

BERWICK BANK WIND FARM ONSHORE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Chapter 13: Socio-economics

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FIGURES

Figure 13.1 Socio-economics Study Area

13. SOCIO-ECONOMICS

13.1. INTRODUCTION

1. This chapter of the Onshore Environmental Impact Assessment (EIA) Report presents the assessment of the likely significant effects (as per the “EIA Regulations”) of the Berwick Bank Wind Farm onshore infrastructure which is the subject of this application (hereafter referred to as “the Proposed Development”) on socio-economics receptors. Specifically, this chapter considers the potential impacts of the Proposed Development landward of Mean Low Water Springs (MLWS) during the construction, operation and maintenance, and decommissioning phases.
2. “Likely Significant Effect (LSE)” is a term used in both the “EIA Regulations” and the Habitat Regulations. Reference to LSE in this Onshore EIA Report refers to “LSE” as used by the “EIA Regulations”.
3. In the case of a socio-economics EIA, there is a complexity with the impacts associated with offshore and intertidal activities primarily manifesting onshore. This chapter 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:
 - **onshore**: if physical infrastructure and civil works are located onshore, any resulting impacts are categorised as onshore; and
 - **offshore**: if physical infrastructure and civil works are located offshore, any resulting impacts are categorised as offshore.
4. The potential impacts from the construction, operation and maintenance, and decommissioning of the offshore components of the Project on socio-economics and tourism receptors are considered as part of the Offshore EIA Report. The potential impacts of both the onshore and offshore components on socio-economic receptors are considered cumulatively as part of the Tier 1 cumulative effects assessment (CEA) (section 13.12).
5. This chapter summarises information contained within Volume 4, Appendix 13.1, Appendix 13.2 (BVG Associates, 2021), Appendix 13.3, and Appendix 13.4.

13.2. PURPOSE OF THIS CHAPTER

6. The primary purpose of the Onshore EIA Report is outlined in Volume 1, Chapter 1. It is intended that the Onshore EIA Report will provide East Lothian Council (ELC), statutory and non-statutory stakeholders, with sufficient information to determine the likely significant effects of the Proposed Development on socio-economics receptors.
7. In particular, this socio-economics Onshore EIA Report chapter:
 - presents existing socio-economics baseline conditions established from desk studies, and consultation with stakeholders;
 - identifies any assumptions and limitations encountered in compiling the environmental information;
 - presents the likely significant impacts on socio-economics receptors arising from the Proposed Development and reaches a conclusion on the likely significant effects on socio-economics, 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 the likely significant adverse effects of the Proposed Development on socio-economics receptors.

13.3. SOCIO-ECONOMICS LOCAL AND NATIONAL STUDY AREAS

8. The identification of the study areas for the socio-economics 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 national study area. Impacts upon different receptors are likely to materialise at both local and national levels.

13.3.1. SOCIO-ECONOMICS LOCAL STUDY AREA

9. It is necessary that the socio-economics local study area is linked primarily to the onshore project activities including onshore substation and onshore cables. These activities, and their socio-economic catchment areas are anticipated to form epicentres of impact on socio-economic receptors.
10. Therefore, the socio-economics local study area associated with these activities has been derived from labour catchments¹ by using a 60 minute drive time catchment as a proxy².
11. The associated direct, indirect, and induced supply chain activities associated with the construction, operation and maintenance, and decommissioning of the Proposed Development can be assessed based on a focused local authority area definition. Adopting a methodology which defines the socio-economics local study area 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.
12. Therefore, a 60 minute drive time catchment based on the epicentre of onshore activity – Skateraw – has been converted to a best fit local authority area. Inclusion of local authority areas in the socio-economics local study area is based on an analysis of the share of the local authority area population within the bounds of the 60 minute drive time catchment. Local authorities with more than 50% of their population falling within the 60 minute drive time catchment of a facility has been included in the socio-economics local study area. The results of this analysis are shown in Volume 4, Appendix 13.1.
13. Professional judgement has also been used to qualify the socio-economics local study area. Results have also been corroborated through comparison with 2011 Travel to Work Areas (TTWA).
14. The socio-economics local study area consists of the following local authorities (along with a justification for inclusion):
 - **East Lothian**
 - Proposed Development is located within the local authority boundary; and
 - meets 50% population threshold.
 - **Scottish Borders**
 - Proposed Development will be located in close proximity to the local authority boundary;
 - Proposed Development will be located in close proximity to the Berwick 2011 TTWA, which falls within the Scottish Borders local authority;
 - stakeholder consultations indicated there are heritage labour market links between existing industrial infrastructure in the vicinity of the Proposed Development (e.g.

¹ 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.

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

Torness Power Station) and settlements along the A1 to the south of the Proposed Development;

- does not meet 50% population threshold (23%) due to large geographical size of Scottish Borders local authority area; and
- taking the above evidence into consideration – and despite not meeting the 50% population threshold – inclusion is considered merited.

- **City of Edinburgh**

- Proposed Development is located within the Edinburgh 2011 TTWA. This suggests it is reasonable to assume that Edinburgh will form a key part of the labour pool that contributes to the delivery of the Proposed Development;
- does not meet 50% population threshold (44%). Firstly, the small margin does not present sufficient grounds on which to exclude the City of Edinburgh local authority. Secondly, 44% of the City of Edinburgh's population accounts for almost a quarter of a million people, which would be a significant omission; and
- taking the above evidence into consideration – and despite not meeting the 50% population threshold – inclusion is considered merited.

- **Midlothian**

- Proposed Development is located within the Edinburgh 2011 TTWA, as is Midlothian local authority. This suggests it is reasonable to assume that Midlothian and East Lothian have a functional economic relationship in terms of labour markets; and
- meets 50% population threshold.

15. The socio-economics local study area is shown in Volume 2, Figure 13.1.

13.3.2. SOCIO-ECONOMICS NATIONAL STUDY AREA

16. A larger national socio-economics impact area is defined to reflect the wider reach of Gross Value Added (GVA) and employment impacts that are likely to materialise through the supply chain and provision of labour across Scotland. The socio-economics national study area is defined as Scotland.

13.4. POLICY CONTEXT

17. Policy in relation to socio-economics receptors, is set out in Table 13.1. There is no legislation specifically in relation to socio-economics. Policy relating to socio-economics receptors is contained within a number of strategic planning contexts.

Table 13.1: Summary of Policy Provisions Relevant to Socio-economics

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Onshore EIA Report
National		
National Planning Framework 4 (Scottish Government, 2023)	<p>The <u>National Planning Framework 4</u> (NPF4) is a long term spatial strategy, comprising a set of national planning policies to underpin the statutory development plan.</p> <p>A spatial strategy for Southern Scotland sets out broad support for local economic development which makes use of the area's environmental assets to innovate and foster green growth.</p> <p>In Central Scotland, the spatial strategy involves further investment of key former industrial sites where existing infrastructure can be reused to support the transition to a low carbon economy.</p> <p>The north east of Scotland, <u>including the</u> Cromarty Firth area, is seen as a centre for the skills and expertise needed to help transition the regional industry from the oil and gas sector towards a cleaner, greener future. NPF4 highlights this makes the area a uniquely investable location that could benefit Scotland as a whole.</p> <p>NPF4 identifies 18 nationally significant developments that will help to deliver the spatial strategy.</p> <p>The optimisation of Aberdeen Harbour is included in this list of developments, with the south harbour acting as a cluster of offshore renewable energy research, manufacturing and support services. Through this, Aberdeen Harbour is expected to support net zero and stimulate economic investment.</p> <p>Dundee Waterfront is another nationally significant development. This includes new and upgraded port facilities for vessel berthing, and related landside activities including lay-down, freight handling and marine sector services. Delivery of the Dundee Waterfront improvements is seen as essential to securing net zero investment in the city, as well as supporting economic opportunities and skills.</p>	<p>Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.</p> <p>Embedded commitments set out in section 13.9 (including delivery of Supply Chain Engagement Plan) aligns with Policies 11 and 25.</p>

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Onshore EIA Report
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Another relevant nationally significant development is the Scotland wide 'Strategic Renewable Electricity Generation and Transmission Infrastructure'. NPF4 cites the potential of these developments to support jobs and business investment and bring wider economic benefits throughout the country.

NPF4 outlines a set of 33 policies across themes of sustainable places, liveable places and productive places Relevant policies include:

Policy 1; Tackling the climate and nature crises, aims to encourage, promote and facilitate development that addresses the global climate emergency and nature crisis.

Policy 11; Energy, outlines that development proposals for all forms of renewable, low-carbon and zero emissions technologies will be supported. However, proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment and associated business and supply chain opportunities. In addition, project design and mitigation must demonstrate how impacts on communities and individual dwellings, including residential amenity, visual impact, and noise are addressed.

Policy 25; Community Wealth building, is supportive of development proposals which contribute to local or regional community wealth building strategies and are consistent with local economic priorities. This includes ensuring the use of local supply chains and services, local job creation and the creation of new local firms.

Scotland's Economic Strategy (Scottish Government, 2015)	The strategy for growing the Scottish economy sets out a wider ambition for Scotland; to become a more cohesive and resilient economy which improves the opportunities and life chances for all residents. Two key pillars of the overall approach are increasing competitiveness and tackling inequality.	Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.
Economic Recovery Implementation Plan (Scottish Government, 2020)	The economic recovery plan identifies priority sections of the economy to support through the Covid-19 pandemic whilst remaining aligned with 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.	Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Onshore EIA Report
Shaping Scotland's Economy: Inward Investment Plan (Scottish Government 2020)	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-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.
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 m will be provided to Skills Development Scotland to support a range of national training interventions, which often include reskilling workers from declining industries to green jobs. The Budget allocates £370.5 m towards Scotland's enterprise agencies, up from £340 m 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-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.
Offshore Wind Policy Statement (Scottish Government, 2020)	<p>The Scottish government are 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.</p> <p>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 m 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.</p>	Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.
Sectoral Marine Plan for Offshore Wind Energy (Scottish Government, 2020)	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-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.

Relevant Policy	Summary of Relevant Policy	How and Where Considered in the Onshore EIA Report
<p>Scottish Offshore Wind Strategic Investment Assessment (Scottish Offshore Wind Energy Council, 2021)</p>	<p>The growth in offshore wind farms in Scotland has been below 2020 projections, meaning that supply chains have not yet benefitted from these developments and subsequently the number of jobs created 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 1GW 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.</p>	<p>Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.</p>
Sub-national		
<p>Building Scotland's Future Today: Scottish Enterprise's Strategic Framework 2019–2022 (Scottish Enterprise, 2019)</p>	<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 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.</p>	<p>Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.</p>
Local		
<p>East Lothian Local Development Plan 2018 (East Lothian Council, 2018)</p>	<p>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.</p> <p>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.</p>	<p>Policy priority for socio-economics investment relevant to the Proposed Development considered in assessment of sensitivity of receptors.</p>

13.5. CONSULTATION

18. There was broad consistency in the nature of comments received during relevant consultation activities to date. The approach and methodology were refined and enhanced based on consultation responses received.
19. A range of key stakeholders were invited to participate in consultation to inform the socio-economics EIA Report. This included national and regional representative organisations as well as local authority officers and community council representatives within the socio-economics local study area. Invitations were issued to 12 organisations, listed in Volume 4, Appendix 13.3.
20. A total of six consultation meetings were completed. 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 impacts.

13.5.1. COMMUNITY ENGAGEMENT

21. 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:** Weeklong 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.

22. Pre-planning application public consultation events have been arranged by the Applicant 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.
23. A variety of issues were raised during the course of these community engagement events. Issues raised relating to onshore socio-economics have been considered within this chapter. The findings from these community engagement events are set out fully within the standalone Pre-Application Consultation (PAC) Report.

Table 13.2: Summary of Key Consultation of Relevance to Socio-economics

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
Methodology and Approach			
October 2020	East Lothian Council, Scoping Opinion	Support for socio-economics proposals set out in the scoping report. No specific comments provided.	Impacts scoped in and scoped out as per scoping report (see section 13.10).
October 2020	East Lothian Council, Scoping Opinion	Onshore transmission works are a key part of wider Berwick Bank Wind Farm Project. Should include clear reference to where EIA Report for offshore element of the Project can be found.	Whilst the Onshore and Offshore chapters are separate, these draw on a single technical report which sets out the combined, and component economic impacts see Volume 4, Appendix 13.2). The CEA (Tier 1) also considers both combined On and Offshore socio economic effects (see section 13.12).
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 (see sections 13.8 and 13.10).
Sector Development and Supply Chain			
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.	Project team took each individual's contact details and explained the set process in place for becoming an approved vendor with the Applicant. As of 8 December 2020, all participants were formally contacted by a member of the procurement and commercial team to explain this further. 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.
			The Applicant has since established (see section 13.9):

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
			<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	<p>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>	<p>Applicant's desire is to create as much Scottish supply chain content as possible.</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 United Kingdom (UK).</p>
December 2021	<p>Scottish Government</p> <p>Online consultation meeting</p>	<p>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).</p>	<p>The Applicant has since established a Supply Chain Engagement Plan as set out above (see section 13.9).</p> <p>Adoption of appropriate and realistic procurement scenarios for assessment based on current and pipeline capability to consider increased Scottish retention of CAPEX (see sections 13.8 and 13.10).</p> <p>Designed in measures (primary) to enhance beneficial economic impacts through early engagement (see section 13.9).</p>
December 2021	<p>Scottish Enterprise</p> <p>Online consultation meetings</p>	<p>Need to use combined pipeline to create market certainty for investors to come in and establish new capabilities in Scotland.</p>	<p>Embedded mitigation (tertiary) to enhance beneficial economic impacts through early engagement (see section 13.9).</p>
December 2021	<p>Virtual and in-person public consultation event</p>	<p>Information requested on procurement and supply chain processes, with emphasis on ensuring local businesses can</p>	<p>Applicant's desire is to create as much Scottish supply chain content as possible.</p> <p>The Applicant's position remains that consenting multiple projects on a comparable scale to the proposed development</p>

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
		easily tender for works associated with the proposed development.	will create business and investor confidence in the supply chain to deliver a greater level of content within the UK.
			The Applicant has since established a Supply Chain Engagement Plan as set out above (see section 13.9).
Skills and Labour Market			
December 2021	Scottish Government 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 (see section 13.11).
December 2021	Scottish Government. 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 (see section 13.11).
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 (see section 13.7.2). Considered as part of assessment (see section 13.11).
December 2021	East Lothian 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 (see section 13.11).
Social Impacts			
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

Date	Consultee and Type of Consultation	Issue(s) Raised	Response to Issue Raised and/or Where Considered in this Chapter
			<p>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 (see section 13.9).</p>
December 2021	Virtual and in-person public consultation event	Community benefits – what could be created locally (out-with supply chain content).	As above (see section 13.11).
March 2022	Virtual and in-person public consultation event	Community benefits – what could be created locally (out-with supply chain content).	As above (see section 13.11).

13.6. METHODOLOGY TO INFORM BASELINE

24. This section sets out a summary of the methodology to inform analysis of the baseline environments of the socio-economics local study area and Scotland National (Scotland) study area.
25. The summary of baseline conditions aligns with the socio-economics impacts set out in section 13.10, and therefore covers 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);
 - employment change in impact industries (2015–2019); and
 - total employment in the offshore wind sector (2019).
 - GVA
 - total GVA in all industries (2019);
 - GVA change in all industries (2015–2019);
 - total GVA in impact industries (2019);
 - GVA change in impact industries (2015–2019); and
 - total GVA in the offshore wind sector (2019).
26. These indicators are analysed on the basis of publicly available desktop sources as set out in Table 13.3.
27. Use of baseline data covers the period 2015 to 2019. The year 2019 has been selected as the baseline year given the economic and labour market uncertainty resulting from Covid-19 pandemic.

13.6.1. INDUSTRY DEFINITIONS

28. Below are definitions of the industry terms utilised throughout this chapter:
 - **All industries:** this industry definition includes all Standard Industrial Classification 2007 (SIC07) codes and can be thought of as the ‘whole’ economy.
 - **Impact industries:** various permutations of impact industries are utilised, each defined in Volume 4, Appendix 13.4. 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 that can contribute either directly or indirectly to the construction, operation and maintenance, and decommissioning of offshore energy infrastructure.
 - **Offshore wind:** this industry definition represents activity that is currently supported by the offshore wind sector.

Impact industries

29. 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.
30. ‘Impact industries’ have been defined to represent employment and GVA in industries directly and indirectly associated with the construction, operation and maintenance, and decommissioning of offshore energy infrastructure. These definitions can be found in Volume 4, Appendix 13.4.

31. 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; and
 - GVA data can be obtained via *Regional gross value added (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 instances aggregates a number of related divisions. This level of reporting is not as detailed as employment data available via BRES.
32. 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 impact industries definitions are set out at Volume 4, Appendix 13.4.

13.6.2. DESKTOP STUDY

33. Information on socio-economics receptors within the socio-economics local study area and Scotland was collected through a detailed desktop review of existing studies and datasets. These are summarised in Table 13.3.

Table 13.3: Summary of Key Desktop Studies and Datasets

Title	Source	Year	Author
Business Register and Employment Survey	Office for National Statistics	2022	–
Population Projections for Scottish Areas, 2018-based	National Records of Scotland	2020	–
Regional gross value added (balanced) by industry: local authorities	Office for National Statistics	2019	–
The Economic Impact of Scotland's Renewable Energy Sector	Fraser of Allander Institute	2021	–

13.6.3. SITE-SPECIFIC SURVEYS

34. No site-specific surveys have been undertaken to inform the socio-economics assessment of effects. This is not necessarily due to the availability of existing socio-economics data for the identified impact areas.

13.7. BASELINE ENVIRONMENT

13.7.1. OVERVIEW OF BASELINE ENVIRONMENT

35. This section sets out a summary of relevant baseline data for the socio-economics local study area and Scotland under the following headings:
 - employment; and
 - GVA.

Employment

36. 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 FTE.
37. The definition of construction, operation and maintenance, and decommissioning employment impact industries on the basis of SIC07 classes/subclasses are set out in Volume 4, Appendix 13.4.
38. All industries employment in the socio-economics local study area in 2019 was approximately 460,000 (Table 13.4). Between 2015–2019, employment in the socio-economics local study area increased by approximately 27,000. This equates to an average annual growth rate of 1.3%. All industries employment in Scotland in 2019 was approximately £2.6 m. Between 2015–2019, employment in Scotland increased by approximately 36,000. This equates to an average annual growth rate of 0.3%.

Table 13.4: All Industries Employment Count and Change – by Socio-economics Local Study Area and Scotland

Study Area	Total Employment (2019)	Change (2015–2019)
Local study area	460,000	27,000
Scotland	2,600,000	36,000

Source: Hardisty Jones Associates (HJA) analysis of BRES (ONS, 2022)

39. Construction impact industries employment in the socio-economics local study area in 2019 was approximately 4,000 (Table 13.5). Over the period 2015–2019, employment in construction impact industries increased by approximately 500. Operation and maintenance impact industries employment in the socio-economics local study area in 2019 was approximately 2,000. Over the period 2015–2019, employment in operation and maintenance impact industries increased by approximately 250. Decommissioning impact industries employment in the socio-economics local study area in 2019 was approximately 1,500. Over the period 2015–2019, employment in decommissioning impact industries increased by approximately 250 (ONS, 2022).
40. Construction impact industries employment in Scotland in 2019 was approximately 40,000. Between 2015–2019, construction impact industries employment in Scotland increased by 1,000. Operation and maintenance impact industries employment in Scotland in 2019 was approximately 22,000. Between 2015–2019, operation and maintenance impact industries employment in Scotland increased by 1,000. Decommissioning impact industries employment in Scotland in 2019 was approximately 25,000. Between 2015–2019, decommissioning impact industries employment in Scotland increased by 2,000 (ONS, 2022).

Table 13.5: Construction, Operation and Maintenance, and Decommissioning Impact Industries Employment Count and Change – by Socio-economics Local Study Area and Scotland

Study Area	Construction		Operation and Maintenance		Decommissioning	
	Employment (2019)	Change (2015–2019)	Employment (2019)	Change (2015–2019)	Employment (2019)	Change (2015–2019)
Local study area	4,000	500	2,000	250	1,750	250
Scotland	40,000	1,000	22,000	1,000	25,000	2,000

Source: HJA analysis of BRES (ONS, 2022)

41. Total direct, indirect and induced FTE employment supported by the offshore wind sector in Scotland in 2019 was 4,700 (Fraser of Allander Institute, 2021). No equivalent data is available for the socio-economics local study area. No equivalent data based on change from 2015–2019 is available at the time of writing.

GVA

42. The definition of construction, operation and maintenance, and decommissioning GVA impact industries on the basis of SIC07 divisions are set out in Volume 4, Appendix 13.4.
43. All industries GVA in the socio-economics local study area in 2019 was approximately £4.8bn. Between 2015–2019, GVA in the socio-economics local study area increased by approximately £300m. All industries GVA in Scotland in 2019 was approximately £147bn. Between 2015–2019, GVA in Scotland increased by £16bn (Table 13.6). This equates to an average annual growth of 2.2% (ONS, 2019).

Table 13.6: All Industries GVA and Change – by Socio-economics Local Study Area and Scotland

Study Area	Total GVA (£, 2019)	Change (£, 2015–2019)
Local study area	£30,100m	£5,400m
Scotland	£147,000m	£16,000m

Source: HJA analysis of Regional gross value added (balanced) by industry: local authorities (ONS, 2019)

44. Construction impact industries GVA in the socio-economics local study area in 2019 was approximately £2,200m (Table 13.7). Over the period 2015–2019, GVA in construction impact industries increased by £300m. Operation and maintenance impact industries GVA in the socio-economics local study area in 2019 was approximately £1,400m. Over the period 2015–2019, GVA in operation and maintenance impact industries increased by £100m. Decommissioning impact industries GVA in the socio-economics local study area in 2019 was approximately £1,500m. Over the period 2015–2019, GVA in decommissioning impact industries increased by £30m (ONS, 2019).
45. Construction impact industries GVA in Scotland in 2019 was approximately £20bn. Over the period 2015–2019, GVA in construction impact industries increased by £7m. Operation and maintenance impact industries GVA in Scotland in 2019 was approximately £13bn. Over the period 2015–2019, GVA in operation and maintenance impact industries decreased by £280m. Decommissioning impact industries GVA in Scotland in 2019 was approximately £15bn. Over the period 2015–2019, GVA in decommissioning impact industries decreased by £140m (ONS, 2019).

Table 13.7: Construction, Operation and Maintenance, and Decommissioning Impact Industries GVA and Change – by Socio-economics Local Study Area and Scotland

Study Area	Construction		Operation and Maintenance		Decommissioning	
	Total GVA (£, 2019)	Change (£, 2015–2019)	Total GVA (£, 2019)	Change (£, 2015–2019)	Total GVA (£, 2019)	Change (£, 2015–2019)
Local study area	£2,200m	£300 m	£1,400m	£100m	£1,500m	£30m

Study Area	Construction		Operation and Maintenance		Decommissioning	
	Total GVA (£, 2019)	Change (£, 2015–2019)	Total GVA (£, 2019)	Change (£, 2015–2019)	Total GVA (£, 2019)	Change (£, 2015–2019)
Scotland	£20,000m	£7m	£13,000m	(£280m)	£15,000m	(£140m)

Source: HJA analysis of Regional gross value added (balanced) by industry: local authorities (ONS, 2019)

Note: negative values in parentheses

46. Total direct, indirect and induced GVA supported by the offshore wind sector in Scotland in 2019 was £447m (Fraser of Allander Institute, 2021). No equivalent data is available for the socio-economics local study area.

13.7.2. FUTURE BASELINE SCENARIO

47. The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017)), requires 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 Onshore EIA Report.
48. 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.
49. 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. 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 (Table 13.8). 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 13.8: Population Projections to 2043 (2018-based) – by Socio-economics Local Study Area and Scotland

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)
Local study area	940,000	113,000	(11,000)	124,000
Scotland	5,600,000	137,000	(334,000)	470,000

Source: HJA analysis of Population Projections for Scottish Areas, 2018-based (National Records of Scotland, 2020)

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

50. Whilst the working age population and employment are forecast to decline, unemployment is forecast to remain static at 4.2%.
51. 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.

52. 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.
53. Section 13.4 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.
54. 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 being secured such as the Project. Without such investments the scale of growth in the offshore wind sector as forecast will not be realised.

13.7.3. LIMITATIONS AND ASSUMPTIONS

55. 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.
56. Use of BRES data covers the period 2015 to 2019 as there is a discontinuity with earlier data following the inclusion of PAYE only businesses in the dataset. 2020 data is not included due to the labour market uncertainty resulting from 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.
57. Specific data on employment and GVA within offshore wind activities is not available across socio-economics local study areas on a consistent basis.
58. Data and sources considered as part of the future baseline scenario were published after 2016, and are therefore implicitly assumed to factor in the potential impacts of the UK's exit from the European Union.

13.8. METHODOLOGY FOR ASSESSMENT OF EFFECTS

13.8.1. OVERVIEW

59. The socio-economics assessment of effects has followed, where appropriate, the methodology set out in Volume 1, Chapter 2 of the Onshore EIA Report. There is no official guidance or legislation governing the process of socio-economics reporting. However, specific to the socio-economics study, the following (non-binding) guidance document has also been considered:

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

13.8.2. CRITERIA FOR ASSESSMENT OF EFFECTS

60. 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 2 of the Onshore EIA Report.

61. The criteria for defining magnitude in this chapter are outlined in Table 13.9.

Table 13.9: 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 (Adverse). The impact would result in large scale or major increase of employment or GVA, respectively (Beneficial).	3
Medium	The impact would result in loss of employment or GVA, respectively (Adverse). The impact would result in benefit to, or addition of, employment or GVA, respectively (Beneficial).	2
Low	The impact would result in minor loss of employment or GVA, respectively (Adverse). The impact would result in minor addition of employment or GVA, respectively (Beneficial).	1
Negligible	The impact would result in very minor loss of employment or GVA, respectively (Adverse). The impact would result in very minor addition of employment or GVA, respectively (Beneficial).	0

62. 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 13.9. The average value across baseline conditions is then calculated and used to determine the overall magnitude.

63. 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.

64. The criteria for defining sensitivity in this chapter are outlined in Table 13.10.

Table 13.10: 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.
High	National (Scotland) receptor of high policy importance.
Medium	Local (Scottish local authorities) receptor of high or medium policy importance.
Low	Local (Scottish local authorities) receptor of low policy importance.
Negligible	Receptor of very low or no importance at any policy level.

65. Sensitivity of employment impacts are assessed against 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 are also considered important. General policy aims to provide jobs, skills, education, and training for local residents in any sector are also considered.
66. As per section 13.4, increasing employment in the renewable energy sector, including offshore wind activities specifically, is a policy objective at the national (Scotland) level. Supporting economic opportunities in renewable energy activities is a policy objective of East Lothian and Scottish Borders local authorities (i.e. the socio-economics local study area) to ensure renewable energy plays a role in the future economic development of each Council area. As set out at section 13.4, 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.
67. 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.
68. The significance of the effect upon socio-economics receptors is determined by correlating the magnitude of the impact and the sensitivity of the receptor, as outlined in Table 13.11 below.

Table 13.11: Matrix Used for the Assessment of the Significance of the Effect

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

13.8.3. TECHNICAL IMPACT REPORT

69. The Technical Impact Report at Volume 4, Appendix 13.2 (BVG Associates, 2021) sets out an economic analysis of the Project. This has been prepared to inform the socio-economics assessment of effects.

70. The Technical Impact Report considers direct, indirect and induced employment and GVA effects at local, Scotland and UK levels across a detailed breakdown of development phases. The approach draws on BVG Associates proprietary approach. The full methodology employed is set out within the report and its own appendices.

Wind Farm Options Considered

71. 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.
72. 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 the Proposed Development’s project description as defined for consenting.
73. 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 £9.6bn 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.
74. 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

75. 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 5, the Project has three signed grid connection agreements with the network operator. Two agreements are for connection at the Branxton substation, with a third additional connection at Blyth, Northumberland (referred to as the Cambois connection). Applications for necessary consents for the Cambois connection will be applied for separately.
76. As the Applicant has expenditure commitments related to the Cambois connection, it is assumed the impacts assessed in the Technical Impact Report 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. As per Volume 1, Chapter 5 this is described as:

The Proposed Development comprises of onshore cables within a cable corridor from the landfall connecting to a new [SSER] onshore substation... and the onward onshore cable corridor connecting to the SP Energy Networks (SPEN) Branxton Substation... (Volume 1, Chapter 5)

77. Given its overlap with the Proposed Development, the Cambois connection scheme will be considered as part of the cumulative effects assessment.
78. Onshore transmission works will include the following:
- a new onshore substation/convertor station (herein referred to as ‘substation’);
 - landfall works;
 - onshore cables within a cable corridor between the landfall and the new onshore substation, and between the new onshore substation and the SPEN Branxton substation; and
 - associated ancillary infrastructure.
79. The Branxton substation is being developed by SPEN and is subject to a separate planning application. It is assumed impacts associated with the Branxton substation are not included in the impacts assessed in the Technical Impact Report as the Applicant has no expenditure commitments related to this scheme. However, impacts associated with connection to the Branxton substation are assumed to be included in the impacts assessed in the Technical Impact Report, and are retained for assessment as part of the Proposed Development (as per listed transmission works above).
80. As such, there is no requirement to adjust the impacts assessed to account for the separate application covering the Branxton substation.
81. On this basis, of the level 2 supply chain categories set out in Table 13.12, it is anticipated the following categories include impacts which cover the separate applications, and would require adjustment:

Table 13.12: Adjustment of Technical Impact Report Assessment to Exclude Cambois Connection – by Level 2 Supply Chain Category

Level 2 Supply Chain Category	Comments	Approach
Export cable supply – onshore only	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 [fabrication] – onshore only	<p>The Project Description Envelope for the Proposed Development sets out a maximum substation area of 97,500 sq m.</p> <p>The Project Description Envelope for the Cambois connection sets out a maximum convertor station area of 75,000 sq m.</p>	<p>Assuming that impacts correlate with substation/convertor station areas, the Cambois connection accounts for 43% share of onshore impacts under this supply chain category in the Technical Impact Report.</p> <p>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.</p>
Export cable installation – onshore only	<p>The Project Description Envelope for the Proposed Development sets out a maximum length of landfall trenching of 1,500 m.</p> <p>The Project Description Envelope for the Cambois Connection sets out a maximum length of landfall cable of 2,320 m.</p> <p>The Project Description Envelope for the Proposed Development sets out a maximum length of cable corridor to the new SSER substation of 1,260 m, and a maximum length of cable corridor to the SPEN substation of 2,089 m.</p>	<p>Assuming that impacts correlate with cable and trench lengths, the Cambois connection accounts for a 47% share of impacts under this supply chain category in the Technical Impact Report.</p> <p>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.</p>

Level 2 Supply Chain Category	Comments	Approach
	The Project Description Envelope for the Cambois Connection sets out a maximum length of cable corridor to the substation of 1,895 m.	
Substation installation – onshore only	Included as part of the Proposed Development.	Zero impacts assessed, therefore no adjustment required (see also below).
Other CAPEX – onshore only	Activities associated with installation of onshore substation are included in this supply chain category.	This supply chain category mostly covers installation of the onshore substation.
	Regarding onshore installation works, the Technical Impact Report states “the onshore substation has the greatest labour requirement and there are likely to be over 200–300 people onsite during peak construction.”	Therefore, impacts assessed in the Technical Impact Report under this supply chain category are discounted by 43% to exclude those impacts associated with the Cambois connection.
Wind farm operation – onshore only	There are no local or Scottish employment and GVA impacts assigned to this category in the Technical Impact Report. It is anticipated that impacts associated with wind farm operation will be felt at the UK level.	Zero onshore impacts assessed at local and Scotland levels, therefore no adjustment required.
Transmission maintenance –	This supply chain category is assumed to be where operation and maintenance impacts associated with onshore infrastructure is concentrated.	Assuming operation and maintenance impacts correlate with transmission capacity, the Cambois connection accounts for a 44% share of impacts under this supply chain category in the Technical Impact Report.
	The Proposed Development is currently estimated to account for approximately 2.3 GW transmission capacity.	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.
	The Cambois connection is currently estimated to account for approximately 1.8 GW transmission capacity.	

82. Because of the uncertainty regarding the share of expenditure between the Project and the Cambois connection, the approach set out above intends to be conservative in allocating a share of expenditure (and therefore impacts) to the Proposed Development, so as not to overstate any beneficial effects. As such, any increase in the Proposed Development’s share of impacts would translate to an increase in the beneficial effects associated with it.

Procurement scenarios

83. Employment and GVA 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 Proposed Development (direct and indirect).

84. The Technical Impact Report (Volume 4, Appendix 13.2) 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.
85. Table 13.13 sets out the local, Scottish and UK content shares across the four procurement scenarios.

Table 13.13: Local, Scottish and UK Content Procurement Scenarios (Shares)

Procurement Scenario	Low	Baseline	Enhanced	60%
Local ³ content	7%	7%	7%	7%
Scottish content	18%	19%	23%	36%
UK content	31%	36%	44%	58%

Source: HJA based on BVG Associates (2021).

86. 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.
87. Scottish content is similar for both the low and baseline scenarios with a more marked step to the enhanced and 60% scenarios.
88. 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 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-economics effects where a minimum design scenario is required.
89. 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.
90. 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 supply chain growth necessary to achieve 60% UK content will be beyond any single project, given the future pipeline and investment needs required to drive supply chain improvements. 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 (see section 13.5). The uncertainty surrounding where the required level of supply chain activity and investment will be located makes the 60% UK

³ As per Volume 4, Appendix 13.2, local is defined as the location of the onshore grid connection.

content scenario unsuitable for assessment. This accords with stakeholder comment that there is a tendency to consider unrealistic and over ambitious economic impact scenarios.

- 91. 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 phase.
- 92. To aid readability, the Baseline procurement scenario has been taken forward for full assessment. Additional data or analysis tables are included where appropriate.
- 93. Table 13.14 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.

Table 13.14: Local, Scottish and UK Content Procurement Scenarios (Detailed Assumptions)

Procurement Scenario	Baseline	Enhanced
UK, Scotland and UK Content		
Construction	Development and project management based in UK, majority in Scotland. Construction of onshore substation(s) carried out by Scottish civil engineering contractor using Scottish and other UK suppliers to provide support systems. Onshore cable installation and construction of the operations, maintenance, and service (OMS) base uses Scottish suppliers.	As baseline plus: Additional Scottish involvement in offshore export cable supply. Additional Scottish involvement in installation and commissioning of onshore substation(s).
Operation and Maintenance	Operations activity includes mix of local, Scottish and UK activity.	As baseline.
Decommissioning	Reasonable expectation that onshore parts of the wind farm will be retained and upgraded for other uses.	As baseline.

Source: HJA based on BVG Associates (2021).

Construction, Operation and Maintenance, and Decommissioning Phase Impacts

- 94. The project-wide 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 13.15. This categorisation includes both onshore and offshore categories, with those relevant to onshore assessment highlighted in yellow.

Table 13.15: Classification of Project 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 Tower	
	Balance of plant		Foundation supply Array cable supply
			Offshore export cable supply Onshore and offshore substations

Development Phase	Level 1 Supply Chain Category	Level 2 Supply Chain Category
	Installation and commissioning	Wind turbine installation
		Foundation installation
		Array cable installation
		Onshore export cable installation
		Substation installation
		Other CAPEX
Operation and Maintenance	Operation and Maintenance	Wind farm operation
		Wind turbine maintenance and service
		Balance of plant OMS
		Transmission maintenance
		Vessels
Decommissioning	Decommissioning	Decommissioning

95. Construction phase impacts are presented as ‘per annum’ FTE years/GVA based on a construction period of 40 months.

13.9. MEASURES ADOPTED AS PART OF THE PROPOSED DEVELOPMENT

96. Rather than mitigation there are potential opportunities to secure enhanced beneficial effects within the socio-economics local study areas and Scotland.

97. The Applicant has already engaged in early stage discussions with potential Tier 1 suppliers, key national and regional socio-economics 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.

98. The Applicant was invited and accepted membership of a local skills and supply chain forum, the aim of which is to discuss avenues for local benefits to be felt within East Lothian as a result of the development. The Applicant attended a kick off meeting on 18 March 2022 with other representatives across the energy industry. The forum has been organised and chaired by Paul McLennan Member of the Scottish Parliament (MSP) (MSP for East Lothian).

99. The Applicant’s embedded (tertiary) commitments 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. This is aligned with Policies 11 and 25 of NPF4.

100. The Applicant is also committed to the creation of a Community Benefit Fund, pending consent determination for both onshore and offshore components of 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 for both offshore and onshore aspects of the Project. 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.

13.10. KEY PARAMETERS FOR ASSESSMENT

13.10.1. MAXIMUM DESIGN SCENARIO

101. The maximum design scenario(s) summarised here 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 5 of the Onshore EIA Report. Effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the Project Design Envelope (PDE) (e.g. different infrastructure layout), to that assessed here, be taken forward in the final design scheme.
102. The maximum design scenario is to be treated as the onshore transmission works to include the following:
- a new onshore substation.
 - landfall works;
 - onshore cables within a cable corridor between the landfall and the new onshore substation, and between the new onshore substation and the SPEN Branxton substation; and
 - associated ancillary infrastructure.
103. A construction period of 40 months has been assumed throughout.
104. Potential impacts considered within this assessment are the following:
- Impact on employment activities (including supply chain); and
 - Impact on GVA (£) (including supply chain).

13.10.2. IMPACTS SCOPED OUT OF THE ASSESSMENT

105. On the basis of the baseline environment and the project description outlined in Volume 1, Chapter 5 of the Onshore EIA Report, a number of impacts are proposed to be scoped out of the assessment for socio-economics. These impacts were proposed to be scoped-out in The Berwick Bank Wind Farm Onshore Scoping Report (SSER, 2020) (Volume 4, Appendix 2.1) and no concerns were raised by key consultees.
106. Impacts scoped out of the assessment were agreed with key stakeholders through consultation. These, together with a justification, are presented in Table 13.16.

Table 13.16: Impacts Scoped Out of the Assessment for Socio-economics (tick confirms the impact is scoped out)

Potential Impact	Phase ⁴			Justification
	C	O	D	
Impact on economic activity of other commercial users	✓	✓	✓	It is expected that a minor or negligible loss of agricultural activity will occur as a result of the construction phase which will be reflected in the assessment of net direct, indirect and induced employment and GVA impacts. Negligible significant impacts are expected on other commercial users.
Impacts on local accommodation provision	✓	✓	✓	For reasons of scale and specialism, it is expected the level of direct employment resulting from the construction phase is not anticipated to require the

⁴ C = Construction, O = Operation and maintenance, D = Decommissioning

relocation of labour at a level that will materially impact on local accommodation provision. Where the level of direct employment cannot be absorbed locally, the impact is expected to be of a scale that any subsidiary impacts on local accommodation provision will be negligible.

Impact on economic activity dependant on key transport routes	✓	✓	✓	The description of development identifies that trenchless methods will be used for installing cables beneath key transport routes (A1 trunk road and East Coast Main Line (ECML) railway). As a result it is assessed that any disruption will be negligible, and there will be no adverse socio economic effects as a result.
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13.11. ASSESSMENT OF SIGNIFICANCE

107. The potential effects arising from the construction, operation and maintenance and decommissioning phases of the Proposed Development are listed in 13.10, along with the maximum design scenario against which each impact has been assessed. An assessment of the likely significance of the effects of the Proposed Development on socio-economics receptors caused by each identified impact is given below.

IMPACT ON EMPLOYMENT ACTIVITIES (INCLUDING SUPPLY CHAIN)

108. This impact is applicable to the construction, operation and maintenance, and decommissioning phases.

Magnitude – Assessment Approach

109. Magnitude of employment impacts are 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; and
- 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.

110. The criteria against which magnitude of employment impacts are assessed and can be found in Table 13.17.

Table 13.17: 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%

Construction Phase

111. Potential expenditure on the following activities associated with the Proposed Development could support employment in Scottish companies that are directly engaged in the manufacturing/supply and construction/installation supply chain:

- balance of plant manufacturing and supply – onshore substation, and onshore cable; and

- civil works associated with construction and installation of onshore substation, onshore cable, and other installation.
112. The manufacturing/supply and construction/installation of the Proposed Development could also go on to support employment indirectly in the wider Scottish supply chain.
113. The construction phase for the Proposed Development is expected to be 40 months, which has been assumed throughout.
114. The potential impacts of the Proposed Development on employment in manufacturing, construction and installation activities are set out in Table 13.18. This will create opportunities to both safeguard existing employment and facilitate new employment.

Table 13.18: Potential Impacts (Baseline UK Supply Scenario) of the Proposed Development on Employment in Construction Activities

Study Area	Per Annum (FTE Years)	Total (FTE Years)
Local study area	60	190
Scotland	340	1,100

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

Magnitude of Impact

115. On the basis of a 40 month construction phase, 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.
116. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.19.

Table 13.19: Comparison of Construction Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local study area	<0.1%	1.4%
Scotland	<0.1%	0.8%

117. The magnitude of impact for each socio-economics study area is set out in Table 13.20.

Table 13.20: Magnitude of Construction Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude Overall	vs. Relevant Baseline Conditions	
		Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local study area	Medium (Beneficial) [2]	Negligible [0]	High [3]
Scotland	Low (Beneficial) [1]	Negligible [0]	Medium [2]

Sensitivity of the Receptor

118. As per section 13.8, the sensitivity of the receptor for the socio-economics local study area and Scotland is assessed as high – a summary is set out in Table 13.21.

Table 13.21: Sensitivity of Employment in Construction Activities – by Socio-economics Local Study Area and Scotland

Study Area	Sensitivity of Receptor	Justification
Local study area	High	National and local policy objective
Scotland	High	National policy objective

Significance of the Effect

119. The significance of the effect for each socio-economics study area is set out in Table 13.22.

Table 13.22: Significance of Construction Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Local study area	Medium (Beneficial)	High	Moderate to Major (Beneficial)	Yes
Scotland	Low (Beneficial)	High	Minor to Moderate (Beneficial)	No

120. At the socio-economics local 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, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.
121. At Scotland 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, therefore, be of **minor to moderate** beneficial significance, which is not significant in EIA terms.

Enhanced Scenario

122. 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 4, Appendix 13.2). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.
123. The potential impacts of the Proposed Development on employment in manufacturing and supply, and construction/installation activities under the Enhanced procurement scenario are set out in Table 13.23.

Table 13.23: Potential Impacts (Enhanced UK Supply Scenario) of the Proposed Development on Employment in Construction Activities

Study Area	Per Annum (FTE Years)	Total (FTE Years)
Local study area	100	190
Scotland	500	1,600

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

- 124. Under the Enhanced scenario, there is negligible change in the employment impacts assessed at the socio-economics local study area level during construction phase. Therefore no change in significance of effect from the baseline scenario is assessed at this geography (see Table 13.22).
- 125. There is some increase in the employment impacts assessed under the Enhanced scenario at Scotland level during construction phase. The quantitative assessment indicates an increase from minor to moderate (beneficial) to moderate 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.
- 126. 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 to major** beneficial significance, which is significant in EIA terms.

Secondary Mitigation and Residual Effect

- 127. The Applicant has committed to enhancement of beneficial effects as per section 13.9. No other secondary mitigation is required.

Operation and Maintenance Phase

- 128. 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:
 - Operation, maintenance and services associated with maintenance of onshore grid connection.
- 129. The operation and maintenance of the Proposed Development could also go on to support employment indirectly in the wider supply chain.
- 130. A 35 year operational period has been assumed throughout.
- 131. The potential impacts of the Proposed Development on employment in operation and maintenance activities are set out in Table 13.24.

Table 13.24: Potential Impacts of the Proposed Development on Employment in Operation and Maintenance Activities

Study Area	Per Annum (FTE Years)	Total (FTE Years)
Local study area	<1	11
Scotland	2	67

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

Magnitude of Impact

- 132. On the basis of a 35 year operational period, the impact is assessed as long term. Due to the long term contract-based nature of operation and maintenance activities, the impact is assessed as continuous.

133. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.25.

Table 13.25: Comparison of Operation and Maintenance Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local study area	<0.1%	<0.1%
Scotland	<0.1%	<0.1%

134. The magnitude of impact for each socio-economics study area is set out in Table 13.26.

Table 13.26: Magnitude of Operation and Maintenance Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude Overall	vs. Relevant Baseline Conditions	
		Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local study area	Negligible [0]	Negligible [0]	Negligible [0]
Scotland	Negligible [0]	Negligible [0]	Negligible [0]

Sensitivity of the Receptor

135. As per section 13.8, the sensitivity of the receptor for the socio-economics local study area and Scotland is assessed as high – a summary is set out in Table 13.27.

Table 13.27: Sensitivity of Employment in Operation and Maintenance Activities – by Socio-economics Local Study Area and Scotland

Study Area	Sensitivity of Receptor	Justification
Local study area	High	National and Local policy objective
Scotland	High	National policy objective

Significance of the Effect

136. The significance of the effect for each socio-economics study area is set out in Table 13.28.

Table 13.28: Significance of Operation and Maintenance Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Local study area	Negligible	High	Negligible	No
Scotland	Negligible	High	Negligible	No

137. At the socio-economics local study area level, 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 **negligible** beneficial significance⁵, which is not significant in EIA terms.
138. At Scotland level, 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 **negligible** beneficial significance⁶, which is not significant in EIA terms.

Secondary Mitigation and Residual Effect

139. The Applicant has committed to enhancement of beneficial effects as per section 13.9. No other secondary mitigation required.

Decommissioning Phase

140. Potential expenditure on decommissioning of onshore infrastructure associated with the Proposed Development could support employment in activities associated with decommissioning in the socio-economics local study area and Scotland.
141. 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. At time of writing there is a reasonable expectation that all onshore infrastructure will be retained and repurposed, but subject to review in the future on the basis of likely environmental impacts (see Volume 4, Appendix 13.2).
142. The Technical Report (Volume 4, Appendix 13.2) notes that the workforce for the decommissioning of the onshore infrastructure associated with the Proposed Development is likely to be supported in a similar way to installation and commissioning. However, the scale of activity will be greatly reduced given the intention to retain and repurpose facilities.
143. On this basis the magnitude of effects would be much lower than those set out for the construction phase under the Baseline and Enhanced scenarios.
144. The significance of effects assessed at construction phase for employment in manufacturing, construction, and installation activities are set out at Table 13.22. On the basis of currently available evidence the significance of effects for decommissioning phase activities will be of **negligible** beneficial significance at the socio-economics local study area and Scotland. This is not significant in EIA terms.

IMPACT ON GVA (£) (INCLUDING SUPPLY CHAIN)

145. This impact is applicable to the construction, operation and maintenance, and decommissioning phases.

Magnitude – Assessment Approach

146. Magnitude of GVA impacts are 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; and

⁵ This overrides the criteria for significance assessment set out at Table 13.13. The extent to which the magnitude of the impact is assessed as negligible is such that anything other than a significance of negligible would be illogical.

⁶ See footnote 7.

- 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.

Construction Phase

147. Potential expenditure on the following activities associated with the Proposed Development could support GVA in Scottish companies that are directly engaged in the manufacturing and supply, and construction/installation supply chain:
- balance of plant manufacturing and supply – onshore substation and onshore cable; and
 - civil works associated with construction and installation of onshore substation, onshore cable and other installation.
148. The manufacturing/supply and construction/installation of the Proposed Development could also go on to support GVA indirectly in the wider Scottish supply chain.
149. The construction phase for the Proposed Development is expected to be 40 months, which has been assumed throughout.
150. The potential impacts of the Proposed Development on GVA in manufacturing, construction, and installation activities are set out in Table 13.29.

Table 13.29: Potential Impacts (Baseline UK Supply Scenario) of the Proposed Development on GVA in Construction Activities

Study Area	Per Annum GVA (£)	Total GVA (£)
Local study area	£5m	£16m
Scotland	£25m	£80m

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

Magnitude of Impact

151. On the basis of a 40 month construction phase, the impact is assessed as long term. Due to the contract-based nature of development, manufacturing, construction, and installation activities, the impact is assessed as intermittent.
152. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.30.

Table 13.30: Comparison of Construction Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Local study area	<0.1%	0.2%
Scotland	<0.1%	0.1%

153. The magnitude of impact for each study area is set out in Table 13.31.

Table 13.31: Magnitude of Construction Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	vs. Relevant Baseline Conditions	
	Overall	Share of all industries GVA (2019)	Share of construction impact industries GVA (2019)
Local study area	Low (Beneficial) [1]	Negligible [0]	Low [1]
Scotland	Low (Beneficial) [1]	Negligible [0]	Low [1]

Sensitivity of the Receptor

154. As per section 13.8, the sensitivity of the receptor for the socio-economics local study area and Scotland is assessed as high – a summary is set out in Table 13.32.

Table 13.32: Sensitivity of GVA in Construction Activities – by Socio-economics Local Study Area and Scotland

Study Area	Sensitivity of Receptor	Justification
Local study area	High	National and Local policy objective
Scotland	High	National policy objective

Significance of the Effect

155. The significance of the effect for each socio-economics study area is set out in Table 13.33.

Table 13.33: Significance of Construction Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

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

156. At the socio-economics local study area level, the magnitude of the impact is deemed to be low (beneficial) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor to moderate** beneficial significance, which is not significant in EIA terms.

157. At Scotland level, the magnitude of the impact is deemed to be low (beneficial) and the sensitivity of the receptor is considered to be high. The effect will, therefore, be of **minor to moderate** beneficial significance, which is not significant in EIA terms.

Enhanced Scenario

158. 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 4, Appendix 13.2). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial effects are greater.

159. The potential impacts of the Proposed Development on GVA in manufacturing/supply and construction/installation activities under the Enhanced procurement scenario are set out in Table 13.34.

Table 13.34: Potential Impacts (Enhanced UK Supply Scenario) of the Proposed Development on GVA in Construction Activities

Study Area	Per Annum GVA (£)	Total GVA (£m)
Local study area	£5 m	£16 m
Scotland	£37 m	£120 m

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

160. Under the Enhanced scenario, there is negligible change in the employment impacts assessed at the socio-economics local study area level during construction phase. Therefore no change in significance of effect from the Baseline scenario is assessed at this geography (see Table 13.33).

161. There is some increase in the GVA impacts assessed under the Enhanced scenario at Scotland level during construction phase. Despite this, the quantitative assessment indicates no change in the magnitude of impacts at this level.

162. Therefore, under the Enhanced scenario, at Scotland level the significance of effects assessed remain unchanged from the Baseline scenario as per Table 13.33 above.

Secondary Mitigation and Residual Effect

163. The Applicant has committed to enhancement of beneficial effects as per section 13.9. No other secondary mitigation is required.

Operation and Maintenance Phase

164. 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:

- operation, maintenance and services associated with maintenance of onshore grid connection.

165. The operation and maintenance of the Proposed Development could also go on to support GVA indirectly in the wider supply chain.

166. A 35 year operational period has been assumed throughout.

167. The potential impacts of the Proposed Development on GVA in operation and maintenance activities are set out in Table 13.35.

Table 13.35: Potential Impacts of the Proposed Development on GVA in Operation and Maintenance Activities

Study Area	Per Annum GVA (£)	Total GVA (£m)
Local study area	<£0.1m	£1.1m
Scotland	£0.2m	£6.4m

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

Magnitude of Impact

168. On the basis of a 35 year operational period, the impact is assessed as long term. Due to the long term contract-based nature of operation and maintenance activities, the impact is assessed as continuous.
169. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.36.

Table 13.36: Comparison of Operation and Maintenance Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Local study area	<0.1%	<0.1%
Scotland	<0.1%	<0.1%

170. The magnitude of impact for each socio-economics study area is set out in Table 13.37.

Table 13.37: Magnitude of Operation and Maintenance Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	vs. Relevant Baseline Conditions	
		Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Local study area	Negligible [0]	Negligible [0]	Negligible [0]
Scotland	Negligible [0]	Negligible [0]	Negligible [0]

Sensitivity of the Receptor

171. As per section 13.8, the sensitivity of the receptor for the socio-economics local study area and Scotland is assessed as high – a summary is set out in Table 13.38.

Table 13.38: Sensitivity of GVA in Operation and Maintenance Activities – by Socio-economics Local Study Area and Scotland

Study Area	Sensitivity of Receptor	Justification
Local study area	High	National and local policy objective
Scotland	High	National policy objective

Significance of the Effect

172. The significance of the effect for each socio-economics study area is set out in Table 13.39.

Table 13.39: Significance of Operation and Maintenance Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Local study area	Negligible	High	Negligible	No
Scotland	Negligible	High	Negligible	No

173. At the socio-economics local study area level, 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 **negligible** beneficial significance⁷, which is not significant in EIA terms.
174. At Scotland level, 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 **negligible** beneficial significance⁸, which is not significant in EIA terms.

Secondary Mitigation and Residual Effect

175. The Applicant has committed to enhancement of beneficial effects as per section 13.9. No other secondary mitigation is required.

Decommissioning Phase

176. Potential expenditure on decommissioning of onshore infrastructure associated with the Proposed Development could support GVA in activities associated with decommissioning in the socio-economics local study area and Scotland.
177. 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. At time of writing there is a reasonable expectation that all onshore infrastructure will be retained and repurposed, but subject to review in the future on the basis of likely environmental impacts (see Volume 4, Appendix 13.2).
178. The Technical Report (Volume 4, Appendix 13.2) notes that the workforce for the decommissioning of the onshore infrastructure associated with the Proposed Development is likely to be supported in a similar way to installation and commissioning. However, the scale of activity will be greatly reduced given the intention to retain and repurpose facilities.
179. On this basis the magnitude of effects would be much lower than those set out for the construction phase under the baseline and enhanced scenarios.
180. The significance of effects assessed at construction phase for GVA in manufacturing, construction, and installation activities are set out at Table 13.33. On the basis of currently available evidence the significance of effects for decommissioning phase will be of **negligible** beneficial significance at the socio-economics local study area and Scotland levels. This is not significant in EIA terms.

⁷ This overrides the criteria for significance assessment set out at Table 13.13. The extent to which the magnitude of the impact is assessed as negligible is such that anything other than a significance of negligible would be illogical.

⁸ This overrides the criteria for significance assessment set out at Table 13.13. The extent to which the magnitude of the impact is assessed as negligible is such that anything other than a significance of negligible would be illogical.

13.12. CUMULATIVE EFFECTS ASSESSMENT

181. 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 2 of the Onshore EIA Report for detail on CEA methodology.
182. 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 4, Appendix 2.4). Volume 4, Appendix 2.4 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.
183. 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 onshore) with Berwick Bank Wind Farm offshore;
 - tier 2 assessment – All plans/projects assessed under Tier 1, plus projects which became operational since baseline characterisation, those under construction and 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.
184. The specific projects scoped into the CEA for socio-economics, are outlined in Table 13.40.
185. The range of potential cumulative impacts that are identified and included in Table 13.40 below, is a subset of those considered for the Proposed Development alone CEA assessment. 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.
186. 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.

Table 13.40: List of Other Developments Considered Within the CEA for Socio-Economics

Development	Status	Distance from Study Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development [e.g. Project Construction Phase Overlaps with Proposed Development Construction Phase]
Tier 1						
Berwick Bank Offshore	Application	43.28 km	Offshore component of the Berwick Bank Project	2024–2030	2030–2065	The construction, operation and maintenance, and decommissioning phases of the project will overlap with the Proposed Development and has been scoped in on the basis of data confidence, effect-receptor pathways and the spatial/temporal scales involved.
Tiers 2–4						
Seagreen 1A Export Cable Corridor Onshore	Consented	31.52 km	Onshore component of Seagreen 1A Export Cable Corridor Planning permission in principle for onshore substation, underground electricity cables and associated temporary and permanent infrastructure to export electricity from the Seagreen 1A Project to the National electricity transmission network.	2022–2024	2024–onwards	The construction, operation and maintenance, and decommissioning phases of the Seagreen 1A Export Cable Corridor will overlap with the Proposed Development and has been scoped in on the basis of data confidence, effect-receptor pathways and the spatial/temporal scales involved.
Inch Cape Onshore component	Consented	32.11 km	Onshore component of Inch Cape offshore wind farm project. Planning permission in principle for proposed onshore transmission works associated with the Inch Cape offshore wind farm comprising the construction, operation and	Unconfirmed – assumed imminent	Unconfirmed, but spatial overlap assumed with high confidence.	The construction, operation and maintenance, and decommissioning phases of the project are highly likely to overlap with the Proposed Development and has been scoped in on the basis of data confidence, effect-receptor pathways and the spatial/temporal scales involved.

Development	Status	Distance from Study Area (km)	Description of Project	Dates of Construction (If Applicable)	Dates of Operation (If Applicable)	Overlap with the Proposed Development [e.g. Project Construction Phase Overlaps with Proposed Development Construction Phase]
			decommissioning of an onshore substation, electricity cables and associated infrastructure required to export electricity from the Inch Cape Offshore Wind Farm to the National Electricity Transmission System.			
SPEN Eastern Link - Branxton Grid Substation	Application	Within socio-economics local study area	New 400kV Electricity substation and associated works in fields to the south of Thornton Bridge Sealing End Compound Branxton, Dunbar	2023-2026		The construction, operation and maintenance, and decommissioning phases of the project will overlap with the Proposed Development and has been scoped in on the basis of data confidence, effect-receptor pathways and the spatial/temporal scales involved.
Tier 3						
Cambois connection	Scoping	Unknown	Up to four HVDC cables connecting Berwick Bank Wind Farm to the national grid at Blyth, Northumberland.	Unknown	Unknown	The Applicant is also developing an additional export cable and grid connection to Blyth, Northumberland. 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.

Cambois Connection

187. As described in Volume 1, Chapter 1, the Applicant is developing an additional export cable grid connection to Blyth, Northumberland (the Cambois connection). Applications for necessary consents (including marine licences) will be applied for separately. The CEA for the Cambois connection is based on information presented in the Cambois Connection Scoping Report (SSER, 2022), submitted in October 2022. The Cambois connection has been screened into the CEA for offshore socioeconomics receptors.

SPEN Eastern Link Project – Converter Station and Cable Route

188. The Eastern Link Project is being developed by SPEN and is subject to a separate planning application. Due to the absence of data relating to potential impacts associated with the scheme (the socio-economics EIA chapter is not available on the East Lothian Council planning portal), the potential cumulative impacts on relevant environmental receptors of the Proposed Development and the SPEN Eastern Link Project cannot be considered within the socio-economics CEA.

189. Any impacts associated with the scheme would result in no material change to the assessment of cumulative effects set out in this chapter.

13.12.1. MAXIMUM DESIGN SCENARIO

190. The maximum design scenarios summarised here 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 5 of the Onshore EIA Report as well as the information available on other projects and plans, to inform a ‘maximum design scenario’. Most effects are anticipated to be beneficial. For those effects anticipated to be adverse in nature, effects of greater adverse significance are not predicted to arise should any other development scenario, based on details within the PDE, to that assessed here, be taken forward in the final design scheme.

Table 13.41: Consideration of Cumulative Projects Based on Study Area, Impact, and Phase

Phase	Tier 1 Berwick Bank Wind Farm (Offshore)			Inch Cape Offshore Wind Farm			Tier 2 Seagreen 1A (Onshore)			SPEN Eastern Link - Branxton Grid Substation			Tier 3 Cambois Connection		
	C	O	D	C	O	D	C	O	D	C	O	D	C	O	D
Employment															
Local															
Scotland															
GVA															
Local															
Scotland															
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															

191. For the purposes of this chapter, the maximum design scenario refers to the maximum construction and operational impacts (employment and GVA) associated with the Proposed Development and cumulative projects as provided in relevant application documents.

13.12.2. CUMULATIVE EFFECTS ASSESSMENT

192. An assessment of the likely significance of the cumulative effects of the Proposed Development upon socio-economics receptors arising from each identified impact is given below.
193. Tier 1 cumulative impacts are not applicable to the socio-economics local study area during all phases of development – this is because different segments of the construction sector will be impacted by onshore and offshore construction activities⁹.

IMPACT ON EMPLOYMENT ACTIVITIES (INCLUDING SUPPLY CHAIN).

Tier 1

Construction Phase

194. The potential Tier 1 cumulative impacts on employment in manufacturing/supply and construction/installation activities under the Baseline procurement scenario are set out in Table 13.42. This will create opportunities to both safeguard existing employment and facilitate new employment.

Table 13.42: Potential Tier 1 Cumulative Impacts (Baseline Procurement Scenario) on Employment in Construction Activities – Scotland

Study Area	Per Annum FTE Years	Total FTE Years
Scotland	5,200	7,200

Magnitude of impact

195. A comparison of the assessed impact compared to the relevant baseline conditions for Scotland is set out in Table 13.43.

Table 13.43: Comparison of Tier 1 Cumulative Construction Phase Employment Impacts vs. Relevant Baseline Conditions – Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Scotland	0.2%	17.9%

196. The magnitude of Tier 1 cumulative impacts for Scotland is set out in Table 13.44.

⁹ No conceptual effect-receptor pathway

Table 13.44: Magnitude of Tier 1 Cumulative Construction Phase Employment Impacts – Scotland

Study Area	Magnitude	vs. Relevant Baseline Conditions	
	Overall	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]

Note: Assigned values from Table 13.9 shown in brackets

Sensitivity of the receptor

197. As per section 13.8, the sensitivity of the receptor for Scotland is assessed as high.

Significance of the effect

198. The significance of effect for Scotland are set out in Table 13.45.

Table 13.45: Significance of Tier 1 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) – Scotland

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

199. At Scotland level, the magnitude of Tier 1 cumulative impacts is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.

Enhanced Scenario

200. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken for the Enhanced scenario, as defined in the supporting Technical Impact Report (Volume 4, Appendix 13.2). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial impacts are greater.

201. 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 13.46. An equivalent Enhanced scenario is also available for the Tier 1 project, which has also been adopted here.

Table 13.46: Potential Tier 1 Cumulative Impacts (Enhanced Procurement Scenario) on Employment in Construction Activities – Scotland

Study Area	Per Annum FTE Years	Total FTE Years
Scotland	14,800	16,100

Magnitude of impact

202. A comparison of the assessed impact compared to the relevant baseline conditions for Scotland is set out in Table 13.47.

Table 13.47: Comparison of Tier 1 Cumulative Construction Phase Employment Impacts vs. Relevant Baseline Conditions – Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Scotland	0.6%	37.0%

203. The magnitude of Tier 1 cumulative impacts for Scotland is set out in Table 13.48.

Table 13.48: Magnitude of Tier 1 Cumulative Construction Phase Employment Impacts – Scotland

Study Area	Magnitude Overall	vs. Relevant Baseline Conditions	
		Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Scotland	High (Beneficial) [3]	Medium [2]	High [3]

Note: Assigned values from Table 13.9 shown in brackets

Sensitivity of the receptor

204. As per section 13.8, the sensitivity of the receptor for Scotland is assessed as high.

Significance of the effect

205. The significance of effect for Scotland are set out in Table 13.49.

Table 13.49: Significance of Tier 1 Cumulative Construction Phase Employment Impacts (Baseline Procurement Scenario) – Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	High (Beneficial)	High	Major (Beneficial)	Yes

206. Compared to the Baseline scenario, there is a substantial increase in the Tier 1 cumulative impacts assessed during the construction phase under the Enhanced scenario at Scotland level. 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.

207. 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.

Operation and Maintenance Phase

208. The potential Tier 1 cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and the Scotland level are set out in Table 13.50. This will create opportunities to both safeguard existing employment and facilitate new employment.

Table 13.50: Potential Tier 1 Cumulative Impacts on Employment in Operation and Maintenance Activities – by Socio-economics Local Study Area and Scotland

Study Area	Per Annum FTE Years	Total FTE Years
Local study area	320	11,200
Scotland	750	26,200

Magnitude of impact

209. A comparison of the assessed impacts compared to the relevant baseline conditions is set out in Table 13.51.

Table 13.51: Comparison of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local study area	<0.1%	15.9%
Scotland	<0.1%	3.4%

210. The magnitude of impact for the socio-economics local study area and Scotland is set out in Table 13.52.

Table 13.52: Magnitude of Tier 1 Cumulative Operation and Maintenance Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude Overall	vs. Relevant Baseline Conditions	
		Share of All Industries Employment (2019)	Share of Construction Impact Industries Employment (2019)
Local Study Area	Medium (Beneficial) [2]	Negligible [0]	High [3]
Scotland	Medium (Beneficial) [2]	Negligible [0]	High [3]

Note: Assigned values from Table 13.9 shown in brackets.

Sensitivity of the receptor

211. As per section 13.8, the sensitivity of the receptor for the socio-economics local study Area and Scotland is assessed as high.

Significance of the effect

212. The significance of the effect for the socio-economics local study area and Scotland is set out in Table 13.53.

Table 13.53: Significance of Tier 1 Operation and Maintenance Phase Employment Impacts – by Socio-economics Local Study Area and Scotland

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

213. At the socio-economics local study area level, the magnitude of Tier 1 cumulative impacts is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.

214. At Scotland level, the magnitude of Tier 1 cumulative impacts is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.

Decommissioning Phase

215. Potential expenditure on decommissioning of Tier 1 project(s) could support employment in activities associated with decommissioning in Scotland.

216. 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 onshore infrastructure would be retained and repurposed, and offshore structures above seabed level will be removed, subject to review in the future based on likely environmental impacts.

217. On this basis the magnitude of effects is expected to be much lower than those set out for the construction phase under the Baseline and Enhanced scenarios.

218. The significance of Tier 1 cumulative effects assessed at construction phase for employment in construction activities are set out in Table 13.45. Based on currently available evidence, it is concluded the significance of Tier 1 cumulative effects for the decommissioning phase will be of **no greater than moderate** beneficial significance across Scotland. This is significant in EIA terms.

Tiers 2–4

Construction Phase

219. There is negligible¹⁰ change in the potential cumulative impacts on employment in construction activities at Scotland level between Tier 1 and Tiers 2–4.

220. The significance of the Tiers 2–4 cumulative effects for Scotland are unchanged from those set out for Tier 1 cumulative effects in Table 13.45.

¹⁰ Tier 2 impacts account for a circa 1% increase, which can reasonably be considered negligible.

Enhanced Scenario

221. As per the Baseline scenario above, under the Enhanced scenario there is negligible change in the potential cumulative impacts on employment in construction activities at Scotland level between Tier 1 and Tiers 2–4.
222. The significance of the Tiers 2–4 cumulative effects for Scotland under the Enhanced scenario are unchanged from those set out for Tier 1.

Operation and Maintenance Phase

223. There is negligible change in the potential cumulative impacts on employment in operation and maintenance activities at the socio-economics local study area and Scotland level between Tier 1 and Tiers 2–4. Therefore, the significance of the Tiers 2–4 cumulative effects for the socio-economics local study area and Scotland are unchanged from those set out for Tier 1.

Decommissioning Phase

224. 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 onshore infrastructure would be retained and repurposed, and offshore structures above seabed level will be removed, subject to review in the future on the basis of likely environmental impacts.
225. 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.
226. On the basis of currently available evidence, it is concluded the significance of Tiers 2–4 cumulative effects for the decommissioning phase will be of **no greater than minor** beneficial significance across the socio-economics local study area and Scotland. This is not significant in EIA terms.

IMPACT ON GVA (£) (INCLUDING SUPPLY CHAIN)

Tier 1

Construction Phase

227. The potential Tier 1 cumulative impacts on GVA in manufacturing/supply and construction/installation activities under the Baseline procurement scenario are set out in Table 13.54. This will create opportunities to both safeguard existing GVA output and facilitate new GVA output.

Table 13.54: Potential Tier 1 Cumulative Impacts (Baseline Procurement Scenario) on GVA in Construction Activities – Scotland

Study Area	Per Annum GVA (£)	Total GVA (FTE Years)
Scotland	£380 m	£530 m

Magnitude of Impact

228. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.55.

Table 13.55: Comparison of Tier 1 Cumulative Construction Phase GVA Impacts vs. Relevant Baseline Conditions – Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Scotland	0.3%	1.9%

229. The magnitude of Tier 1 cumulative impacts for Scotland is set out in Table 13.56.

Table 13.56: Magnitude of Tier 1 Cumulative Construction Phase GVA Impacts – Scotland

Study Area	Magnitude	vs. Relevant Baseline Conditions	
		Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Scotland	Medium (Beneficial) [2]	Low [1]	High [3]

Note: Assigned values from Table 13.9 shown in brackets.

Sensitivity of the Receptor

230. As per section 13.8, the sensitivity of the receptor for Scotland is assessed as high.

Significance of the Effect

231. The significance of effect for Scotland are set out in Table 13.57.

Table 13.57: Significance of Tier 1 Cumulative Construction Phase GVA Impacts (Baseline Procurement Scenario) – Scotland

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

232. At Scotland level, the magnitude of Tier 1 cumulative impacts is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.

Enhanced Scenario

233. The assessment set out above has been undertaken on the Baseline procurement scenario. The same approach has been undertaken for the Enhanced scenario, as defined in the supporting Technical Impact Report (Volume 4, Appendix 13.2). This assumes an increased share of UK and Scottish content in the supply chain within the construction phase, so beneficial impacts are greater.

234. The potential Tier 1 Cumulative impacts on GVA manufacturing/supply and construction/installation activities under the Enhanced procurement scenario are set out in

Table 13.58. An equivalent Enhanced scenario is also available for the Tier 1 project, which has also been adopted here.

Table 13.58: Potential Tier 1 Cumulative Impacts (Enhanced Procurement Scenario) on GVA in Construction Activities – Scotland

Study Area	Per Annum GVA (£)	Total GVA (£)
Scotland	£1,100 m	£1,200 m

Magnitude of Impact

235. A comparison of the assessed impact compared to the relevant baseline conditions is set out in Table 13.59.

Table 13.59: Comparison of Tier 1 Cumulative Construction Phase GVA Impacts vs. Relevant Baseline Conditions – Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Scotland	0.7%	5.6%

236. The magnitude of Tier 1 cumulative impacts for Scotland is set out in Table 13.60.

Table 13.60: Magnitude of Tier 1 Cumulative Construction Phase GVA Impacts – Scotland

Study Area	Magnitude Overall	vs. Relevant Baseline Conditions	
		Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Scotland	High (Beneficial) [3]	Medium [2]	High [3]

Note: Assigned values from Table 13.9 shown in brackets.

Sensitivity of the Receptor

237. As per section 13.8, the sensitivity of the receptor for Scotland is assessed as high.

Significance of the Effect

238. The significance of effect for Scotland are set out in Table 13.61.

Table 13.61: Significance of Tier 1 Cumulative Construction Phase GVA Impacts (Baseline Procurement Scenario) – Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Scotland	High (Beneficial)	High	Major (Beneficial)	Yes

239. Compared to the Baseline scenario, there is a substantial increase in the Tier 1 cumulative impacts assessed during the construction phase under the Enhanced scenario at Scotland level. The quantitative assessment indicates an increase from moderate to major (beneficial) to major (beneficial) significance of effects at this level. The increase in GVA impacts are judged to be substantial enough to justify increasing the assessed significance of effects.
240. 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.

Operation and Maintenance Phase

241. The potential Tier 1 cumulative impacts on GVA in operation and maintenance activities at the socio-economics local study area and Scotland level are set out in Table 13.62. This will create opportunities to both safeguard existing GVA output and facilitate new GVA output.

Table 13.62: Potential Tier 1 Cumulative Impacts on GVA in Operation and Maintenance Activities – by Socio-economics Local Study Area and Scotland

Study Area	Per Annum GVA (£)	Total GVA (£)
Local study area	£34 m	£1,200 m
Scotland	£80 m	£2,700 m

Magnitude of Impact

242. A comparison of the assessed impacts compared to the relevant baseline conditions is set out in Table 13.63.

Table 13.63: Comparison of Tier 1 Cumulative Operation and Maintenance Phase GVA Impacts vs. Relevant Baseline Conditions – by Socio-economics Local Study Area and Scotland

Study Area	vs. Relevant Baseline Conditions	
	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Local study area	0.1%	2.5%
Scotland	<0.1%	0.6%

243. The magnitude of impact for the socio-economics local study area and Scotland is set out in Table 13.64.

Table 13.64: Magnitude of Tier 1 Cumulative Operation and Maintenance Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	vs. Relevant Baseline Conditions	
	Overall	Share of All Industries GVA (2019)	Share of Construction Impact Industries GVA (2019)
Local study area	Medium (Beneficial) [2]	Low [1]	High [3]
Scotland	Low (Beneficial) [1]	Negligible [0]	Medium [2]

Note: Assigned values from Table 13.9 shown in brackets.

Sensitivity of the Receptor

244. As per sub-section 13.8, the sensitivity of the receptor for the socio-economics local study area and Scotland is assessed as high.

Significance of the Effect

245. The significance of the effect for the socio-economics local study area and Scotland is set out in Table 13.65.

Table 13.65: Significance of Tier 1 Operation and Maintenance Phase GVA Impacts – by Socio-economics Local Study Area and Scotland

Study Area	Magnitude	Sensitivity	Significance	Significant in EIA Terms (Yes/No)
Local study area	Medium (Beneficial)	High	Moderate to Major (Beneficial)	Yes
Scotland	Low (Beneficial)	High	Minor to Moderate (Beneficial)	No

246. At the socio-economics local study area level, the magnitude of Tier 1 cumulative impacts is deemed to be medium (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **moderate to major** beneficial significance, which is significant in EIA terms.

247. At Scotland level, the magnitude of Tier 1 cumulative impacts is deemed to be low (beneficial) and the sensitivity of the receptor is considered to be high. Tier 1 cumulative effects will, therefore, be of **minor to moderate** beneficial significance, which is not significant in EIA terms.

Decommissioning Phase

248. Potential expenditure on decommissioning of Tier 1 project(s) could support GVA in activities associated with decommissioning in Scotland.

249. 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 onshore infrastructure would be retained and repurposed, and offshore structures above seabed level will be removed, subject to review in the future based on likely environmental impacts.

250. 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.

251. The significance of Tier 1 cumulative effects assessed at construction phase for GVA in construction activities are set out in Table 13.57. Based on currently available evidence, it is concluded the significance of Tier 1 cumulative effects for the decommissioning phase will be of **no greater than moderate** beneficial significance across Scotland. This is significant in EIA terms.

Tiers 2–4

Construction Phase

252. There is negligible¹¹ change in the potential cumulative impacts on GVA in construction activities at the socio-economics local study area between the Proposed Development and Tiers 2–4.
253. The significance of the Tiers 2–4 cumulative effects for the socio-economics local study area are unchanged from those set out for the Proposed Development.
254. There is negligible¹² change in the potential cumulative impacts on GVA in construction activities at Scotland level between Tier 1 and Tiers 2–4.
255. The significance of the Tiers 2–4 cumulative effects for Scotland are unchanged from those set out for Tier 1.

Enhanced Scenario

256. As per the Baseline scenario above, under the Enhanced scenario there is negligible change in the potential cumulative impacts on GVA in construction activities at Scotland level between Tier 1 and Tiers 2–4.
257. The significance of the Tiers 2–4 cumulative effects for Scotland under the Enhanced scenario are unchanged from those set out for Tier 1.

Operation and maintenance phase

258. There is negligible change in the potential cumulative impacts on GVA in operation and maintenance activities at the socio-economics local study area and Scotland level between Tier 1 and Tiers 2–4. Therefore, the significance of the Tiers 2–4 cumulative effects for the socio-economics local study area and Scotland are unchanged from those set out for Tier 1.

Decommissioning phase

259. 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 onshore infrastructure would be retained and repurposed, and offshore structures above seabed level will be removed, subject to review in the future on the basis of likely environmental impacts.
260. 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.

¹¹ Tier 2 impacts account for a circa 2% increase, which can reasonably be considered negligible.

¹² Tier 2 impacts account for a circa 0.3% increase, which can reasonably be considered negligible.

261. On the basis of currently available evidence, it is concluded the significance of Tiers 2–4 cumulative effects for the decommissioning phase will be of **no greater than minor** beneficial significance across the socio-economics local study area and Scotland. This is not significant in EIA terms.

13.13. INTER-RELATED EFFECTS

262. No inter-related effects are anticipated on socio-economics receptors.

13.14. SUMMARY OF IMPACTS, MITIGATION MEASURES AND MONITORING

263. Information on socio-economics within the socio-economics local study area and Scotland was collected through desktop review.
264. Table 13.66 and Table 13.67 present a summary of the potential impacts, mitigation measures and residual effects in respect to socio-economics. The impacts assessed include:
- impact on employment activities (including supply chain); and
 - impact on GVA (£) (including supply chain).
265. Table 13.68 and Table 13.69 present a summary of the potential cumulative effects, mitigation measures and residual effects. The cumulative effects assessed include:
- impact on employment activities (including supply chain); and
 - impact on GVA (£) (including supply chain).

Table 13.66: Summary of Likely Significant Socio-economics Effects, Mitigation and Monitoring – 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 activities (including supply chain)	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	Not Applicable (N/A)	Moderate to major (Beneficial)	N/A
		✓		Negligible	High	Negligible	N/A	Negligible	N/A
			✓	Negligible	High	Negligible	N/A	Negligible	N/A
Impact on GVA (£) (including supply chain)	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	Minor to moderate (Beneficial)	N/A
		✓		Negligible	High	Negligible	N/A	Negligible	N/A
			✓	Negligible	High	Negligible	N/A	Negligible	N/A
Enhanced Procurement Scenario									
<i>No change</i>									

Table 13.67: Summary of Likely Significant Socio-economics Effects, Mitigation and Monitoring – Scotland

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 activities (including supply chain)	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	Minor to moderate (Beneficial)	N/A
		✓		Negligible	High	Negligible	N/A	Negligible	N/A
			✓	Negligible	High	Negligible	N/A	Negligible	N/A
Impact on GVA (£) (including supply chain)	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	Minor to moderate (Beneficial)	N/A
		✓		Negligible	High	Negligible	N/A	Negligible	N/A
			✓	Negligible	High	Negligible	N/A	Negligible	N/A
Enhanced Procurement Scenario									
Impact on employment activities (including supply chain)	✓			Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate (Beneficial)	N/A
Impact on GVA (£) (including supply chain)	✓			Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	Minor to moderate (Beneficial)	N/A

Table 13.68: Summary of Likely Significant Cumulative Socio-economics Effects, Mitigation and Monitoring – 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 activities (including supply chain)	Tier 1	✓	Medium (Beneficial)	High	Moderate to major (Beneficial)*	N/A	Moderate to Major (Beneficial)*	N/A
		✓	Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate to Major (Beneficial)	N/A
		✓	Negligible	High	Negligible*	N/A	Negligible*	N/A
	Tiers 2–4	✓ ✓ ✓	No change from Tier 1					
Impact on GVA (£) (including supply chain)	Tier 1	✓	Low (Beneficial)	High	Minor to moderate (Beneficial)*	N/A	Minor to moderate (Beneficial)*	N/A
		✓	Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate to major (Beneficial)	N/A
		✓	Negligible	High	Negligible*	N/A	Negligible*	N/A
	Tiers 2–4	✓ ✓ ✓	No change from Tier 1					
Enhanced Procurement Scenario								
No change								

*No Tier 1 project impact at this geography – no change from Proposed Development significance of effects

Table 13.69: Summary of Likely Significant Cumulative Socio-economics Effects, Mitigation and Monitoring – Scotland

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 activities (including supply chain)	Tier 1	✓	Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate to major (Beneficial)	N/A
		✓	Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate to major (Beneficial)	N/A
		✓	≤ Low (Beneficial)	High	≤ Moderate (Beneficial)	N/A	≤ Moderate (Beneficial)	N/A
	Tiers 2–4	✓ ✓ ✓	No change from Tier 1					
Impact on GVA (£) (including supply chain)	Tier 1	✓	Medium (Beneficial)	High	Moderate to major (Beneficial)	N/A	Moderate to major (Beneficial)	N/A
		✓	Low (Beneficial)	High	Minor to moderate (Beneficial)	N/A	Minor to moderate (Beneficial)	N/A
		✓	≤ Low (Beneficial)	High	≤ Moderate (Beneficial)	N/A	≤ Moderate (Beneficial)	N/A
	Tiers 2–4	✓ ✓ ✓	No change from Tier 1					
Enhanced Procurement Scenario								
Impact on employment activities (including supply chain)	Tier 1	✓	High (Beneficial)	High	Major (Beneficial)	N/A	Major (Beneficial)	N/A
	Tiers 2–4	✓	No change from Tier 1					
Impact on GVA (£) (including supply chain)	Tier 1	✓	High (Beneficial)	High	Major (Beneficial)	N/A	Major (Beneficial)	N/A
	Tiers 2–4	✓	No change from Tier 1					

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