



Bellrock Offshore Wind Farm

Wind Farm Development Area

Environmental Impact Assessment Report - Volume IV

Appendix 16.1: Socioeconomics, Tourism and Recreation Technical Report

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Glossary of Terminology

Term	Definition
Applicant	Bellrock Offshore Wind Farm Limited, the legal entity submitting Section 36 Consent and Marine Licence applications for the Bellrock Wind Farm Development Area.
Assembly port	A port at which floating substructures are assembled.
Bellrock Offshore Wind Farm (or the Bellrock Project)	<p>An offshore wind farm capable of exporting up to 1.8 GW of renewable energy to the National Electricity Transmission System.</p> <p>The Wind Farm Development Area is located 120 km east of Stonehaven, and will connect to the National Electricity Transmission System at the proposed SSEN Transmission Hurlie substation, west of Stonehaven in Aberdeenshire. The Bellrock Offshore Wind Farm comprises of the following Development Areas:</p> <ul style="list-style-type: none"> ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.
Cable protection	Protective measure to minimise the effects of scour and hazards along the inter-array cables, and protecting these cables at infrastructure crossing points.
Construction port(s)	Port that may be used during the construction of the Wind Farm Infrastructure and includes integration port(s) and assembly port(s).
Construction works	<p>Works to install the Wind Farm Infrastructure as authorised by the Wind Farm Development Area Section 36 Consent/Marine Licence, such as:</p> <ul style="list-style-type: none"> ▪ Site preparation works undertaken after commencement of construction; ▪ Pre-installation surveys (intrusive and/or non-intrusive); ▪ Placement on or installation in the seabed of anchors and associated scour protection, and mooring lines, and associated scour protection; ▪ Towing or transportation of the floating offshore unit to the Wind Farm Development Area from a port or wet storage facility; ▪ Floating offshore unit installation and commissioning, including hooking-up to the pre-installed mooring system; ▪ Trench excavation for inter-array cables; ▪ Laying of inter-array cables in or on the seabed and, associated cable protection; ▪ Installation of subsea cable hubs, including placing of associated foundation; ▪ Final commissioning following cable connections and snagging; and ▪ Post installation surveys.
Development Area	<p>For consenting purposes, the area for which separate consents and/or Marine Licences will be sought by the Applicant, comprising:</p> <ul style="list-style-type: none"> ▪ Wind Farm Development Area; ▪ Offshore Transmission Development Area; and ▪ Onshore Transmission Development Area.

Term	Definition
Environmental mitigation area	Area within which mitigating measures are deployed to reduce the environmental impact of the Bellrock Project.
Floating offshore substation	The combined offshore substation, floating substructure and station keeping system.
Floating substructure	A floating structure which provides buoyancy and, in conjunction with the station keeping system, supports a superstructure (e.g. wind turbine generator or offshore substation), and maintaining its position within the structure's excursion limit.
Integration port	A port at which wind turbine generators are integrated with floating substructures.
Inter-array cables	Armoured cable containing electrical and fibre optic cores, which link the wind turbine generators to each other and to the subsea cable hubs and/or the offshore substations and include dynamic inter-array cable and static inter-array cable sections.
Interconnector cable	Armoured cable containing electrical and fibre optic cores which link two or more offshore substations.
National Electricity Transmission System	The high-voltage electricity power transmission network serving Great Britain which receives electricity from generators (such as offshore wind farms) and transmits that electricity to anywhere on the National Electricity Transmission System to satisfy demand.
Offshore export cable	Armoured cable containing electrical and fibre optic cores between the offshore substation(s) and the transition joint bay(s).
Offshore substation	An offshore platform which houses electrical equipment such as transformers, switchgear, and protection and control systems, enabling the wind farm's renewable electricity to be received via inter-array cables and exported via the offshore export cables.
Offshore Transmission Development Area	The boundary within which the Offshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned (and includes the whole of the Wind Farm Development Area).
Offshore Transmission Infrastructure	Infrastructure located within the Offshore Transmission Development Area including fixed bottom and/or floating offshore substations, offshore reactive compensation station(s) and associated scour protection; interconnector cables and associated cable protection; and offshore export cables and associated cable protection (including activities associated with the Offshore Transmission Infrastructure construction, operation and maintenance, and decommissioning).
Onshore substation	Onshore substation which will be fenced and house electrical equipment (such as transformers, switchgear, and protection and control systems), thereby enabling renewable electricity from the wind farm to be received via the onshore export cables and exported to the National Electricity Transmission System.
Onshore Transmission Development Area	The boundary within which the Onshore Transmission Infrastructure will be constructed, operated and maintained, and decommissioned.

Term	Definition
Onshore Transmission Infrastructure	Infrastructure located within the Onshore Transmission Development Area including transition joint bay(s); onshore export cables; onshore substation; temporary construction compounds; temporary working areas; environmental mitigation areas; drainage/irrigation infrastructure; access works; and any other associated infrastructure (including activities associated with the Onshore Transmission Infrastructure construction, operation and maintenance, and decommissioning).
Operational life	The expected operational life of the Wind Farm Infrastructure from the Commercial Operation Date to the first floating offshore unit being decommissioned.
ScotWind	A Crown Estate Scotland leasing round for offshore wind projects in which the process enabled developers to apply for seabed rights to plan and build wind farms in Scottish waters.
Scour protection	Protective material positioned around anchors to avoid sediment being eroded as a result of the flow of water.
Site preparation works	Preparatory activities undertaken within the Wind Farm Development Area prior to the commencement of construction of the Wind Farm Infrastructure, which may comprise (and which may require separate consents): <ul style="list-style-type: none"> ▪ Geophysical surveys, geotechnical surveys, and non-archaeological/archaeological diver/remotely operated vehicle surveys; ▪ Seabed preparation including sand wave levelling, slope levelling for gravity based anchors (if selected), boulder clearance, and pre-lay grapnel runs; ▪ Unexploded ordnance survey and/or clearance; ▪ Debris clearance; and ▪ Out of service cable/pipeline removal.
Static inter-array cable	The section of inter-array cable that is not designed to move.
Station keeping system	The system (including mooring lines and anchors) used to hold a floating offshore unit within its excursion limit and maintain the intended orientation of the floating offshore unit.
Subsea cable hub	A subsea device, with a gravel pad foundation, which allows the connection of multiple inter-array cables.
Switchgear	Electrical equipment used to control, protect, and isolate electrical circuits and equipment.
Temporary construction compound	Area within the Onshore Transmission Development Area used temporarily to support the construction and commissioning, which may include (but not limited to) office, welfare and workshop facilities; vehicle parking; spoil, material and equipment laydown and/or storage; drainage infrastructure; wheel washing facilities; and lighting, fencing and security.
Towing	Transportation of a floating offshore unit or floating substructure between a port, and/or wet storage facility and/or the Wind Farm Development Area.
Transition joint bay	An underground structure at the landfall accessed by manhole or other means which accommodates the jointing of the offshore export cables and the onshore export cables. A fence may be installed around the access manhole for protection.

Term	Definition
Wet storage	The temporary storage/anchorage of floating substructures and/or floating offshore units prior to their transportation to the Wind Farm Development Area.
Wind Farm Development Area	The boundary within which the Wind Farm Infrastructure will be constructed, operated and maintained, and decommissioned.
Wind Farm Infrastructure	Infrastructure located within the Wind Farm Development Area including wind turbine generators; floating substructures, station keeping systems and associated scour protection; inter-array cables and associated cable protection; subsea cable hubs; and ancillary infrastructure including buoys (including activities associated with the Wind Farm Infrastructure construction, operation and maintenance, and decommissioning).
Wind turbine generator	A wind turbine generator converts wind energy into electrical energy. The main components include rotor assembly (composed of three blades and a hub); nacelle (containing the generator, shaft and gearbox, power electronic converter and transformer); and a tower (containing lifting equipment and switchgear).

Glossary of Abbreviations

Term	Definition
EIA	Environmental impact assessment
EU	European Union
FSS	Floating substructure
FTE	Full time equivalent
GB	Great Britain
GP	General Practitioner
GVA	Gross value added
GW	Gigawatt
HM	His Majesty
IAC	Inter-array cable
NPF4	National Planning Framework 4
NPV	Net present value
NRS	National Records of Scotland
O&M	Operation and maintenance
OfSS	Offshore substation
OfTDA	Offshore Transmission Development Area
ONS	Office for National Statistics
OnTDA	Onshore Transmission Development Area
OWIC	Offshore Wind Industry Council
SCDS	Supply Chain Development Statement
SKS	station keeping system
UK	United Kingdom
WFDA	Wind Farm Development Area
WTG	Wind turbine generator

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1 Introduction

1. This Socioeconomics, Tourism and Recreation Technical Report is an Appendix to **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** of the Bellrock Wind Farm Development Area (WFDA) Environmental Impact Assessment (EIA) Report.
2. This technical report first lists the data sources that were consulted as part of the desktop exercise informing the socioeconomics, tourism and recreation baseline (as presented in **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)**). It then sets out the 'Input-output' methodology underpinning the analysis of the economic impacts from the Bellrock Wind Farm Infrastructure. This includes reference to the sources for key assumptions, including on total project costs and spending by study area.
3. The aim of this technical report is to:
 - Provide more detail on the methodology used to develop the baseline; and
 - Provide more detail on the methodology used to quantify the economic impacts associated with the Bellrock Wind Farm Infrastructure.
4. This report has been prepared by BiGGAR Economics Limited.

1.1 The Bellrock Project

5. The Bellrock WFDA EIA Report presents the impacts and activities associated with the Bellrock Wind Farm Infrastructure located within the WFDA. The Wind Farm Infrastructure comprises wind turbine generators (WTGs), floating substructures (FSS), station keeping systems (SKSs) and associated scour protection, inter-array cables (IACs) and associated cable protection, and subsea cable hubs.
6. The future Bellrock Offshore Transmission Development Area (OfTDA) EIA Report will consider impacts and activities associated with the Offshore Transmission Infrastructure located within the OfTDA. The Offshore Transmission Infrastructure comprises fixed bottom and/or floating offshore substations (OfSSs)¹, offshore reactive compensation station(s) and associated scour protection, interconnector cables and associated cable protection, and offshore export cables and associated cable protection.
7. The future Onshore Transmission Development Area (OnTDA) EIA Report will consider the impacts and activities associated with the Onshore Transmission Infrastructure. The Onshore

¹ Offshore substations will be consented as part of the OfTDA and will be assessed as part of the Bellrock OfTDA EIA Report. The OfTDA is also considered within the Bellrock WFDA EIA's cumulative effects assessments.

Transmission Infrastructure generally comprises transition joint bay(s), onshore export cables, onshore substation, temporary construction compounds, and temporary working areas.

8. Together, the Bellrock WFDA, OfTDA and OnTDA make up the Bellrock Project. A description of the Development Areas that make up the Bellrock Project and all terms used is provided in **Chapter 1: Introduction (Volume II)**.
9. This technical report refers to the Bellrock WFDA and the Bellrock Project as appropriate. In some instances, it is not possible to consider the Bellrock WFDA on its own and it must be considered for the Bellrock Project as a whole (i.e. the Bellrock WFDA, OfTDA and OnTDA). The Bellrock Wind Farm Infrastructure is considered in **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** and the full Bellrock Project is considered in **Appendix 16.2: Socioeconomics Whole Project Assessment (Volume IV)**.

2 Socioeconomics, Tourism, and Recreation Study Areas

10. While a significant proportion of the construction, operation and maintenance (O&M) and decommissioning activity associated with the Bellrock Wind Farm Infrastructure is expected to take place offshore, the relevant study areas for the socioeconomics, tourism and recreation assessment are located onshore.
11. The socioeconomics, tourism and recreation study areas for the assessment of effects on employment and the economy are defined in line with the Scottish Government's guidance on the identification of 'local areas' for offshore developments (Scottish Government, 2022a). This guidance identified six principles for identifying local study areas for offshore developments:
 - Principle 1 (Dual Geographies): The local area for the supply chain and investment impacts should be separate from the local area(s) for wider socioeconomic impacts, including tourism and recreation;
 - Principle 2 (Appropriate Impacts): The appropriate impacts to be considered for assessments should be identified before defining the local areas;
 - Principle 3 (Epicentres): The local areas should include all the epicentres of the appropriate impacts;
 - Principle 4 (Accountability): The local areas used in the assessment should comprise pre-existing economic or political geographies (community councils, local authorities, development agencies) to enhance accountability;
 - Principle 5 (Understandable): The local areas should be defined in such a way that they are understandable to the communities they describe; and
 - Principle 6 (Connected Geography): The local area for the supply chain and investment impacts should consist of connected (including coastal) pre-existing economic or political geographies.
12. In line with this guidance, the study areas for the socioeconomic impacts are different from those used for the assessment of tourism and recreation impacts.
13. The tourism and recreation study area is defined functionally based on the extent of secondary effects, rather than as a fixed geographical boundary. Due to the distance from shore (>120 km), there cannot be a visual effect on coastal tourism. And, as detailed in **Section 16.4.1 of Chapter 16 (Volume II)**, the study area corresponds to the physical scope of the primary effects identified in other chapters (e.g. Shipping, Fisheries). If no significant effect is found in those chapters (as confirmed in **Section 16.8.1.6 of Chapter 16 (Volume II)**), the study area for tourism effects is effectively null.
14. For the socioeconomic study area, the main local epicentres of impact are expected to be the ports used during the construction, O&M, and decommissioning of the Wind Farm Infrastructure.

However, as the specific ports have not yet been confirmed by the Applicant, a suite of socioeconomic study areas have been defined at two distinct geographic scales to ensure both strategic and local impacts are assessed.

15. Firstly, to capture wider supply chain and labour market effects, the analysis considers the following broad socioeconomic study areas:
 - Scotland; and
 - the United Kingdom (UK).

16. Secondly, to illustrate the potential range of local effects, a socioeconomic study area has been defined for each of the indicative port locations presented in **Table 16.13 of Chapter 16 (Volume II)**. These local study areas are defined as the electoral ward in which the port is located – or the local authority area in the case of ports situated within cities.

3 Baseline Methodology

3.1 Desktop Study

17. Information on socioeconomics, tourism and recreation was collected through a detailed desktop review of existing studies and datasets. This data gathering covered both the broad socioeconomic study areas (Scotland and the UK) used for economic modelling, and the local socioeconomic study areas (indicative port locations) used for assessing social impacts. The sources underpinning the baseline are summarised in **Table 3.1**.

Table 3.1: Summary of Key Desktop Datasets and Reports for Socioeconomics, Tourism and Recreation

Title	Source	Extent	Year	Author
Principal Population Projections 2022-based	Office for National Statistics (ONS)	Scotland and UK-level population projections	2025	ONS
Northern Ireland Annual General Medical Services Statistics	Business Services Organisation	Number of General Practitioners (GPs) across the UK's countries	2024	Business Services Organisation
Guide to an Offshore Windfarm	BVG Associates	Information on the contracts required for an offshore windfarm	2024	BVG Associates
Northern Ireland Housing Statistics	Department for Communities	Housing in Northern Ireland used to define the UK baseline	2024	Department for Communities
Mid-2023 Population Estimates – local authority	National Records of Scotland (NRS)	Population estimates	2024	NRS
Business Register and Employment Survey 2023	ONS	Sectoral employment across Great Britain	2024	ONS
Annual Business Survey	ONS	Information on economic activity in the UK	2024	ONS
Annual Population Survey	ONS	Employment, unemployment rates, and qualifications across the UK	2024	ONS

Title	Source	Extent	Year	Author
Annual Survey of Hours and Earnings 2024	ONS	Earnings across the UK	2024	ONS
Population Estimates - local authority based by five-year age band	ONS	Population estimates by local authority	2024	ONS
Dwelling Stock by Tenure, UK	ONS	Housing stock in the UK	2024	ONS
House Price Statistics	Registers of Scotland	Housing prices in Scotland	2024	Registers of Scotland
Housing Statistics: Stock by tenure	Scottish Government	Housing stock in Scotland	2024	Scottish Government
Pupil Census Supplementary Statistics 2024	Scottish Government	Pupil numbers across Scotland	2024	Scottish Government
Teacher Census Supplementary Statistics 2024	Scottish Government	Teacher numbers across Scotland	2024	Scottish Government
Industry Statistics Database 2024	Scottish Government	Information on sustainable tourism activity	2024	Scottish Government
VisitScotland – Research and Insights	VisitScotland	Information on tourism activity	2024	VisitScotland
Education and Training Statistics for the UK	UK Government	Teacher per pupil numbers	2024	UK Government
Offshore Wind Skills Intelligence Report	Offshore Wind Industry Council (OWIC)	Skills evidence for the offshore wind sector	2023	OWIC
International Passenger Survey 2022	ONS	Overnight visitors and spending for international visitors	2023	ONS
Job Density	ONS	Employment over time across the UK	2023	ONS
Annual Growth Sector Statistics	Scottish Government	Evidence on tourism employment and gross value added (GVA) across Scotland	2023	Scottish Government

Title	Source	Extent	Year	Author
General Practice – GP workforce and practice list sizes	Public Health Scotland	GPs in Scotland	2022	Public Health Scotland
Great Britain (GB) Day Visitor Survey 2022	Kantar	Day visitor trips and spending across Great Britain	2020	Kantar
The GB Tourism Survey 2022	Kantar	Overnight visitor trips and spending across Great Britain	2020	Kantar
2018-based principal population projections for council areas	NRS	Population projections	2020	NRS
Collaborating for Growth: Strategies for Expanding the UK Offshore Wind Supply Chain	OWIC	Information on the UK Offshore Wind Supply Chain	2020	OWIC
Guidance on assessing the socioeconomic impacts of offshore wind farms	Oxford Brookes University	Guidance on socioeconomic impact assessments of offshore wind farms	2020	Oxford Brookes University

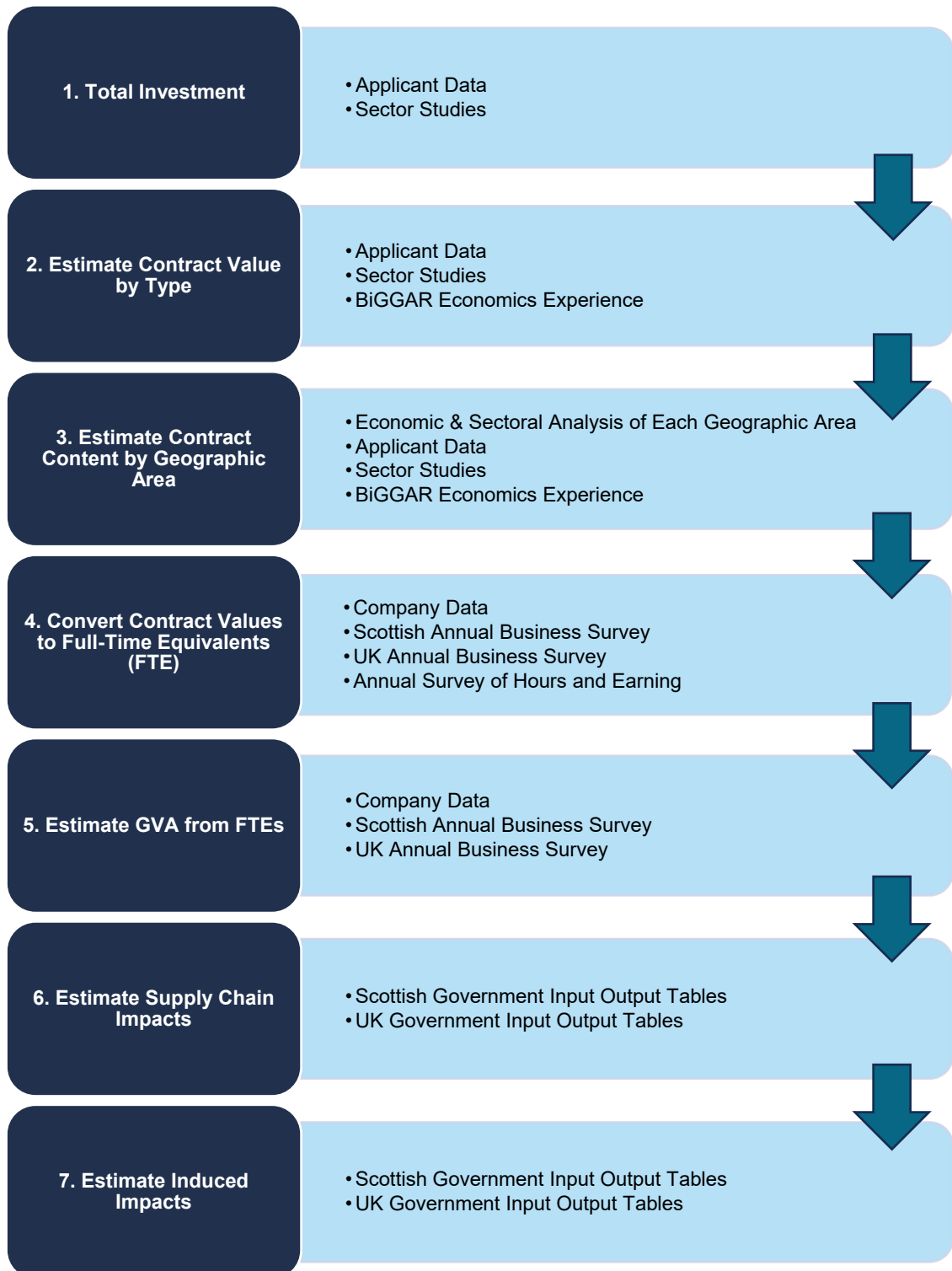
4 Economic Impact Methodology

4.1 Approach to Impacts from Offshore Wind

4.1.1 Key Steps in Assessing the Contribution of the Bellrock WFDA

18. Before the analysis of economic impacts is undertaken, it is necessary to select the study areas for inclusion in the assessment of the Bellrock Wind Farm Infrastructure, as set out in **Section 2**. This process is based on guidance developed by BiGGAR Economics on behalf of the Scottish Government (Scottish Government, 2022).
19. Having selected the study areas for which GVA and employment impacts are considered, it is then possible to gather relevant information and estimate economic impacts. The estimation of the economic benefits from the Bellrock Wind Farm Infrastructure is based on a purpose-built tool developed by BiGGAR Economics. As set out in **Plate 4.1**, the analysis is based on an Input-output methodology built upon the following steps:
 - Estimation of the total investment associated with the Bellrock WFDA (development, construction, O&M, and decommissioning);
 - Estimation of contract value by type;
 - Estimation of contract content by geographical area;
 - Conversion of contracts into the direct employment supported by the Bellrock WFDA;
 - Estimation of direct GVA based on direct employment supported;
 - Estimation of supply chain (indirect) impacts on GVA and employment; and
 - Estimation of induced impacts on GVA and employment.

Plate 4.1: Economic Impact Methodology and Data Sources



4.1.2 Information Requirements and Data Sources

20. The assessment requires knowledge of a series of parameters including:
- Minimum and maximum number of WTGs and their capacity;
 - WTG substructure type (i.e. floating);
 - Costs by project contract category;
 - Estimates of content by study area; and
 - Timescales of activity.
21. These details are provided in **Chapter 4: Project Description (Volume II)** for the Bellrock WFDA.
22. Other key sources of information include:
- Commercial data from the Applicant, including the Supply Chain Development Statement (Bellrock Offshore Wind Farm Limited, 2023);
 - Classification of economic activity from the ONS 'Standard Industrial Classification of Economic Activity' (ONS, 2022);
 - Scottish Annual Business Statistics for data on GVA, turnover and employment across Scotland (Scottish Government, 2024d);
 - UK Annual Business Survey for data on GVA, turnover and employment across the UK (ONS, 2022);
 - Scottish Government Input-output GVA and employment multipliers for Type 1 impacts (supply chain spending) and Type 2 impacts (supply chain spending and staff spending) (Scottish Government, 2024e); and
 - UK Input-output GVA and employment multipliers for Type 1 and Type 2 impacts (ONS, 2023).
23. These data sources are complemented by BiGGAR Economics experience working with developers in the offshore wind sector and by using sectoral reports.

4.1.3 Supply Chain Development Statement

24. The starting point for the economic impact assessment was the expenditure that is expected to be associated with the Bellrock Project. The Applicant's Supply Chain Development Statement (SCDS) Outlook (Bellrock Offshore Wind Farm Limited, 2023) provides estimates of the share of expenditure in Scotland, the UK, the Rest of Europe and elsewhere across two scenarios (commitment and ambition) associated with four stages of expenditure:
- Development stage;
 - Manufacturing and fabrication stage;
 - Installation stage; and

- Operations stage (note this includes maintenance activities).
25. In the commitment scenario presented in the SCDS Outlook (**Table 4.1**), the total expenditure committed during the development, manufacture and fabrication and installation stages (collectively the development and construction phases) of the Bellrock Project is £3.7 billion, including £1.6 billion committed expenditure in Scotland and £0.5 billion committed expenditure in the rest of the UK.
26. This includes:
- £249.6 million on development costs;
 - £2.7 billion on manufacturing and fabrication costs; and
 - £698 million on installation activity costs.
27. In addition, there is expected to be O&M spend of £303.5 million over the first six years, including £138.9 million in Scotland. This is expected to relate to operating and maintaining the WTGs and infrastructure associated with the Bellrock Project, inspections, rents and transmission charges.
28. Each of the categories of spend was then split into sub-categories based on BiGGAR Economics' offshore wind economic model, which incorporates a detailed breakdown of cost categories, based on industry data, including BVG Associates Guide to a Floating Offshore Wind Farm (BVG Associates, 2024).

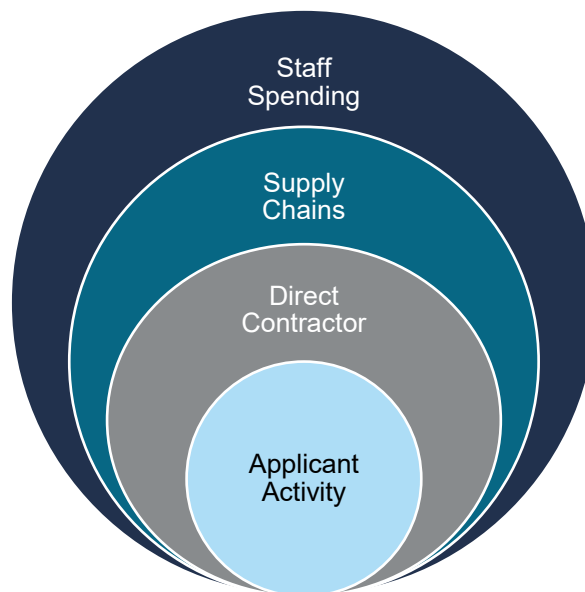
Table 4.1: Supply Chain Development Statement (Commitment)

Project Stage	Scotland	Rest of UK	Rest of Europe	Rest of World	Total
Development	£158 million	£81 million	£10 million	-	£250 million
Manufacturing and Fabrication	£980 million	£354 million	£1.206 billion	£177 million	£2.717 billion
Installation	£438 million	£20 million	£239 million	-	£698 million
Total Development and Construction Phase	£1.576 billion	£456 million	£1.456 billion	£177 million	£3.665 billion
O&M	£139 million	£56 million	£108 million	-	£304 million
Total	£1.715 billion	£513 million	£1.564 billion	£177 million	£3.968 billion
Notes:					
Source: Bellrock Offshore Wind Farm Limited, 2023, Supply Chain Development Statement Outlook					

4.1.4 Dimensions of Impact and Key Terms

29. In line with industry best practice, for the assessment of GVA and employment impacts, the analysis focuses on:
- Direct economic impacts: economic impact associated with the activity of primary contractors involved in the development, construction and operations and maintenance of the Bellrock Wind Farm Infrastructure; and
 - Indirect economic impacts: economic impact associated with the spending taking place across the supply chain of those businesses involved in the development, construction and operations and maintenance of the Bellrock Wind Farm Infrastructure.
30. **Plate 4.2** sets out the levels of economic activity and the impacts assessed. The assessment also refers to the additional benefits associated with the spending in the economy by those employed to carry out works associated with the Bellrock Wind Farm Infrastructure (induced economic impacts).

Plate 4.2: Levels of Economic Activity and Impact



31. The economic impacts are expressed in terms of:
- GVA: a measure of economic activity expressed as the difference between an organisation's turnover and its non-staff operational expenditure;
 - Years of employment: a measure of short-term employment used in the context of jobs associated with construction and development activity. As an example, a job lasting for 18 months is equivalent to 1.5 years of employment; and
 - Jobs: a measure of employment used to reflect long-term employment such as the operations and maintenance phase.

4.1.5 Pricing and Discounting

32. All prices considered as part of the assessment are real prices (i.e. they reflect cost estimates as expressed in prices as of 31 January 2025, which is the cut-off point for this assessment)).
33. The analysis, where appropriate, also provides estimates based on the net present value (NPV) of activity. This is based on His Majesty's (HM) Treasury's guidance on economic appraisal as included in the Green Book (HM Treasury, 2022), where it is recommended that impacts occurring over long periods of time are discounted to account for the different value people give to present compared to future consumption. The HM Treasury's suggested discount factor of 3.5% is applied.

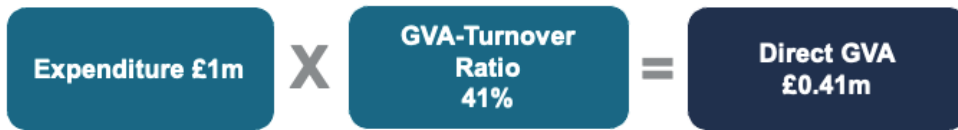
4.1.6 Net Economic Impact

34. In line with best practice, the economic analysis considers the net economic impact from the Bellrock Wind Farm Infrastructure. This requires accounting for additionality, the extent to which economic activity would not occur without the Bellrock Wind Farm Infrastructure. There are four dimensions of additionality:
- Displacement: the extent to which activity associated with the Bellrock Wind Farm Infrastructure displaces existing economic activity in the socioeconomics, tourism and recreation study areas;
 - Leakage: the extent to which spending on the Bellrock Wind Farm Infrastructure benefits businesses outside the socioeconomics, tourism and recreation study areas;
 - Deadweight: the extent to which economic activity would occur even without the Bellrock Wind Farm Infrastructure; and
 - Substitution: the effects arising when a business substitutes one activity for a similar one to benefit from public sector assistance.

4.2 Economic Impact Modelling

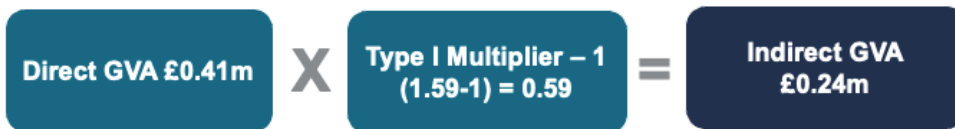
35. This section provides details on the Input-output methodology applied. Having gathered data on spending for each of the contracts during each phase and assigned to the Bellrock WFDA, OFTDA or OnTDA, the first step involves estimating the total spending supported by the contracts performed in each of the socioeconomics, tourism and recreation study areas (Scotland and UK). Based on the turnover supported, it is then possible to estimate the direct employment and direct GVA supported by the Bellrock Wind Farm Infrastructure by applying the relevant turnover per GVA and turnover per job ratios from the ONS Annual Business Survey. This is illustrated in **Plate 4.3** below.

Plate 4.3: Direct Gross Value Added (GVA)



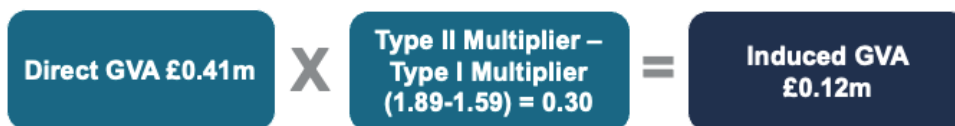
36. Alongside the direct impact generated by the Bellrock Wind Farm Infrastructure, there was an impact on the supply chain of those businesses being awarded project-related contracts. To estimate indirect impacts, it is necessary to apply the direct GVA and direct employment Type I employment and GVA multipliers as sourced from the UK Input-output Tables. How Type I multipliers are applied is shown in **Plate 4.4**.

Plate 4.4: Indirect Gross Value Added (GVA)



37. In line with industry best practice, for the assessment of GVA and employment impacts, the analysis focuses on the direct and indirect impacts. In addition, the analysis also reports on induced impacts, which are the result of those employed to carry out project-related work spending their salaries and wages across the economy. To estimate induced impacts, it was necessary to apply Type II UK Employment and GVA multipliers to the direct GVA and employment supported by the Bellrock Project, as shown in **Plate 4.5**.

Plate 4.5: Induced Gross Value Added (GVA)



38. As the economic impact multipliers reflect activity occurring within the UK economy, it is necessary to adjust multipliers to reflect activity occurring in each of the study areas. This is based on an analysis of household spending patterns and knowledge of supply chains at the regional level.

5 Relevant Socioeconomic, Tourism and Recreation Policies

5.1 UK Offshore Wind Sector Deal

39. The Offshore Wind Sector Deal (UK Government, 2020), sets out the UK Government's aim to support the development of offshore wind energy generation in the UK, making the sector a significant part of a low-cost, low-carbon flexible grid system. The Deal also emphasises how UK companies can benefit from the opportunities presented by the expansion of the offshore wind sector, enhancing the competitiveness of UK firms internationally and sustaining the UK's role as a global leader in offshore wind generation.
40. The UK Government highlighted that some estimates suggest that offshore wind capacity globally will grow by 17% annually from 22 gigawatt (GW) to 154 GW in 2030, which could mean the UK contributing up to 40 GW of generating capacity. In 2022, this was increased to 50 GW by 2030 (UK Government, 2022) and recently to 60 GW (UK Government, 2024).
41. The UK Government aims to reach this capacity in a sustainable, timely way (UK Government, 2020) and commits to working with the offshore wind sector and wider stakeholders to deliver the expansion of the sector, addressing strategic deployment issues, transmission issues and environmental impacts. Reaching this level of capacity could support up to 27,000 jobs in the UK, while the sector will work with the UK Government, existing institutions, and universities to increase job mobility between energy sectors, increase apprenticeship opportunities and coordinate local efforts, further developing the benefits to the UK economy.
42. The UK Government has also highlighted the role that offshore wind can play in the transition to a net zero economy by 2050 (UK Government, 2021). Based on existing technology, electrification remains the main route to reach carbon neutrality. To make this change possible, the supply of electricity will need to increase significantly to match demand, and the Government aims to decarbonise the power sector by 2035. This also has the potential to create many new green jobs, as part of the UK Government's 'Build Back Greener' agenda (UK Government, 2021).

5.2 National Planning Framework 4

43. National Planning Framework 4 (NPF4) is Scotland's national spatial strategy, outlining how to improve people's lives through sustainable, liveable, and productive places (Scottish Government, 2023).
44. The Scottish Government identifies net zero energy solutions as a key contributor to net zero emissions by 2045 and includes National Planning Policies to achieve this aim, such as a Climate

Emergency Policy (1) which encourages and promotes development that addresses the global climate emergency and a Green Energy Policy (11) which encourages and promotes all forms of renewable energy development, both onshore and offshore.

45. As part of Policy 11(a), all forms of renewable technologies, including offshore wind, was supported. This is subject to the test outlined in Policy 11(c), which states that: "development proposals will only be supported where they maximise net economic impact, including local and community socioeconomic benefits such as employment, associated business and supply chain opportunities". The Bellrock WFDA will support employment and create opportunities for local businesses at both the construction, and O&M phases.

5.3 National Strategy for Economic Transformation

46. In March 2022, the Scottish Government published the National Strategy for Economic Transformation (Scottish Government, 2022b), which set out its ambition for Scotland's economy over the next ten years. The Scottish Government's vision is to create a wellbeing economy where society thrives across economic, social and environmental dimensions, and which delivers prosperity for all Scotland's people and places. Of particular importance is the ambition to be greener, with a just transition to net zero, a nature-positive economy and a rebuilding of natural capital.
47. A key longer-term challenge identified in the strategy is to address deep-seated regional inequality, including in rural and island areas that face problems such as a falling labour supply, poorer access to infrastructure and housing. The transition to net zero presents a further challenge of delivering positive employment, revenue and community benefits.
48. To deliver its vision and address the economy's challenges, five programmes of action have been identified (with a sixth priority of creating a culture of delivery), including:
- Establishing Scotland as a world-class entrepreneurial nation;
 - Strengthening Scotland's position in new markets and industries, generating new, well-paid jobs from a just transition to net zero;
 - Making Scotland's businesses, industries, regions, communities and public services more productive and innovative;
 - Ensuring that people have the skills they need to meet the demands of the economy, and that employers invest in their skilled employees; and
 - Reorienting the economy towards wellbeing and fair work.
49. The strategy notes that Scotland has substantial energy potential and that it has developed a growing green industrial base. This provides a strong foundation for securing new market opportunities arising from the transition to net zero. Renewable energy also has a role to play in supporting productive businesses and regions across Scotland.

5.4 Offshore Wind Policy Statement

50. The Scottish Government's 2020 Offshore Wind Policy Statement (Scottish Government, 2020) highlights the substantial potential of Scotland's waters for offshore wind and the importance of the sector in the transition to net zero.
51. When the policy statement was published in October 2020, the ScotWind leasing round set ambitions for 11 GW of offshore wind capacity to be developed in Scottish waters by 2030, generating substantial economic impacts in Scotland's offshore wind supply chain. The ScotWind leasing round is now expected to lead to an additional 27.6 GW of offshore wind capacity (Crown Estate Scotland, 2023), with particular economic opportunities related to floating offshore.
52. As part of the ScotWind leasing process, each developer submitted a SCDS and SCDS Outlook, which sets out the commitment (or minimum) and ambition (maximum) spending expected to take place in Scotland and the rest of the UK across the categories of development, manufacturing and fabrication, installation and operations. A greater share of operational activities are expected to be procured from Scotland, reflecting the growing operations and maintenance capacity in the country.
53. The Scottish Government commits to making every effort to maximise the economic benefit from such developments and ensure that the Scottish economy sees the full benefit of these projects.

5.5 Update to the 2020 Offshore Wind Policy Statement (2026)

54. In January 2026, the Scottish Government published an update to the 2020 Offshore Wind Policy Statement (Scottish Government, 2026), significantly increasing Scotland's ambition for offshore wind Deployment. This update reflects the rapid evolution of the sector since 2020, particularly following the ScotWind and INTOG leasing rounds.

5.5.1 Increased Capacity Targets

55. The Scottish Government has reset its offshore wind policy ambition to up to 40 GW of new offshore wind capacity by 2040. This is a substantial increase from the 8-11 GW by 2030 target set in the original 2020 statement. This new target is in addition to the capacity already operational or consented as of August 2025. The update reaffirms the government's commitment to supporting the delivery of the existing project pipeline, which includes the Bellrock Project (listed as a project with a lease awarded for 1.8 GW).

5.5.2 Strategic Benefits and Economic Growth

56. The update identifies four key strategic benefits for Scotland arising from this increased ambition:
- **Energy Security:** Reducing reliance on volatile fossil fuel markets;
 - **Economic Growth:** Unlocking private investment and building a world-class domestic supply chain to create thousands of high-quality jobs;

- **Just Transition:** Providing alternative employment for those transitioning away from the fossil fuel industry; and
- **Climate Action:** Accelerating progress toward net zero targets.

5.5.3 Supply Chain and Innovation

57. The 2026 update estimates the potential global capital value of the Scottish offshore wind market at approximately £100 billion, assuming full deployment of the pipeline. It places a heavy emphasis on floating offshore wind - which accounts for more than half of Scotland's potential pipeline - as a primary competitive advantage for the nation. The Bellrock Project, as a floating offshore development, is central to this strategic focus.

5.5.4 Skills and Community Benefits

58. To support this scale of development, the Scottish Government published the Offshore Wind Skills Priorities & Action Plan in November 2025 to coordinate the pipeline of skilled workers. Furthermore, the government intends to update its Good Practice Principles for Community Benefits later in 2026 to ensure that the economic success of large-scale projects translates into tangible outcomes for local and coastal communities. This will follow the UK Government's consultation into Community Benefits and Shared Ownership for Low Carbon Energy Infrastructure due in Spring 2026.

6 Summary

59. This Socioeconomics, Tourism and Recreation Technical Report provides details on the methodology that has informed the economic analysis in **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)**.
60. The economic impact from the Bellrock Wind Farm Infrastructure is estimated across the broad socioeconomics, tourism and recreation study areas of:
- Scotland; and
 - The UK.
61. In addition, social impacts are assessed across a suite of local socioeconomic study areas corresponding to the indicative port locations.
62. **Chapter 16: Socioeconomics, Tourism and Recreation (Volume II)** provides a characterisation of the socioeconomic, tourism and recreation conditions within these two study areas. This was based on a desk-based exercise, including the review of relevant statistical publications and reports.
63. The economic impact analysis draws on evidence on the total spending from the Bellrock Project, as drawn from the Applicant's SCDS Outlook. Activity across the development, construction, and operations and maintenance phase has then been allocated to the Bellrock Wind Farm Infrastructure based on a breakdown of spending by contract.
64. The economic impact analysis is based on an Input-output methodology. On this basis, the employment and GVA supported by the Bellrock Wind Farm Infrastructure have been estimated using sectoral economic ratios and multipliers.
65. Finally, in line with industry best practice, the assessment has focused on the net economic impact from the Bellrock Wind Farm Infrastructure, which required consideration of its additionality (as described in further detail in **Section 4.1.6**).

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