemore;
  - golf: popular links golf courses such as Royal Aberdeen and Murcar are located along Aberdeenshire's coastline, with around 35 parkland and heathland courses located inland;
  - water sports: Surfing, diving, and sailing are all popular recreational activities on the Aberdeenshire coast;
  - winter sports: Royal Deeside, on the edge of the Cairngorms National Park, is a popular location for winter sports enthusiasts wanting to participate in skiing and snowboarding;
  - culture and arts: there is a wide variety of museums, art galleries, and theatres to cater to visitors. P&J Live, His Majesty's Theatre, Music Hall, Lemon Tree, and The Barn all host large music events and musical theatre productions; and
  - history and heritage: Old Aberdeen and Footdee ("Fittie") are popular 'Old Towns' that attract visitors.
124. Based on the viewpoints set out in volume 2, chapter 15, the following viewpoints within the Seascape, Landscape and Visual Impact Assessment (SLVIA) study area are located in Aberdeenshire:

#### Representative day time viewpoints

- Johnshaven (1).

#### Night time viewpoints

- Johnshaven (1).

125. Johnshaven (1) viewpoint is the only viewpoint within the SLVIA study area located in Aberdeenshire.

#### Angus

126. Angus' tourism offer included the following:

- golf: 'Carnoustie Country' is a global golfing destination, with over 30 gold courses along the east coast of Scotland covering Angus, Dundee, Perth and Kinross, and Fife – all within an hour's drive of the Carnoustie Championship Course. Montrose is the fifth oldest golf course in the world. Golf holidays are a popular option for visitors to the area;
- cycling and walking: Mountain biking is a popular recreational activity in Angus, as is walking; and
- fishing: visitors can enjoy river, loch, sea, and shore fishing across Angus.

127. Based on the viewpoints set out in volume 2, chapter 15, the following viewpoints within the SLVIA study area are located in Angus:

#### Representative day time viewpoints

- Montrose (2).

#### Night time viewpoints

- Montrose (2).

#### Fife

128. Fife's tourism offer includes the following:

- cycling and walking: 350 miles of dedicated cycle routes, and multiple mountain biking trails. Fife is included on several National Cycling Routes, including: Coast and Castles (1), River Forth (76), River Tay (766), and Clackmannanshire to Dunfermline (764). Fife Coastal Path and the Fife Pilgrim Way are popular walking routes;
- golf: Fife is a global golfing destination, with almost 50 courses available to play. This includes 'the most famous golf course in the world' – the Old Course at St Andrews;
- motorsports: Fife is home to Scotland's national motorsport centre;
- fishing: reservoir, loch, river, and sea fishing are all available for visiting anglers;
- water sports: sailing and sea kayaking are popular activities off the coast of Fife;
- culture and arts: there is a variety of museums, art galleries, and theatres to cater to visitors; and
- history and heritage: Dunfermline Abbey, St Andrews Cathedral and Falkland Palace are popular tourist attractions.

129. Based on the viewpoints set out in volume 2, chapter 15, the following viewpoints within the SLVIA study area are located in Fife:

#### Representative day time viewpoints

- St Andros Cathedral (3);
- Cambo Sands (4);
- Fife Ness (5);
- Crail (6); and
- Isle of May (23).

#### Night time viewpoints

- Fife Ness (5).

#### East Lothian

130. East Lothian's tourism offer consists primarily of outdoor recreational activities:

- golf: East Lothian accommodates a number of historic golf courses. The area is home to Muirfield Golf Course, a regular host to The Open Championship;
- walking: the original section of the now much longer John Muir Way is located along the East Lothian coast;
- cycling: the Go East Lothian Trail spans 39 miles, and starts and finishes at North Berwick. The trail closely follows the East Lothian coast. The trail includes a number of beaches and popular tourist destinations;
- fishing: takes place near Hopes and Whiteadder Reservoirs, as well as Kin Loch, the River Tyne at Dunbar, or from the harbours at Dunbar, Cockenzie, Port Seton and North Berwick. Recreational fishing trips are commonplace from these locations;
- equestrianism: Horse riding is popular along the beaches of Gullane and Belhaven Bay;
- water sports: diving is popular in Forth, Bass Rock and Isle of May, where shipwrecks and underwater cliffs can be explored. Windsurfing is popular at Longniddry and Gullane. North Berwick and Tantallon are popular for Kayaking, and Belhaven for surfing. The Firth of Forth in general is popular for paddle boarding. The Forth also has a rich sailing history and caters for all types of sailing, from small dinghies to large yachts. Cruising, club and national championships take place on the Firth of Forth;
- tourist attractions: John Muir's birthplace, Foxlake Adventures, Smeaton Estate, East Links Family Park, the Scottish Seabird Centre and the National Museum of Flight; and
- beaches: East Lothian has numerous popular beaches, including Belhaven Bay, Yellowcraig, Seacliff, and Longniddry.

131. Based on the viewpoints set out in volume 2, chapter 15, the following viewpoints – some of which are popular tourist destinations – within the SLVIA study area are located in East Lothian:

#### Representative day time viewpoints

- North Berwick Law (7);
- Tantallon Castle (8);
- Tynninghame (Ravensheugh Sands) (9);
- Dunbar (10);
- Skateraw (11); and
- Pencraig Brae (21).

#### Night time viewpoints

- Dunbar (10).

#### Scottish Borders

132. Scottish Border's tourism offer also consists primarily of outdoor recreational activities:

- cycling and walking: there are a number of cycling and walking routes, varying in length and covering both rural landscapes and historical sites along the routes, notably St Abbs Head nature reserve and Coldingham Bay;

- fishing: the River Tweed, River Teviot and the market town of Kelso are all popular fishing spots;
- golf: there are a number of golf facilities including Schloss Roxburghe Championship Golf Course at Kelso; and
- Eyemouth: a fishing town that dates back to the 13th century. A popular location for walkers visiting the harbour and the historic fort as well as the beach. Historical attractions include the Eyemouth Museum and Gunsgreen House, which documents smuggling activities in the town from 18th century. Rib trips are also conducted from Eyemouth harbour.

133. Based on the viewpoints set out in volume 2, chapter 15, the following viewpoints – some of which are popular tourist destinations – within the SLVIA study area are located in Scottish Borders:

#### Representative day time viewpoints

- Cove (12);
- Fast Castle (13);
- Tun Law (14).;
- St Abb's Head (15);
- Eyemouth (16); and
- Ewelair Hill (22).

#### Night time viewpoints

- St Abb's Head (15).

#### Recreation

134. A summary of recreational activities is set out within volume 2, chapter 17. This is not repeated here.

#### GVA – Tourism and Recreation

135. Data from Scotland's Marine Economic Statistics (2018) indicates total GVA estimated at £579 million and 29,700 jobs. This is estimated to account for 40% of marine employment and 14% of all Scottish tourism. However, it is noted that this employment headcount is not replicated in FTE terms due to the seasonal nature of much employment. The trend data shows activity levels are increasing in this market segment.
136. The Forth and Tay region is identified as supporting 26% of Scottish marine tourism, including £153 million of GVA and 7,000 jobs.
137. Analysis of recreational sailing, boating and motor cruising identifies that these activities are highly seasonal and typically undertaken during daytime. These activities are popular around the coast of Scotland, particularly on the west coast with just 10% of profits associated with activities on the east coast.
138. Sailing Tourism in Scotland (ekos, 2016) covers both recreational and tourist related sailing activities for both domestic and visiting sailors. Across Scotland, the analysis identifies 15,700 berths of which 13,500 are filled by Scottish residents. Occupancy levels are high at 95%. The sector is estimated at £130 million in turnover, £68 million in GVA and supporting 2,700 FTEs. The sector is stated as growing. The study considers four regions. The east region covers the east coast from Eyemouth to Peterhead and is most applicable. This identifies 1,617 berths in the east region, 10% of the Scottish total. It is noted that 98% of berth owners are Scottish residents. This is well above the 69% average across Scotland as a whole indicating predominantly domestic activity. Total employment related to the sector in the east region is estimated at 205 FTEs, 7.5% of the Scottish total.

#### 18.7.7. FUTURE BASELINE SCENARIO

139. The EIA Regulations require that a “a description of the relevant aspects of the current state of the environment (Baseline scenario) and an outline of the likely evolution thereof without development as far as natural changes from the Baseline scenario can be assessed with reasonable effort, on the basis of the availability of environmental information and scientific knowledge” is included within the Offshore EIA Report.
140. In the event that the Proposed Development does not come forward, an assessment of the future baseline conditions has been carried out and is described within this section.
141. Analysis by the Scottish Fiscal Commission sets out forecasts for the Scottish economy to 2026. This indicates short term growth in the economy following the downturn caused by the Covid-19 pandemic. Over the medium term 2024-26 Gross Domestic Product (GDP) is forecast to grow at 1.4% per annum and employment is forecast to fall nationally. As per Table 18.21, the population is projected to decline in terms of natural change (births minus deaths), with in-migration playing a vital role in sustaining positive population growth (National Records of Scotland, 2020). The effects of ageing across the population will also be felt strongly. This will reduce the size of the working age population to 2043 (–0.2%).



**Table 18.21: Population Projections to 2043 (2018-based) – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Total Population (2043)	Change in Total Population (2018–2043)	Change in Population, Natural Change (births minus deaths) (2018–2043)	Change in Population, Net Migration (2018–2043)
Invergordon	230,000	(2,300)	(21,000)	20,000
Aberdeen	500,000	12,000	(14,000)	25,000
Montrose	760,000	6,500	(33,000)	40,000
Dundee	770,000	(14,000)	(69,000)	57,000
Methil	1,200,000	29,000	(75,000)	105,000
Burntisland	2,200,000	132,000	(88,000)	220,000
Rosyth	3,700,000	207,000	(147,000)	351,000
Leith	1,000,000	133,000	1,300	131,000
Support harbours	1,150,000	134,000	(12,000)	146,000
<b>Scotland</b>	<b>5,600,000</b>	<b>137,000</b>	<b>(334,000)</b>	<b>470,000</b>

Source: HJA analysis of Population Projections for Scottish Areas, 2018-based (National Records of Scotland), 2022.

Note: negative values in parentheses, figures may not sum due to rounding.

142. Whilst the working age population and employment are forecast to decline, unemployment is forecast to remain static at 4.2%.
143. Analysis prepared by Scottish Enterprise indicates potential recruitment difficulties and a potential shortage of engineers. The potential opportunities within the low carbon sector (including offshore wind) are stated to be recognised by businesses in Scotland. It is noted that the low carbon sector is well placed to compete for skilled workers due to the good levels of pay in the sector.
144. Sector analysis by Skills Development Scotland includes commentary on the energy, construction and engineering (manufacturing) sectors. Across the energy sector as a whole the workforce is expected to decline by 2031. However, there will continue to be employment opportunities as a result of replacement demand. Major growth is forecast within the offshore wind sector workforce, from 3,500 to 20,000 by 2031 as deals materialise. Within the construction sector, employment is forecast to grow faster than the whole economy average, with high levels of replacement demand fuelling further employment opportunity. Within the engineering sector, the workforce is expected to grow, but at a slower rate than the whole economy average.
145. Section 18.4 sets out that Scottish Government, regional public sector economic development stakeholders, and local authorities are planning for future economic growth in the renewable energy sector, which includes offshore wind activities. The strategic planning policy environment, if realised, will result in increased employment and GVA in offshore wind related activities.
146. Overall, the data shows relatively weak performance of the Scottish economy anticipated in the medium term, with a declining population and falling levels of total employment. The offshore wind sector is identified as a key growth opportunity, but is reliant on investments, such as the Proposed Development

being secured. Without such investments, the scale of growth in the offshore wind sector as forecast will not be realised.

147. As per section 18.4, national and local strategic planning environments plan for increased housing provision. This sits alongside economic plans to support and facilitate growth in the economy and particularly the offshore wind industry within socio-economics local study areas and socio-economics national study area. These policies are formulated in order to provide sufficient homes for workers.

#### Ports development

148. A summary of available port and harbour masterplans, along with future development plans reported by Scottish Energy Ports Capability Directory, relevant to port and harbour facilities under consideration is set out in Table 18.22. This summary highlights the planned expansion of port and harbour facilities to accommodate additional activities.

**Table 18.22: Summary of Publicly Available Port and Harbour Masterplans and Future Development Plans**

Study Area	Document Title	Summary
Invergordon	Nigg Development Masterplan (2013)	This plan acknowledges the potential of Nigg as a base for serving the offshore wind energy sector and anticipates the need for a purpose-built wind and renewable energy park on the site.
	Opportunity Cromarty Firth (webpage)	Opportunity Cromarty Firth is a partnership of organisations exploring the opportunity for the Cromarty Firth to become a 'Free Trade Zone'.  Partners of the project include the Port of Cromarty Firth and Global Energy Group, as well as other regional businesses, academia and the public sector.  The primary objective of Opportunity Cromarty Firth is to maximise the local benefits from a pipeline of renewable energy projects which will create business opportunities and employment, attract inward investment, research and development, and position the Highlands as a strategic part of the country's commitment to becoming a net-zero economy.
	Scottish Energy Ports Capability Directory (webpage)	Future developments include the installation of fixed pipe fuel bunkering systems and additional upgrades to the onsite facilities. Nigg Energy Park will continue to develop its renewables sector fabrication and logistics offerings for both wind and tidal projects, and commenced marshalling activities for the Beatrice offshore wind project in 2018.
Aberdeen	Aberdeen Harbour Masterplan (2020)	The masterplan for Aberdeen Harbour details its central role in supporting the offshore renewable energy sector and the economic opportunities that will continue to arise through this, such as the creation of high value engineering, professional, scientific and energy related jobs created.
	Scottish Energy Ports Capability Directory (webpage)	Aberdeen Harbour has commenced construction of Aberdeen South Harbour, in Nigg Bay. This will provide new facilities that will improve the port's ability to accommodate larger vessels. The development will provide an additional 1,400 m of quay, a water depth of up to 10.5 m, a wide entrance and 300 m turning circle, and a construction compound of more than 125,000 m <sup>2</sup> . It will also have heavy lift capabilities, fully serviced berths and independent project areas.
Montrose	Montrose Port Authority Annual Review 2019/20	Montrose Port was selected in 2019 as the operations and maintenance base to support Seagreen Offshore Wind Farms.
	Scottish Energy Ports Capability Directory (webpage)	Selection as the Seagreen Offshore Wind Farms operations and maintenance base includes development of an operations building, warehouse, communications tower and pontoon for crew transfer vessels. This 50 year commitment from the

Study Area	Document Title	Summary
		Seagreen development will ensure ongoing investment and redevelopment of Montrose Port's existing facilities.
Dundee	Scottish Energy Ports Capability Directory (webpage)	Future development plans include a 16 acre decommissioning site, and a 20 acre offshore wind marshalling yard.
Methil	Scottish Energy Ports Capability Directory (webpage)	Future development plans include further platforming of the engineering land behind the quaysides.
Rosyth	Scottish Energy Ports Capability Directory (webpage)	A large section of the port was cleared to provide project space for the Queensferry Crossing Construction. This has created 16 acres of space directly behind the quayside to support port operations. A new crane pad is being created. This will add to the flexibility the port has to offer.
Leith	Scottish Energy Ports Capability Directory (webpage)	Planning approval has been granted for the demolition of the grain silo which is situated opposite the Imperial Dock. Clearance of this unused building opens up approximately 16 hectares of land next to a deep water berth creating excellent logistics opportunities for renewables, oil and gas and late life operation.
Support harbours	Scottish Energy Ports Capability Directory (webpage)	Pre-application enquiry recently submitted for the construction of a helipad at Eyemouth Harbour.
To be confirmed	Scottish Government announcements and policy (webpages)	<p>A partnership agreement to establish two Green Freeports in Scotland has been reached between Scottish and UK Ministers (2022).</p> <p>A Green Freeport is a large zoned area within a defined boundary that includes a rail, sea, or air terminal. Operators and businesses in the zone can benefit from a package of tax and other incentives.</p> <p>Green Freeports are designed to boost innovation and 'inclusive economic growth' within local communities by creating jobs, upholding environmental protections, and supporting economic transformation.</p> <p>It is intended that Green Freeports will contribute towards a number of key policy objectives:</p> <ul style="list-style-type: none"> <li>• promoting regeneration and high-quality job creation;</li> <li>• promoting decarbonisation and a just transition to a net-zero economy;</li> <li>• establishing hubs for global trade and investment; and</li> <li>• fostering an innovative environment.</li> </ul> <p>Up to two Green Freeport designations will be awarded in Scotland through a competitive bidding process. As such, the location of any future facilities development related to Green Freeports is yet to be determined.</p>

#### Offshore wind farm development

149. As per volume 2, chapter 15 (section 15.7.3), offshore wind farms are set to form a key characteristic of the evolving baseline character of the area of coastline in proximity to the outer Firth of Forth. This would also be true in the absence of the Proposed Development, which follows other developments incorporating Neart na Gaoithe and Seagreen (both under construction), and the consented Inch Cape. These developments are situated in between the Proposed Development array area and the impacted area of coastline.

#### 18.7.8. DATA LIMITATIONS AND ASSUMPTIONS

150. Specific data on employment and GVA within offshore wind activities specifically is not available across socio-economics local study areas on a consistent basis.
151. Conventional modelling of economic impacts for most industrial sectors relies on government statistics, for example, those based on SIC07 codes. SIC07 data is most appropriate for traditional industries. The development of new codes for a maturing sector such as offshore wind, however, takes time. At this stage, there are currently no SIC07 codes specific to the offshore wind sector. This means that conventional SIC analyses of offshore wind and related activities needs to map existing SIC07 data onto offshore wind and related activities, which is not straightforward. Analyses using SIC07 codes also rely on generalised data. This means that – either intentionally or unintentionally – some activities relevant to offshore wind and related activities might be excluded, and other activity unrelated to offshore wind and related activities might be included. There is no officially agreed definition to be used when assessing the offshore wind related industry based on SIC07 codes.
152. Use of BRES data covers the period 2015 to 2019 as there is a discontinuity with earlier data (pre-2015) following the inclusion of PAYE only businesses in the dataset.
153. Employment, GVA, and labour market data for 2020/21 is not included due to the labour market uncertainty resulting from the Covid-19 pandemic. Multiple lockdowns and government measures to mitigate subsequent adverse economic impacts (for example, the Coronavirus Job Retention Scheme) created a highly unusual set of circumstances potentially impacting official labour market statistics. Exclusion of 2020/21 data ensures this limitation does not impact data and statistics used in this chapter.
154. Data on economic activity rates and resident-based employment are collected via the Annual Population Survey. As this is a survey, data from smaller areas (e.g. local authority level) can exhibit greater volatility than data from larger areas due to smaller sample sizes. These limitations are not deemed to be of sufficient scale to undermine the validity of the assessment and remain the best available data.
155. Tourism data is available from Visit Scotland on the basis of tourism regions (as defined by Visit Scotland). These definitions are set out as per volume 3, appendix 18.5. For the most part, these regions do not match exactly with the socio-economic and tourism local study area definitions set out in Table 18.2. The baseline environments of Visit Scotland's tourism regions are adopted as a proxy for the baseline conditions in the relevant socio-economic and tourism local study area.

### 18.8. METHODOLOGY FOR ASSESSMENT OF EFFECTS

#### 18.8.1. OVERVIEW

156. The socio-economics and tourism assessment of effects has followed the methodology set out in volume 1, chapter 6 of the Offshore EIA Report. There is no official guidance or legislation governing the process of socio-economics and tourism EIA assessment of effects.
157. This chapter's approach is based on the most up-to-date and relevant methods available at the time of writing. Marine Scotland Licensing Operations Team (MS-LOT) guidance on socio-economic assessment of effects of offshore wind schemes is not currently available (at time of consent submission). However, relevant consultation responses to date from MAU (see section 18.5) make recommendations in alignment with the broad contents of the draft guidance, ensuring this chapter's approach is as aligned as possible at this stage with the approach anticipated to be set out in the guidance.
158. However, specific to the socio-economic and tourism EIA, the following (non-binding) guidance document has been considered:

- Glasson, J. *et al.* (2020). Guidance on assessing the socio-economic impacts of offshore wind farms, Oxford Brookes University.

## 18.8.2. CRITERIA FOR ASSESSMENT OF EFFECTS

159. The process for determining the significance of effects is a two-stage process that involves defining the magnitude of the potential impacts and the sensitivity of the receptors. This section describes the criteria applied in this chapter to assign values to the magnitude of potential impacts and the sensitivity of the receptors. The terms used to define magnitude and sensitivity are based on those which are described in further detail in volume 1, chapter 6 of the Offshore EIA Report.
160. As this assessment sets out magnitude, sensitivity and significance for multiple study areas, the assessment has been tabulated for ease of interpretation. In addition, for each potential impact pathway, the baseline conditions for which magnitude and sensitivity are assessed are presented within the specific impact pathway assessment.
161. The criteria for defining magnitude in this chapter are outlined in Table 18.24. In determining magnitude within this chapter, each assessment considered the spatial extent, duration, frequency and reversibility of impact and these are outlined within the magnitude section of each assessment of effects (e.g. a duration of hours or days would be considered for most receptors to be of short term duration, which is likely to result in a low magnitude of impact).

**Table 18.23: Definition of Terms Relating to the Magnitude of an Impact**

Magnitude of Impact	Definition	Assigned Value for Calculating Overall Magnitude
High	The impact would result in a major loss of employment or GVA, respectively, and/or quality of economic activity; or the impact would result in severe damage to accommodation or tourism characteristics, features or elements, respectively (adverse).	3
	The impact would result in large scale or major increase of employment or GVA, respectively, and/or quality of economic activity; or the impact would result in extensive enhancement or major improvement of accommodation or tourism attribute qualities, respectively (beneficial).	
Medium	The impact would result in loss of employment or GVA, respectively; or the impact would result in partial loss of or damage to key accommodation or tourism characteristics, features, or elements, respectively (adverse).	2
	The impact would result in benefit to, or addition of, employment or GVA, respectively; or the impact would result in improvement of accommodation or tourism attribute qualities, respectively (beneficial).	
Low	The impact would result in minor loss of employment or GVA, respectively; or the impact would result in some measurable alteration to key accommodation or tourism characteristics, features, or elements, respectively (adverse).	1
	The impact would result in minor addition of employment or GVA, respectively; or the impact would result in beneficial impact to key accommodation or tourism characteristics, features, or elements, respectively (beneficial).	

Magnitude of Impact	Definition	Assigned Value for Calculating Overall Magnitude
Negligible	The impact would result in very minor loss of employment or GVA, respectively; or very minor detrimental alteration to accommodation or tourism characteristics, features or elements, respectively (adverse).	0
	The impact would result in very minor addition of employment or GVA, respectively; or very minor benefit to accommodation or tourism characteristics, features or elements, respectively (beneficial).	

162. For each impact under consideration, the magnitude of employment and/or GVA impacts is assessed against multiple baseline conditions and aggregated to a single magnitude level as appropriate. In order to ensure consistency of interpretation, the magnitude assessed against each baseline condition is assigned a value as per Table 18.24. The average value across baseline conditions is then calculated and used to determine the overall magnitude.
163. This chapter assesses impacts predicted to last for more than two years as 'long term', impacts predicted to last between six months and two years as medium term, and impacts predicted to last less than six months as short term.
164. The criteria for defining sensitivity in this chapter are outlined in Table 18.25.

**Table 18.24: Definition of Terms Relating to the Sensitivity of the Receptor**

Value (Sensitivity of the Receptor)	Description
Very High	International receptor of very high policy importance, and/or (for relevant impacts) none or very limited potential for recovery.
High	National (Scotland) receptor of high policy importance, and/or (for relevant impacts) none or limited potential for recovery.
Medium	Regional (Scottish regions) or local (Scottish local authorities) receptor of high or medium policy importance, and/or (for relevant impacts) some potential for recovery.
Low	Regional (Scottish regions) or local (Scottish local authorities) receptor of low policy importance, and/or (for relevant impacts) high potential for recovery.
Negligible	Receptor of very low or no importance at any policy level, and/or (for relevant impacts) very high potential for recovery.

165. As per section 18.4, increasing employment in the renewable energy sector, including offshore wind activities specifically, is a policy objective at the national (Scotland) level. It is also a policy objective of each local authority which has a potential construction facility located within its boundary to ensure renewable energy plays a role in its future economic development. As set out at section 18.7.4, the offshore wind sector is identified as a growth opportunity within a more broadly defined energy sector which is forecast to experience employment decline, and medium-term declines in employment and population more generally across Scotland. As such, the sensitivity of all receptors at all phases of development are assessed as high unless otherwise stated, due to assessment of capacity/recoverability of receptors.



166. The significance of the effect upon socio-economics and tourism is determined by considering both the magnitude of the impact and the sensitivity of the receptor. The particular method employed for this assessment is presented in Table 18.26.
167. In cases where a range is suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e. the range is given as minor to moderate). In such cases the final significance conclusion is based upon the author's professional judgement as to which outcome delineates the most likely effect. Where professional judgement is applied to quantify final significance from a range, the assessment will set out the factors that result in the final assessment of significance. These factors may include the likelihood that an effect will occur, data certainty and relevant information about the wider environmental context.
168. For the purposes of this assessment:
- a level of residual effect of moderate or above will be considered a 'significant' effect in terms of the EIA Regulations; and
  - a level of residual effect of minor or less will be considered 'not significant' in terms of the EIA Regulations.
169. In cases where a range is suggested for the significance of effect, there remains the possibility that this may span the significance threshold (i.e. the range is given as minor to moderate). In such cases the final significance is based upon the author's professional judgement as to which outcome delineates the most likely effect.

**Table 18.25: Matrix Used for the Assessment of the Significance of the Effect**

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

### 18.8.3. TECHNICAL IMPACT REPORT

170. The Technical Impact Report at volume 3, appendix 18.1 (BVG Associates, 2021) sets out an economic analysis of the Project. This has been prepared to inform the socio-economics and tourism assessment of effects from the Proposed Development.
171. The technical impact analysis considers direct, indirect and induced employment and GVA effects at local, Scotland and UK level across a detailed breakdown of project phases. The approach draws on BVG Associates proprietary methodology. The full methodology employed is set out within the report and its own appendices.

### Wind Farm Options Considered

172. The Technical Impact Report considers the potential economic impacts of the wind farm under two different wind farm options – Option 1 and Option 2 (detailed below). Published in December 2021, the Technical Impact Report is based on a point-in-time project description at the time of publishing. Under the 'options' considered, the design of the wind farm is the same, except for the following variations in transmission:
- 'option 1': 2.3 GW High Voltage Alternating Current (HVAC) and 1.8 GW High Voltage Direct Current (HVDC); and
  - 'option 2': 4.1 GW of HVDC.
173. These are the named options considered in the Technical Impact Report – as per the project description at the time of publishing. The names of these options (Option 1 and Option 2) differ from those detailed in the Proposed Development's project description as defined for consenting (Combined Option A, Combined Option B, and HVDC Option). The differences and interactions between both sets of Options is considered in Table 18.26 below.
174. The expenditure for options 1 and 2 considered in the Technical Impact Report is identical for the development (DEVEX, £0.1 bn), operation and maintenance (OPEX, £6.0 bn), and decommissioning phases (DECEX, £0.2 bn). There is a minor variation for construction phase CAPEX with Option 1 measured at £9.6 bn and Option 2 £9.7bn. This is equivalent to approximately 1% additional CAPEX for Option 2. The derived economic impacts under each scenario are therefore subject to very minor variations which are not sufficient to have any substantive impact on the assessment of significance of effects.
175. The stated CAPEX and OPEX figures are preliminary, and based on the best available information relating to supply chain and procurement conditions at the time the BVGA report was prepared. These figures will be subject to a degree of change throughout the project lifetime, as a result of external macro economic factors such as inflationary effects, and internal project factors such as delivery models. It is unlikely that such changes to CAPEX and OPEX would materially affect the assessments of this Chapter.

### Adjusting impacts to exclude Cambois connection

176. Since the Technical Impact report was published – on the basis of the options described above – the project description has changed. As described in volume 1, chapter 3, the Applicant is developing an additional export cable grid connection to Blyth, Northumberland (the Cambois connection). Applications for necessary consents (including marine licenses) will be applied for separately.
177. The options considered in the Technical Impact Report include capacity that will be delivered via the Cambois connection – the impacts assessed in the Technical Impact Report therefore include impacts associated with the Cambois connection. As such, it is necessary to adjust the impacts assessed in the Technical Impact Report to account for the separate application covering the Cambois connection i.e. discount employment and GVA impacts to remove those associated with the Cambois connection – to consider only the options comprised in the Proposed Development for the assessment of impacts from the project alone. These options include HVAC and HVDC solutions for the Offshore Transmission Infrastructure as follows:
- combined Option A or Combined Option B – a combined HVAC/HVDC solution comprising the following:
    - up to eight HVAC OSPs to facilitate connections to Branxton and two HVDC Offshore convertor station platforms that would be required for the Cambois connection; or
    - up to five larger HVAC OSPs to facilitate connections to Branxton and two HVDC Offshore convertor station platforms that would be required for the Cambois connection.
  - HVDC Option: Up to five HVDC Offshore convertor station platforms, two for the Branxton connection and two for the additional Cambois connection. This also includes an offshore interconnector platform.

178. The two sets of options interact as follows in Table 18.26:

**Table 18.26: Interaction of Options Considered in Technical Impact Report and Proposed Development Application**

Technical Impact Report Option	Proposed Development Option	Rationale
<b>Option 1</b> 2.3 GW HVAC and 1.8 GW HVDC	<b>Combined Option A</b> Up to eight HVAC OSPs to facilitate connections to Branxton and two HVDC Offshore converter station platforms that would be required for the Cambois connection.  <b>Combined Option B</b> Up to five larger HVAC OSPs to facilitate connections to Branxton and two HVDC Offshore converter station platforms that would be required for the Cambois connection.	All options include proposals for 2.3 GW HVAC and 1.8 GW HVDC capacity – therefore Combined Option A and Combined Option B equate to Option 1 in the Technical Impact Report.
<b>Option 2</b> 4.1 GW of HVDC	<b>HVDC Option</b> Up to five HVDC Offshore converter station platforms, two for the Branxton connection and two for the additional Cambois connection. This also includes an offshore interconnector platform.	Both options include proposals for 4.1 GW HVDC capacity – therefore the HVDC option equates to Option 2 in the Technical Impact Report.

179. Of the level 2 supply chain categories set out in Table 18.27, it is anticipated the following categories include impacts which cover the separate applications, and would require adjustment:

**Table 18.27: Adjustment of Technical Impact Report Assessment to Exclude Cambois Connection – by Level 2 Supply Chain Category**

Level 2 Supply Chain Category	Comments	Approach
Offshore export cable supply	There are no employment or GVA impacts assigned to this category in the Technical Impact Report – it is anticipated that impacts associated with offshore export cable supply will be located outside the UK.	Zero impacts assessed, therefore no adjustment required.
Onshore and offshore substations	Included as part of the Proposed Development.	No adjustment required.
Offshore export cable installation	The Project Description Envelope for the Proposed Development sets out a maximum total export cable length of 872 km.  The Project Description Envelope for the Cambois connection sets out a cable length of 680 km.	Assuming that impacts correlate with cable lengths, the Cambois connection accounts for a 44% share of impacts under this supply chain category in the Technical Impact Report.  Therefore, impacts assessed in the Technical Impact Report under this supply chain category are discounted by the above share to exclude those associated with the Cambois connection.

Level 2 Supply Chain Category	Comments	Approach
Substation installation	Included as part of the Proposed Development.	No adjustment required.
Transmission maintenance	This supply chain category is assumed to be where operation and maintenance impacts associated with offshore export cable repair and surveying are concentrated.  The Project Description Envelope for the Proposed Development sets out the following details associated with offshore export cable repair and surveying: <ul style="list-style-type: none"> <li>Cable repair: 1 vessel, with up to 40 FTE crew size, assumed to be required five times during the operational lifetime of the Proposed Development; and</li> <li>Cable survey: 1 vessel, with up to 40 FTE crew size, assumed to be required to conduct a single 4 week survey each year.</li> </ul>	249 person-year jobs are estimated to relate to export cable maintenance based on the Project Development Envelope, of which 109 person-year jobs are estimated to relate to the Cambois connection.

180. Impacts associated with the Cambois connection will be considered cumulatively in section 18.12.

#### Procurement scenarios

181. The Technical Impact Report considers four alternative procurement scenarios. These are defined as follows (listed from lowest UK content to highest):

- A low UK content scenario, where significant UK, Scottish and local suppliers are unsuccessful in the procurement process;
- A baseline UK supply scenario, where procurement decisions are based on the current competitiveness of the Scottish and rest of UK supply chain;
- An enhanced UK supply scenario, where all plausible procurement decisions for local, Scottish and UK supply are included; and
- A 60% UK content scenario, which considers what procurement decisions are needed to reach 60% UK content. Table 18.29 sets out the local, Scottish and UK content shares across the four procurement scenarios.

**Table 18.28: Local, Scottish and UK Content Procurement Scenarios (Shares)**

Procurement Scenario	Low	Baseline	Enhanced	60%
Local content	7%	7%	7%	7%
Scottish content	18%	19%	23%	36%

Procurement Scenario	Low	Baseline	Enhanced	60%
UK content <sup>10</sup>	31%	36%	44%	58%

Source: BVG Associates, 2021.

182. Across all four procurement scenarios local content is estimated at 7%. Therefore, the choice of scenario does not materially impact on the assessment of local impact.
183. Scottish content is similar for both the low and baseline scenarios with a more marked step to the enhanced and 60% scenarios.
184. The baseline scenario was developed drawing on existing conditions in the offshore wind sector and supply chain activities, and does not assume a worsening or improvement in conditions as in the case of the alternative scenarios. Confidence in the baseline UK supply scenario is high and allows a suitably precautionous approach in avoiding overstating economic benefits. The variations across local and Scottish content measures when compared to the low content scenario are modest. It is therefore adopted as a plausible, realistic and suitable scenario for assessing socio-economic and tourism effects where a minimum design scenario is required.
185. The enhanced UK supply scenario is deemed plausible with appropriate engagement and favourable procurement decisions. This scenario takes account of known emerging investments in the Scottish supply chain. The enhanced scenario is therefore appropriate to be considered as part of the assessment as a plausible, realistic and suitable maximum design scenario. This includes an increased share of both Scottish and UK content. This includes selection of a Scottish based construction staging port for wind turbine installation which is an important consideration for assessing housing, accommodation and local services impacts.
186. Based on the current status of the UK offshore wind sector supply chain there is a substantial step change required to reach 60% UK content. In order to achieve this level, the combined efforts of UK and Scottish Governments, offshore wind developers, Tier 1 and 2 contractors and other key offshore wind sector stakeholders will be needed. Facilitating the required enhancements to UK supply chain's capability to deliver 60% UK content will be beyond any single project. This is deemed unlikely to be achieved in full within the required time period for the construction phase of the Proposed Development. This has been confirmed by stakeholder consultees. The uncertainty surrounding where the required level of supply chain activity and investment will be located makes the 60% UK content scenario unsuitable for assessment. This accords with stakeholder comment that there is a tendency to consider unrealistic and over ambitious economic impact scenarios.
187. There is no change in local or Scottish content across the baseline and enhanced scenarios during the operation and maintenance or decommissioning phases. Variation is only present in the construction and installation phase.
188. To aid readability, the baseline UK supply scenario has been taken forward for full assessment – the enhanced UK supply scenario is discussed at the end of each construction phase assessment of effects,

with any notable differences highlighted for the reader's benefit alongside an assessment of significance. Additional data or analysis tables are included where appropriate.

189. Table 18.29 sets out the key variations between the baseline and enhanced procurement scenarios. This shows that the enhanced scenario captures an increased share of CAPEX through the construction phase, with the operation and maintenance, and decommissioning phases being considered in the same way across both scenarios.

<sup>10</sup> Based on discussions between HJA and BVG Associates, it is established the 60% UK content procurement scenario is a hypothetical model of the procurement decisions that would be required to reach approximately 60% UK content.



**Table 18.29: Local, Scottish and UK Content Procurement Scenarios (Detailed Assumptions)**

Procurement Scenario	Baseline	Enhanced
<b>Local, Scotland and UK Content</b>		
Development and Construction	<p>Development and project management based in UK, majority in Scotland.</p> <p>Wind turbine blades manufactured in UK.</p> <p>Parts of OSPs/Offshore converter station platforms supplied by Scottish or UK providers.</p> <p>Some use of project management, engineering, use of UK ports and offshore support services for installation and commissioning.</p>	<p>As baseline plus:</p> <ul style="list-style-type: none"> <li>Nacelles manufactured in UK;</li> <li>Towers produced in Scotland;</li> <li>Offshore export cables produced in Scotland;</li> <li>Inter-array cables produced in UK with some spend in Scotland;</li> <li>Larger share of other elements in Scotland and UK; and</li> <li>Scottish port used for wind turbine installation.</li> </ul>
Operation and Maintenance	<p>High level of UK content</p> <p>Balance of plant mostly based in Scotland or rest of UK</p> <p>Use of Scottish port</p>	As baseline
Decommissioning	Similar to installation and commissioning with non UK companies subcontracting Scottish and other UK companies where possible.	As baseline

Source: HJA based on BVG Associates, 2022

#### Construction, operation and maintenance, and decommissioning phase impacts

190. The impacts assessed under level 1 and 2 supply chain categories as part of the Technical Impact Report have been aggregated to provide headline impacts for construction, operation and maintenance, and decommissioning phases as per Table 18.30.

**Table 18.30: Classification of Level 1 and Level 2 Supply Chain Categories by Construction, Operation and Maintenance, and Decommissioning Phase**

Development Phase	Level 1 Supply Chain Category	Level 2 Supply Chain Category
Construction	Development and project management	Developing and permitting
		Project management
	Wind turbine	Blades
		Nacelle

Development Phase	Level 1 Supply Chain Category	Level 2 Supply Chain Category
	Balance of plant	Tower
		Foundation supply
		Inter-array cable supply
		Offshore export cable supply
		Onshore and offshore substations
	Installation and commissioning	Wind turbine installation
		Foundation installation
		Inter-array cable installation
		Offshore export cable installation
		Substation installation
Operation and Maintenance	Operation and Maintenance	Other CAPEX
		Wind farm operation
		Wind turbine maintenance and service
		Balance of plant OMS
		Transmission maintenance
Decommissioning	Decommissioning	Vessels
		Decommissioning

191. Construction phase impacts are presented as ‘maximum concurrent’ FTE years / GVA. This is a measure of peak construction impacts based on:

- annualised impacts of level 2 supply chain categories based on the anticipated construction duration of each phase of works; and
- the point at which the overlap of these would create the highest level of employment/GVA impacts i.e. maximum concurrent.

#### 18.8.4. SUPPORT HARBOURS

192. The socio-economics and tourism local (support harbours) study area is assessed against an indicative 25% of the overall impacts. This is because these support harbours would only play a supporting role in the operation and maintenance phase. As per Table 18.2, these facilities do not have the capacity to accommodate the full impacts of this phase, and as such would not be selected to do so. Using professional expert judgement, a conservative figure of 25% has been selected for this study area (conservative as the level of activity at support harbours is still likely to be lower than this).

### 18.9. MEASURES ADOPTED AS PART OF THE PROPOSED DEVELOPMENT

193. Rather than mitigation there are potential opportunities to secure enhanced beneficial effects within the socio-economics local study areas, socio-economics national study area, and tourism local study area.

194. The Applicant has already engaged in early stage discussions with potential Tier 1 suppliers, key national and regional socio-economic stakeholders including Scottish Government and Scottish Enterprise to explore matters relating to labour, skills and inward investment. This builds on existing working relationships established via other offshore wind projects that have been developed or are in development by the Applicant.
195. The Applicant has committed to being a member of a local skills and supply chain forum, if established. The Applicant attended a 'kick off' meeting on 18 March 2022 with other representatives across the energy industry. The forum is being organised and chaired by Paul McLennan, Member of Scottish Parliament (MSP) (MSP for East Lothian).
196. The Applicant's designed in measures which will be established are set out below.
  - Supply Chain Engagement Plan: setting out initiatives to enhance opportunities for procurement from local and Scottish suppliers and to drive the investment in new facilities associated with the development, manufacturing and supply, and construction/installation supply chain. This looks to act on the opportunity presented by a more reliable pipeline of offshore wind sector activity and tackle the historic lack of investment in supply chain capacity – this aligns with the Scottish Government's commitment to deliver on the ambitions of Scotland's offshore wind programme. This pipeline of activity can create market certainty for investors to facilitate the establishment of new and increased supply chain capabilities in Scotland – as pointed out by Highlands and Islands Enterprise and Scottish Enterprise during consultation.
197. The Applicant is committed to the creation of a Community Benefit Fund pending the grant of consent for the Project. A Berwick Bank Community Benefit Fund would be established in partnership with local stakeholders to ensure that local communities help set the priorities for the fund, as well as decide on what gets funded. The details of the Community Benefit Fund would be established after a consent determination has been made. Ahead of establishing any formal Fund, the Project team are keen to support local initiatives where possible and have invited local stakeholders to discuss opportunities directly with the Project team. To date the Project has supported various local organisations and initiatives such as the North Berwick Fringe By The Sea Festival, the Scottish Seabird Centre and the National Merlin Rocket Yachting Championship, held in East Lothian. In addition to this the Project team are working alongside local education partners to explore a variety of Science, Technology, Engineering and Mathematics (STEM) benefits that the Project can bring to the East Lothian area. The Project team are members of the East Lothian Industry and Education Partnership and are also members of the Mid and East Lothian Chamber of Commerce.

and scheduling at suitable ports. In determining appropriate scenarios for consideration, it was agreed that it was implausible that all elements of installation and commissioning activity would be located at a single staging port location. The most plausible option was deemed to be each element of installation and commissioning activity (wind turbine, foundation, inter-array cables, offshore export cables, OSPs/Offshore converter station platforms) being located within different port locations suitably located to access the array, but that some colocation of elements is possible. The combination of co-located construction supply chain activities is listed for each impact.

## 18.10. KEY PARAMETERS FOR ASSESSMENT

### 18.10.1. MAXIMUM DESIGN SCENARIO

198. The maximum design scenarios identified in Table 18.31 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These scenarios have been selected from the details provided in volume 1, chapter 3 of the Offshore EIA Report, along with the Technical Impact Report in volume 3, appendix 18.1 (BVG Associates, 2021). Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different infrastructure layout), to that assessed here, be taken forward in the final design scheme.
199. Volume 3, appendix 18.1 sets out impacts locally and across the 'Rest of Scotland' area. In discussions with BVG Associates it was noted that the locations identified as under consideration as construction ports could accommodate some of the rest of Scotland activity for installation and commissioning. The exact locations for activities is subject to a range of procurement decisions and other factors including capacity

**Table 18.31: Maximum Design Scenario Considered for Each Impact as Part of the Assessment of Likely Significant Effects on Socio-Economics and Tourism**

Potential Impact	Phase <sup>11</sup>			Maximum Design Scenario	Justification
	C	O	D		
Impact on employment in activities (including supply chain) associated with manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓	✓	✓	<p><b>Construction Phase</b></p> <p>Overall, Combined Option A and Combined Option B as per project description (see volume1, chapter 3) are anticipated to deliver the greatest socio-economic impacts and will therefore be treated as the maximum design scenario.</p> <p>Total CAPEX estimated at £9.6 bn.</p> <p>Baseline and Enhanced procurement scenarios to be tested.</p> <p><b>Operation and Maintenance Phase</b></p> <p>Overall, Combined Option A and Combined Option B as per project description (see volume1, chapter 3) is anticipated to deliver the greatest socio-economic impacts and will therefore be treated as the maximum design scenario.</p> <p>Total OPEX estimated at £6.0 bn.</p> <p>Baseline procurement scenario to be tested – Enhanced procurement scenario is not anticipated to deliver additional socio-economics impacts. Baseline scenario will therefore be treated as the maximum design scenario.</p> <p><b>Decommissioning Phase</b></p> <p>Overall, wind turbine Combined Option A and Combined Option B as per Project Description is anticipated to deliver the greatest socio-economic impacts and will therefore be treated as the maximum design scenario.</p> <p>Total Decommissioning Expenditure (DECEX) estimated at £0.2 bn.</p> <p>The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known.</p> <p>Maximum design scenario assumes all structures above seabed level will be removed.</p> <p>Maximum design scenario assumes decommissioning support facility to be located in Scotland.</p> <p>Maximum design scenario assumes cables to be left <i>in situ</i>.</p>	<p><b>Construction Phase</b></p> <p>Potential expenditure on the following activities associated with the Proposed Development could support employment in companies that are directly engaged in the development, manufacturing and supply, and construction/installation supply chain:</p> <ul style="list-style-type: none"> <li>• wind turbine manufacturing and supply – blades, nacelle, hub, tower;</li> <li>• balance of plant manufacturing and supply – foundations, inter-array cables, OSPs/Offshore converter station platforms, offshore export cables. The largest wind turbine is considered likely to lead to the largest potential expenditure; and</li> <li>• construction and installation of wind turbine and balance of plant – wind turbine, foundation, inter-array cable, and other installation.</li> </ul> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum impacts associated with the Proposed Development to avoid over-stating beneficial effects.</p> <p>The Enhanced procurement scenario has been assessed to provide a fair assessment of the realistic maximum impacts and to ensure testing of greatest possible effects.</p> <p>The development, manufacturing and supply, and construction/installation of the Proposed Development could also go on to support employment indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"> <li>• indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li> <li>• induced impacts result from the personal expenditure of individuals working on the Proposed Development.</li> </ul> <p><b>Operation and Maintenance Phase</b></p> <p>Potential expenditure on the following activities associated with the operation and maintenance of the Proposed Development could support employment in companies that are directly engaged in the operation and maintenance supply chain:</p> <ul style="list-style-type: none"> <li>• wind turbine, balance of plant, and transmission maintenance and servicing.</li> <li>• Vessel and crew activity:</li> <li>• Service Operation Vessels (SOV); and</li> <li>• guard vessels.</li> </ul> <p>The Baseline procurement scenario has been assessed. Assessment of this scenario provides a fair assessment of the most realistic impacts associated with the Proposed Development. Impacts identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p>The operation and maintenance of the Proposed Development could also go on to support employment indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"> <li>• indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li> <li>• induced impacts result from the personal expenditure of individuals working on the Proposed Development.</li> </ul>

<sup>11</sup> C = Construction, O = Operation and maintenance, D = Decommissioning



Potential Impact	Phase <sup>11</sup>			Maximum Design Scenario	Justification
	C	O	D		
					<p><b>Decommissioning Phase</b></p> <p>Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support employment in companies that are directly engaged in the decommissioning supply chain. The decommissioning of the Proposed Development could also go on to support employment indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"><li>indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li><li>induced impacts result from the personal expenditure of individuals working on the Proposed Development.</li></ul> <p>The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts. Offshore cabling will also be removed where possible and appropriate to do so.</p> <p>The Technical Report (volume 3, appendix 18.1) notes that the workforce for the decommissioning of the offshore parts of the wind farm is likely to be supported in a similar way to installation and commissioning.</p> <p>Therefore, decommissioning phase effects have been assessed on the basis of the assessment of Baseline procurement scenario construction phase effects (which have been discounted in order to account for construction phase impacts including those resulting from fabrication).</p>
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓	✓	✓	<p><b>Construction Phase</b> As above.</p> <p><b>Operation and Maintenance Phase</b> As above.</p> <p><b>Decommissioning Phase</b> As above.</p>	<p><b>Construction Phase</b></p> <p>Potential expenditure on the following activities associated with the Proposed Development could support GVA output in companies that are directly engaged in the development, manufacturing and supply, and construction/installation supply chain:</p> <ul style="list-style-type: none"><li>wind turbine manufacturing and supply – blades, nacelle, hub, tower;</li><li>balance of plant manufacturing and supply – foundations, inter-array cables, OSPs/Offshore convertor station platforms, offshore export cables; and</li><li>construction and installation of wind turbine and balance of plant – wind turbine, foundation, inter-array cables, and other installation.</li></ul> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum impacts associated with the Proposed Development to avoid over-stating beneficial effects.</p> <p>The Enhanced procurement scenario has been assessed to provide a fair assessment of the realistic maximum impacts and to ensure testing of greatest possible effects.</p> <p>The development, manufacturing and supply, and construction/installation of the Proposed Development could also go on to support GVA output indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"><li>indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li><li>induced impacts result from the personal expenditure of individuals working on the Proposed Development.</li></ul> <p><b>Operation and Maintenance Phase</b></p> <p>Potential expenditure on the following activities associated with the operation and maintenance of the Proposed Development could support GVA output in companies that are directly engaged in the operation and maintenance supply chain:</p> <ul style="list-style-type: none"><li>wind turbine, balance of plant, and transmission maintenance and servicing;</li></ul>

Potential Impact	Phase <sup>11</sup>			Maximum Design Scenario	Justification
	C	O	D		
					<p>Vessel and crew activity:</p> <ul style="list-style-type: none"> <li>SOVs; and</li> <li>guard vessels.</li> </ul> <p>The Baseline procurement scenario has been assessed. Assessment of this scenario provides a fair assessment of the most realistic impacts associated with the Proposed Development. Impacts identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p>The operation and maintenance of the Proposed Development could also go on to support GVA output indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"> <li>indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li> <li>induced impacts result from the personal expenditure of individuals working on the Proposed Development</li> </ul> <p><b>Decommissioning Phase</b></p> <p>Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support GVA output in companies that are directly engaged in the decommissioning supply chain. The decommissioning of the Proposed Development could also go on to support GVA output indirectly in the wider supply chain through:</p> <ul style="list-style-type: none"> <li>indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and</li> <li>induced impacts result from the personal expenditure of individuals working on the Proposed Development.</li> </ul> <p>Decommissioning phase effects have been assessed on the basis of the assessment of Baseline procurement scenario construction phase effects (which have been discounted in order to account for construction phase impacts including those resulting from fabrication).</p>
Impact on access to employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning	✓	✓	✓	<p><b>Construction Phase</b> As above.</p> <p><b>Operation and Maintenance Phase</b> As above.</p> <p><b>Decommissioning Phase</b> As above.</p>	<p><b>Construction Phase</b></p> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum impacts associated with the Proposed Development to avoid over-stating beneficial effects.</p> <p>The Enhanced procurement scenario has been assessed to provide a fair assessment of the realistic maximum impacts and to ensure testing of greatest possible effects.</p> <p>Direct and indirect employment associated with the construction phase could increase the range and supply of employment opportunities that are accessible to residents of the area.</p> <p><b>Operation and Maintenance Phase</b></p> <p>The Baseline procurement scenario has been assessed. Assessment of this scenario provides a fair assessment of the most realistic impacts associated with the Proposed Development. Impact identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p>Direct and indirect employment associated with the operation and maintenance phase could increase the range and supply of employment opportunities that are accessible to residents of the area.</p> <p><b>Decommissioning Phase</b></p> <p>Direct and indirect employment associated with the decommissioning phase could increase the range and supply of employment opportunities that are accessible to residents of the area.</p>

Potential Impact	Phase <sup>11</sup>			Maximum Design Scenario	Justification
	C	O	D		
Impact on the demand for housing, accommodation and local services	✓	✓	✓	<p><b>Construction Phase</b> As above, except for: Maximum design scenario assumes wind turbine and offshore export cable installation are co-located at primary construction facility, with remaining supply chain activities located at other port and harbour facilities.</p> <p><b>Operation and Maintenance Phase</b> As above.</p> <p><b>Decommissioning Phase</b> As above.</p>	<p>Decommissioning phase effects have been assessed on the basis of the assessment of Baseline procurement scenario construction phase effects (which have been discounted in order to account for construction phase impacts including those resulting from fabrication).</p> <p>This impact could be either beneficial or adverse depending on the scale of effect. Therefore it is appropriate to test the maximum design scenario in order to test whether the scale of effects is likely to create adverse impact.</p> <p>The maximum design scenario is informed by analysis within the Technical Report (volume 3, appendix 18.1) setting out the likely source of workforce and likely demand for temporary, medium term and long term accommodation. Volume 3, appendix 18.1 draws on the Project Design Envelope setting out likely crew sizes, vessel movements and shift patterns.</p> <p><b>Construction Phase</b></p> <p>Direct and indirect employment generated during the construction phase could increase demand for housing, accommodation and local services during the construction phase. Particularly mobile installation and commissioning workforces. Many of these workers will be based offshore but may give rise to temporary accommodation demand before and after two week shifts. Under the alternative scenario a Scottish based construction port will also drive demand for an onshore workforce requiring medium term accommodation.</p> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum impacts associated with the Proposed Development to avoid over-stating beneficial effects.</p> <p>The Enhanced procurement scenario has been assessed to provide a fair assessment of the realistic maximum impacts and to ensure testing of greatest possible effects, in particular where this could lead to beneficial effects becoming adverse.</p> <p><b>Operation and Maintenance Phase</b></p> <p>Direct and indirect employment generated during the operation and maintenance phase could increase demand for housing, accommodation and local services. It is anticipated that due to the long term nature of the operation and maintenance requirements the workforce will live locally. Some of those may relocate to the area requiring long term/permanent housing within the vicinity of the operation and maintenance port.</p> <p>The Baseline procurement scenario has been assessed. Assessment of this scenario provides a fair assessment of the most realistic impacts associated with the Proposed Development. Impact identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p><b>Decommissioning Phase</b></p> <p>As for construction phase</p>



Potential Impact	Phase <sup>11</sup>			Maximum Design Scenario	Justification
	C	O	D		
Impact on tourism and recreation activity and associated economic value	✓	✓	✓	<b>Construction Phase</b> See SLVIA topic chapter Table 15.13 (volume 2, chapter 15).  <b>Operation and Maintenance Phase</b> See SLVIA topic chapter Table 15.13 (volume 2, chapter 15).  <b>Decommissioning Phase</b> See SLVIA topic chapter Table 15.13 (volume 2, chapter 15).	<p>Potential impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development on tourism and recreation are indirect in nature. It is necessary to derive an assessment of significance of effects on tourism and recreation from the findings in the SLVIA topic chapter. The potential visual impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development will be one of the most important considerations when assessing significance of effects on tourism and recreation. The assessment of significance of effects on seascape, landscape and visual impact considered in volume 2, chapter 15 assesses some environmental effects and some cumulative effects that are significant in EIA terms. Using this assessment to inform a related assessment of significance of effects on tourism and recreation indicates consideration of potential impacts on seascape, landscape and visual impact should be high priority.</p> <p>Therefore the SLVIA topic chapter (volume 2, chapter 15) will be the primary driver of identifying the impact of the Proposed Development on tourism and recreation receptors.</p> <p>On this basis, the maximum design scenario for the impact on tourism and recreation activity and associated economic value draws directly on the maximum design scenario for SLVIA.</p>

## 18.10.2. IMPACTS SCOPED OUT OF THE ASSESSMENT

200. On the basis of the baseline environment and the project description outlined in volume 1, chapter 3 of the Offshore EIA Report, no impacts are proposed to be scoped out of the assessment for socio-economics and tourism.

Commercial fisheries

201. Impacts on activities associated with commercial fisheries such as temporary loss or restricted access to fishing grounds have been considered in terms of socio-economic impacts such as changes to income for fishers and fishing related businesses.
202. Volume 1, chapter 12 has assessed no significant effects in EIA terms on activities associated with commercial fisheries. Therefore, it is assessed there are likely to be no socio-economic effects on commercial fisheries receptors that are significant in EIA terms.

## 18.11. ASSESSMENT OF SIGNIFICANCE

203. The potential effects arising from the construction, operation and maintenance and decommissioning phases of the Proposed Development are listed in Table 18.31, along with the maximum design scenario against which each effect has been assessed in terms of its likely significance. An assessment of the likely significance of the effects of the Proposed Development on socio-economics and tourism receptors caused by each identified impact is given below.

### IMPACT ON EMPLOYMENT IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING

204. This impact is applicable to the construction, operation and maintenance, and decommissioning phases. The assessment draws on the employment impacts as set out in the supporting Technical Report in volume 3, appendix 18.1.

#### Magnitude – Assessment Approach

205. The magnitude of employment impacts is assessed against the following baseline conditions:
- share of total employment across all industries (2019): this gives an indication of the scale of the impact in the context of the receiving environment's employment base;
  - share of total employment in impact industries (2019): this gives an indication of the scale of the impact in the context of the receiving environment's impact industries employment base; and
  - share of total employment in offshore wind sector (2019): this gives an indication of the scale of the impact in the context of the receiving environment's offshore wind sector employment base. Data for this receptor is not available below the national level and therefore quantitative analysis is excluded for socio-economics local study area assessments.
206. The criteria against which magnitude of employment impacts are assessed and can be found in Table 18.32.

**Table 18.32: Magnitude of Employment Impacts Assessment Criteria**

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

#### Sensitivity – Assessment Approach

207. Sensitivity to employment impacts is assessed against the following baseline condition:
- policy environment: whether an area's policy position has the aim of making the offshore wind sector part of its approach to economic development. This can also be through providing jobs, skills, education, and training for local residents to work in the offshore wind sector. Policy aims to provide the same opportunity in the renewable energy sector will also be considered as important. General policy aims to provide jobs, skills, education, and training for local residents in any sector will also be considered.

#### Construction Phase

208. Potential expenditure on the following activities associated with the Proposed Development could support employment in local and Scottish companies that are directly engaged in the development, manufacturing and supply, and construction/installation supply chain:
- wind turbine manufacturing and supply – blades, nacelle, hub, tower;
  - balance of plant manufacturing and supply – foundations, inter-array cables, OSPs/Offshore convertor station platforms, offshore export cables; and
  - construction and installation of wind turbines and balance of plant – wind turbine, foundation, inter-array cables, and other installation.
209. The development, manufacturing and supply, and construction/installation of the Proposed Development could also go on to support employment indirectly in the wider Scottish supply chain and as a result of workers spending their wages (induced effects).
210. A maximum 96 month construction period has been assumed throughout.
211. The potential impacts of the Proposed Development on employment in development, manufacturing and supply, and construction/installation under the Baseline procurement scenario activities are set out in Table 18.33. This will create opportunities to both safeguard existing employment and facilitate new employment.

**Table 18.33: Potential Impacts (Baseline Procurement Scenario) of the Proposed Development on Employment in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Socio-economics local study areas	1,100	1,100
Socio-economics national study area	4,800	6,000

Source: HJA analysis of BVG Associates (2021). Figures may not sum due to rounding.

#### Magnitude of Impact

212. Employment impacts have been assessed on the basis of direct, indirect, and induced impacts:
- direct impacts result from the activities of the Applicant and its major contractors;
  - indirect impacts result from the activities of suppliers to the Applicant or its major contractors; and
  - induced impacts result from the personal expenditure of individuals working on the wind farm (direct and indirect).
213. On the basis of a maximum 96 month construction period, the impact is assessed as long term. Due to the contract based nature of manufacturing, construction, and installation activities, the impact is assessed as intermittent.
214. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of construction ports, and the associated supply of a range of inputs and services. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.34.

**Table 18.34: Comparison of Construction Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Invergordon	0.8%	42%	Not Applicable (N/A)
Aberdeen	0.4%	3%	N/A
Dundee	0.3%	12%	N/A
Leith	0.2%	21%	N/A
<b>Scotland</b>	0.2%	6%	103%

215. The magnitude of impact for each socio-economics local study area and the socio-economics national study area is set out in Table 18.35. The share of offshore wind sector employment within the local study areas is inferred based on the nationally available data.

**Table 18.35: Magnitude of Construction Phase Employment Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019) <sup>12</sup>
Invergordon	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Aberdeen	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
Dundee	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
Leith	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
<b>Scotland</b>	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the Receptor

216. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.36.

**Table 18.36: Sensitivity of Employment in Activities (Including Supply Chain) Associated with Manufacturing, Construction, and Installation – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Sensitivity of Receptor	Justification
Invergordon	High	National and local policy objective
Aberdeen	High	National and local policy objective
Dundee	High	National and local policy objective
Leith	High	National and local policy objective
Scotland	High	National policy objective

#### Significance of the Effect

217. The significance of the effect for each socio-economics local study area and the socio-economics national study area are set out in Table 18.37.

<sup>12</sup> Socio-economics local study area magnitudes are notional based on the principle the offshore wind sector accounts for a low proportion of impact industries employment, as evidenced in the data for Scotland.



**Table 18.37: Significance of Construction Phase Employment Impacts (Baseline Procurement Scenario) – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Invergordon	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Aberdeen	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Dundee	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Leith	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Scotland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Alternative Procurement Scenarios

218. The core assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
219. The potential impacts of the Proposed Development on employment in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.38.

**Table 18.38: Potential Impacts (Enhanced Procurement Scenario) of the Proposed Development on Employment in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Socio-economics local study areas	1,900	1,900
Socio-economics national study area	14,300	14,500

Source: HJA analysis of BVG Associates (2021). Figures may not sum due to rounding.

220. Under the Enhanced scenario, there is some increase in the employment impacts assessed at the socio-economics local study area level during construction phase. The quantitative assessment indicates some increases in the magnitude of impacts at this level. However, the changes in employment impacts are not judged to be substantial enough to justify increasing the assessed significance of effects – therefore no change in significance of effect is assessed at the socio-economics local study area level.
221. Therefore, under the Enhanced scenario, at the socio-economics local study area level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 18.37 above.
222. There is a substantial increase in the employment impacts assessed under the Enhanced scenario at the socio-economics national study area level during construction phase. The quantitative assessment indicates an increase from moderate to major (beneficial) to major (beneficial) significance of effects at

this level. The increase in employment impacts are judged to be substantial enough to justify increasing the assessed significance of effects.

223. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the impact is deemed to be high (beneficial) and the sensitivity of the receptor is considered to be high. The effect will be of **major** beneficial significance, which is significant in EIA terms.

#### Secondary Mitigation and Residual Effect

224. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation is required.

#### Operation and Maintenance Phase

225. Potential expenditure on the following activities associated with the Proposed Development could support employment in Scottish companies that are directly engaged in the operation and maintenance supply chain:
- wind turbine, balance of plant, and transmission maintenance and servicing; and
  - vessel and crew activity.
226. The operation and maintenance of the Proposed Development could also go on to support employment indirectly in the wider supply chain.
227. A 35 year operation period has been assumed throughout.
228. The potential impacts of the Proposed Development on employment in operation and maintenance activities at the socio-economics local study area level are set out in Table 18.39.

**Table 18.39: Potential Impacts of the Proposed Development on Employment in Operation and Maintenance Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Socio-economics local study areas	320	11,200
Socio-economics national study area	750	26,100

Source: HJA analysis of BVG Associates (2021)

#### Magnitude of Impact

229. Employment impacts have been assessed on the basis of direct, indirect and induced impacts.
230. On the basis of a 35 year operation period, the impact is assessed as long term. The majority of operation and maintenance activities will be on a continuous rolling programme. The impact is therefore assessed as continuous.
231. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of operation and maintenance port and harbour facilities, and the associated supply of a range of inputs and services. A comparison of the assessed impact compared to the relevant baseline

conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.40.

**Table 18.40: Comparison of Operation and Maintenance Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	0.1%	0.9%	N/A
Montrose	<0.1%	0.9%	N/A
Dundee	0.1%	5.3%	N/A
Methil	<0.1%	3.9%	N/A
Burntisland	<0.1%	2.9%	N/A
Rosyth	<0.1%	1.7%	N/A
Leith	<0.1%	9.5%	N/A
Support harbours <sup>13</sup>	<0.1%	2.2%	N/A
<b>Scotland</b>	<0.1%	1.2%	15.9%

232. The magnitude of impact, and associated justification, for each socio-economics local study area and socio-economics national study area is set out in Table 18.41.

**Table 18.41: Magnitude of Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019) <sup>14</sup>
Aberdeen	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]
Montrose	Medium (Beneficial) [2]	Negligible [0]	Medium [2]	High [3]

<sup>13</sup> Support harbours (Cockenzie, Dunbar and Eyemouth) are assessed as being subject to 25% of total impacts given their supporting role.

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019) <sup>14</sup>
Dundee	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Methil	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Burntisland	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Rosyth	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Leith	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Support harbours	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
<b>Scotland</b>	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the Receptor

233. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.42.

**Table 18.42: Sensitivity of Employment in Activities (Including Supply Chain) Associated with Operation and Maintenance – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Sensitivity of Receptor	Justification
Aberdeen	High	National and local policy objective
Montrose	High	National and local policy objective
Dundee	High	National and local policy objective
Methil	High	National and local policy objective
Burntisland	High	National and local policy objective
Rosyth	High	National and local policy objective
Leith	High	National and local policy objective
Support harbours	High	National and local policy objective
<b>Scotland</b>	High	National policy objective

<sup>14</sup> Socio-economics local study area magnitudes are notional based on the principle the offshore wind sector accounts for a low proportion of impact industries employment.

#### Significance of the Effect

234. The significance of the effect for each socio-economics local study area and the socio-economics and tourism and national study area is set out in Table 18.43.

**Table 18.43: Significance of Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Montrose	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Dundee	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Methil	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Burntisland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Rosyth	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Leith	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Support harbours	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Scotland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

235. Across the socio-economics local study area the significance of the impact is deemed to be of overall **moderate to major** beneficial significance. This is significant in EIA terms.
236. For the socio-economics national study area the significance of the impact is deemed to be of overall **moderate to major** beneficial significance. This is significant in EIA terms.

#### Secondary Mitigation and Residual Effect

237. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation is required.

#### Decommissioning Phase

238. Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support employment in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.
239. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts.
240. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four ports identified as being under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.

241. The Technical Report (volume 3, appendix 18.1) notes that the workforce for the decommissioning of the offshore parts of the wind farm is likely to be supported in a similar way to installation and commissioning.
242. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
243. The significance of effects assessed at construction phase for employment in manufacturing, construction, and installation activities are set out in Table 18.37. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial significance across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

#### IMPACT ON GVA (£) SUPPORTED IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING

244. Economic activities undertaken in local and national study areas will support the creation of GVA, a measure of economic output.
245. This impact is applicable to the construction, operation and maintenance, and decommissioning phases.

#### Magnitude – Assessment Approach

246. Magnitude of GVA impacts is assessed against the following baseline conditions:
- share of total GVA across all industries (2019): this gives an indication of the scale of the impact in the context of the receiving environment's GVA output;
  - share of total GVA in impact industries (2019): this gives an indication of the scale of the impact in the context of the receiving environment's impact industries GVA output; and
  - share of total GVA in offshore wind sector (2019): this gives an indication of the scale of the impact in the context of the receiving environment's offshore wind sector GVA output. Data for this receptor is not available below the national level and is therefore excluded for Socio-Economics local study area assessments.
247. The criteria against which magnitude of GVA impacts are assessed and can be found in Table 18.44.

**Table 18.44: Magnitude of GVA Impacts Assessment Criteria**

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

248. This is based on average annual GVA growth of 3.7% across all industries in the UK (see section 18.7.3).



#### Sensitivity – Assessment Approach

249. Sensitivity of GVA impacts is assessed against the following baseline condition:

- policy environment: whether an area's policy position has the aim of making the offshore wind sector part of its approach to economic development. This can be through increasing direct activity in the offshore wind sector, or indirectly through the supply chain. Policy aims to provide the same increase in activity in the renewable energy sector will also be considered as important.

#### Construction Phase

250. Potential expenditure on the following activities associated with the Proposed Development could support GVA in Scottish companies that are directly engaged in the development, manufacturing and supply, and construction/installation supply chain:
- wind turbine manufacturing and supply – blades, nacelle, hub, tower;
  - balance of plant manufacturing and supply – foundations, inter-array cables, OSPs/Offshore converter station platforms, offshore export cables; and
  - construction and installation of wind turbine and balance of plant – wind turbine, foundation, inter-array cables, and other installation.
251. The development, manufacturing and supply, and construction/installation of the Proposed Development could also go on to support GVA indirectly in the wider Scottish supply chain.
252. A maximum 96 month construction period has been assumed throughout.
253. The potential impacts of the Proposed Development on GVA in manufacturing, construction, and installation activities are set out in Table 18.45.

**Table 18.45: Potential Impacts (Baseline Procurement Scenario) of the Proposed Development on GVA in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Socio-economics local study areas	£90 million	£90 million
Socio-economics national study area	£360 million	£450 million

Source: HJA analysis of BVG Associates (2021).

#### Magnitude of Impact

254. GVA impacts have been assessed on the basis of direct, indirect, and induced impacts.

255. On the basis of a maximum 96 month construction period, the impact is assessed as long term. Due to the contract-based nature of manufacturing, construction, and installation activities, the impact is assessed as intermittent.
256. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of construction ports, and the associated supply of a range of inputs and services. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.46

**Table 18.46: Comparison of Construction Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Invergordon	1.4%	7.4%	N/A
Aberdeen	0.5%	1.7%	N/A
Dundee	0.5%	2.4%	N/A
Leith	0.3%	2.5%	N/A
<b>Scotland</b>	0.2%	1.4%	80%

257. The magnitude of impact, and associated justification, for each socio-economics local study area and socio-economics national study area is set out in Table 18.47.

**Table 18.47: Magnitude of Construction Phase GVA Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019) <sup>15</sup>
Invergordon	High (Beneficial) [3]	High [3]	High [3]	High [3]
Aberdeen	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Dundee	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Leith	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

<sup>15</sup> Socio-economics local study area magnitudes are notional based on the principle the offshore wind sector accounts for a low proportion of impact industries employment.

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019) <sup>15</sup>
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the Receptor

258. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.48.

**Table 18.48: Sensitivity of GVA in Activities (Including Supply Chain) Associated with Manufacturing, Construction, and Installation – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Sensitivity of Receptor	Justification
Invergordon	High	National and local policy objective
Aberdeen	High	National and local policy objective
Dundee	High	National and local policy objective
Leith	High	National and local policy objective
Scotland	High	National policy objective

#### Significance of the Effect

259. The significance of the effect for each socio-economics local study area and the socio-economics national study area is set out in Table 18.49.

**Table 18.49: Significance of Construction Phase GVA Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Invergordon	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Aberdeen	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Dundee	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Leith	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Scotland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Alternative Procurement Scenarios

260. The core assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
261. The potential impacts of the Proposed Development on GVA in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.50.

**Table 18.50: Potential Impacts (Enhanced Procurement Scenario) of the Proposed Development on GVA in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Socio-economics local study areas	£160 million	£160 million
Socio-economics national study area	£1,100 million	£1,100 million

Source: HJA analysis of BVG Associates (2021). Figures may not sum due to rounding.

262. Under the Enhanced scenario, there is some increase in the GVA impacts assessed at the Socio-Economics local study area level during construction phase. The quantitative assessment indicates some increases in the magnitude of impacts at this level. However, the changes in GVA impacts are not judged to be substantial enough to justify increasing the assessed significance of effects – also GVA impacts are already assessed as major beneficial for the majority of socio-economics local study areas under the Baseline scenario. Therefore no change in significance of effect is assessed at the socio-economics local study area level.
263. Under the Enhanced scenario, at the socio-economics local study area level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 18.49 above.
264. There is a substantial increase in the GVA impacts assessed under the Enhanced scenario at the socio-economics national study area level during construction phase. The quantitative assessment indicates an increase from moderate to major (beneficial) to major (beneficial) magnitude of impacts at this level. The increase in GVA impacts are judged to be substantial enough to justify increasing the assessed significance of effects.
265. Therefore, under the Enhanced scenario, at the Socio-Economics national study area level the magnitude of the impact is deemed to be high (beneficial) and the sensitivity of the receptor is considered to be high. The effect will be of **major** beneficial significance, which is significant in EIA terms.

#### Secondary Mitigation and Residual Effect

266. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation is required.

#### Operation and Maintenance Phase

267. Potential expenditure on the following activities associated with the Proposed Development could support GVA in Scottish companies that are directly engaged in the operation and maintenance supply chain:
- wind turbine, balance of plant, and transmission maintenance and servicing; and
  - vessel and crew activity.
268. The operation and maintenance of the Proposed Development could also go on to support GVA indirectly in the wider supply chain.
269. A 35 year operation period has been assumed throughout.
270. The potential impacts of the Proposed Development on GVA in operation and maintenance activities at the socio-economics local study area and socio-economics national study area levels are set out in Table 18.51.

**Table 18.51: Potential Impacts of the Proposed Development on GVA in Operation and Maintenance Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Per Annum GVA	Total GVA
Socio-economics local study areas	£34 million	£1,200 million
Socio-economics national study area	£76 million	£2,600 million

Source: HJA analysis of BVG Associates (2021).

#### Magnitude of Impact

271. GVA impacts have been assessed on the basis of direct, indirect, and induced impacts.
272. On the basis of a 35 year operation period, the impact is assessed as long term. Due to the contract-based nature of operation and maintenance activities, the impact is assessed as intermittent.
273. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.52.

**Table 18.52: Comparison of Operation and Maintenance Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Aberdeen	0.2%	0.8%	N/A
Montrose	0.1%	0.7%	N/A
Dundee	0.2%	1.3%	N/A
Methil	0.1%	0.9%	N/A
Burntisland	<0.1%	0.5%	N/A
Rosyth	<0.1%	0.3%	N/A
Leith	0.1%	1.5%	N/A
Support harbours	<0.1%	0.3%	N/A
<b>Scotland</b>	<0.1%	0.4%	16.9%

274. The magnitude of impact, and associated justification, for each Socio-Economics local study area is set out in Table 18.53.

**Table 18.53: Magnitude of Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019) <sup>16</sup>
Aberdeen	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]
Montrose	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]
Dundee	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
Methil	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]
Burntisland	Medium (Beneficial) [2]	Negligible [0]	Medium [2]	High [3]
Rosyth	Low (Beneficial) [1]	Negligible [0]	Low [1]	High [3]

<sup>16</sup> Socio-Economics local study area magnitudes are notional based on the principle the offshore wind sector accounts for a low proportion of impact industries employment.



Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019) <sup>16</sup>
Leith	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
Support harbours	Low (Beneficial) [1]	Negligible [0]	Low [1]	High [3]
<b>Scotland</b>	Low (Beneficial) [1]	Negligible [0]	Low [1]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the Receptor

275. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.54.

**Table 18.54: Sensitivity of GVA in Activities (Including Supply Chain) Associated with Operation and Maintenance – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Sensitivity of Receptor	Justification
Aberdeen	High	National and local policy objective
Montrose	High	National and local policy objective
Dundee	High	National and local policy objective
Methil	High	National and local policy objective
Burntisland	High	National and local policy objective
Rosyth	High	National and local policy objective
Leith	High	National and local policy objective
Support harbours	High	National and local policy objective
Scotland	High	National policy objective

#### Significance of the Effect

276. The significance of the effect for each socio-economics local study area is set out in Table 18.55.

**Table 18.55: Significance of Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Montrose	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Dundee	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Methil	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Burntisland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Rosyth	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Leith	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Support harbours	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
<b>Scotland</b>	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No

#### Secondary Mitigation and Residual Effect

277. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation required.

#### Decommissioning Phase

278. Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support GVA in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.
279. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts.
280. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four ports identified as being under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
281. The Technical Report (volume 3, appendix 18.1) notes that activity associated with decommissioning of the offshore parts of the wind farm is likely to be supported in a similar way to installation and commissioning. However, the scale of activity will be reduced given the intention to leave cables *in situ*.
282. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
283. The significance of effects assessed at construction phase for GVA in manufacturing, construction, and installation activities are set out in Table 18.49. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial

significance across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

#### IMPACT ON ACCESS TO EMPLOYMENT AMONGST LOCAL RESIDENTS IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING

284. The expenditure in both local and national study areas will create a range of employment opportunity for residents within the respective areas. This will include supporting existing workforces within the supply chain as well as the creation of new roles where expansion of the sector is facilitated.
285. This impact is applicable to the construction, operation and maintenance, and decommissioning phases.

##### Magnitude – Assessment Approach

286. Magnitude of employment impacts are assessed against the following baseline conditions:
- economic activity (2019): using the economically active population as a benchmark to assess the scale of impact on the current available workforce; and
  - economically inactive individuals that want a job and unemployed population (2019): comparison with this figure gives an indication of the scale of employment impacts in the context of potentially available workforce within an area.
287. The criteria against which magnitude of employment impacts amongst local residents are assessed and can be found in Table 18.56.

**Table 18.56: Magnitude of employment impacts amongst local residents assessment criteria**

Magnitude of Impact	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market <sup>17</sup>
High	>1.0%	>10%
Medium	0.5%–1.0%	5%–10%
Low	0.1%–0.5%	1%–5%
Negligible	<0.1%	<1%

##### Sensitivity – Assessment Approach

288. Sensitivity of employment impacts are assessed against the following baseline condition:

- policy environment: whether an area's policy position has the aim of providing jobs, skills, education, and training for local residents to work in the offshore wind sector. Policy aims to provide the same opportunity in the renewable energy sector will also be considered as important. General policy aims to provide jobs, skills, education, and training for local residents in any sector will also be considered.

##### Construction Phase

289. Potential expenditure on the following activities associated with the Proposed Development could improve access to employment amongst local residents in activities (including supply chain) associated with development, manufacturing and supply, and construction/installation:
- wind turbine manufacturing and supply – blades, nacelle, hub, tower;
  - balance of plant manufacturing and supply – foundations, inter-array cables, OSPs/Offshore converter station platforms, offshore export cables; and
  - construction and installation of wind turbine and balance of plant – wind turbine, foundation, inter-array cables, and other installation.
290. The development, manufacturing and supply, and construction/installation of the Proposed Development could also go on to support access to employment amongst local residents indirectly in the wider Scottish supply chain.
291. A maximum 96 month construction period has been assumed throughout.
292. The potential impacts of the Proposed Development on access to employment amongst local residents in manufacturing, construction, and installation activities are set out in Table 18.57.

**Table 18.57: Potential Impacts (Baseline Procurement Scenario) of the Proposed Development on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Socio-economics local study areas	1,100	1,100
Socio-economics national study area	4,800	6,000

Source: HJA analysis of BVG Associates (2021).

##### Magnitude of Impact

293. Employment impacts have been assessed on the basis of direct, indirect, and induced impacts.
294. On the basis of a maximum 96 month construction period, the impact is assessed as long term. Due to the contract-based nature of manufacturing, construction, and installation activities, the impact is assessed as intermittent.

<sup>17</sup> Unemployed individuals plus economically inactive individuals that want a job.

295. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of construction ports, and the associated supply of a range of inputs and services.
296. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.58.

**Table 18.58: Comparison of Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Invergordon	0.9%	10.3%
Aberdeen	0.4%	5.0%
Dundee	0.3%	2.8%
Leith	0.2%	2.7%
<b>Scotland</b>	0.2%	1.9%

297. The magnitude of impact, and associated justification, for each socio-economics local study area is set out in Table 18.59.

**Table 18.59: Magnitude of Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Invergordon	High (Beneficial) [3]	Medium [2]	High [3]
Aberdeen	Low (Beneficial) [1]	Low [1]	Low [1]
Dundee	Low (Beneficial) [1]	Low [1]	Low [1]
Leith	Low (Beneficial) [1]	Low [1]	Low [1]
<b>Scotland</b>	Low (Beneficial) [1]	Low [1]	Low [1]

#### Sensitivity of the Receptor

298. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.60.

**Table 18.60: Sensitivity of Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities (Including Supply Chain) – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Sensitivity of Receptor	Justification
Invergordon	High	National and local policy objective
Aberdeen	High	National and regional policy objective
Dundee	High	National and regional policy objective
Leith	High	National and regional policy objective
<b>Scotland</b>	High	National policy objective

#### Significance of the Effect

299. The significance of the effect for each socio-economics local study area is set out in Table 18.61.

**Table 18.61: Significance of Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Invergordon	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Aberdeen	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Dundee	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Leith	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Scotland	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No

#### Alternative Procurement Scenarios

300. The core assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
301. The potential impacts of the Proposed Development on access to employment amongst local residents in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.62.



**Table 18.62: Potential Impacts (Enhanced Procurement Scenario) of the Proposed Development on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Socio-Economics Local Study Areas	1,900	1,900
Socio-Economics National Study Area	14,300	14,500

Source: HJA analysis of BVG Associates (2021). Figures may not sum due to rounding.

302. Under the Enhanced scenario, there is some increase in the employment access impacts assessed at the Socio-Economics local study area level during construction phase. The quantitative assessment indicates some increases in the magnitude of impacts at this level. However, the changes in GVA impacts are not judged to be substantial enough to justify increasing the assessed significance of effects – no change in significance of effect is assessed at the socio-economics local study area level.
303. Therefore, under the Enhanced scenario, at the Socio-Economics local study area level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 18.61 above.
304. There is a substantial increase in the employment impacts assessed under the Enhanced scenario at the socio-economics national study area level during construction phase. The quantitative assessment indicates an increase in the magnitude of impacts at this level. The increase in employment impacts are judged to be substantial enough to justify increasing the assessed significance of effects.
305. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the impact is deemed to be medium beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **moderate** beneficial significance, which is significant in EIA terms.

#### Secondary Mitigation and Residual Effect

306. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation is required.

#### Operation and Maintenance Phase

307. Potential expenditure on the following activities associated with the Proposed Development could improve access to employment amongst local residents in activities associated with operation and maintenance supply chain:
- wind turbine, balance of plant, and transmission maintenance and servicing; and
  - vessel and crew activity.
308. The operation and maintenance of the Proposed Development could also go on to support access to employment amongst local residents indirectly in the wider Scottish supply chain.
309. A 35 year operation period has been assumed throughout.
310. The potential impacts of the Proposed Development on access to employment amongst local residents in operation and maintenance activities at the socio-economics local study area level are set out in Table 18.63.

**Table 18.63: Potential Impacts of the Proposed Development on Access to Employment Amongst Local Residents in Operation And Maintenance Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Socio-economics local study areas	320	11,200
Socio-economics national study area	750	26,100

Source: HJA analysis of BVG Associates (2021).

#### Magnitude of Impact

311. Employment impacts have been assessed on the basis of direct, indirect, and induced impacts.
312. On the basis of a 35 year operation period, the impact is assessed as long term. Due to the ongoing nature operation and maintenance activities, the impact is assessed as continuous.
313. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of operation and maintenance port and harbour facilities, and the associated supply of a range of inputs and services.
314. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.64.

**Table 18.64: Comparison of Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance Activities vs. Relevant Baseline Conditions – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	0.1%	1.5%
Montrose	<0.1%	0.8%
Dundee	<0.1%	0.9%
Methil	<0.1%	0.6%
Burntisland	<0.1%	0.4%
Rosyth	<0.1%	0.2%
Leith	<0.1%	0.8%
Support harbours	<0.1%	0.2%
<b>Scotland</b>	<0.1%	0.3%

315. The magnitude of impact, and associated justification, for each socio-economics local study area is set out in Table 18.65.

**Table 18.65: Magnitude of Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	Low (Beneficial) [1]	Low [1]	Low [1]
Montrose	Negligible [0]	Negligible [0]	Negligible [0]
Dundee	Negligible [0]	Negligible [0]	Negligible [0]
Methil	Negligible [0]	Negligible [0]	Negligible [0]
Burntisland	Negligible [0]	Negligible [0]	Negligible [0]
Rosyth	Negligible [0]	Negligible [0]	Negligible [0]
Leith	Negligible [0]	Negligible [0]	Negligible [0]
Support harbours	Negligible [0]	Negligible [0]	Negligible [0]
<b>Scotland</b>	Negligible [0]	Negligible [0]	Negligible [0]

#### Sensitivity of the Receptor

316. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high – a summary is set out in Table 18.66.

**Table 18.66: Sensitivity of Access to Employment Amongst Local Residents in Operation and Maintenance Activities (Including Supply Chain) – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Sensitivity of Receptor	Justification
Aberdeen	High	National and regional policy objective
Montrose	High	National and regional policy objective
Dundee	High	National and regional policy objective
Methil	High	National, regional, and local policy objective
Burntisland	High	National, regional, and local policy objective
Rosyth	High	National, regional, and local policy objective
Leith	High	National and regional policy objective
Support harbours	High	National, regional, and local policy objective
<b>Scotland</b>	High	National policy objective

#### Significance of the Effect

317. The significance of the effect for each socio-economics local study area is set out in Table 18.67.

**Table 18.67: Significance of Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Montrose	Negligible	High	<b>Minor</b> (Beneficial)	No
Dundee	Negligible	High	<b>Minor</b> (Beneficial)	No
Methil	Negligible	High	<b>Minor</b> (Beneficial)	No
Burntisland	Negligible	High	<b>Minor</b> (Beneficial)	No
Rosyth	Negligible	High	<b>Minor</b> (Beneficial)	No
Leith	Negligible	High	<b>Minor</b> (Beneficial)	No
Smaller ports	Negligible	High	<b>Minor</b> (Beneficial)	No
<b>Scotland</b>	Negligible	High	<b>Minor</b> (Beneficial)	No

#### Secondary Mitigation and Residual Effect

318. The Applicant has committed to enhancement of beneficial effects as per section 18.9. No secondary mitigation is required.

#### Decommissioning Phase

319. Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support access to employment amongst local residents in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.
320. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts.
321. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four ports identified as being under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
322. The Technical Report (volume 3, appendix 18.1) notes that the workforce for the decommissioning of the offshore parts of the wind farm is likely to be supported in a similar way to installation and commissioning. However, the scale of activity will be reduced given the intention to leave cables *in situ*.

323. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
324. The significance of effects assessed at construction phase for access to employment amongst local residents in manufacturing, construction, and installation activities are set out in Table 18.61. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than minor** beneficial significance across socio-economics local study areas and the socio-economics national study area. This is not significant in EIA terms. Invergordon socio-economics local study area is the single exception, where the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial significance. This is not significant in EIA terms.

#### IMPACT ON THE DEMAND FOR HOUSING, ACCOMMODATION AND LOCAL SERVICES

325. The potential for demand will arise through the temporary, medium term or permanent relocation of workers into socio-economics and tourism study areas.
326. Temporary is defined for this assessment as a period generally measured in nights that would typically be accommodated within a hotel, hostel, guesthouse or bed and breakfast type environment. The worker would be expected to travel alone without family.
327. Medium term is defined as a period generally measured in months that would typically be accommodated within rented accommodation. The worker would typically be expected to travel alone without family.
328. Long term or permanent relocation is defined as a period generally measured in years that would result in the worker relocating to the relevant area with a long term housing solution alongside their family.
329. This impact is applicable to the construction, operation and maintenance, and decommissioning phases. The assessment draws on the assessment of employment impacts and discussion of workforce issues as set out in the supporting Technical Report in volume 3, appendix 18.1.

#### Magnitude – Assessment Approach

330. The magnitude of impacts is assessed against the following baseline conditions:
- Potential permanent relocations:
    - total population (2019): comparison with total population to give an indication of the scale of the impact of labour migration on the resident population;
    - total dwellings stock (2019): comparison with overall dwellings stock to give an indication of the scale of the impact of labour migration on the housing market; and
    - total unoccupied dwellings stock (2019): comparison with unoccupied dwellings stock to give an indication of the scale of the impact of labour migration on the housing market.
  - Potential medium term relocations:
    - total population (2019): comparison with total population to give an indication of the scale of the impact of labour migration on the resident population; and
    - total private rented sector (2018): comparison with the scale of the private rented to sector to assess potential effects on local housing market.
  - Potential temporary overnight stays:
    - total number of overnight stays (2019): comparison with total number of overnight stays (in nights per annum) to provide indication of scale relative to existing market; and
    - temporary accommodation capacity (2019): comparison with overnight accommodation capacity to give an indication of the scale of impact of demand from temporary workers.

**Table 18.68: Magnitude of Impacts on the Demand for Housing, Accommodation and Local Services Assessment Criteria**

Magnitude of Impact	Impact as a Share of Receptor Total	Impact as Share of Existing Receptor Capacity
High	>1.0%	>10%
Medium	0.5%–1.0%	5%–10%
Low	0.1%–0.5%	1%–5%
Negligible	<0.1%	<1%

#### Sensitivity – Assessment Approach

331. Sensitivity of employment impacts is assessed against the following baseline conditions:
- policy environment: whether relevant policy environment has the aim of protecting and strengthening local services and the housing market;
  - stakeholder comments on previous experience of impacts arising from effects of contractor workforce; and
  - scale of change of receiving environment in recent history.
- Construction Phase
332. Potential expenditure on activities associated with the construction phase of the Proposed Development could support temporary or medium term labour migration into socio-economics local study areas.
333. A maximum 96 month construction period has been assumed throughout. Although not all impacts will occur for the entire duration of the construction period. Any variation is described and aligns to the anticipated construction programme.
334. Under the baseline scenario it is assumed that procurement decisions are taken in line with current competitiveness of the Scottish offshore wind sector. Employment related to the balance of plant manufacturing and fabrication is assumed to draw on the standing workforces of existing enterprises. This will not have any impact on the demand for housing, accommodation, and local services above current baseline activity.
335. As set out in the Technical Report (volume 3, appendix 18.1), there will be a range of installation and commissioning roles filled by mobile workers, as is typical of all offshore wind projects. Within the baseline scenario these roles will be largely offshore with workers accommodated within SOVs. However, these workers have the potential to give rise to demand for temporary accommodation at the start and end of typical two week shift periods at sea.
336. The potential demand for temporary accommodation, as measured in nights per annum, arising from the Proposed Development are set out in Table 18.69. The maximum estimated number of overnight stays per annum is calculated based on the following assumptions:
- maximum activities within a single Socio-Economics local study area;
  - maximum vessel numbers;
  - vessel crew size (including technician and marine crew);
  - shift arrangements (assumed two week on/off shift pattern);
  - shifts per annum (based on construction programme);



- nights of accommodation required per shift (assumed maximum two nights per shift, including one night before and one night after shift period before travelling to home location); and
  - it is assumed that a minimum of one third of workers would not require local overnight accommodation.
337. Under the baseline scenario the main construction staging port is located outside Scotland. However, other installation and commissioning activities could be located at the ports under consideration. The maximum impact associated with any single port derives from inter-array cable installation. Further impact will be created across the rest of Scotland associated with other installation and commissioning activities.
338. There is no anticipated medium term relocation of workers into any of the socio-economics and tourism study local areas or the socio-economics national study area.
339. No permanent relocation of workers into any of the socio-economics and tourism study areas is anticipated under any of the scenarios during the construction phase.

**Table 18.69: Potential Maximum Demand for Temporary Accommodation, Baseline Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Number of Temporary Overnight Stays (Nights per Annum)	Maximum Number of Medium Term Relocations (Persons)	Maximum Number of Permanent Relocations (Workers)	Maximum Permanent Population Increase (Persons)
Socio-economics local study areas	21,252	N/A	N/A	N/A
Socio-economics national study area	72,293	N/A	N/A	N/A

Source: HJA analysis of BVG Associates (2021).

#### Magnitude of Impact

340. Following a review of the anticipated construction programme the period of maximum temporary accommodation requirement will extend across four to five years. This is assessed as long term.
341. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of construction ports, and the associated supply of a range of inputs and services.
342. The assessment is based on the maximum potential effects as set out at Table 18.31. Impact compared to accommodation capacity is estimated based on average unutilised hotel room occupancy. This is a proxy indicator. As per Table 18.70, there is substantial unutilised capacity across a variety of accommodation types.
343. Impacts are assessed as beneficial, creating demand for temporary accommodation within identified levels of available capacity in each socio-economics local study area and the socio-economics national study area.

**Table 18.70: Magnitude of Temporary Accommodation Demand, Baseline Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Impact Compared to Total Number of Overnight Stays (Nights, 2019)	Impact Compared to Remaining Accommodation Capacity (2019)
Invergordon	0.2%	0.6%
Aberdeen	0.5%	1.1%
Dundee	0.3%	1.0%
Leith	0.1%	0.4%
<b>Scotland</b>	<b>&lt;0.1%</b>	<b>0.3%</b>

344. The magnitude of impact, relative to the baseline for each socio-economics local study area and the socio-economics national study area is set out in Table 18.71.

**Table 18.71: Magnitude of Temporary Accommodation Demand, Baseline Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Overnight Stays	Accommodation Capacity
Invergordon	Low (Beneficial)	Low [1]	Negligible [0]
Aberdeen	Low (Beneficial)	Low [1]	Low [1]
Dundee	Low (Beneficial)	Low [1]	Low [1]
Leith	Negligible (Beneficial)	Low [1]	Negligible [0]
<b>Scotland</b>	<b>Negligible (Beneficial)</b>	<b>Negligible [0]</b>	<b>Negligible [0]</b>

#### Sensitivity of the Receptor

345. The temporary accommodation sector forms part of the wider tourism sector which is a policy priority across each socio-economics local study area and the national socio-economics study area.
346. Occupancy rates of temporary accommodation are subject to substantial variations on an annual basis. Normal fluctuation is substantially greater than the assessed scale of impact.
347. There is excess capacity within the temporary accommodation sector based on annual average and peak month (minimum 10%) occupancy data.
348. Multiple stakeholders indicated that there had been no adverse impacts as a result of previous similar projects with temporary contractor workforces requiring short term accommodation.

349. The sensitivity of impact and associated justification for each socio-economics local study area and the national socio-economics study area is set out in Table 18.72.

**Table 18.72: Sensitivity of Demand for Housing, Accommodation, and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Sensitivity of Receptor	Justification
Invergordon	Medium	National and local policy objective. Substantial capacity to absorb impact. Substantial normal variability in receptor. Stakeholder comments.
Aberdeen	Medium	National and local policy objective. Substantial capacity to absorb impact. Substantial normal variability in receptor. Stakeholder comments.
Dundee	Medium	National and local policy objective. Substantial capacity to absorb impact. Substantial normal variability in receptor. Stakeholder comments.
Leith	Medium	National and local policy objective. Substantial capacity to absorb impact. Substantial normal variability in receptor. Stakeholder comments.
Scotland	Medium	National and local policy objective. Substantial capacity to absorb impact. Substantial normal variability in receptor. Stakeholder comments.

#### Significance of the Effect

350. The significance of the effect for each socio-economics local study area and the national socio-economics study area is set out in Table 18.73.

**Table 18.73: Significance of Construction Phase Employment Impacts on Demand for Housing, Accommodation, and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA terms
Invergordon	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No
Aberdeen	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No
Dundee	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No
Leith	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Scotland	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No

#### Secondary Mitigation and Residual Effect

351. No socio-economics and tourism mitigation is considered necessary because the predicted impact in the absence of mitigation is not significant in EIA terms.

#### Alternative Scenarios

352. The core assessment set out above has been undertaken on the baseline procurement scenario. The same approach has been undertaken to the enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
353. Capturing additional balance of plant manufacturing and fabrication activities is predicated on new investments such as the Nigg Offshore Wind factory and XLCC cable factories at Hunterston. If contracts are placed with ports such as these, this will support/safeguard employment for their workforces that would be expected to be permanently resident in the labour market catchment area of the ports.
354. Under the enhanced scenario a Scottish port is selected as the primary construction staging port. This will have impacts on both temporary and medium term accommodation and housing within the socio-economics local study area of the selected port in addition to the impacts assessed under the baseline scenario.
355. The use of a Scottish construction port will include an estimated maximum 200 workers based on land, requiring accommodation in the vicinity of the selected port, as well as additional temporary demand associated with the shift patterns of wind turbine installation and commissioning and marine crew working offshore. The estimated impact is summarised in Table 18.74.
356. There will also be additional temporary demand for accommodation in the rest of Scotland as a result of further additional installation and commissioning activities being located within the country, but not at the primary construction staging port.

**Table 18.74: Potential Maximum Demand for Temporary Accommodation, Enhanced Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Number of Temporary Overnight Stays (Nights per Annum)	Maximum Number of Medium Term Relocations (Persons)	Maximum Number of Permanent Relocations (Workers)	Maximum Permanent Population Increase (Persons)
Socio-economics local study areas	40,763	N/A	N/A	N/A
Socio-economics national study area	91,803	200	N/A	N/A

Source: HJA analysis of BVG Associates (2021).

357. Assessment of temporary overnight accommodation impacts is undertaken on the same basis as for the baseline scenario.
358. It is assumed medium term accommodation and housing needs will be primarily met through the private rented sector. Based on the construction programme demand for accommodation is likely to be across two periods, the first of 18 to 20 months, the second of 12 to 14 months. It is estimated that workers will either rent or be provided with accommodation arranged by their employer in small groups. A maximum of 50 dwellings within the relevant socio-economics local study area is therefore used for the assessment.

**Table 18.75: Magnitude of Temporary and Medium Term Accommodation and Housing Demand, Enhanced Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Temporary Accommodation Impact Compared to Total Number of Overnight Stays (Nights, 2019)	Temporary Accommodation Impact Compared to Remaining Accommodation Capacity (2019)	Medium Term Housing Impact Compared to Current Private Rental Sector (2018)	Medium Term Population Impact Compared to Baseline Population (2019)
Invergordon	0.4%	1.2%	0.3%	<0.1%
Aberdeen	0.9%	2.1%	0.2%	<0.1%
Dundee	0.6%	2.0%	<0.1%	<0.1%
Leith	0.2%	0.8%	<0.1%	<0.1%
<b>Scotland</b>	<b>0.1%</b>	<b>0.4%</b>	<b>&lt;0.1%</b>	<b>&lt;0.1%</b>

359. The assessment of magnitude is set out in Table 18.76.

**Table 18.76: Magnitude of Temporary Accommodation Demand, Baseline Scenario – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions			
		Temporary Overnight Stays	Temporary Accommodation Capacity	Medium Term Housing	Medium Term Population
Invergordon	Low (Beneficial)	Low [1]	Low [1]	Low [1]	Negligible [0]
Aberdeen	Low (Beneficial)	Medium [2]	Low [1]	Low [1]	Negligible [0]
Dundee	Low (Beneficial)	Medium [2]	Low [1]	Negligible [0]	Negligible [0]
Leith	Negligible (Beneficial)	Low [1]	Negligible [0]	Negligible [0]	Negligible [0]
<b>Scotland</b>	<b>Negligible (Beneficial)</b>	<b>Low [1]</b>	<b>Negligible [0]</b>	<b>Negligible [0]</b>	<b>Negligible [0]</b>

360. The sensitivity of the receptor is unchanged. Table 18.77 sets out the revised assessment of significance under the enhanced scenario.

**Table 18.77: Significance of Construction Phase Employment Impacts on Demand for Housing, Accommodation, and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA terms
Invergordon	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No
Aberdeen	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No
Dundee	Low (Beneficial)	Medium	<b>Minor</b> (Beneficial)	No

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA terms
Leith	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
<b>Scotland</b>	<b>Negligible (Beneficial)</b>	<b>Medium</b>	<b>Negligible to minor</b> (Beneficial)	<b>No</b>

#### Operation and Maintenance Phase

361. Potential expenditure on activities associated with the operation and maintenance phase of the Proposed Development could support labour migration into socio-economics local study areas.
362. A 35 year operations and maintenance period has been assumed throughout.
363. Under each of the scenarios it is assumed that a Scottish port is utilised as a main operations and maintenance base. Some activity will be supported in other locations in Scotland, which could potentially be another of the ports under consideration. However, the scale of any such impact will be lower than if selected as the main port and assessment has been made on the maximum potential impact.
364. As set out in the Technical Report (volume 3, appendix 18.1), theoretically this workforce could live anywhere and travel to the wind farm for two weekly shifts. However, given the long term continuity of the maintenance work there is a high likelihood the workforce will live locally, within the socio-economics local study area identified relevant to each facility under consideration.
365. The Proposed Development will create new roles within operation and maintenance activities. These roles could be filled through a number of routes including:
- local or Scottish workers transitioning from the Oil and Gas or other relevant sectors;
  - new entrants to the sector resulting from existing and planned training activities; and
  - relocations of skilled workers to the selected locality.
366. With a lead time of at least five years before commencement of operations there is time to train a local workforce, with a range of skills and training programmes already in place across Scotland to support potential growth in the offshore wind sector workforce.
367. For the purposes of assessment it is assumed a maximum of 50% of the workforce is recruited from outside the relevant socio-economics local study area. As such relocations will be long term or permanent – it is assumed that any migrating workers would also relocate their families. The assessment of population impact assumes average household size of 2.14 persons (2020, Estimates of Households and Dwellings, National Records of Scotland).
368. Table 18.78 sets out the scale of employment associated with the operation and maintenance phase under the baseline scenario. It is assumed jobs are net additional as the Proposed Development adds to the requirement for operation and maintenance workforce above existing baseline.
369. Other periodic operation and maintenance tasks may require temporary overnight accommodation for crew immediately before and after commencing works offshore. This is estimated at less than 500 nights per annum which is so negligible relative to the scale of existing overnight stays in any of the socio-economics and tourism study areas as to not warrant further consideration.



**Table 18.78: Potential Itinerant Employment Impacts (Baseline UK Supply Scenario) of the Proposed Development on Demand for Housing, Accommodation And Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Estimated Permanent Population Increase	Estimated Permanent Dwelling Requirement
Socio-economics local study areas	270	290	135
Socio-economics national study area	400	430	200

Source: HJA analysis of BVG Associates (2021).

#### Magnitude of Impact

370. On the basis of a 35 year operations and maintenance period, the impact is assessed as long term. Due to the ongoing rolling programme of the majority of operation and maintenance activity the impact is assessed as continuous.
371. As discussed in section 18.3, impacts are considered across multiple socio-economics local study areas linked to the selection of operation and maintenance port and harbour facilities, and the associated supply of a range of inputs and services.
372. Growing the working age population of Scotland through attracting migrant labour is a policy aim of the Scottish Government. As such, the impact is assessed as beneficial.
373. The magnitude of impact, and associated justification, for each socio-economics local study area and the national socio-economics study area is set out in Table 18.79 and Table 18.80.

**Table 18.79: Magnitude of Operation and Maintenance Phase Employment Impacts on Demand for Housing, Accommodation, and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact on Relevant Baseline Conditions		
	Total Population	Dwelling Stock	Unoccupied Dwelling Stock
Aberdeen	0.06%	0.06%	1.2%
Montrose	0.04%	0.04%	0.8%
Dundee	0.04%	0.04%	1.0%
Methil	0.02%	0.02%	0.8%
Burntisland	0.01%	0.01%	0.5%
Rosyth	0.01%	0.01%	0.3%
Leith	0.03%	0.03%	1.1%
Support harbours	0.01%	0.01%	0.2%
<b>Scotland</b>	0.01%	0.01%	0.2%

**Table 18.80: Magnitude of Operational and Maintenance Phase Employment Impacts on Demand for Housing, Accommodation, and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of impact	Magnitude of Impact on Relevant Baseline Conditions		
		Total Population	Dwelling Stock	Unoccupied Dwelling Stock
Aberdeen	Negligible (Beneficial)	Negligible	Negligible	Low
Montrose	Negligible (Beneficial)	Negligible	Negligible	Negligible
Dundee	Negligible (Beneficial)	Negligible	Negligible	Low
Methil	Negligible (Beneficial)	Negligible	Negligible	Negligible
Burntisland	Negligible (Beneficial)	Negligible	Negligible	Negligible
Rosyth	Negligible (Beneficial)	Negligible	Negligible	Negligible
Leith	Negligible (Beneficial)	Negligible	Negligible	Low
Support harbours	Negligible (Beneficial)	Negligible	Negligible	Negligible
<b>Scotland</b>	Negligible (Beneficial)	Negligible	Negligible	Negligible

#### Sensitivity of the Receptor

374. The housing market in each socio-economics local study area has delivered additional dwellings in recent years, with plans for additional housing to meet planned population and economic growth including targeted growth of the offshore wind sector. The receptor is deemed to have a high degree of recoverability.
375. Growing the working age population and attracting migrant labour, as well as delivering additional housing is a policy ambition across local and national socio economics study areas.
376. The sensitivity of impact and associated justification for each socio-economics local study area and the national socio-economics study area is set out in Table 18.81.

**Table 18.81: Sensitivity of Demand for Housing, Accommodation and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Sensitivity of receptor	Justification
Aberdeen	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Montrose	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Dundee	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Methil	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Burntisland	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.

Local Study Area	Sensitivity of receptor	Justification
Rosyth	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Leith	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Support harbours	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.
Scotland	Medium	National and local policy objective. Capacity to absorb impact. Plans in place to increase capacity in receptor.

#### Significance of the Effect

377. The significance of the effect for each socio-economics local study area is set out in Table 18.82.

**Table 18.82: Significance of Operational and Maintenance Phase Employment Impacts on Demand for Housing, Accommodation and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude	Sensitivity	Significance	Significant in EIA terms
Aberdeen	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Montrose	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Dundee	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Methil	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Burntisland	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Rosyth	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Leith	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
Support harbours	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No
<b>Scotland</b>	Negligible (Beneficial)	Medium	<b>Negligible to minor</b> (Beneficial)	No

#### Secondary Mitigation and Residual Effect

378. No socio-economics and tourism mitigation is considered necessary because the predicted impact in the absence of mitigation is not significant in EIA terms.

#### Decommissioning Phase

379. Potential expenditure on decommissioning of wind turbine and balance of plant associated with the Proposed Development could support temporary or medium term labour migration into socio-economics local study areas and the socio-economics national study area.

380. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts.
381. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four ports identified as being under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
382. The Technical Report (volume 3, appendix 18.1) notes that the workforce for the decommissioning of the offshore parts of the wind farm is likely to be sourced in a similar way to installation and commissioning. However, the scale of activity will be reduced given the intention to leave cables *in situ*.
383. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
384. The significance of effects assessed at construction phase for accommodation, housing and local services are set out at Table 18.73. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than minor** beneficial significance across socio-economics local study areas and the socio-economics national study area. This is not significant in EIA terms.

#### IMPACT ON TOURISM AND RECREATION ACTIVITY AND ASSOCIATED ECONOMIC VALUE

385. The Proposed Development has the potential to cause both beneficial and adverse impacts on tourism and recreational activity and associated economic value.
386. This impact is applicable to the construction, operation and maintenance, and decommissioning phases.

#### Tourism and Recreation Related Receptors

387. In assessing any potential adverse effects upon tourism and recreation activity the following receptors have been considered:

- accommodation, housing, and local services.
- seascape, landscape and visual impact (via review of volume 2, chapter 15);
- infrastructure and other users (via review of volume 2, chapter 17); and
- shipping and navigation (via review of volume 2, chapter 13).

#### Accommodation, Housing and Local Services

388. The analysis of effects on accommodation, housing and local services set out above identified minor beneficial effects on temporary (overnight) accommodation during the construction phase, negligible scale of impacts on temporary (overnight) accommodation during the operation and maintenance phase and **no greater than minor** beneficial effects on temporary (overnight) accommodation during the decommissioning phase.
389. On the basis of this review there are no likely significant tourism effects that warrant consideration.

#### Seascape and Visual Impact

390. Volume 2, chapter 15 considers effects on near shore recreational receptors through visual amenity.

391. As per volume 2, chapter 15 (section 15.11) the effects arising as a result of the construction and decommissioning phases of the Proposed Development are assessed as being of the same or lower magnitude and significance on all visual receptors and viewpoints as those arising due to the operation and maintenance phase. However, the residual effects are assessed as being short-term and temporary, occurring during the length of the construction and decommissioning phase, and differing in nature from the operational effects mainly due the influence of the various construction vessels in the seascape, including cable laying vessels closer to shore within the export cable array area corridor, that will not be present or result in effects during the operation and maintenance phase. During the majority of the construction and decommissioning phases the magnitude of change and effects on visual receptors/views will be less than during the operation and maintenance phase, while the wind turbines are not fully constructed. Therefore, a single assessment of seascape and visual impacts during the operation and maintenance phase within the context of tourism receptors is presented to cover all three phases.
392. As per volume 2, chapter 15 (section 15.11) a summary of the significance of effects assessed at each visual receptor relevant to the tourism local study areas is summarised below (daytime only unless otherwise stated).

**Table 18.83: Significance of Effects of the Proposed Development during Operation and Maintenance on Representative Viewpoints**

	Significance of Effects in EIA Terms
<b>Viewpoints</b>	
1 Johnshaven (daytime/night-time)	Not significant
2 Montrose (daytime/night-time)	Not significant
3 St Andrews Cathedral	Not significant
4 Cambo Sands	Not significant
5 Fife Ness (daytime/night-time)	Not significant
6 Crail	Not significant
7 North Berwick Law	Not significant
8 Tantallon Castle	Not significant
9 Tynninghame (Ravensheugh Sands)	Not significant
10 Dunbar (daytime/night-time)	Not significant
11 Skateraw	Not significant
12 Cove	Not significant
13 Fast Castle	Significant ( <b>moderate to major</b> )
14 Tun Law	Significant ( <b>moderate to major</b> )
15 St Abb's Head (daytime/night-time)	Significant ( <b>moderate to major/moderate</b> )
16 Eyemouth	Significant ( <b>moderate</b> )
21 Pencraig Brae	Not significant
22 Ewelair Hill	Not significant
23 Isle of May	Not significant
<b>Country Parks</b>	
John Muir Country Park	Not significant
<b>Major Settlements</b>	
Inverbervie	Not significant
Arbroath	Not significant
Carnoustie	Not significant
Montrose	Not significant
Anstruther	Not significant
Crail	Not significant
Pittenweem	Not significant

	Significance of Effects in EIA Terms
St Andrews	Not significant
Dunbar	Not significant
Eyemouth	Significant ( <b>moderate</b> )
<b>Minor Settlements</b>	
Gourdon	Not significant
Johnshaven	Not significant
Auchmithie	Not significant
East Haven	Not significant
Bilsdean	Not significant
Innerwick	Not significant
Cove	Not significant
St Abbs	Significant ( <b>moderate</b> )
<b>Recreational Route – Berwickshire Coastal Path</b>	
Cockburnspath to Dowlaw	Not significant
Dowlaw to St Abbs	Significant ( <b>moderate to major</b> )
St Abbs to Eyemouth	Significant ( <b>moderate to major</b> )
Eyemouth to Berwick upon Tweed	Not significant
<b>Recreational Route – Fife Coastal Path</b>	
Cambo Sands to Leuchars	Not significant
Elie to Cambo Sands	Not significant
<b>Recreation Route – John Muir Way</b>	
John Muir Way Link	Not significant
Section 10 North Berwick to Dunbar	Not significant
<b>Recreational Route – National Cycle Network Route 1</b>	
Entire route	Not significant
<b>Recreational Route – National Cycle Network Route 76</b>	
Entire route	Not significant

393. As per volume 2, chapter 15 (section 15.11) a summary of the significance of effects on seascape (coastal) character assessed at each Coastal Character Area relevant to the tourism local study area is summarised below (daytime only unless otherwise stated).

**Table 18.84: Significance of Effects (Daytime) on Seascape (Coastal) Character – Summary**

	Significance of Effects in EIA Terms
<b>Coastal Character Area</b>	
SA4 Montrose Bay	Not significant
SA5 Long Craig	Not significant
SA6 Lunan Bay (daytime/night-time)	Not significant
SA7 Land Craig to Deil's Head	Not significant
SA12 St Andrews to Fife Ness (daytime/night-time)	Not significant
SA13 East Neuk of Fife (daytime/night-time)	Not significant
SA17 Eyebroughty to Torness Point (daytime/night-time)	Not significant
SA18 Torness Point to St Abbs Head (daytime/night-time)	Significant ( <b>moderate</b> )/Not significant
SA19 St Abbs Head to Eyemouth (daytime/night-time)	Significant ( <b>moderate to major</b> )/Not significant
SA20 Eyemouth to Berwick upon Tweed (daytime/night-time)	Not significant
North Berwick to Seton Sands Coast SLA (night-time)	Not significant
Tantallon Coast SLA (night-time)	Not significant
Belhaven Bay SLA (night-time)	Not significant



## Significance of Effects in EIA Terms

Berwickshire Coast SLA (night-time)

Significant (**moderate**)

Source: Volume 2, chapter 15, section 15.11.

394. Effects on transport routes are screened out as these are not deemed to be tourism assets.
395. The number of visual receptors and Coastal Character Areas where effects are assessed to be significant in EIA terms is limited. The baseline tourism conditions set out for each impacted local authority in section 18.7.6 indicate that the tourism local study area has a wide and varied tourism sector encompassing many attractions above and beyond the limited, specific locations subject to potential visual impacts. Therefore, the role these specific locations play in the tourism industry of the tourism local study area can be considered as negligible. Overall, the significance of visual impacts at the tourism local study area level is assessed as negligible, which is not significant in EIA terms.
396. Research in 2008 on the economic impacts of wind farms on Scottish tourism found that whilst there is typically a preference among visitors for landscapes without wind farms, offshore wind farms have had negligible and, in some cases, beneficial effects on the tourism industry. The research quotes a study carried out to identify whether a recent experience of a wind farm had altered the likelihood of a visitor returning to Scotland. The study found that 99% of visitors who had seen a wind farm suggested that the experience did not have any effect. Additionally, the research quotes an internet survey which found that few very large farms concentrated in one area have less of an impact on tourism than many small farms spread across the country. To conclude on the various studies undertaken, the report finds that whilst wind farms have an adverse impact on GVA and employment in the tourism industry, the impact is very small.

### Infrastructure and Other Users

397. Volume 2, chapter 17 considers effects on a range of recreational receptors including fishing, sailing and motor cruising, kite surfing, windsurfing, sea/surf kayaking, canoeing, beach users and diving.
398. In all cases, the magnitude of effects is assessed as low, significance **minor**, and no secondary mitigation required. The significance of effects is assessed as below the threshold of EIA significance in all cases.
399. On the basis of the chapter review, there are no significant effects identified in respect to Infrastructure and other users and therefore there are not any likely significant tourism effects that warrant further consideration.

### Shipping and Navigation

400. Volume 2, chapter 13 considers navigational safety and risk for all vessels including recreational vessels, as well as restrictions to port activities and users.
401. The assessment of effects associated with the Proposed Development is in all cases deemed to be **broadly acceptable or tolerable**, which are not significant in EIA terms.
402. The infrastructure and other users EIA chapter finds no issue with the ability of recreational sailing, boating and motor cruising users from undertaking normal activity. The shipping and navigation assessment finds that such users may be discouraged from navigating in and around the identified navigation corridor given the potential presence of commercial traffic, which may be compounded by the overall reduction in sea room for small craft to navigate within the outer Firth of Forth. This impact would be relevant to construction, operation and maintenance and decommissioning phases. However, when subject to further mitigation the assessment finds the significance of any adverse effect is **tolerable**, which is not significant in EIA terms.

403. On the basis of the chapter review there are no likely significant tourism effects that warrant consideration.

### Construction Phase

404. A maximum 96 month construction period has been assumed throughout.

### Magnitude of Impact

405. On the basis of a maximum 96 month construction period, the impact is assessed as long term.
406. Analysis of the topics set out above has found there are no direct or indirect tourism and recreation impacts of significance in EIA terms during construction phase. The magnitude of any adverse tourism effects is therefore assessed as negligible.

### Sensitivity of the Receptor

407. Protecting and growing the tourism sector including marine tourism is a policy objective at local and national levels. The sensitivity of the receptor is therefore considered to be high.

### Significance of the Effect

408. Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor adverse significance**, which is not significant in EIA terms.

### Secondary Mitigation and Residual Effect

409. No tourism and recreation mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the designed in measures outlined in volume 2, chapter 13, section 13.10) is not significant in EIA terms.

### Operation and Maintenance Phase

### Magnitude of Impact

410. On the basis of a 35 year operation and maintenance period, the impact is assessed as long term.
411. Analysis of the topics set out above has found there are no direct or indirect tourism and recreation impacts of significance in EIA terms during construction phase. The magnitude of any adverse tourism effects is therefore assessed as negligible.

### Sensitivity of the Receptor

412. Protecting and growing the tourism sector including marine tourism is a policy objective at local and national levels. The sensitivity of the receptor is therefore considered to be high.

#### Significance of the Effect

413. Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor adverse significance**, which is not significant in EIA terms.

#### Secondary Mitigation and Residual Effect

414. No tourism and recreation mitigation is considered necessary because the likely effect in the absence of further mitigation (beyond the designed in measures outlined in volume 2, chapter 13, section 13.10) is not significant in EIA terms.

#### Decommissioning Phase

415. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts.
416. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four ports identified as being under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
417. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline scenario. The maximum assessed significance relating to tourism is therefore negligible.
418. The assessment is therefore the same as for the construction phase – the significance of the impact is deemed to be of **minor adverse significance**. This is not significant in EIA terms.

## 18.12. CUMULATIVE EFFECTS ASSESSMENT

### 18.12.1. METHODOLOGY

419. The CEA assesses the impact associated with the Proposed Development together with other relevant plans, projects and activities. Cumulative effects are therefore the combined effect of the Proposed Development in combination with the effects from a number of different projects, on the same receptor or resource. Please see volume 1, chapter 6 for detail on CEA methodology.
420. The projects and plans selected as relevant to the CEA presented within this chapter are based upon the results of a screening exercise (see volume 3, appendix 6.4 of the Offshore EIA Report). Volume 3, appendix 6.4 further provides information regarding how information pertaining to other plans and projects is gained and applied to the assessment. Each project or plan has been considered on a case by case basis for screening in or out of this chapter's assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved.
421. In undertaking the CEA for the Proposed Development, it is important to bear in mind that other projects and plans under consideration will have differing potential for proceeding to an operational stage and hence a differing potential to ultimately contribute to a cumulative impact alongside the Proposed Development. Therefore, a tiered approach has been adopted. This provides a framework for placing relative weight upon the potential for each project/plan to be included in the CEA to ultimately be realised, based

upon the project/plan's current stage of maturity and certainty in the projects' parameters. The tiered approach which will be utilised within the Proposed Development CEA employs the following tiers:

- tier 1 assessment – Proposed Development (Berwick Bank Wind Farm offshore) with Berwick Bank Wind Farm onshore;
  - tier 2 assessment – All plans/projects assessed under Tier 1, plus projects which became operational since baseline characterisation, those under construction, those with consent and submitted but not yet determined;
  - tier 3 assessment – All plans/projects assessed under Tier 2, plus those projects with a Scoping Report; and
  - tier 4 assessment – All plans/projects assessed under Tier 3, which are reasonably foreseeable, plus those projects likely to come forward where an Agreement for Lease has been granted.
422. The specific projects scoped into the CEA for socio-economics and tourism, are outlined in Table 18.85. The screening of projects to be considered as part of the CEA has taken into account location (to determine whether there is realistic prospect of overlap with the study areas considered as part of this assessment, taking account of available evidence for schemes) and timing (to determine whether there is realistic prospect of overlap with the construction phase). Any offshore wind farms already within the operation and maintenance phase are assumed to form part of the existing baseline.
423. The range of potential cumulative impacts that are identified and included in Table 18.87 below, is a subset of those considered for the Proposed Development alone. This is because some of the potential impacts identified and assessed for the Proposed Development alone, are localised and temporary in nature. It is considered therefore, that these potential impacts have limited or no potential to interact with similar changes associated with other plans or projects. These have therefore not been taken forward for detailed assessment.
424. Similarly, some of the potential impacts considered within the Proposed Development alone assessment are specific to a particular phase of development (e.g. construction, operation and maintenance or decommissioning). Where the potential for cumulative effects with other plans or projects only have potential to occur where there is spatial or temporal overlap with the Proposed Development during certain phases of development, impacts associated with a certain phase may be omitted from further consideration where no plans or projects have been identified that have the potential for cumulative effects during this period.
425. As described in volume 1, chapter 3, the Applicant is developing an additional export cable grid connection to Blyth, Northumberland (the Cambois connection). Applications for necessary consents (including marine licenses) will be applied for separately. The CEA for the Cambois connection is based on information presented in the Cambois connection Scoping Report (SSER, 2022e), submitted in October 2022. The Cambois connection has been screened into the CEA for offshore socioeconomics and tourism receptors.

**Table 18.85: List of Developments Considered Within the CEA for Socio-Economics and Tourism**

Development	Status	Distance from Proposed Development Array Area (km)	Distance from Offshore Export Cable Routes (km)	Description of Development	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
<b>Tier 1</b>							
Berwick Bank Wind Farm (Onshore aspects)	Application	37.8 km east of the Scottish Borders coastline (St. Abb's Head) and 47.6 km to the East Lothian coastline	0	Onshore electricity cables from the substation to the new Branxton Grid Substation (being developed by SP Energy Networks); and Associated infrastructure, potentially including (but not limited to) landscaping; parking and servicing areas; drainage infrastructure; and temporary and/or permanent new access tracks/road, road and junction alterations/improvements.	Commencing in 2025, for approximately 36 months	2025 – 2060 (approx.)	<p>The construction, operation and maintenance, and decommissioning phases of this project will overlap with the Proposed Development.</p> <p>The following socio-economic local study areas will be impacted:</p> <ul style="list-style-type: none"> <li>• support harbours (operation and maintenance phase only); and</li> <li>• socio-economics national study area (all phases).</li> </ul>
<b>Tier 2</b>							
Inch Cape Offshore Wind Farm	Consented	19	39	Up to 72 wind turbines at a capacity of 1,000 MW.	2023 – 2025	2026 – unknown	<p>The latter stages of the construction phase of this project overlap with the early stage of the construction phase of the Proposed Development. Operation and maintenance phase will also overlap.</p> <p>The following socio-economic local study area is included as being potentially impacted during the construction phase:</p> <ul style="list-style-type: none"> <li>– Dundee: selected as pre-assembly and marshalling base.</li> </ul> <p>The following socio-economic local study area is included as being potentially impacted during the operation and maintenance phase:</p> <ul style="list-style-type: none"> <li>– Montrose: selected as operation and maintenance base.</li> </ul>
Moray Offshore Wind Farm (West)	Consented	203	229	Up to 750 MW wind farm in the Moray Firth.	2023 - 2024	2025 – unknown	<p>The operation and maintenance phase of this project overlaps with the operation and maintenance phase of the Proposed Development.</p> <p>The following socio-economic local study area is included as being potentially impacted during the operation and maintenance phase:</p> <ul style="list-style-type: none"> <li>– Aberdeen: Buckie harbour has been selected as operation and maintenance base. Given the proximity of Buckie harbour to the Aberdeen socio-economics local study area, there is potential for cumulative effects.</li> </ul>
Neart Na Gaoithe Offshore Wind	Under construction	16	15	Up to 75 wind turbines at a capacity of 450 MW.	2022 – 2023	2024 – unknown	<p>The operation and maintenance phase of this project overlaps with the operation and maintenance phase of the Proposed Development.</p> <p>The following socio-economic local study area is included as being potentially impacted during the operation and maintenance phase:</p> <ul style="list-style-type: none"> <li>– Support harbours: Eyemouth harbour has been selected as operation and maintenance base for this project.</li> </ul>



Development	Status	Distance from Proposed Development Array Area (km)	Distance from Offshore Export Cable Routes (km)	Description of Development	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development
<b>Tier 1</b>							
North Connect HVDC Interconnector	PAC agreed	Unknown	Unknown	Installation of Underground HVDC Cables & 1.4GW HVDC Interconnector Cables - Site offshore to the south east of Boddan Peterhead - ENQ/2018/0535	Unknown	Unknown	<p>It is possible that the construction phase of this project will overlap with the construction phase of the Proposed Development. It is also possible that operation and maintenance phases will overlap.</p> <p>The following socio-economic local study areas are included as being potentially impacted during the construction phase:</p> <p>– Aberdeen: given proximity to the Project, there is a possibility of cumulative effects. There is insufficient data on construction GVA impacts to consider the cumulative impacts on this receptor (employment and labour market impacts only to be assessed for cumulative effects).</p> <p>There is insufficient data on operation and maintenance impacts on which to base an assessment of cumulative effects related to this project.</p>
<b>Tier 3</b>							
Cambois connection	Scoping	Unknown	Unknown	Up to four HVDC cables connecting Berwick Bank Wind Farm to the national grid at Blyth, Northumberland. Each cable is up to 170 km in length with associated cable protection of up to 15% of cable length.	Unknown	Unknown	<p>The Applicant is also developing an additional export cable and grid connection to Blyth, Northumberland (hereafter the “Cambois connection”). Applications for the necessary consents (including marine licences) will be applied for separately once further development work has been undertaken on this offshore export corridor. The Cambois connection has been included as a cumulative project for the purposes of the offshore EIA and assessed based on the information presented in the Cambois connection Scoping Report submitted in November 2022 (SSER, 2022e). An EIA and HRA will be prepared to support any relevant consent applications that are required to deliver the Cambois connection which will also consider cumulative effects with the Proposed Development.</p>
<b>Tier 4</b>							
ScotWind	Lease offer	Unknown (Various)	Unknown	17 offshore wind projects with combined capacity of 24.8GW	Unknown	Unknown	Screened out. There is currently insufficient data to make a fair and robust assessment of any overlap and therefore cumulative effects associated with the ScotWind proposals.

#### Maximum Design Scenario

426. The maximum design scenarios identified have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. The cumulative effects presented and assessed in this section have been selected from the details provided in volume 1, chapter 3 of the Offshore EIA Report as well as the information available on other projects and plans (see volume 3, appendix 6.4), to inform a 'maximum design scenario'. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (e.g. different wind turbine layout), to that assessed here, be taken forward in the final design scheme.
427. Table 18.86 sets out which socio-economics local study areas are included in the maximum design scenario based on impact, phase, and data availability.

**Table 18.86: Consideration of Cumulative Projects Based on Socio-Economics Local Study Area, Impact, and Phase**

Cumulative Project	Tier 1 Berwick Bank Wind Farm (Onshore)			Tier 2 Inch Cape Offshore Wind Farm			Moray Offshore Wind Farm (West)			Neart Na Gaoithe Offshore Wind			North Connect HVDC Interconnect.			Tier 3 Cambois Connection		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
<b>Employment</b>																		
Invergordon																		
Aberdeen																		
Montrose																		
Dundee																		
Methil																		
Burntisland																		
Rosyth																		
Leith																		
Support h'brs																		
Scotland																		
<b>GVA</b>																		
Invergordon																		
Aberdeen																		
Montrose																		
Dundee																		
Methil																		
Burntisland																		
Rosyth																		
Leith																		
Support h'brs																		

Cumulative Project	Tier 1 Berwick Bank Wind Farm (Onshore)	Tier 2 Inch Cape Offshore Wind Farm	Moray Offshore Wind Farm (West)	Neart Na Gaoithe Offshore Wind	North Connect HVDC Interconnect.	Tier 3 Cambois Connection
Scotland						
Access to employment amongst local residents						
As per Employment impact						
Demand for housing, accommodation and local services						
As per Employment impact						

Key	
Baseline scenario screened into maximum design scenario	
Baseline and Enhanced scenarios screened into maximum design scenario	
Insufficient data to include in maximum design scenario	
Screened out of maximum design scenario	

428. As per 18.3.3, potential impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development on tourism and recreation are indirect in nature. As per 18.3.3. it is necessary to derive an assessment of significance of cumulative effects on tourism and recreation from the findings elsewhere in the Offshore EIA Report, namely:
- accommodation, housing, and local services.
  - seascape, landscape and visual impact (via review of volume 2, chapter 15);
  - infrastructure and other users (via review of volume 2, chapter 17); and
  - shipping and navigation (via review of volume 2, chapter 13).

**Table 18.87: Maximum Design Scenario Considered for Each Impact as Part the Assessment of Likely Significant Cumulative Effects on Socio-Economics and Tourism**

Potential Cumulative Effect	Phase <sup>18</sup>			Tier	Maximum Design Scenario
	C	O	D		
Impact on employment in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning.	✓	✓	✓	1 – Berwick Bank Wind Farm (Onshore aspects)	<p>In addition to considering the built out of the Proposed Development, this will also consider the build out of project(s) in Tier 1.</p> <p><b>Construction Phase</b></p> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum offshore and Tier 1 employment impacts associated with the Proposed Development to avoid over-stating beneficial effects, and the Enhanced Procurement scenario has been assessed to provide a fair assessment of the realistic maximum offshore and Tier 1 employment impacts and to ensure testing of greatest possible effects.</p> <p><b>Operation and Maintenance Phase</b></p> <p>The Baseline procurement scenario has been assessed for the Proposed Development and Tier 1 project(s). Assessment of this scenario provides a fair assessment of the most realistic employment impacts associated with Proposed Development and Tier 1 project(s). Employment impacts identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p><b>Decommissioning Phase</b></p> <p>The scale and duration of Tier 1 project(s) decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is currently anticipated that onshore infrastructure would be retained and repurposed, subject to review in the future on the basis of likely environmental impacts.</p> <p>Therefore, plausible maximum decommissioning impacts are inferred from construction phase impacts. On this basis the greatest plausible impacts are expected to be significantly lower than those set out for the construction phase under the Baseline and Enhanced scenarios.</p>
				2 – Inch Cape Offshore Wind Farm – Moray Offshore Wind Farm (West) – Neart Na Gaoithe Offshore Wind – North Connect HVDC Interconnector	<p>In addition to considering the build out of the Proposed Development and Tier 1 project(s), this will consider build out of projects in Tiers 2–4 as well.</p> <p><b>Construction Phase</b></p> <p>The Inch Cape Offshore Wind Farm socio-economics EIA includes a 'Low impact' and a 'High impact' scenario for employment impacts associated with the construction phase. To align with the approach adopted for the Proposed Development, the 'Low' Inch Cape impact scenario is included in the Baseline scenario CEA to avoid over-stating beneficial effects. The 'High' Inch Cape impact scenario is included in this chapter's Enhanced scenario CEA to ensure testing of greatest possible effects.</p>
				3 – Cambois connection	<p>The single impact scenario for employment impacts associated with the construction phase provided by other projects is treated as the 'baseline' scenario for each, and has been included in both the Baseline scenario and Enhanced scenario CEA.</p>
				4	<p><b>Operation and Maintenance Phase</b></p> <p>The Baseline procurement scenario has been assessed for Tier 2–4 projects. Assessment of this scenario provides a fair assessment of the most realistic employment impacts associated with Tier 2–4 projects.</p> <p><b>Decommissioning Phase</b></p> <p>Decommissioning impacts for projects in Tiers 2–4 are assessed on the same basis as the Proposed Development.</p>

<sup>18</sup> C = Construction, O = Operation and maintenance, D = Decommissioning



Potential Cumulative Effect	Phase <sup>18</sup>			Tier	Maximum Design Scenario
	C	O	D		
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning.	✓	✓	✓	1 – Berwick Bank Wind Farm (Onshore aspects)	<p>In addition to considering the built out of the Proposed Development, this will also consider the build out of project(s) in Tier 1.</p> <p><b>Construction Phase</b></p> <p>The Baseline procurement scenario has been assessed to provide a fair assessment of the realistic minimum offshore and Tier 1 GVA impacts associated with the Proposed Development to avoid over-stating beneficial effects, and the Enhanced Procurement scenario has been assessed to provide a fair assessment of the realistic maximum offshore and Tier 1 GVA impacts and to ensure testing of greatest possible effects.</p> <p><b>Operation and Maintenance Phase</b></p> <p>The Baseline procurement scenario has been assessed for the Proposed Development and Tier 1 project(s). Assessment of this scenario provides a fair assessment of the most realistic GVA impacts associated with Proposed Development and Tier 1 project(s). GVA impacts identified under the Enhanced procurement scenario do not differ sufficiently to warrant separate assessment.</p> <p><b>Decommissioning Phase</b></p> <p>The scale and duration of Tier 1 project(s) decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is currently anticipated that onshore infrastructure would be retained and repurposed, subject to review in the future on the basis of likely environmental impacts.</p> <p>Therefore, plausible maximum decommissioning impacts are inferred from construction phase impacts. On this basis the greatest plausible impacts are expected to be significantly lower than those set out for the construction phase under the Baseline and Enhanced scenarios.</p>
				2 – Inch Cape Offshore Wind Farm – Moray Offshore Wind Farm (West) – Neart Na Gaoithe Offshore Wind – North Connect HVDC Interconnector	<p>In addition to considering the build out of the Proposed Development and Tier 1 project(s), this will consider build out of projects in Tiers 2–4 as well.</p> <p><b>Construction Phase</b></p> <p>The Inch Cape Offshore Wind Farm socio-economics EIA includes a ‘Low impact’ and a ‘High impact’ scenario for employment impacts associated with the construction phase. To align with the approach adopted for the Proposed Development, the ‘Low’ Inch Cape impact scenario is included in the Baseline scenario CEA to avoid over-stating beneficial effects. The ‘High’ Inch Cape impact scenario is included in this chapter’s Enhanced scenario CEA to ensure testing of greatest possible effects.</p>
				3 – Cambois connection	<p>The single impact scenario for employment impacts associated with the construction phase provided by other projects is treated as the ‘baseline’ scenario for each, and has been included in both the Baseline scenario and Enhanced scenario CEA.</p>
				4	<p><b>Operation and Maintenance Phase</b></p> <p>The Baseline procurement scenario has been assessed for Tier 2–4 projects. Assessment of this scenario provides a fair assessment of the most realistic employment impacts associated with Tier 2–4 projects.</p> <p><b>Decommissioning Phase</b></p> <p>Decommissioning impacts for projects in Tiers 2–4 are assessed on the same basis as the Proposed Development.</p>
Impact on access to employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning.	✓	✓	✓	1 – Berwick Bank Wind Farm (Onshore aspects)	<p><i>As per Impact on employment in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning, above.</i></p>

Potential Cumulative Effect	Phase <sup>18</sup>			Tier	Maximum Design Scenario
	C	O	D		
				2 – Inch Cape Offshore Wind Farm – Moray Offshore Wind Farm (West) – Neart Na Gaoithe Offshore Wind – North Connect HVDC Interconnector 3 – Cambois connection 4	As per <i>Impact on employment in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning</i> , above.
Impact on the demand for housing, accommodation and local services.	✓	✓	✓	1 – Berwick Bank Wind Farm (Onshore aspects)  2 – Inch Cape Offshore Wind Farm – Moray Offshore Wind Farm (West) – Neart Na Gaoithe Offshore Wind – North Connect HVDC Interconnector 3 – Cambois connection 4	<p>This impact could be either beneficial or adverse depending on the scale of effect. Therefore it is appropriate to assess as per <i>Impact on employment in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning</i>, above.</p> <p>This impact could be either beneficial or adverse depending on the scale of effect. Therefore it is appropriate to assess as per <i>Impact on employment in activities (including supply chain) associated with: manufacturing, construction and installation; operation and maintenance; and decommissioning</i>, above.</p>
Impact on tourism and recreation activity and associated economic value.	✓	✓	✓	1/2/3/4 See SLVIA topic chapter Table 15.42 (volume 2, chapter 15)	<p>Potential cumulative impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development on tourism and recreation are indirect in nature. It is necessary to derive an assessment of significance of cumulative effects on tourism and recreation from the findings in the SLVIA topic chapter. The potential visual impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development will be one of the most important considerations when assessing cumulative effects on tourism and recreation. The assessment of cumulative effects on seascape, landscape and visual impact considered in volume 2, chapter 15 assesses some cumulative effects that are significant in EIA terms. Using this assessment to inform a related assessment of cumulative effects on tourism and recreation indicates consideration of potential impacts on seascape, landscape and visual impact should be high priority.</p> <p>Therefore the SLVIA topic chapter (volume 2, chapter 15) will be the primary driver of identifying the cumulative impact of the Proposed Development on tourism and recreation receptors.</p> <p>On this basis, the maximum design scenario for the cumulative impact on tourism and recreation activity and associated economic value draws directly on the CEA maximum design scenario for SLVIA.</p>

## 18.12.2. CUMULATIVE EFFECTS ASSESSMENT

429. An assessment of the likely significance of the cumulative effects of the Proposed Development upon socio-economic and tourism receptors arising from each identified impact is given below.
430. Table 18.85 provides project specific details on which socio-economics local study areas will need to be considered throughout the CEA.
431. Where a project in Tier 2 to 4 has more than one scenario available for consideration, the lower scenario has been incorporated into the Baseline scenario assessment, and the maximum design scenario has been incorporated into the Enhanced scenario assessment.

### IMPACT ON EMPLOYMENT IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING

#### Tier 1

#### Construction phase

432. The potential Tier 1 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.88. This will create opportunities to both safeguard existing employment and facilitate new employment.

**Table 18.88: Potential Tier 1 Cumulative Impacts (Baseline Procurement Scenario) on Employment in Manufacturing, Construction and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Scotland	5,200	7,200

#### Magnitude of impact

433. A comparison of the assessed impact compared to the relevant baseline conditions for the socio-economics national study area is set out in Table 18.89.

**Table 18.89: Comparison of Tier 1 Cumulative Construction Phase Employment Impacts vs. Relevant Baseline Conditions – Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Scotland	0.2%	7.1%	116%

434. The magnitude of Tier 1 cumulative impacts for the socio-economics national study area is set out in Table 18.90.

**Table 18.90: Magnitude of Tier 1 Cumulative Construction Phase Employment Impacts – Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

435. As per section 18.8, the sensitivity of the receptor for each Socio-Economics local study area and the Socio-Economics national study area is assessed as high.

#### Significance of the effect

436. The significance of effect for the socio-economics national study area are set out in Table 18.91.

**Table 18.91: Significance of Tier 1 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) – Socio-Economics National Study Area**

Study area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	Medium (Beneficial)	High	Moderate to major (Beneficial)	Yes

#### Alternative Procurement Scenarios

437. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
438. The potential Tier 1 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.92. An equivalent Enhanced scenario is also available for the Tier 1 project, which has also been adopted here.



**Table 18.92: Potential Tier 1 Cumulative Impacts (Enhanced Procurement Scenario) on Employment in Manufacturing, Construction and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Scotland	14,800	16,100

439. There is a substantial increase in the Tier 1 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level. The increase in employment impacts is judged to be substantial enough to justify increasing the assessed significance of effects.
440. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tier 1 cumulative impact is deemed to be high beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **major beneficial significance**, which is significant in EIA terms.

#### Operation and maintenance phase

441. The potential Tier 1 cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.93. This will create opportunities to both safeguard existing employment and facilitate new employment.

**Table 18.93: Potential Tier 1 Cumulative Impacts on Employment in Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Support harbours	80	2,800
Scotland	750	26,200

#### **Magnitude of impact**

442. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.94.

**Table 18.94: Comparison of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Support harbours <sup>19</sup>	<0.1%	2.2%	N/A
Scotland	<0.1%	1.2%	16%

443. The magnitude of impact for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.95.

**Table 18.95: Magnitude of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Support harbours	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
Scotland	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### **Sensitivity of the receptor**

444. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

#### **Significance of the effect**

445. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.96.

<sup>19</sup> Support harbours (Cockenzie, Dunbar and Eyemouth) are assessed as being subject to 25% of total offshore impacts given their supporting role.

**Table 18.96: Significance of Tier 1 Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Support harbours	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Scotland	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Decommissioning phase

446. Potential expenditure on decommissioning of Tier 1 project(s) could support employment in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.
447. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is currently anticipated that offshore infrastructure would be retained and repurposed, subject to review in the future on the basis of likely environmental impacts.
448. On this basis the magnitude of effects is expected to be significantly lower than those set out for the construction phase under the baseline and enhanced scenarios.
449. The significance of Tier 1 cumulative effects assessed at construction phase for employment in manufacturing, construction, and installation activities are set out in Table 18.91. On the basis of currently available evidence, it is concluded that the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

#### Tiers 2 to 4

#### Construction phase

450. The potential Tiers 2 to 4 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.97. This will create opportunities to both safeguard existing employment and facilitate new employment.

**Table 18.97: Potential Tiers 2 to 4 Cumulative Impacts (Baseline Procurement Scenario) on Employment in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Aberdeen	2,100	2,200
Dundee	2,100	3,400
Scotland	6,700	10,400

#### Magnitude of impact

451. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.98.

**Table 18.98: Comparison of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	0.7%	5.9%	N/A
Dundee	0.6%	23.9%	N/A
Scotland	0.3%	9.0%	148%

452. The magnitude of Tiers 2 to 4 cumulative impacts for the socio-economics national study area is set out in Table 18.99. The share of offshore wind sector employment within the socio-economics local study areas is inferred based on the nationally available data.

**Table 18.99: Magnitude of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Dundee	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

453. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

#### Significance of the effect

454. The significance of effect for the socio-economics local study area(s) and socio-economics national study area are set out in Table 18.100.

**Table 18.100: Significance of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Dundee	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
<b>Scotland</b>	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Alternative Procurement Scenarios

455. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are predicted to be greater.
456. The potential Tiers 2 to 4 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.101. Equivalent 'enhanced' scenarios have also been adopted here, depending on availability by Tiers 2 to 4 projects.

**Table 18.101: Potential Tiers 2 to 4 Cumulative Impacts (Enhanced Procurement Scenario) on Employment in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Aberdeen	2,900	3,000
Dundee	3,400	6,800
<b>Scotland</b>	19,900	22,500

Source: HJA analysis of: Moray West Offshore Windfarm, 2018; and NorthConnect High Voltage Direct Current Cable Infrastructure, 2018

457. Under the Enhanced scenario, there is some increase in the employment impacts assessed at the socio-economics local study area level during construction phase. The quantitative assessment indicates some increase in the magnitude of impacts at this level. However, the change in employment impacts is not judged to be substantial enough to justify increasing the assessed significance of effects – no change in significance of effect is assessed at this local study area level.
458. Therefore, under the Enhanced scenario, at the socio-economics local study area level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 18.100 above.
459. There is a substantial increase in the Tiers 2 to 4 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level. This increases the assessed magnitude of impacts. The increase in employment impacts is judged to be substantial enough to justify increasing the assessed significance of effects.

460. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tiers 2 to 4 cumulative impact is deemed to be high beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **major** beneficial significance, which is significant in EIA terms.

#### Operation and maintenance phase

461. The potential Tiers 2 to 4 cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.102. This will create opportunities to both safeguard existing employment and facilitate new employment.

**Table 18.102: Potential Tiers 2 to 4 Cumulative Impacts on Employment in Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Aberdeen	300	11,900
Montrose	400	13,100
Support harbours	200	4,900
<b>Scotland</b>	1,000	34,800

Source: HJA analysis of: Moray West Offshore Windfarm, 2018; and NorthConnect High Voltage Direct Current Cable Infrastructure, 2018

#### Magnitude of impact

462. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.103.

**Table 18.103: Comparison of Tiers 2 to 4 Cumulative Operation and Maintenance Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	0.1%	1.0%	N/A
Montrose	<0.1%	1.0%	N/A
Support harbours	<0.1%	4.8%	N/A
<b>Scotland</b>	<0.1%	1.6%	22%

463. The magnitude of impact for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.104.



**Table 18.104: Magnitude of Tiers 2 to 4 Cumulative Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]
Montrose	Medium (Beneficial) [2]	Negligible [0]	Medium [2]	High [3]
Support harbours	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]
<b>Scotland</b>	Medium (Beneficial) [2]	Negligible [0]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

464. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area(s) and the socio-economics national study area is assessed as high.

#### Significance of the effect

465. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.105.

**Table 18.105: Significance of Tiers 2 to 4 Operation and Maintenance Phase Employment Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Montrose	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Support harbours	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
<b>Scotland</b>	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Decommissioning phase

466. Potential expenditure on decommissioning activities associated with Tiers 2 to 4 projects could support employment in activities associated with decommissioning in the relevant socio-economics local study areas and socio-economics national study area.
467. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known.
468. On this basis the magnitude of effects is assessed as lower than those set out for the construction phase under the baseline and enhanced scenarios.

469. The significance of effects assessed at construction phase for employment in manufacturing, construction, and installation activities are set out in Table 18.100. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

#### IMPACT ON GVA (£) SUPPORTED IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING

##### Tier 1

##### Construction phase

470. The potential Tier 1 cumulative impacts on GVA in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.106.

**Table 18.106: Potential Tier 1 Cumulative Impacts (Baseline Procurement Scenario) on GVA in Manufacturing, Construction, and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Scotland	£380 million	£535 million

#### Magnitude of impact

471. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.107.

**Table 18.107: Comparison of Tier 1 Cumulative Construction Phase GVA Impacts vs. Relevant Baseline Conditions – Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Scotland	0.3%	1.5%	86%

472. The magnitude of Tier 1 cumulative impacts for the socio-economics national study area is set out in Table 18.108. The share of offshore wind sector GVA within the local study areas is inferred based on the nationally available data.

**Table 18.108: Magnitude of Tier 1 Cumulative Construction Phase GVA Impacts – Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

473. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

#### Significance of the effect

474. The significance of effect for the socio-economics national study area is set out in Table 18.109.

**Table 18.109: Significance of Tier 1 Cumulative Construction Phase GVA Impacts (Baseline Procurement Scenario) – Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	Medium (Beneficial)	High	Moderate to major (Beneficial)	Yes

#### Alternative Procurement Scenarios

475. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are predicted to be greater.

476. The potential Tier 1 cumulative impacts on GVA in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.110. An equivalent Enhanced scenario is also available for the Tier 1 project, which has also been adopted here.

**Table 18.110: Potential Tier 1 Cumulative Impacts (Enhanced Procurement Scenario) on GVA in Manufacturing, Construction and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total (GVA)
Scotland	£1,100 million	£1,200 million

477. There is a substantial increase in the Tier 1 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level. The increase in GVA impacts is substantial enough to bring about an increase in the assessed significance of effects.

478. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tier 1 cumulative impact is deemed to be high beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **major** beneficial significance, which is significant in EIA terms.

#### Operation and maintenance phase

479. The potential Tier 1 cumulative impacts on GVA in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.111.

**Table 18.111: Potential Tier 1 Cumulative Impacts on GVA in Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Support harbours	£10 million	£300 million
Scotland	£80 million	£2,700 million

#### Magnitude of impact

480. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.112.

**Table 18.112: Comparison of Tier 1 Cumulative Operation and Maintenance Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Support harbours <sup>20</sup>	<1.0%	0.3%	N/A
<b>Scotland</b>	<1.0%	0.4%	17%

481. The magnitude of impact, and associated justification, for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.113.

**Table 18.113: Magnitude of Tier 1 Cumulative Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Support harbours	Low (Beneficial) [1]	Negligible [0]	Low [1]	High [3]
<b>Scotland</b>	Low (Beneficial) [1]	Negligible [0]	Low [1]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

482. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area(s) and the socio-economics national study area is assessed as high.

#### Significance of the effect

483. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.114.

**Table 18.114: Significance of Tier 1 Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Support harbours	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No

<sup>20</sup> Support harbours (Cockenzie, Dunbar and Eyemouth) are assessed as being subject to 25% of total offshore impacts given their supporting role.

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No

#### Decommissioning phase

484. Potential expenditure on decommissioning of Tier 1 project(s) could support GVA in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.

485. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is currently anticipated that offshore infrastructure would be retained and repurposed, subject to review in the future on the basis of likely environmental impacts.

486. On this basis the magnitude of effects is predicted to be significantly lower than those set out for the construction phase under the baseline and enhanced scenarios.

487. The significance of Tier 1 cumulative effects assessed at construction phase for GVA in manufacturing, construction, and installation activities are set out in Table 18.109. On the basis of currently available evidence the significance of effects for the decommissioning phase is predicted to be **no greater than moderate** beneficial significance across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

#### Tiers 2 to 4

#### Construction phase

488. The potential Tiers 2 to 4 cumulative impacts on GVA in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.115.

**Table 18.115: Potential Tiers 2 to 4 Cumulative Impacts (Baseline Procurement Scenario) on GVA in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Aberdeen	£150 million	£150 million
Dundee	£190 million	£360 million
<b>Scotland</b>	£500 million	£870 million

Source: HJA analysis of: Moray West Offshore Windfarm, 2018



## Magnitude of impact

489. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.116.

**Table 18.116: Comparison of Tiers 2 to 4 Cumulative Construction Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Aberdeen	0.8%	2.9%	N/A
Dundee	1.1%	5.0%	N/A
<b>Scotland</b>	0.3%	1.9%	111%

490. The magnitude of Tiers 2 to 4 cumulative impacts for the socio-economics national study area is set out in Table 18.117. The share of offshore wind sector GVA within the socio-economics local study areas is inferred based on the nationally available data.

**Table 18.117: Magnitude of Tiers 2 to 4 Cumulative Construction Phase GVA Impacts – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries Employment (2019)	Share of Operation and Maintenance Impact Industries Employment (2019)	Share of Offshore Wind Sector Employment (2019)
Aberdeen	High (Beneficial) [3]	Medium [2]	High [3]	High [3]
Dundee	High (Beneficial) [3]	High [3]	High [3]	High [3]
<b>Scotland</b>	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]

Note: Assigned values from Table 18.23 shown in brackets.

## Sensitivity of the receptor

491. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

## Significance of the effect

492. The significance of effect for the socio-economics local study area(s) and socio-economics national study area are set out in Table 18.118.

**Table 18.118: Significance of Tiers 2 to 4 Cumulative Construction Phase GVA Impacts (Baseline Procurement Scenario) – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Dundee	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
<b>Scotland</b>	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

## Alternative Procurement Scenarios

493. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are predicted to be greater.

494. The potential Tiers 2 to 4 cumulative impacts on GVA in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.119. Equivalent 'enhanced' scenarios have also been adopted here, depending on availability by Tiers 2 to 4 projects.

**Table 18.119: Potential Tiers 2 to 4 Cumulative Impacts (Enhanced Procurement Scenario) on GVA in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Aberdeen	£220 million	£220 million
Dundee	£330 million	£760 million
<b>Scotland</b>	£1,300 million	£1,900 million

Note: Figures may not sum due to rounding.

495. Under the Enhanced scenario, there is some increase in the GVA impacts assessed at the socio-economics local study area level during construction phase. The quantitative assessment indicates some increase in the magnitude of impacts at this level. However, the change in GVA impacts is not judged to be substantial enough to justify increasing the assessed significance of effects – no change in significance of effect is assessed at this local study area level.

496. There is a substantial increase in the Tiers 2 to 4 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level. This increases the assessed magnitude of impacts. The increase in employment impacts is judged to be substantial enough to justify increasing the assessed significance of effects.

497. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tiers 2 to 4 cumulative impact is deemed to be high beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **major** beneficial significance, which is significant in EIA terms.

#### Operation and maintenance phase

498. The potential Tiers 2 to 4 cumulative impacts on GVA in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.120.

**Table 18.120: Potential Tiers 2 to 4 Cumulative Impacts on GVA in Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Maximum Concurrent GVA	Total GVA
Aberdeen	£40 million	£1,200 million
Montrose	£40 million	£1,200 million
Support harbours	£20 million	£600 million
<b>Scotland</b>	£150 million	£3,100 million

#### Magnitude of impact

499. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.121.

**Table 18.121: Comparison of Tiers 2 to 4 Cumulative Operation and Maintenance Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions		
	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Aberdeen	0.3%	1.1%	N/A
Montrose	0.2%	0.8%	N/A
Support harbours	<1.0%	0.8%	N/A
<b>Scotland</b>	0.1%	0.8%	33%

500. The magnitude of impact, and associated justification, for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.122.

**Table 18.122: Magnitude of Tiers 2 to 4 Cumulative Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Aberdeen	Medium (Beneficial) [2]	Low [1]	High [3]	High [3]
Montrose	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]

Study Area	Magnitude			
	Overall	Share of All Industries GVA (2019)	Share of Operation and Maintenance Impact Industries GVA (2019)	Share of Offshore Wind Sector GVA (2019)
Support Harbours	Medium (Beneficial) [2]	Negligible [0]	Medium [2]	High [3]
<b>Scotland</b>	Medium (Beneficial) [2]	Low [1]	Medium [2]	High [3]

*Note: Assigned values from Table 18.23 shown in brackets.*

#### Sensitivity of the receptor

501. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area(s) and the socio-economics national study area is assessed as high.

#### Significance of the effect

502. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.123.

**Table 18.123: Significance of Tiers 2 to 4 Operation and Maintenance Phase GVA Impacts – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Montrose	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
Support harbours	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes
<b>Scotland</b>	Medium (Beneficial)	High	<b>Moderate to major</b> (Beneficial)	Yes

#### Decommissioning phase

503. Potential expenditure on decommissioning activities associated with Tiers 2 to 4 projects could support GVA in activities associated with decommissioning in the relevant socio-economics local study areas and socio-economics national study area.
504. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known.
505. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
506. The significance of effects assessed during the construction phase, for employment in manufacturing, construction, and installation activities, are set out in Table 18.118. On the basis of currently available evidence the significance of effects for decommissioning phase is predicted to be **no greater than moderate** beneficial across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

**IMPACT ON ACCESS TO EMPLOYMENT AMONGST LOCAL RESIDENTS IN ACTIVITIES (INCLUDING SUPPLY CHAIN) ASSOCIATED WITH: MANUFACTURING, CONSTRUCTION AND INSTALLATION; OPERATION AND MAINTENANCE; AND DECOMMISSIONING**

**Tier 1**

**Construction phase**

507. The potential Tier 1 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.124.

**Table 18.124: Potential Tier 1 Cumulative Impacts (Baseline Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Scotland	5,200	7,200

**Magnitude of impact**

508. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.125.

**Table 18.125: Comparison of Tier 1 Cumulative Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities vs. Relevant Baseline Conditions – Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Scotland	0.2%	2.0%

509. The magnitude of Tier 1 cumulative impacts for the Socio-Economics national study area is set out in Table 18.126. The share of offshore wind sector employment within the local study areas is inferred based on the nationally available data.

**Table 18.126: Magnitude of Tier 1 Cumulative Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Scotland	Low (Beneficial) [1]	Low [1]	Low [1]

Note: Assigned values from Table 18.23 shown in brackets.

**Sensitivity of the receptor**

510. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

**Significance of the effect**

511. The significance of effect for the socio-economics national study area is set out in Table 18.127.

**Table 18.127: Significance of Tier 1 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – Socio-Economics National Study Area**

Study area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	Low (Beneficial)	High	Minor to moderate (Beneficial)	No

**Alternative Procurement Scenarios**

512. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are predicted to be greater.

513. The potential Tier 1 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.128. An equivalent Enhanced scenario is also available for the Tier 1 project, which has also been adopted here.

**Table 18.128: Potential Tier 1 Cumulative Impacts (Enhanced Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Scotland	14,800	16,100



514. There is a substantial increase in the Tier 1 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level.
515. Under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tier 1 cumulative impact is deemed to be medium beneficial and the sensitivity of the receptor is considered to be high. The effect will be of **moderate to major** beneficial significance, which is significant in EIA terms.

#### Operation and maintenance phase

516. The potential Tier 1 cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.129.

**Table 18.129: Potential Tier 1 Cumulative Impacts on Access to Employment Amongst Local Residents in Operation And Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Support harbours	80	2,800
Scotland	750	26,000

#### Magnitude of impact

517. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.130.

**Table 18.130: Comparison of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance Activities vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Support harbours	<0.1%	0.2%
Scotland	<0.1%	0.3%

518. The magnitude of impact for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.131.

**Table 18.131: Magnitude of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Support harbours	Negligible [0]	Negligible [0]	Negligible [0]
Scotland	Negligible [0]	Negligible [0]	Negligible [0]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

519. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area(s) and the socio-economics national study area is assessed as high.

#### Significance of the effect

520. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.132.

**Table 18.132: Significance of Tier 1 Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents In Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Support harbours	Negligible	High	Minor (Beneficial)	No
Scotland	Negligible	High	Minor (Beneficial)	No

#### Decommissioning phase

521. Potential expenditure on decommissioning of Tier 1 project(s) could support access to employment amongst local residents in activities associated with decommissioning in the socio-economics local study areas and socio-economics national study area.
522. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is currently anticipated that offshore infrastructure would be retained and repurposed, subject to review in the future on the basis of likely environmental impacts.
523. On this basis the magnitude of effects is predicted to be significantly lower than those set out for the construction phase under the baseline and enhanced scenarios.
524. The significance of Tier 1 cumulative effects assessed at construction phase for access to employment amongst local residents in manufacturing, construction, and installation activities are set out in Table 18.127. On the basis of currently available evidence the significance of effects for the decommissioning

phase will be **no greater than minor** beneficial across socio-economics local study areas and the socio-economics national study area. This is not significant in EIA terms.

Tiers 2 to 4

#### Construction phase

525. The potential Tiers 2 to 4 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Baseline procurement scenario are set out in Table 18.133.

**Table 18.133: Potential Tiers 2 to 4 Cumulative Impacts (Baseline Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Aberdeen	2,100	2,200
Dundee	2,100	3,400
Scotland	6,700	10,400

Source: HJA analysis of: Moray West Offshore Windfarm, 2018; and NorthConnect High Voltage Direct Current Cable Infrastructure, 2018

#### Magnitude of impact

526. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area and the socio-economics national study area is set out in Table 18.134.

**Table 18.134: Comparison of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities vs. Relevant Baseline Conditions – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	0.8%	10.0%
Dundee	0.5%	5.5%
Scotland	0.3%	2.6%

527. The magnitude of Tiers 2 to 4 cumulative impacts for the socio-economics national study area is set out in Table 18.135. The share of offshore wind sector employment within the socio-economics local study areas is inferred based on the nationally available data.

**Table 18.135: Magnitude of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	High (Beneficial) [3]	Medium [2]	High [3]
Dundee	Medium (Beneficial) [2]	Medium [2]	Medium [2]
Scotland	Low (Beneficial) [1]	Low [1]	Low [1]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

528. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area and the socio-economics national study area is assessed as high.

#### Significance of the effect

529. The significance of effect for the socio-economics local study area(s) and socio-economics national study area are set out in Table 18.136.

**Table 18.136: Significance of Tiers 2 to 4 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	High (Beneficial)	High	<b>Major</b> (Beneficial)	Yes
Dundee	Medium (Beneficial)	High	<b>Moderate to Major</b> (Beneficial)	Yes
Scotland	Low (Beneficial)	High	<b>Minor to Moderate</b> (Beneficial)	No

#### Alternative Procurement Scenarios

530. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken to the Enhanced scenario, as defined in the supporting Technical Impact Report (volume 3, appendix 18.1). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are predicted to be greater.
531. The potential Tiers 2 to 4 cumulative impacts on employment in development, manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 18.137. Equivalent 'enhanced' scenarios have also been adopted here, depending on availability by Tiers 2 to 4 projects.

**Table 18.137: Potential Tiers 2 to 4 Cumulative Impacts (Enhanced Procurement Scenario) on Access to Employment Amongst Local Residents in Manufacturing, Construction, and Installation Activities – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Maximum Concurrent (FTE years)	Total (FTE years)
Aberdeen	2,900	3,000
Dundee	3,400	6,800
<b>Scotland</b>	16,900	22,500

Source: HJA analysis of: Moray West Offshore Windfarm, 2018; and NorthConnect High Voltage Direct Current Cable Infrastructure, 2018

532. Under the Enhanced scenario, there is some increase in the employment impacts assessed at the Socio-Economics local study area level during construction phase. The quantitative assessment indicates no change in the magnitude of impacts at this level.
533. Therefore, under the Enhanced scenario, at the socio-economics local study area level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 18.136.
534. There is a substantial increase in the Tiers 2 to 4 cumulative impacts assessed during the construction phase under the Enhanced scenario at the socio-economics national study area level. This increases the assessed magnitude of impacts. The increase in employment impacts is judged to be substantial enough to justify increasing the assessed significance of effects.
535. Therefore, under the Enhanced scenario, at the socio-economics national study area level the magnitude of the Tiers 2 to 4 cumulative impact is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. The effect will be of **moderate to major** beneficial significance, which is significant in EIA terms.

#### Operation and maintenance phase

536. The potential Tiers 2 to 4 cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and socio-economics national study area level are set out in Table 18.138.

**Table 18.138: Potential Tiers 2 to 4 Cumulative Impacts on Access to Employment Amongst Local Residents in Operation And Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Total (FTE years)
Aberdeen	300	11,900
Montrose	400	13,100
Support harbours	200	4,900
<b>Scotland</b>	1,000	34,800

Source: HJA analysis of: Moray West Offshore Windfarm, 2018; and NorthConnect High Voltage Direct Current Cable Infrastructure, 2018

#### Magnitude of impact

Berwick Bank Wind Farm

Environmental Impact Assessment Report

537. A comparison of the assessed impact compared to the relevant baseline conditions for each socio-economics local study area(s) and the socio-economics national study area is set out in Table 18.139.

**Table 18.139: Comparison of Tiers 2 to 4 Cumulative Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents in Operation and Maintenance Activities vs. Relevant Baseline Conditions– by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Relevant Baseline Conditions	
	Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	0.13%	1.6%
Montrose	<0.1%	0.9%
Support harbours	<0.1%	0.4%
<b>Scotland</b>	<1.0%	0.4%

538. The magnitude of impact for each socio-economics local study area(s) and socio-economics national study area is set out in Table 18.140.

**Table 18.140: Magnitude of Tiers 2 to 4 Cumulative Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents In Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study Area	Magnitude of Impact	Magnitude of Impact on Relevant Baseline Conditions	
		Employment Impact as Share of Economically Active Individuals (2019)	Employment Impact as Share of Available Labour Market (2019)
Aberdeen	Low (Beneficial) [1]	Low [1]	Low [1]
Montrose	Negligible [0]	Negligible [0]	Negligible [0]
Support harbours	Negligible [0]	Negligible [0]	Negligible [0]
<b>Scotland</b>	Negligible [0]	Negligible [0]	Negligible [0]

Note: Assigned values from Table 18.23 shown in brackets.

#### Sensitivity of the receptor

539. As per section 18.8, the sensitivity of the receptor for each socio-economics local study area(s) and the socio-economics national study area is assessed as high.

#### Significance of the effect

540. The significance of the effect for each socio-economics local study area(s) and the socio-economics and tourism and national study area is set out in Table 18.141.



**Table 18.141: Significance of Tiers 2 to 4 Operation and Maintenance Phase Employment Impacts on Access to Employment Amongst Local Residents In Operation and Maintenance Activities – by Socio-Economics Local Study Area(s) and Socio-Economics National Study Area**

Study area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Aberdeen	Low (Beneficial)	High	<b>Minor to moderate</b> (Beneficial)	No
Montrose	Negligible	High	<b>Minor</b> (Beneficial)	No
Support harbours	Negligible	High	<b>Minor</b> (Beneficial)	<b>No</b>
<b>Scotland</b>	Negligible	High	<b>Minor</b> (Beneficial)	<b>No</b>

#### Decommissioning phase

541. Potential expenditure on decommissioning activities associated with Tiers 2 to 4 projects could support access to employment amongst local residents in activities associated with decommissioning in the relevant socio-economics local study areas and socio-economics national study area.
542. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known.
543. On this basis the magnitude of effects would be lower than those set out for the construction phase under the baseline and enhanced scenarios.
544. The significance of effects assessed at construction phase for access to employment amongst local residents in manufacturing, construction, and installation activities are set out in Table 18.136. On the basis of currently available evidence the significance of effects for the decommissioning phase will be **no greater than moderate** beneficial across socio-economics local study areas and the socio-economics national study area. This is significant in EIA terms.

### **IMPACT ON THE DEMAND FOR HOUSING, ACCOMMODATION AND LOCAL SERVICES**

#### Tier 1

#### Construction phase

545. Within the construction phase there is no cumulative effect on the relevant socio-economics local study areas, with the offshore support facility locations separate to the onshore socio-economics local study area. There are therefore no socio-economics local study area cumulative effects on the demand for housing, accommodation and local services within Tier 1 beyond those identified for the offshore and onshore elements in their own right.
546. There are potential cumulative effects within the socio-economics national study area (Scotland).

#### **Magnitude of impact**

547. For offshore elements this is focused on the demand for temporary (overnight) accommodation related to the installation and commissioning offshore energy generation and transmission assets, with the majority of work taking place offshore, and only short term stays associated with the start and finish of two week shift patterns. Onshore construction activities have the potential to create demand for medium term

accommodation demand, although the majority of the workforce is anticipated to be drawn from within a c60 minute drive time. There is therefore limited overlap of potential impact.

548. The impacts will be contained within the anticipated maximum 96 month construction period. They are therefore assessed as long term.
549. The magnitude of impact within the socio-economics national study area when considering the baseline procurement scenario remains negligible when considering the cumulative effects of Tier 1 schemes.

#### **Sensitivity of the receptor**

550. The growth of the tourism sector which includes the temporary accommodation sector is a policy priority nationally. The analysis of baseline has identified significant remaining capacity across the hotel, guest house/B&B and hostel accommodation sector in terms of both peak month and average annual occupancy. The scale of demand arising from the Tier 1 cumulative effects is below normal levels of demand variation over the period 2017-19.
551. The sensitivity of the receptor is assessed as medium.

#### **Significance of the effect**

552. With magnitude assessed as negligible and sensitivity as medium, the significance is assessed as **minor** beneficial across the socio-economics national study area. This is not significant in EIA terms.

#### Alternative Procurement Scenarios

553. The enhanced procurement scenario gives rise to increased demand for temporary (overnight) and medium term (e.g. private rented sector) accommodation during the construction phase. As set out above, there is no cumulative effect on the relevant socio-economics local study areas, with the offshore support port locations separate to the onshore impact areas. There are therefore no local study area cumulative effects on the demand for housing, accommodation and local services within Tier 1 beyond those identified for the offshore and onshore elements in their own right.
554. There are cumulative effects within the socio-economics national study area. The magnitude of cumulative effects remains negligible, the sensitivity of the receptor is medium. The significance of effects is assessed as **minor** beneficial. This is not significant in EIA terms.

#### Operation and maintenance phase

555. During the operation and maintenance phase there are potential cumulative effects within the support harbours socio-economics local study area, which also forms the socio-economics local study area within the consideration of the onshore assessment. There are also potential cumulative effects within the socio-economics national study area.

#### **Magnitude of impact**

556. The majority of the workforce is expected to be drawn from the local area for both offshore and onshore operation and maintenance activity within the support harbours socio-economics local study area. However, as this is adding to the existing levels of offshore wind operation and maintenance activity, employment roles are considered fully additional. There is sufficient lead in time, as well as a range of skills and training programmes in place in order to train local residents to fill available roles. Notwithstanding, there is the potential for some relocations into the local and national study area to meet the additional demand for workers. A maximum of 50% of additional workforce relocating from outside the relevant study area is assumed within both offshore and onshore analysis to test the potential impacts. This is adopted as a high estimate to test the potential impact on existing capacity.

557. The total predicted scale of impact is set out in Table 18.142.

**Table 18.142: Potential Cumulative Effects of Tier 1 Schemes on Demand for Housing, Accommodation and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Study Area	Per Annum (FTE years)	Estimated Permanent Population Increase	Estimated Permanent Dwelling Requirement
Support harbours	320	390	180
Scotland	750	1,330	620

Source: HJA analysis of BVG Associates (2021).

558. The magnitude of potential cumulative effects relative to the baseline environment are set out at Table 18.143.

**Table 18.143: Magnitude of Potential Operation and Maintenance Phase Cumulative Impacts on Demand for Housing, Accommodation and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of Impact on Relevant Baseline Conditions		
	Total Population	Dwelling Stock	Unoccupied Dwelling Stock
Support harbours	<0.1%	<0.1%	1.0%
Scotland	<0.1%	<0.1%	0.7%

559. On the basis of this assessment the magnitude of impacts is assessed as low within the support harbours Socio-Economics local study area and negligible within the socio-economics national study area. This is summarised in Table 18.144.

**Table 18.144: Magnitude of Potential Operation and Maintenance Phase Cumulative Impacts on Demand for Housing, Accommodation and Local Services – by Socio-Economics Local Study Areas and Socio-Economics National Study Area**

Local Study Area	Magnitude of impact	Magnitude of Impact on Relevant Baseline Conditions		
		Total Population	Dwelling Stock	Unoccupied Dwelling Stock
Support Harbours	Negligible (Beneficial)	Negligible	Negligible	Low
Scotland	Negligible (Beneficial)	Negligible	Negligible	Negligible

560. The impacts will span the 35 year operation and maintenance phase and are therefore assessed as long term.

#### Sensitivity of the receptor

561. The housing market in each study area has delivered additional dwellings in recent years, with plans for additional housing to meet planned population and economic growth including targeted growth of the offshore wind sector. The receptor is deemed to have a high degree of recoverability.
562. Growing the working age population and attracting migrant labour, as well as delivering additional housing is a policy ambition across socio-economics local study areas and the socio-economics national study area.
563. Demand for housing, accommodation and local services is deemed to be of negligible vulnerability, high recoverability, and high value. The sensitivity of the receptor is therefore considered to be medium.

#### Significance of the effect

564. With magnitude assessed as negligible and sensitivity as medium, the significance is assessed as **minor** beneficial across the support harbours socio-economics local study area. This is not significant in EIA terms.
565. With magnitude assessed as negligible and sensitivity as medium, the significance is assessed as **minor** beneficial across the socio-economics national study area. This is not significant in EIA terms.

#### Decommissioning phase

566. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. For offshore elements is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts. For onshore elements there is potential for the facilities to be retained and upgraded for other uses.
567. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four port locations identified as under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
568. As noted above, within the construction phase there is no cumulative effect on the relevant socio-economics local study areas, with the offshore support facility locations separate to the onshore impact areas. There are therefore no local study area cumulative effects on the demand for housing, accommodation and local services within Tier 1 beyond those identified for the offshore and onshore elements in their own right. This would apply equally to the decommissioning phase.
569. There may be cumulative effects within the socio-economics national study area. The significance of cumulative effects assessed at construction phase for accommodation, housing and local services is minor beneficial. On the basis of currently available evidence the significance of effects for decommissioning phase will be **no greater than minor** beneficial and therefore not significant in EIA terms across socio-economics national study areas.

Tiers 2 to 4

#### Construction phase

##### **Magnitude of impact**

570. Whilst detailed information is not available it is reasonable to assume that there is potential for cumulative impact on the demand for temporary (overnight) accommodation, primarily within the Aberdeen and Dundee socio-economics local study areas. This would be dependent on the selection of either Aberdeen or Dundee as the primary construction support facility for the Proposed Development.
571. The magnitude of impact assessed for the Proposed Development is low in both relevant socio-economics local study areas.
572. Based on available data the potential magnitude of potential cumulative effects is assessed as low to medium across the Aberdeen and Dundee socio-economics local study areas. The upper end of this range is based on construction phases for more than two projects coinciding.
573. The magnitude of potential cumulative effects is assessed as negligible across the socio-economics national study area.

##### **Sensitivity of the receptor**

574. The sensitivity of the receptor is assessed as medium. The growth of the tourism sector which includes the temporary accommodation sector is a policy priority nationally. The analysis of baseline data has identified significant remaining capacity across the hotel, guest house/B&B and hostel accommodation sector in terms of both peak month and average annual occupancy. The scale of demand arising from the Tier 1 cumulative effects is below normal levels of demand variation over the period 2017-19.

##### **Significance of the effect**

575. Across the Aberdeen and Dundee socio-economics local study areas the magnitude of impact is assessed as low to medium beneficial. The sensitivity of the receptor is assessed as medium. The significance of potential cumulative effects is assessed as minor to moderate. Due to the current plans for construction phases not to overlap and the capacity within the temporary accommodation sector the overall significance of cumulative effects is assessed as **minor** beneficial. This is not significant in EIA terms.
576. With magnitude assessed as negligible and sensitivity as medium, the significance is assessed as **minor** beneficial across the socio-economics national study area. This is not significant in EIA terms.

#### Alternative Procurement Scenarios

577. The assessment of effects under the enhanced procurement scenario for the Proposed Development found no change to the significance of effects relative to the baseline scenario. The assessment of potential cumulative effects is therefore unchanged.

#### Operation and maintenance phase

578. There is potential overlap with the Aberdeen, Dundee, and support harbours socio-economics local study areas. The timing of the operation and maintenance phases is anticipated to coincide.

##### **Magnitude of impact**

579. The magnitude of impact arising from the Proposed Development has been assessed as negligible.

580. On the basis of the information available the magnitude of cumulative impact is also assessed as negligible.

##### **Sensitivity of the receptor**

581. The housing market in each study area has delivered additional dwellings in recent years, with plans for additional housing to meet planned population and economic growth including targeted growth of the offshore wind sector. The receptor is deemed to have a high degree of recoverability.
582. Growing the working age population and attracting migrant labour, as well as delivering additional housing is a policy ambition across local and national socio economics study areas.
583. Demand for housing, accommodation and local services is deemed to be of negligible vulnerability, high recoverability and high value. The sensitivity of the receptor is therefore considered to be medium.

##### **Significance of the effect**

584. With magnitude assessed as negligible and sensitivity assessed as medium the significance of potential cumulative effects is assessed as **minor** beneficial across the Aberdeen, Dundee, and support harbours socio-economics local study areas and socio economics national study area. This is not significant in EIA terms.

#### Decommissioning phase

585. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. For offshore elements is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts. For onshore elements there is potential for the facilities to be retained and upgraded for other uses.
586. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland. Given the need for large lay down areas the four port locations identified as under consideration for the construction phase would have the greatest potential to accommodate decommissioning activities based on current circumstances.
587. If Aberdeen or Dundee were selected as a decommissioning port, there may be cumulative effects with the Tier 2 to 4 schemes. However timing is uncertain and no data is available on which to make an assessment.
588. The significance of cumulative effects assessed at construction phase for accommodation, housing and local services is minor beneficial. On the basis of currently available evidence the significance of effects for decommissioning phase will be **no greater than minor** beneficial and therefore not significant in EIA terms across socio-economics local or national study areas.

#### **IMPACT ON TOURISM AND RECREATION ACTIVITY AND ASSOCIATED ECONOMIC VALUE**

589. In assessing any potential adverse cumulative effects upon tourism and recreation activity the following receptors have been considered:
- accommodation, housing, and local services.
  - seascape, landscape and visual impact (via review of volume 2, chapter 15);
  - infrastructure and other users (via review of volume 2, chapter 17); and
  - shipping and navigation (via review of volume 2, chapter 13).



#### Accommodation, Housing and Local Services

590. The analysis of cumulative effects on accommodation, housing and local services set out above identified minor beneficial effects on temporary (overnight) accommodation during the construction, operation and maintenance, and decommissioning phases.
591. On the basis of this review there are no likely significant cumulative effects on tourism and recreation that warrant consideration.

#### Seascape and Visual Impact

592. Volume 2, chapter 15 considers effects on near shore recreational receptors through visual amenity.
593. As per volume 2, chapter 15 (section 15.12) a summary of the cumulative effects assessed, relevant to the tourism local study area, is summarised below (daytime only).

**Table 18.145: Cumulative Effects of the Proposed Development on Representative Viewpoints**

Cumulative Effects – Significance in EIA Terms	
Viewpoints	
1 Johnshaven	Not significant
2 Montrose	Not significant
3 St Andrews Cathedral	Not significant
4 Cambo Sands	Not significant
5 Fife Ness	Not significant
6 Crail	Not significant
7 North Berwick Law	Not significant
8 Tantallon Castle	Not significant
9 Tynninghame (Ravensheugh Sands)	Not significant
10 Dunbar	Not significant
11 Skateraw	Whole project: Significant (moderate to major) Additional contribution of the Proposed Development: Not significant
12 Cove	Not significant
13 Fast Castle	Not significant
14 Tun Law	Not significant
15 St Abb's Head	Not significant
16 Eyemouth	Not significant
21 Pencraig Brae	Not significant
22 Ewelair Hill	Not significant
23 Isle of May	Not significant
Onshore LVIA Viewpoint 1: A1, Skateraw Junction	Whole project: Significant (moderate to major)
Onshore LVIA Viewpoint 2: Innerwick	Whole project: Significant (moderate to major) Additional contribution of the Proposed Development: Not significant
Onshore LVIA Viewpoint 3: John Muir Way near Skateraw Harbour	Whole project: Significant (moderate to major) Additional contribution of the Proposed Development: Not significant
Onshore LVIA Viewpoint 4: Minor Road near Thornton	Not significant
Onshore LVIA Viewpoint 5: Minor Road near Thurston	Whole project: Significant (moderate) Additional contribution of the Proposed Development: Not significant
Onshore LVIA Viewpoint 6: Blackcastle Hill	Whole project: Significant (moderate) Additional contribution of the Proposed Development: Not significant
Major Settlements	
Inverbervie	Not significant

Cumulative Effects – Significance in EIA Terms	
Arbroath	Not significant
Carnoustie	Not significant
Montrose	Not significant
Anstruther	Not significant
Crail	Not significant
Pittenweem	Not significant
St Andrews	Not significant
Dunbar	Not significant
Eyemouth	Not significant
Recreational Route – Berwickshire Coastal Path	
Cockburnspath to Dowlaw	Not significant
Dowlaw to St Abbs	Not significant
St Abbs to Eyemouth	Not significant
Eyemouth to Berwick upon Tweed	Not significant
Recreational Route – Fife Coastal Path	
Cambo Sands to Leuchars	Not significant
Elie to Cambo Sands	Not significant
Recreation Route – John Muir Way	
John Muir Way Link	Majority of route: Not significant ( <b>minor to moderate</b> ) Short section between Torness and Chapel Point (Skateraw): Significant ( <b>moderate to major</b> )
Section 10 North Berwick to Dunbar	Not significant
Recreational Route – National Cycle Network Route 1	
Entire route	Not significant
Recreational Route – National Cycle Network Route 76	
Entire route	Majority of route: Not significant (none or minor) Short 4km section between Dunbar Cement Works, Skateraw and Thorntonloch: Significant ( <b>major/moderate</b> )

Source: Volume 2, chapter 15, section 15.12.

594. As per volume 2, chapter 15 (section 15.11) a summary of the significance of cumulative effects on seascape (coastal) character assessed at each Coastal Character Area relevant to the tourism local study area is summarised below (daytime only).

**Table 18.146: Significance of Effects (Daytime) on Seascape (Coastal) Character – Summary**

Cumulative Effects – Significance in EIA Terms	
Coastal Character Area	
SA4 Montrose Bay	Not significant
SA5 Long Craig	Not significant
SA6 Lunan Bay	Not significant
SA7 Land Craig to Deil's Head	Not significant
SA12 St Andrews to Fife Ness	Not significant
SA13 East Neuk of Fife	Not significant
SA17 Eyebroughty to Torness Point	Not significant
SA18 Torness Point to St Abbs Head	Not significant
SA19 St Abbs Head to Eyemouth	Not significant

SA20 Eyemouth to Berwick upon Tweed	Not significant
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Source: Volume 2, chapter 15, section 15.12.

595. As per volume 2, chapter 15 (section 15.11) a summary of the significance of cumulative effects on landscapes relevant to the tourism local study area is summarised below (daytime only).

**Table 18.147: Significance of Effects (Daytime) on Seascape (Coastal) Character – Summary**

Cumulative Effects – Significance in EIA Terms	
<b>Designated Landscapes</b>	
Dunbar to Barns Ness SLA	Whole project: Significant ( <b>moderate</b> ) locally to the onshore substation from closest parts of SLA at Skateraw Harbour; and Not significant ( <b>moderate</b> ) on the wider SLA.
Thorntonloch to Dunglass Coast SLA	Whole project: Significant ( <b>moderate</b> ) locally to the onshore substation from closest parts of SLA at Skateraw/Torness/Thorntonloch.
Doonhill to Chesters SLA	Whole project: Not significant ( <b>moderate</b> )
Monymut to Blackcastle SLA	Whole project: Not significant ( <b>moderate</b> )
<b>Landscape Character</b>	
Coastal Margins LCT (277) (Lothians)	Whole project: Significant ( <b>major/moderate</b> ) Additional contribution of the Proposed Development: Not significant ( <b>minor</b> )

596. As per section 18.11, effects on transport routes are screened out of the cumulative effects assessment.
597. According to volume 2, chapter 15 the main tier 1 cumulative effect during construction is likely to occur in views experienced by walkers along a short section of the John Muir Way between Torness and Chapel Point, and visitors to Skateraw Harbour, where the construction of the landfall will be visible at close range in combination with the construction of the Berwick Bank Wind Farm offshore and the construction of the onshore substation in inland views, which are assessed to be significant, although temporary during construction. Tier 1 cumulative effects during operation and maintenance will only occur on receptors near the onshore substation, where both the operational onshore substation and the Berwick Bank Wind Farm offshore may be visible and influence views and perceived character. These tier 1 cumulative effects have been found to be significant when considering the whole project effect (i.e. the total effect of the onshore substation and the Berwick Bank Wind Farm offshore) on localised parts of the landscape around the onshore substation where there are also sea views to the Proposed Development, including geographically contained areas of the Coastal Margins LCT (277) (Lothians), Dunbar to Barns Ness Coast SLA and Thorntonloch to Dinglass Coast SLA, and a number of representative viewpoints in these areas at Skateraw, John Muir Link and Innerwick. When considered as an additional contribution of the Proposed Development (Berwick Bank Wind Farm Offshore), the cumulative effect is however assessed as not significant, fundamentally because the Proposed Development will have a limited influence on the perceived character and views at such long range offshore and results in a low level of additional cumulative change over and above the effect of Berwick Bank onshore substation alone
598. As per volume 2, chapter 15 the contribution of the Proposed Development to the cumulative effect with tier 2 projects on views and perceived character of the South-East Aberdeenshire, Fife and Angus coastline of the SLVIA study area has been found to be medium-low to low with effects not significant, due to it being visually recessive at long distance offshore partially behind Inch Cape and Seagreen 1A, with Inch Cape contributing most to the overall cumulative effect on the views given its closer proximity and larger vertical scale. The cumulative effect of the Proposed Development with tier 2 projects is also assessed as medium-

low and not significant in views and perceived character of the East Lothian coast and progressively reduces to low in views from the Scottish Borders coastline, fundamentally because tier 2 projects (Inch Cape and Seagreen 1A in particular) will have a limited influence on views, as they are located at very long range (over approximately 56km and 69km respectively from the coast), and Inch Cape is located behind Neart na Gaoithe, such that there is very limited additional cumulative change or interaction of the Proposed Development with these tier 2 projects.

599. The Proposed Development will have limited interaction with tier 3 projects and it is assessed that the Proposed Development will result in no additional significant cumulative seascape, landscape and visual effects with scoping stage projects included in the tier 3 assessment.
600. Tier 4 projects are screened out of the cumulative effects assessment in volume 2, chapter 15.
601. Overall the number of visual receptors and designated landscapes where cumulative effects are assessed to be significant in EIA terms is limited. The baseline tourism conditions set out for each impacted local authority in section 18.7.6 indicate that the tourism local study area has a wide and varied tourism sector encompassing many attractions above and beyond the limited, specific locations subject to potential cumulative visual impacts. Therefore, the role these specific locations play in the tourism industry of the tourism local study area can be considered as negligible. Overall, the significance of cumulative visual impacts at the tourism local study area level is assessed as negligible.
602. Research in 2008 on the economic impacts of wind farms on Scottish tourism found that whilst there is typically a preference among visitors for landscapes without wind farms, offshore wind farms have had a negligible and, in some cases, beneficial effects on the tourism industry. The research quotes a study carried out to identify whether a recent experience of a wind farm had altered the likelihood of a visitor returning to Scotland. The study found that 99% of visitors who had seen a wind farm suggested that the experience did not have any effect. Additionally, the research quotes an internet survey found that few very large farms concentrated in one area have less of an impact on tourism than many small farms spread across the country. To conclude on the various studies undertaken, the report finds that whilst wind farms have an adverse impact on GVA and employment in the tourism industry, the impact is very small.

#### Infrastructure and Other Users

603. Volume 2, chapter 17 considers cumulative effects on a range of recreational receptors including fishing, sailing and motor cruising, kite surfing, windsurfing, sea/surf kayaking, canoeing, beach users and diving.
604. In all cases, the magnitude of effects is assessed as low, significance **minor**, and no secondary mitigation is required. The cumulative effects are assessed as below the threshold of EIA significance in all cases.
605. On the basis of the chapter review, there are negligible likely significant tourism effects that warrant consideration.

#### Shipping and Navigation

606. Volume 2, chapter 13 considers navigational safety and risk for all vessels including recreational vessels, as well as restrictions to port activities and users.
607. The assessment of cumulative effects associated with the Proposed Development is in all cases deemed to be **broadly acceptable or tolerable**, which are not significant in EIA terms.
608. On the basis of the chapter review there are no likely significant tourism effects that warrant consideration

## Tier 1

### Construction phase

#### **Magnitude of impact**

609. Analysis of the topics set out above has found there are direct or indirect tourism and recreation cumulative impacts of negligible significance in EIA terms during construction phase. The magnitude of any adverse tourism and recreation effects is therefore assessed as negligible.

#### **Sensitivity of the receptor**

610. Protecting and growing the tourism sector including marine tourism is a policy objective at local and national level. The sensitivity of the receptor is therefore considered to be high.

#### **Significance of the effect**

611. Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor** adverse significance, which is not significant in EIA terms.

### Operation and maintenance phase

#### **Magnitude of Impact**

612. Analysis of the topics set out above has found there are direct or indirect tourism and recreation cumulative impacts of negligible significance in EIA terms during operation and maintenance phase. The magnitude of any adverse tourism and recreation cumulative effects is therefore assessed as negligible.

#### **Sensitivity of the receptor**

613. Protecting and growing the tourism sector including marine tourism is a policy objective at local and national level. The sensitivity of the receptor is therefore considered to be high.

#### **Significance of the effect**

614. Overall, the magnitude of the impact is deemed to be negligible and the sensitivity of the receptor is considered to be high. The cumulative effect will, therefore, be of **minor** adverse significance, which is not significant in EIA terms.

### Decommissioning phase

615. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. For offshore elements is anticipated that all structures above seabed level will be removed, but subject to review in the future on the basis of likely environmental impacts. For onshore elements there is potential for the facilities to be retained and upgraded for other uses.
616. As noted above, within the construction phase cumulative effects are not significant in EIA terms. There are therefore no tourism local study area cumulative effects on tourism and recreation activity and associated economic value within Tier 1 beyond those identified for the offshore and onshore elements in their own right. This would apply equally to the decommissioning phase.

## Tiers 2 to 4

### Construction phase

617. The Tier 2 to 4 schemes have potential for cumulative effects. The degree of overlap with construction periods is uncertain and may not occur.

#### **Magnitude of impact**

618. The cumulative assessment of relevant impacts for Tier 2–4 projects (where available) is set out below:
- Inch Cape Offshore Wind Farm: tourism effects were scoped out altogether after agreement by MS-LOT.
  - Moray Offshore Wind Farm (West): the magnitude of the two relevant impacts considered by the Moray West EIA were negligible adverse and low adverse respectively.
  - Neart Na Gaoithe Offshore Wind: the magnitude of cumulative impacts on tourism were assessed 'marginally' higher than the project itself as a result of changes to the 'aggregate visual effect'. The sensitivity of the tourism receptor was described as negligible, and the overall significance of cumulative effects on tourism was assessed as not significant in EIA terms.
619. These effects capture different elements of the tourism and recreation sector. All are considered negligible to low.
620. There is no data to assess the potential effects to tourism and recreation activity from other Tier 2 to 4 schemes.

#### **Sensitivity of the receptor**

621. Protecting and growing the tourism sector including marine tourism is a policy objective at local and national level. The sensitivity of the receptor is therefore considered to be high.

#### **Significance of the effect**

622. The magnitude of cumulative effects is assessed as ranging from negligible to low adverse. The sensitivity of the receptor is assessed as high. The significance of potential cumulative effects across the tourism local study area is assessed as **minor** adverse. This is not significant in EIA terms.

### Operation and maintenance phase

623. No cumulative effects are assessed as a result of the Proposed Development.
624. No data is available on the potential impact of the Tier 2 to 4 schemes on tourism and recreation activity during the operation and maintenance phase. Therefore it is not possible to undertake any form of cumulative assessment.

### Decommissioning phase

625. The scale and duration of decommissioning activity is uncertain. The exact approach to decommissioning is not yet confirmed as best practice at the time is not currently known. It is therefore not possible to determine whether and how decommissioning phase activities will impact on tourism receptors.
626. No plans are in place to consider potential locations for decommissioning support ports. It is not known if this will be located in Scotland.



627. The conclusion of assessment that is possible for the Proposed Development is that effects would be less than or equal to those stated for the construction phase. Therefore any effects will not be significant in EIA terms.

### 18.13. TRANSBOUNDARY EFFECTS

628. Potential transboundary socio-economics and tourism impacts upon European Economic Area (EEA) states may arise through the purchase of project components, equipment and the sourcing of labour from companies based outside the UK. The sourcing of materials and labour from EEA states is assumed to provide beneficial effects to the economies of EEA states and so the consideration of measures envisaged to reduce or eliminate such effects is not relevant in the context of transboundary impacts.
629. The following considerations have been made with respect to linkages between socio-economics and tourism and transboundary effects assessed in other topic chapters:
- volume 2, chapter 12: Commercial Fisheries: no likely significant transboundary effects.
  - volume 2, chapter 13: Shipping and Navigation: on the basis of cumulative effects assessment, any likely transboundary effects are assessed as being of tolerable significance, which is not significant in EIA terms.
  - volume 2, chapter 15 Seascape and Visual Resources: no likely significant transboundary effects.
  - volume 2, chapter 17: Infrastructure and Other Users: no likely significant transboundary effects.
630. Since relevant topic chapters have assessed no significant transboundary effects, it is likely that no related transboundary effects on socio-economics and tourism receptors will be significant in EIA terms.
631. The screening of transboundary impacts therefore identifies no potential for significant effects with regards to socio-economics and tourism.

### 18.14. INTER-RELATED EFFECTS

632. A description of the likely inter-related effects arising from the Proposed Development on socio-economics and tourism receptors is provided in volume 3, appendix 20 of the Offshore EIA Report.
633. For socio-economics and tourism receptors, all potential impacts have been considered within the inter-related assessment. Table 18.148 lists the inter-related effects (project lifetime effects) that are predicted to arise during the construction, operation and maintenance phase, and decommissioning of the Proposed Development and also the inter-related effects (receptor-led effects) that are predicted to arise for socio-economics and tourism receptors.

**Table 18.148: Summary of Likely Significant Inter-Related Effects for Socio-Economics and Tourism from Individual Effects Occurring across the Construction, Operation and Maintenance and Decommissioning Phases of the Proposed Development and from Multiple Effects Interacting Across all Phases (Receptor-led Effects)**

Description of Impact	Phase C O D	Likely Significant Inter-Related Effects
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓ ✓ ✓	<p>There will be beneficial effects on employment throughout the construction and installation; operation and maintenance; and decommissioning phases.</p> <p>Employment effects will occur within different locations and sectors of the economy, and at different times and intensities. In combination the Proposed Development will provide a long term employment stimulus.</p> <p>These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phases. Therefore, these inter-related effects would not be significant in EIA terms.</p>
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓ ✓ ✓	<p>There will be beneficial effects on GVA throughout the construction and installation; operation and maintenance; and decommissioning phases.</p> <p>GVA effects will occur within different locations and sectors of the economy, and at different times and intensities. In combination the Proposed Development will provide a long term GVA stimulus.</p> <p>These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phases. Therefore, these inter-related effects would not be significant in EIA terms.</p>
Impact on access to employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓ ✓ ✓	<p>There will be beneficial effects on the potential for local workers to access employment throughout the construction and installation; operation and maintenance; and decommissioning phases.</p> <p>Access to employment effects will occur within different locations, sectors of the economy, and labour market – and at different times and intensities. In combination the Proposed Development will provide a long term employment stimulus.</p> <p>These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phases. Therefore, these inter-related effects would not be significant in EIA terms.</p>
Impact on the demand for housing, accommodation and local services.	✓ ✓ ✓	<p>Direct and indirect employment generated during the construction phase could increase demand for housing, accommodation and local services during the construction phase. Direct and indirect employment generated during the operation and maintenance phase could increase demand for housing, accommodation and local services. It is anticipated that due to the long term nature of the operation and maintenance requirements the workforce will live locally. Some of those may relocate to the area requiring long term/permanent housing within the vicinity of the operation and maintenance port. Direct and indirect employment generated during the decommissioning phase could increase demand for housing, accommodation and local services during the</p>

Description of Impact	Phase C O D	Likely Significant Inter-Related Effects
		<p>decommissioning phase. The housing and accommodation needs of employment during each phase differs.</p> <p>These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phases. Therefore, these inter-related effects would not be significant in EIA terms.</p>
Impact on tourism and recreation activity and associated economic value.	✓ ✓ ✓	<p>Potential impacts of the construction, operation and maintenance, and decommissioning of the Proposed Development on tourism and recreation are indirect in nature.</p> <p>These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual phases. Therefore, these inter-related effects would not be significant in EIA terms.</p>
<b>Receptor Led Effects</b>		
By definition, most of the impacts outlined above will interact. The exception is the tourism and recreation receptor, which is primarily determined on the basis of visual impact.		
Expenditure associated with the Proposed Development will result in employment and GVA impacts – these impacts are the basis for assessing potential socio-economic effects. Therefore the interactions between socio-economic receptors are inherent in the assessments of these impacts. It is not possible for socio-economic impacts to act together in a manner that multiplies effects.		
Employment-related receptors are likely to interact with the demand for housing, accommodation and local services receptor. In the event that employment impacts were to increase or decrease, effects related to the demand for housing, accommodation and local services would similarly increase or decrease. The same applies to GVA impacts. However, these impacts would not act together in a manner that multiplies effects.		
With regards to tourism and recreation, it is possible that interactions with the impact on demand for housing, accommodation, and local services will occur. This interaction is considered appropriately within the assessment of impacts on tourism and recreation, and is assessed to be not significant in EIA terms.		
Any impacts assessed as being significant in EIA terms are beneficial in nature.		
These inter-related effects as described above are not anticipated to interact in such a way as to result in combined effects of greater significance than the assessments presented for each individual receptor. Therefore, these inter-related effects would not be significant in EIA terms.		

## 18.15. SUMMARY OF IMPACT, MITIGATION MEASURES, LIKELY SIGNIFICANT EFFECTS AND MONITORING

634. Information on socio-economics and tourism receptors was collected through desktop review for the following socio-economics local study areas and socio-economics national study area:

- Invergordon socio-economics local study area;
- Aberdeen socio-economics local study area;
- Montrose socio-economics local study area;
- Dundee socio-economics local study area;

- Methil socio-economics local study area;
- Burntisland socio-economics local study area;
- Rosyth socio-economics local study area;
- Leith socio-economics local study area;
- support harbours socio-economics local study area; and
- Scotland socio-economics national study area.

635. Table 18.153 to Table 18.162 present a summary of the potential impacts, mitigation measures and residual effects in respect to socio-economics and tourism. The impacts assessed include:

- impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning;
- impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning;
- impact on access to employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning;
- impact on the demand for housing, accommodation and local services; and
- impact on tourism and recreation activity and associated economic value.

636. Overall – as per Table 18.149 and Table 18.50 – it is concluded that if a Scottish port/harbour facility is selected as a base for the construction, operation and maintenance, or decommissioning phases:

#### Socio-economics local study areas:

- the beneficial impact on employment in that location is likely to be significant in EIA terms;
- the beneficial impact on GVA in that location is likely to be significant in EIA terms – the two exceptions are in the case of Rosyth and support harbours socio-economics local study areas during the operation and maintenance phase;
- the beneficial impact on access to employment amongst local residents is likely to be not significant in EIA terms – the exception is Invergordon during the construction phase, where impacts could be significant in EIA terms; and
- the beneficial impact on demand for housing, accommodation and local services is likely to be not significant in EIA terms.

#### Socio-economics national study area

- the beneficial impact on employment in Scotland is likely to be significant in EIA terms;
- the beneficial impact on GVA in Scotland is likely to be significant in EIA terms during the construction phase, not significant in EIA terms during the operation and maintenance phase, and significant in EIA terms during the decommissioning phase;
- the beneficial impact on access to employment amongst Scottish residents is likely to be not significant in EIA terms – the exception is under the alternative scenario, where the effect has the potential to be significant in EIA terms during the construction phase; and
- the beneficial impact on demand for housing, accommodation and services in Scotland is likely to be not significant in EIA terms.

637. The impact on tourism and recreation activity and its associated economic value has been assessed as no greater than minor adverse. This is not significant in EIA terms. There is potential for minor adverse impacts within the local study area covering the local authority areas of East Lothian and Scottish Borders due to low level disruption to recreational users of the sea. The detailed assessments of disruption to activities have not found these to be substantial. This is not significant in EIA terms.

638. Table 18.154 to Table 18.163 present a summary of the likely significant socio-economic effects in EIA terms.

**Table 18.149: Significance of Effects on Employment, GVA, Access to Employment, and Demand for Housing, Accommodation and Local Services – Socio-Economics Local Study Areas, Baseline Scenario**

Impact	Employment				GVA				Access to Employment				Demand for Housing, Accom. and Local Services			
	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major
<b>Construction</b>																
Invergordon																
Aberdeen																
Dundee																
Leith																
<b>Operation and Maintenance</b>																
Aberdeen																
Montrose																
Dundee																
Methil																
Burntisland																
Rosyth																
Leith																
Support harbours																
<b>Decommissioning</b>																
Invergordon																
Aberdeen																
Dundee																
Leith																
<b>Key</b>																
Significant in EIA terms																
Not significant in EIA terms																



**Table 18.150: Significance of Effects on Employment, GVA, Access to Employment, and Demand for Housing, Accommodation and Local Services – Socio-Economics National Study Area, Baseline and Enhanced Scenarios**

Study Area	Employment				GVA				Access to Employment				Demand for Housing, Accom. and Services			
Significance	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major
<b>Construction</b>																
Scotland – Baseline Scenario																
Scotland – Alternative Scenario																
<b>Operation and Maintenance</b>																
Scotland – Baseline Scenario																
<b>Decommissioning</b>																
Scotland – Baseline Scenario																
<b>Key</b>																
Significant in EIA terms																
Not significant in EIA terms																

639. The cumulative effects assessed are the same as those included in the Proposed Development impact assessment.
640. Overall – as per Table 18.151 and Table 18.152 - it is concluded that if a Scottish port/harbour facility is selected as a base for the construction, operation and maintenance, or decommissioning phases:
- the beneficial cumulative impact on employment is likely to be significant in EIA terms;
  - the beneficial cumulative impact on GVA is likely to be significant in EIA terms with the exception of the support harbours socio-economics local study area under Tier 1 conditions;
  - the beneficial cumulative impact on access to employment amongst local residents is likely to be not significant in EIA terms under Tier 1 conditions. However, consideration of Tier 2 projects increases the beneficial effects on access to employment amongst local residents to being significant in EIA terms during the construction phase; and
  - the beneficial cumulative impact on demand for housing, accommodation and services in Scotland is likely to be not significant in EIA terms.

**Table 18.151: Cumulative Effects on Employment, GVA, Access to Employment, and Demand for Housing, Accommodation and Local Services – Socio-Economics Local Study Areas, Baseline Scenario**

Impact	Employment				GVA				Access to Employment				Demand for Housing, Accom. and Services			
Significance	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major
<b>Tier 1</b>																
<b>Operation and Maintenance</b>																
Support harbours (Tier 1)																
<b>Tiers 2–4</b>																
<b>Construction</b>																
Aberdeen (Tiers 2–3)																
Dundee (Tiers 2–3)																
<b>Operation and Maintenance</b>																
Aberdeen (Tiers 2–3)																
Montrose (Tiers 2–3)																
Support harbours (Tiers 2–3)																
<b>Decommissioning</b>																
Aberdeen (Tiers 2–3)																
Dundee (Tiers 2–3)																
<b>Key</b>																
Significant in EIA terms																
Not significant in EIA terms																

**Table 18.152: Cumulative Effects on Employment, GVA, Access to Employment, and Demand for Housing, Accommodation and Local Services – Socio-Economics National Study Area, Baseline and Enhanced Scenarios**

Study Area	Employment				GVA				Access to Employment				Demand for Housing, Accom. and Services			
Significance	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major	Negligible	Minor	Moderate	Major
<b>Tier 1</b>																
<b>Construction</b>																
Scotland – Baseline Scenario																
Scotland – Alternative Scenario																
<b>Operation and Maintenance</b>																
Scotland – Baseline Scenario																

Study Area	Employment				GVA				Access to Employment				Demand for Housing, Accom. and Services			
Decommissioning																
Scotland – Baseline Scenario																
Tiers 2–4																
Construction																
Scotland – Baseline Scenario																
Scotland – Alternative Scenario																
Operation and Maintenance																
Scotland – Baseline Scenario																
Decommissioning																
Scotland – Baseline Scenario																
Key																
Significant in EIA terms																
Not significant in EIA terms																

641. The cumulative impact on tourism and recreation activity and its associated economic value has been assessed as no greater than minor adverse. This is not significant in EIA terms.
642. Table 18.164 to Table 18.169 present a summary of the potential cumulative effects.
643. No potential transboundary impacts have been identified in regard to effects of the Proposed Development.

Table 18.153: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring – Invergordon Socio-Economics Local Study Area

Description of Impact	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
	C	O	D						
Baseline Procurement Scenario									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>21</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>22</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>23</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	✓			Low (Beneficial)	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario									
No change									

<sup>21</sup> Inferred from magnitude of construction phase

<sup>22</sup> Inferred from magnitude of construction phase

<sup>23</sup> Inferred from magnitude of construction phase



**Table 18.154: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Aberdeen Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per "Significance of Effect"	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per "Significance of Effect"	N/A
			✓	≤ Medium (Beneficial) <sup>24</sup>	High	≤ Moderate (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per "Significance of Effect"	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per "Significance of Effect"	N/A
			✓	≤ Medium (Beneficial) <sup>25</sup>	High	≤ Moderate (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per "Significance of Effect"	N/A
		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per "Significance of Effect"	N/A
			✓	≤ Low (Beneficial) <sup>26</sup>	High	≤ Minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on the demand for housing, accommodation and local services.	✓			Low (Beneficial)	Medium	Minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
			✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

<sup>24</sup> Inferred from magnitude of construction phase

<sup>25</sup> Inferred from magnitude of construction phase

<sup>26</sup> Inferred from magnitude of construction phase

**Table 18.155: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Montrose Socio-Economics Local Study Area**

Description of Impact	Phase C	O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

**Table 18.156: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Dundee Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>27</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>28</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Low (Beneficial) <sup>29</sup>	High	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	✓			Low (Beneficial)	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

<sup>27</sup> Inferred from magnitude of construction phase

<sup>28</sup> Inferred from magnitude of construction phase

<sup>29</sup> Inferred from magnitude of construction phase



**Table 18.157: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Methil Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

Table 18.158: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Burntisland Socio-Economics Local Study Area

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
Baseline Procurement Scenario									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario									
No change									

**Table 18.159: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Rosyth Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
No change									



**Table 18.160: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Leith Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>30</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial) <sup>31</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Low (Beneficial) <sup>32</sup>	High	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	✓			Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	Negligible	Medium	Negligible	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

<sup>30</sup> Inferred from magnitude of construction phase

<sup>31</sup> Inferred from magnitude of construction phase

<sup>32</sup> Inferred from magnitude of construction phase

**Table 18.161: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Support Harbours Socio-Economics Local Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.		✓		Negligible	High	Minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
Impact on the demand for housing, accommodation and local services.		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
<b>Enhanced Procurement Scenario</b>									
No change									

**Table 18.162: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Socio-Economics National Study Area**

Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
<b>Baseline Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Medium (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Low (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	≤ Low (Beneficial)	High	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	✓			Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓		Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓	Negligible	Medium	Negligible (Beneficial)	N/A	As per “Significance of Effect”	N/A
<b>Enhanced Procurement Scenario</b>									
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation;	✓			Low (Beneficial)	High	Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A



Description of Impact	C	Phase O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
operation and maintenance; and decommissioning.									
Impact on the demand for housing, accommodation and local services.	✓			Negligible	Medium	Negligible to minor (Beneficial)	N/A	As per "Significance of Effect"	N/A

Table 18.163: Summary of Likely Significant Environmental Effects, Mitigation and Monitoring– Tourism Local Study Area

Description of Impact	Phase C	O	D	Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
Baseline Procurement Scenario									
Impact on tourism and recreation activity and associated economic value.	✓	✓	✓	Negligible	High	Minor (Adverse)	N/A	As per "Significance of Effect"	N/A

Table 18.164: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Aberdeen Socio-Economics Local Study Area

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (Beneficial) <sup>33</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (Beneficial) <sup>34</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (beneficial) <sup>35</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	Tier 1				N/A					
		✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A

<sup>33</sup> Inferred from magnitude of construction phase

<sup>34</sup> Inferred from magnitude of construction phase

<sup>35</sup> Inferred from magnitude of construction phase

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
				✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per "Significance of Effect"	N/A
Enhanced Procurement Scenario										
No change										

Table 18.165: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Montrose Socio-Economics Local Study Area

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
	Tiers 2–4		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	Tier 1				N/A					
	Tiers 2–4		✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario										
No change										

Table 18.166: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Dundee Socio-Economics Local Study Area

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4			✓	≤ Medium (Beneficial) <sup>36</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4			✓	≤ Medium (Beneficial) <sup>37</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1				N/A					
		✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4			✓	≤ Medium (beneficial) <sup>38</sup>	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	Tier 1				N/A					
		✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4			✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario										
No change										

<sup>36</sup> Inferred from magnitude of construction phase

<sup>37</sup> Inferred from magnitude of construction phase

<sup>38</sup> Inferred from magnitude of construction phase



**Table 18.167: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Support Harbours Socio-Economics Local Study Area**

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1		✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	Tier 1		✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4		✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario										
No change										

**Table 18.168: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Socio-Economics National Study Area**

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Low (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Medium (Beneficial)	High	≤ Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Low (Beneficial)	High	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Negligible	High	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	≤ Low (Beneficial)	High	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Tier 1	✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A	

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Impact on the demand for housing, accommodation and local services.	Tiers 2–4		✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
		✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
			✓		Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
				✓	Negligible	Medium	≤ Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
Enhanced Procurement Scenario										
Impact on employment in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on GVA (£) supported in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			High (Beneficial)	High	Major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on access to Employment amongst local residents in activities (including supply chain) associated with: manufacturing, construction, and installation; operation and maintenance; and decommissioning.	Tier 1	✓			Low (Beneficial)	High	Moderate (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	As per “Significance of Effect”	N/A
Impact on the demand for housing, accommodation and local services.	Tier 1	✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓			Negligible	Medium	Minor (Beneficial)	N/A	As per “Significance of Effect”	N/A

Table 18.169: Summary of Likely Significant Cumulative Environment Effects, Mitigation and Monitoring – Tourism Local Study Area

Description of Impact	Cumulative Effects Assessment Tier	Phase			Magnitude of Impact	Sensitivity of Receptor	Significance of Effect	Additional Measures	Residual Effect	Proposed Monitoring
		C	O	D						
Baseline Procurement Scenario										
Impact on tourism and recreation activity and associated economic value.	Tier 1	✓	✓	✓	Negligible	High	Minor (Adverse)	N/A	As per “Significance of Effect”	N/A
	Tiers 2–4	✓	✓	✓	Negligible	High	Minor (Adverse)	N/A	As per “Significance of Effect”	N/A



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