# Bowdun Offshore Wind Farm, Offshore EIA Report

## Volume 2, Appendix 18.2: Socio-Economics Quantitative Assessment Methodology

TWP-BOW-JCB-ENV-RPT-00017 | April 2026

# Contents



# List of Tables

# Glossary

| Defined term | Definition |
|---|---|
| **Direct Impacts** | The GVA and employment generated by organisations directly involved in project delivery. |
| **Effect** | Term used to express the consequence of an impact i.e. the result of change or changes on specific environmental resources or receptors. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity of the receptor or resource in accordance with defined significance criteria. |
| **Environmental Impact Assessment (EIA)** | Assessment of the potential likely significant effects of a proposed development on the physical, biological, and human environment during construction, operation and maintenance and decommissioning. |
| **Gross Disposable Household Income** | Measures the total amount of money households have available to spend or save after paying direct taxes and receiving benefits or welfare payments. |
| **Gross Value Added (GVA)** | Measures the contribution of individual companies, industries, and regions to the national economy. This figure is presented at current prices, reflecting the total value generated by the economy/sector after subtracting intermediate consumption (i.e., the cost of inputs used in production). |
| **Impact** | A change caused by an action that occurs during a project's lifetime. |
| **Indirect Impacts** | The GVA and employment impacts generated by supply chain activity i.e. supply of goods and services to the direct contractors. They capture the broader economic contribution beyond the direct impact arising from its immediate investment. |
| **Induced Impacts** | Generated from the increased household spending by those employed directly or indirectly through the Project. |
| **Onshore** | Area Landward of Mean Low Water Springs (see definition above). |
| **Operations Phase** | Includes routing inspections, repairs and replacement of infrastructure and equipment associated with the Project. |
| **Project (the)** | An overarching term for the Bowdun Offshore Wind Farm (Bowdun OWF) comprising the offshore and onshore infrastructure required to generate and transmit electricity from the Array Area to the onshore Grid Connection Point. The Project includes both the Offshore Generation Assets, the Offshore Transmission Assets and the Onshore Transmission Assets (see definitions above). |
| **Study Area** | For each environmental topic, the baseline environment will be characterised, and the potential environmental impacts will be described within a topic-specific 'study area'. The study areas are defined for each topic in the Onshore Scoping Report and are based on the maximum spatial extent across which potential impacts of the Project may be experienced by the relevant receptors (i.e., zone of Influence). |
| **Thistle Wind Partners (TWP)** | Company established for the development of the Project. |

## Acronyms

| Acronym | Definition |
|---|---|
| **aFTE** | Years of Employment |
| **CAPEX** | Capital Expenditure |
| **DECEX** | Decommissioning Costs |
| **EIA** | Environmental Impact Assessment |
| **FTE** | Jobs |
| **GVA** | Gross Value Added |
| **O&G** | Oil and Gas |
| **O&M** | Operation and Maintenance |
| **OPEX** | Operational Expenditure |
| **SCDS** | Supply Chain Development Statement |
| **TWP** | Thistle Wind Partners |
| **UK** | United Kingdom |

## Table of Units

| Units | Definition |
|---|---|
| **GW** | GigaWatt |
| **£** | GBP |
| **%** | Percent |

# 1 Assessment Methodology

## 1.1 Introduction

1.1.1 This technical appendix presents the Socio-Economics, Tourism and Recreation assumptions and methodology used to quantify the potential economic impacts of the Bowdun Offshore Wind Farm (OWF) ('the Project'). The Project comprises of the onshore elements, landward of Mean Low Water Springs (MLWS), and the offshore elements covering the Option Lease Area (OLA) comprises of the Array Area, which is located in the E3 Plan Option Area (POA) detailed in the Scottish Sectoral Marine Plan (Scottish Government, 2020), and the Export Cable Corridor. The Array Area is located 38 km from the Aberdeenshire coast at its closest point, covering an area of 187 $km^2$. The Proposed Development will comprise of Wind Turbines (fixed foundations), Inter-Array Cables, Offshore Substation Platforms, Interconnector Cables, Offshore Export Cables and any necessary scour/cable protection. The Export Cable Corridor will include a maximum of three High Voltage Alternating Current Offshore Export Cables, each with a length of up to 70 km and will make Landfall at Benholm, Aberdeenshire.

1.1.2 Gross Value Added (GVA) is a measure of economic value added by an organisation or industry and is typically estimated by subtracting the non-staff operational costs from the revenues. GVA impacts are presented in real, undiscounted terms.

1.1.3 Employment impacts are quantified as the number of jobs (FTEs) and Years of Employment (aFTEs):

- FTEs – the number of Full-Time Equivalent roles created. This is used when considering employment impacts during the operational phase.
- aFTEs - Annualised FTEs – the total number of years of employment in Full Time Equivalent roles. This is used when considering short term employment impacts, such as those associated with the construction and decommissioning phases.

1.1.4 The GVA and employment impacts were quantified for the whole project including both the onshore and offshore elements. This is considered an appropriate approach, for the following reasons:

- At the time of this assessment, project expenditure estimates were only available for the Project as a whole and could not be disaggregated.
- The GVA and employment impacts are driven by the amount of expenditure going into the supply chain in different locations (United Kingdom, Scotland or the Regional Socio-Economics Study Area) rather than the location (onshore or offshore) where the construction or operations activity associated with that expenditure occurs.
- Many activities, particularly during the operations phase, are associated with the overall development, and cannot be separated into onshore or offshore activities.

- The onshore and offshore elements of investment are intrinsically linked; neither would proceed in the absence of the other.

1.1.5 Impacts are assessed across three project phases, three spatial areas, and two scenarios, outlined in detail in Section 1.3.

## 1.2 Project Expenditure Assumptions

1.2.1 The key input for modelling the impact on GVA and employment is the expected level of project expenditure, comprising:

- Capital expenditure (CAPEX) phase relates to the initial investment in building and installing infrastructure.
- Operational expenditure (OPEX) is the ongoing costs of running and maintaining the asset.
- Decommissioning (DECEX) is for the safe dismantling and removal of infrastructure once it reaches the end of its operational life.

1.2.2 At the time of writing, detailed estimates for project expenditure are not yet available. Assumptions were derived using the supply chain expenditure targets that will inform the updated Bowdun Offshore Wind Farm Supply Chain Development Statement (SCDS), a refresh of the 2023 Bowdun OWF SCDS, which is not yet published (due later in 2026). The SCDS figures have been revised by the Applicant since the assessment of GVA and employment impacts was undertaken for the onshore elements of the Bowdun OWF (reported in the Volume 1, Chapter 16: Socio-Economics, Tourism and Recreation, Bowdun OWF Onshore EIA Report (BOWFL, 2025)) and illustrate a higher proportion of spend occurring within Scotland and UK than the 2023 SCDS figures.

1.2.3 The SCDS expenditure targets were derived by estimating total expenditure, based on a typical OWF of this size, for operational expenditure (OPEX) and three categories of capital expenditure (CAPEX): Development, Manufacturing/Fabrication, Installation. This is then split by geographic area (Scotland, UK, EU, Rest of World), under two scenarios - 'Commitments' and 'Ambitions', reflecting the proportion of the contracts expected to be delivered by the suppliers in each area, determined through a structured, evidence-based assessment of the UK and Scottish supply chain.

1.2.4 Decommissioning expenditure (DECEX) is not included in the SCDS. An assumption was made based on the Guide to an Offshore Wind Farm (BVG Associates, 2025), which estimates that the cost for decommissioning a 1 GW offshore wind farm is £426 million (gross, excluding any resale value of equipment removed). This has been apportioned between the Regional Socio-Economics Study Area, Scotland and UK expenditure assuming the same regional split as the CAPEX estimates in the SCDS.

## 1.3 Scenarios for Geographic Split of Expenditure

1.3.1 Two scenarios were modelled, aligned with the two SCDS scenarios:

- Scenario 1 (Commitments Scenario) is based on the SCDS Commitments scenario, which reflects a conservative assumption for the proportion of contracts that the supply chain in Scotland and the UK would be capable of meeting, based on current capabilities.
- Scenario 2 (Ambitions Scenario) acts as a more optimistic, high-case projection, aligned with strategic objectives. It is based on the SCDS Ambitions scenario, which assumes a higher level of Scotland and UK supply chain participation, aligning with the UK's ambition to achieve 60% local content in offshore wind farms off its shores by 2030.

1.3.2 The SCDS expenditure figures includes 6 years of OPEX. This was adjusted up to include 30 years of OPEX for the full 30-year lifespan of the Project, to align with the 30-year Project lifespan assumed in Guide to an Offshore Wind Farm Update 2025 (BVG Associates, 2025).

1.3.3 For all three phases (CAPEX, OPEX and DECEX), GVA and employment effects are assessed for the UK and Scotland. For the OPEX phase, the effects are also assessed for the Regional Socio-Economics Study Area (comprising Aberdeenshire, Aberdeen City and Angus), as the Applicant has committed to locating an Operations and Maintenance (O&M) port within this Regional Socio-Economics Study Area. This more localised assessment of GVA and employment impacts was not included for the CAPEX and DECEX phases as the location of construction and decommissioning ports within Scotland have not yet been selected.

1.3.4 To estimate the impact for the Regional Socio-Economics Study Area for the OPEX phase, an assumption was made for the proportion of Scotland spend which is expected to be awarded to local contractors. This was informed by a recent analysis undertaken by the Applicant for the supply chain for civils scopes and buildings associated with the onshore works which indicated that up to 68% of these contracts could be accommodated by suppliers in Aberdeenshire and Angus, due to the prevalence of large civil engineering businesses with established track-record in delivery of required scopes in this region. Whilst we consider this a reasonable reference point for our modelling assumptions, it is acknowledged that the analysis related to onshore CAPEX may differ from the supply chain for offshore OPEX activities, therefore we have applied more conservative assumptions of 35% in Scenario 1 (Commitments Scenario) and 50% in Scenario 2 (Ambitions Scenario).

**Table 1.1: Scenario 1 Commitments Scenario Investment (£m)**

| Categories of spend | | Regional Socio-Economics Study Area (£m) | Scotland (£m) | UK (£m) | Total Spend (including Rest of World) (£m) |
|---|---|---|---|---|---|
| **CAPEX** | Development | - | £57 | £89 | £114 |
| | Manufacturing/ Fabrication | - | £182 | £584 | £2,995 |
| | Installation | - | £272 | £458 | £1,030 |
| **OPEX** | Operation + Maintenance | £637 | £1,820 | £1,820 | £2,245 |
| **DECEX** | Decommissioning | - | £53 | £116 | £426 |

**Table 1.2: Scenario 2 Ambitions Scenario Investment (£m)**

| Categories of spend | | Regional Socio-Economics Study Area (£m) | Scotland (£m) | UK (£m) | Total Spend (including Rest of World) (£m) |
|---|---|---|---|---|---|
| **CAPEX** | Development | - | £57 | £89 | £114 |
| | Manufacturing/ Fabrication | - | £1,046 | £1769 | £2,995 |
| | Installation | - | £278 | £464 | £1,030 |
| **OPEX** | Operation + Maintenance | £910 | £1,820 | £1,820 | £2,245 |
| **DECEX** | Decommissioning | - | £141 | £242 | £426 |

## 1.4 Sector Split Assumptions and Multipliers

1.4.1 Three categories of economic impact have been assessed:

- Direct Impacts: The immediate impacts (value and jobs created) that arise from each phase of the Project by organisations directly involved in project delivery.
- Indirect Impacts (using Type I multipliers): The impacts generated by supply chain activity i.e. supply of goods and services to the direct contractors. They capture the broader economic contribution beyond the direct impact arising from its immediate investment.
- Induced Impacts (using Type II multipliers): The impacts generated from the increased household spending by those employed directly or indirectly through the Project.

1.4.2 To quantify these impacts on GVA and employment, multipliers published by the UK and Scottish government or derived from national Input-Output tables were applied to projected investment figures. These multipliers vary by type of

impact (Direct, Indirect or Induced), expenditure location (UK or Scotland), and industry sector.

1.4.3 Guide to an Offshore Wind Farm (BVG Associates, 2025) outlines the activities and supplier involvement across each phase of an OWF project lifecycle. This guidance was used to inform assumptions regarding the industry sectors linked to each expenditure category to determine the appropriate multipliers to be applied. The sector assumptions and multipliers are shown in the tables below (Table 1.3, Table 1.4 and Table 1.5). There are three different tables for different types of multipliers due to slight differences in sector classifications between Scottish Government and UK Government datasets and some variations in naming conventions for the same industries.

**Table 1.3: UK Multipliers - Assumptions for Sector Split of Expenditure and Sector-specific Multipliers**

| Industry Sectors | CAPEX | | | OPEX | DECEX | Multipliers (Direct, Indirect, Induced) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Development | Manufacturing/ Fabrication | Installation | | | GVA | Emp | Type I GVA | Type I Emp | Type II GVA | Type II Emp |
| Manufacture of Cement, Lime, Plaster, Concrete | | 10% | | | | 0.4 | 2.9 | 2.0 | 2.5 | 2.5 | 3.4 |
| Manuf. of glass, refractory, clay, porcelain, ceramic, stone | | 10% | | | | 0.4 | 7.7 | 1.9 | 1.6 | 2.5 | 1.9 |
| Manufacture of Basic Iron & Steel | | 10% | | | | 0.2 | 2.9 | 2.4 | 2.6 | 3.2 | 3.4 |
| Manufacture of Other Basic Metals & Casting | | 10% | | | | 0.3 | 4.3 | 1.6 | 1.6 | 2.0 | 2.1 |
| Manuf. of Fabricated Metal, excluding Weapons & Ammunition | | 10% | | | | 0.5 | 7.8 | 1.5 | 1.4 | 2.0 | 1.8 |
| Manufacture Of Electrical Equipment | | 10% | | 5% | | 0.4 | 4.4 | 1.7 | 1.9 | 2.3 | 2.6 |
| Manufacture Of Machinery & Equipment N.E.C. | | 10% | | 5% | | 0.4 | 4.4 | 1.7 | 1.9 | 2.2 | 2.5 |
| Rest of Repair; Installation | | | | 35% | | 0.4 | 6.2 | 1.8 | 1.8 | 2.4 | 2.3 |
| Electric Power Generation, Transmission & Distribution | | | | 20% | | 0.1 | 0.6 | 4.3 | 8.7 | 5.3 | 11.2 |
| Waste Collection, Treatment & Disposal; Materials Recovery | | | | | 20% | 0.3 | 5.0 | 2.1 | 1.9 | 2.8 | 2.4 |
| Remediation Activities & Other Waste Mgt Services | | | | | 35% | 0.5 | 9.6 | 1.7 | 1.6 | 2.0 | 1.8 |
| Construction | | | 100% | | 15% | 0.4 | 4.2 | 2.3 | 2.5 | 2.8 | 3.1 |
| Land Transport & Transport via Pipelines, excluding Rail | | 5% | | 5% | 5% | 0.5 | 3.8 | 1.7 | 2.2 | 2.2 | 3.1 |
| Water Transport | | 5% | | 5% | 5% | 0.4 | 0.9 | 2.1 | 8.0 | 2.8 | 11.3 |

| Industry Sectors | CAPEX | | | OPEX | DECEX | Multipliers (Direct, Indirect, Induced) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Development | Manufacturing/ Fabrication | Installation | | | GVA | Emp | Type I GVA | Type I Emp | Type II GVA | Type II Emp |
| Computer Programming, Consultancy & Related Activities | | | | 5% | | 0.5 | 6.3 | 1.6 | 1.7 | 2.2 | 2.3 |
| Activities Of Head Offices; Management Consultancy Activities | 25% | 5% | | 5% | 5% | 0.5 | 12.8 | 1.7 | 1.4 | 2.3 | 1.7 |
| Architectural & Engineering Activities; Technical Testing/Analysis | 25% | 5% | | 5% | 5% | 0.4 | 8.5 | 1.9 | 1.6 | 2.6 | 2.1 |
| Scientific Research & Development | 25% | | | | | 0.4 | 3.7 | 2.0 | 2.6 | 2.5 | 3.4 |
| Other Professional, Scientific & Technical Activities | 25% | 5% | | 5% | 5% | 0.4 | 7.4 | 2.0 | 1.9 | 2.7 | 2.4 |
| Office Administrative, Office Support, Business Support | | 5% | | 5% | 5% | 0.5 | 11.0 | 1.6 | 1.4 | 2.1 | 1.7 |

**Table 1.4: Scotland Multipliers for Direct Impacts - Assumptions for Sector Split of Expenditure and Sector-specific Multipliers**

| Industry Sectors | CAPEX | | | OPEX | DECEX | Direct Impact Ratios | |
|---|---|---|---|---|---|---|---|
| | Development | Manufacturing/ Fabrication | Installation | | | GVA | Emp |
| Primary Industries - A (part) B D E<br>Includes:<br>- Electric Power Generation, Transmission & Distribution<br>- Waste Collection, Treatment & Disposal; Materials Recovery<br>- Remediation Activities & Other Waste Management Services | | | | 20% | 55% | 0.5 | 1.2 |
| Manufacturing | | 70% | | | | 0.4 | 4.1 |
| Manufacture of Basic & Fabricated Metals, Machinery, Motor Vehicles & Other Transport Equipment | | | | 5% | | 0.4 | 6.1 |

| Industry Sectors | CAPEX | | | OPEX | DECEX | Direct Impact Ratios | |
|---|---|---|---|---|---|---|---|
| | Development | Manufacturing/ Fabrication | Installation | | | GVA | Emp |
| Manufacture of Computer, Electronic & Electrical Equipment | | | | 5% | | 0.4 | 5.0 |
| Manufacture of Furniture, Other Manufacturing, Repair & Installation | | | | 35% | | 0.5 | 4.6 |
| Construction | | | 100% | | 15% | 0.4 | 5.7 |
| Transport & Storage | | 10% | | 10% | 10% | 0.5 | 6.3 |
| Information & Communication | | | | 5% | | 0.7 | 6.8 |
| Professional, Scientific & Technical Activities | 100% | 15% | | 15% | 15% | 0.5 | 6.9 |
| Administrative & Support Service Activities | | 5% | | 5% | 5% | 0.6 | 13.7 |

**Table 1.5: Scotland Multipliers for Indirect and Induced Impacts - Assumptions for Sector Split of Expenditure and Sector-specific Multipliers**

| Industry Sectors | | CAPEX | | | OPEX | DECEX | Multipliers (Indirect, Induced) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Development | Manufacturing/ Fabrication | Installation | | | Type I GVA | Type I Emp | Type II GVA | Type II Emp |
| **23.5-6** | Manufacturing Cement Lime & Plaster | | 10% | | | | 1.9 | 2.0 | 2.3 | 2.4 |
| **23OTHER** | Manufacturing Glass, Clay & Stone | | 10% | | | | 1.4 | 1.4 | 1.8 | 1.7 |
| **24.1-3** | Manufacturing Iron & Steel | | 10% | | | | 1.8 | 1.6 | 2.3 | 1.9 |
| **24.4-5** | Manufacturing Other Metals & Casting | | 10% | | | | 1.3 | 1.3 | 1.6 | 1.5 |
| **25** | Manufacturing Fabricated Metals | | 10% | | | | 1.4 | 1.4 | 1.8 | 1.6 |
| **27** | Manufacturing Electrical Equipment | | 10% | | 5% | | 1.2 | 1.4 | 2.5 | 1.8 |

| Industry Sectors | | CAPEX | | | OPEX | DECEX | Multipliers (Indirect, Induced) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Development | Manufacturing/ Fabrication | Installation | | | Type I GVA | Type I Emp | Type II GVA | Type II Emp |
| **28** | Manufacturing Machinery & Equipment | | 10% | | 5% | | 1.3 | 1.7 | 1.6 | 2.1 |
| **33** | Repair & Maintenance | | | | 35% | | 1.2 | 1.3 | 1.5 | 1.6 |
| **35.1** | Electricity | | | | 20% | | 1.8 | 2.5 | 2.0 | 3.1 |
| **38, 39** | Waste, Remediation & Management | | | | | 55% | 1.5 | 1.9 | 1.7 | 2.4 |
| **41-43** | Construction | | | 100% | | 15% | 1.6 | 1.6 | 1.9 | 1.8 |
| **49.3-5** | Other Land Transport | | 5% | | 5% | 5% | 1.4 | 1.2 | 1.9 | 1.4 |
| **50** | Water Transport | | 5% | | 5% | 5% | 1.3 | 1.7 | 1.6 | 2.4 |
| **62** | Computer Services | | | | 5% | | 1.2 | 1.2 | 1.4 | 1.5 |
| **70** | Head Office & Consulting Services | 25% | 5% | | 5% | 5% | 1.3 | 1.3 | 1.5 | 1.5 |
| **71** | Architectural Services etc | 25% | 5% | | 5% | 5% | 1.3 | 1.3 | 1.6 | 1.6 |
| **72** | Research & Development | 25% | | | | | 1.6 | 1.8 | 1.9 | 2.3 |
| **74** | Other Professional Services | 25% | 5% | | 5% | 5% | 1.5 | 1.4 | 1.9 | 1.5 |
| **82** | Business Support Services | | 5% | | 5% | 5% | 1.1 | 1.1 | 1.4 | 1.3 |

## 1.5 Direct Impacts

1.5.1 Direct Impacts are the GVA and employment generated by organisations directly involved in project delivery.

1.5.2 The direct impact ratios in the tables above represent the ratio of employment per £m expenditure and the ratio of GVA per £m expenditure. These ratios are applied to expenditure to estimate the direct GVA impacts (£m) and the direct employment impact (aFTEs/FTEs).

1.5.3 The ratios were derived from sector-level data on turnover, GVA and employment published by the Office for National Statistics in the UK Annual Business Survey 2025 and the Business Register and Employment survey (Office of National Statistics, 2023).

## 1.6 Indirect Impacts

1.6.1 Indirect impacts are the GVA and employment impacts generated by supply chain activity i.e. supply of goods and services to the direct contractors. They capture the broader economic contribution beyond the direct impact arising from its immediate investment.

1.6.2 Indirect impacts were calculating using sector-specific Type I multipliers shown in Table 1.3, Table 1.4 and Table 1.5. The Type I multipliers are applied to the Direct GVA/employment to determine the total GVA/employment including direct and indirect impacts.

1.6.3 Type I multipliers for Scotland GVA and employment are published by the Scottish Government as part of their national statistics (Supply, Use and Input-Output Tables: 1998-2021). Type I multipliers for UK GVA are provided by the Office of National Statistics (UK input-output analytical tables: industry by industry).

1.6.4 Type I employment multipliers for the UK were derived using the 2022 Office for National Statistics Industry-by-Industry Input-Output Table, which maps the flow of goods and services between sectors. The process involves constructing an identity matrix and calculating direct requirements coefficients to represent inter-industry dependencies. These coefficients are then used to form the Leontief matrix, and the Leontief inverse (through matrix inversion). This Leontief inverse quantifies the total direct and indirect effects of a change in final demand on output. To translate these output effects into economic impacts, sector-specific GVA and employment ratios are applied.

1.6.5 While some assessments of indirect GVA and employment impacts apply adjustment for import leakage – which involves discounting inputs sourced outside the study area using sector-level data such as Input-Output tables – this was not required for our analysis. By using Type I multipliers, which inherently captures domestic inter-industry effects and exclude imports by design, we ensure that the results reflect UK-based economic activities only. This approach avoids the risk of overstating impacts that could arise from using gross multipliers, which include both domestic and foreign supply chain effects.

## 1.7 Induced Impacts

1.7.1 Induced impacts are generated from the increased household spending by those employed directly or indirectly through the Project.

1.7.2 Induced impacts were calculating using sector-specific Type II multipliers shown in Table 1.4, Table 1.5, and Table 1.6. Type II multipliers include both indirect and induced effects. They are applied to the Direct GVA/employment to determine the total GVA/employment including Direct, Indirect and Induced impacts.

1.7.3 Type II multipliers for Scotland GVA and employment are published by the Scottish Government as part of their national statistics (Supply, Use and Input-Output Tables: 1998-2021).

1.7.4 UK Type II multipliers for employment and GVA were calculating following the same approach described above for the UK Type I multipliers, with an additional step of incorporating household final consumption as an additional industry sector. In order to include unearned income such as pensions and dividends, the compensation of employees figure in the Input-Output table was adjusted using Gross Disposable Household Income data for the UK and its constituent regions (Office for National Statistics, 2024).

## 1.8 Receptor Sensitivity

1.8.1 Table 1.6 provides details of the justification for assigned receptor sensitivity; the sensitivity criteria is available in Volume 2, Chapter 18: Socio-economics, Tourism and Recreation, Section 1.8.

**Table 1.6: Sensitivity of Socio-Economic Receptors**

| Receptor | Sensitivity | Justification |
|---|---|---|
| **Economy** | | |
| **UK** | Low | At a UK level, in February the Bank of England forecast UK GDP growth to slow from 1.4% in 2025 to 0.9% in 2026 before strengthening to 1.5% in 2027 and 1.9% in 2028. Subdued growth in 2026 reflects the persistence of weak demand, uncertainty and a slight drag from past monetary tightening (Scottish Government, 2026). This growth is expected to be led by regions such as London and the East of England, which benefit from a high concentration of high-growth sectors including information and communication, professional services, and financial activities (EY UK, 2025). Areas outside the South-east, particularly in the North of England, Wales and Northern Ireland, experience below-average GVA growth, reflecting structural imbalances in sectoral composition and productivity (Nguyen, 2019).<br>However, the scale, adaptability and capacity of the UK economy, combined with ongoing policy interventions that aim to increase growth, develop skills (Institute for Government, 2022) and encourage sectoral investment (UK Government, 2024), reduce its vulnerability. The UK's GVA is assigned a Low sensitivity rating due to its diversified sectoral strengths and overall resilience. |
| **Scotland** | Medium | Following expected growth of 1.1% in 2025 the SFC forecast Scottish GDP growth to strengthen to 1.3% in both 2026 and 2027. Overall, stable growth prospects for 2026–27 and easing inflation support a cautiously positive economic outlook, though labour-market softening, weak demand, cost pressures, and rising geopolitical and trade uncertainties continue to pose notable risks (Scottish Government, 2026).<br>Scotland's economic structure is a key factor in its sensitivity. Overall, Scotland's long-standing challenges include business growth, skills gaps, and regional productivity disparities, with rural areas facing greater economic fragility and slower recovery rates (Williams, *et al.*, 2025). Despite these challenges, Scotland's economy benefits from its overall size, policy prioritisation, and institutional resilience, which mitigate its exposure to short-term shocks. The Scottish Government's National Strategy for Economic Transformation and regional development frameworks aim to address structural weaknesses and promote inclusive growth (Scottish Government, 2022). Scotland's GVA is assigned a Medium sensitivity rating, reflecting sectoral underperformance and regional disparities. |
| **Regional Socio-Economic Study Area** | High | The Regional Socio-Economic Study Area has long been closely tied to the UK's oil and gas economy. The North Sea industry became a major economic force for the region beginning in the 1970s, driving population growth, employment, and higher earnings across Aberdeen and Aberdeenshire. Research shows that the arrival and peak of oil and gas activity significantly shaped the area's development, embedding the sector as a core driver of local economic performance (Just Transition Lab, 2023). As the global energy system transitions away from fossil fuels, the region faces a period of economic restructuring marked by contraction within O&G and the gradual emergence of more diversified industries. Across the Regional Socio-Economic Study Area, local strategies consistently emphasise the need for innovation, diversification, and investment in emerging sectors such as renewable energy, life sciences, advanced manufacturing, and tourism. While the region benefits from substantial infrastructure and an experienced workforce, |

| Receptor | Sensitivity | Justification |
|---|---|---|
| | | the pace of transition presents challenges for long-term economic resilience, particularly in communities with employment concentrations tied to the O&G supply chain (Aberdeen and Grampian Chamber of Commerce, 2024). Given these structural pressures and the region's exposure to global market volatility, the overall sensitivity of the economy within the Regional Socio-Economic Study Area is assessed as High. |
| **Labour Market** | | |
| **UK** | Medium | Across the UK, employment growth is forecast to average 1.1% annually from 2024 to 2027 (EY UK, 2025), supported by strong performance in regions with high-growth industries such as finance, technology, and professional services. While the national labour market is resilient, with active workforce development policies (e.g. Skills Bootcamps (Department for Education, 2025), employment rates vary significantly across UK regions (Office for National Statistics, 2025). Unemployment is expected to rise to 5.25% over 2026 (Scottish Government, 2026). Therefore, the receptor sensitivity is Medium. |
| **Scotland** | Medium | Scotland's labour market has shown headline resilience, with low unemployment and growth in real earnings in 2025 (Scottish Government, 2026). However, underlying indicators point to moderate vulnerability. Employment growth is forecast at 0.8% annually from 2024–2027, below the UK average of 1.1%. Structural challenges include a 32% year-on-year decline in job adverts, underrepresentation in high-growth sectors, (Scottish Government, 2025) (EY UK, 2025). Unemployment in Scotland remained low at 3.7% in late 2025, but signs of labour-market loosening are emerging, with fewer payrolled employees, slower pay growth, and business surveys reporting falling staffing levels, even as the unemployment rate dipped slightly over the year (Scottish Government, 2026). While Scotland's overall labour market has shown resilience, regional disparities persist, particularly in areas with lower productivity and sectoral concentration, making them more vulnerable to economic shocks (Fraser of Allander Institute & Scottish Centre for Employment Research, 2017). Overall, employment in the Scottish labour market is assigned a Medium sensitivity. |
| **Regional Socio-Economic Study Area** | High | The labour market across the Regional Socio-Economic Study Area is undergoing a significant period of transition, driven primarily by the long-term decline in O&G activity and the region's strategic shift toward low-carbon and sustainable industries. Historically, the area has benefited from high employment rates and a skilled workforce closely aligned with the needs of the energy sector. However, regional policy documents highlight growing challenges related to workforce availability, linked to the impacts of the UK's exit from the EU, demographic change, and the ageing profile of the labour force (Invest Aberdeen, n.d.). Although some parts of the study area have been less directly dependent on O&G, the wider regional labour market is still affected by structural changes, including the decline of traditional industries and the variable pace of economic diversification. The Regional Skills Assessment (2024) indicates that overall employment growth across the wider area is expected to remain below the national average, with contraction in energy and associated services affecting job stability, opportunities, and workforce transitions (Skills Development Scotland, 2024). In line with the sensitivity criteria, and given the combined pressures of sectoral restructuring, demographic shifts, and uneven employment opportunities, the labour market within the Regional Socio-Economic Study Area is assigned a High sensitivity rating. |

## 1.9 Magnitude of Change

1.9.1 The socio-economic receptors are assessed against the magnitude of change criteria outlined in Table 1.7, using the percentage change in GVA and employment relative to the baseline. The impact on GVA is compared against the GVA of the Regional Socio-Economics Study Area, Scottish, and UK economies, while the impact on employment is evaluated in relation to the total employment in relevant supply chain industries.

**Table 1.7: Magnitude of Change Criteria**

| Magnitude of impact | Lower bound | Upper bound |
|---|---|---|
| **High** | 1.0% | - |
| **Medium** | 0.5% | 1.0% |
| **Low** | 0.1% | 0.5% |
| **Negligible** | - | 0.1% |

## 1.10 Assessment of Significance

1.10.1 The model outputs have been used to determine the magnitude of impact on GVA and employment across the three regions for the three scenarios, and sensitivity criteria applied to determine significance of effect in EIA terms.

1.10.2 In cases where the significance matrix indicates a range (e.g. Moderate to Minor), for an employment impact in Scotland or the Local Area, the higher rating has been assigned because it is expected that many of the jobs created, particular those in Scotland, will be high-value jobs. In any other cases where the significance matrix indicates a range (GVA impacts, or UK employment impacts), the higher or lower rating has been assigned based on whether the estimated impact percentage is higher or lower in the band for determining the magnitude rating. For example, an impact of 0.4% is higher in the band of 0.1% - 0.5% for a Low magnitude of impact, so in this case if the significance matrix indicated a range such as “Negligible to Minor” it would be assigned a Minor significance rating.

1.10.3 The outputs and significance ratings are presented in the Volume 2, Chapter 18: Socio-Economics, Tourism and Recreation, Section 18.10.

## References

Aberdeen and Grampian Chamber of Commerce. (2024). AGCC calls for action as report reveals 18,000 Aberdeen jobs gone since 2010. Available at: https://www.agcc.co.uk/news-article/agcc-calls-for-action-as-economic-report-forecasts-aberdeen-will-continue-to-struggle

BOWFL (2025). Bowdun Onshore Consents Application. Thistle Wind Partners. Available at: https://thistlewindpartners.scot/bowdun/bowdun-document-library/

Bowdun Offshore Wind Farm Limited (BOWFL) (2026). Bowdun Offshore Wind Farm, Supply Chain Development Statement, Available at: https://www.thistlewindpartners.scot/bowdun/

BVG Associates (Published on behalf of The Crown Estate, Crown Estate Scotland, Offshore Wind Growth Partnership, ORE Catapult, and the Scottish Enterprise Agencies: Scottish Enterprise, Highlands & Island Enterprise and South of Scotland Enterprise). (2025). Guide to an Offshore Wind Farm: Update 2025. Available at: https://guidetoanoffshorewindfarm.com/wp-content/uploads/2025/06/BVGA-16464-Fixed-Guide-rF.pdf Accessed 16/08/25

Department for Education. (2025). Skills for Careers. Available at: https://www.skillsforcareers.education.gov.uk/your-training-options Accessed on: 03/10/25

Scottish Government. Office of the Chief Economic Adviser (2026) Scottish Economic Bulletin. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/research-and-analysis/2026/02/scottish-economic-bulletin-february-2026/documents/scottish-economic-bulletin-february-2026/scottish-economic-bulletin-february-2026/govscot%3Adocument/scottish-economic-bulletin-february-2026.pdf

EY UK. (2025). Scotland GVA forecast to edge upwards as employment headwinds remain. Available at: https://www.ey.com/en_uk/newsroom/2024/05/scotland-gva-forecast-to-edge-upwards

Fraser of Allander Institute & Scottish Centre for Employment Research. (2017). Scottish Labour Market Trends. Scottish Labour Market Trends. Available at: https://fraserofallander.org/wp-content/uploads/2021/05/2.2-Scottish-labour-market-trends-vol2-no2.pdf Available at: 09/10/25

Institute for Government. (2022). Levelling up and Skills Policy. Available at: https://investaberdeen.co.uk/uploads/Regional%20Economic%20Strategy%202035%20FINAL.pdf Accessed on: 19/09/25

Invest Aberdeen. (2024). Regional Economic Strategy. Available at: https://investaberdeen.co.uk/uploads/Regional%20Economic%20Strategy%202035%20FINAL.pdf Accessed on: 19/09/25

Invest Aberdeen. (n.d.). North East Scotland: Offshore Wind. Invest Aberdeen. Available at: https://investaberdeen.co.uk/uploads/North%20East%20Scotland%20Offshore%20Wind.pdf Accessed on:15/09/25

Just Transition Lab. (2023). Just Transition for workers and communities in Aberdeen and Aberdeenshire: Rapid evidence assessment support., Available at: https://doi.org/10.57064/2164/19887

Nguyen, D. (2019). Regional Economic Disparities and Development in the UK. National Institute of Economic and Social Research. Available at: https://www.niesr.ac.uk/wp-content/uploads/2021/10/DP010.pdf Accessed on: 20/09/25

Office of National Statistics, 2023. Business Register and Employment Survey, Available at: https://www.ons.gov.uk/releases/ukbusinessregisterandemploymentsurveybresprovisionalresults2023revisedresults2022

Office for National Statistics. (2024). Regional gross disposable household income, UK: 1997 to 2022. Available at: https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome/bulletins/regionalgrossdisposablehouseholdincomegdhi/1997to2022 Accessed on: 20/10/25

Office for National Statistics. (2025). Labour market in the regions of the UK: September 2025. Available at: https://www.gov.uk/government/statistics/labour-market-in-the-regions-of-the-uk-september-2025 Accessed on: 24/09/25

Office for National Statistics. (2025). Supply and Use tables, UK input-output analytical tables: industry by industry. Available at: https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/ukinputoutputanalyticaltablesindustrybyindustry/current Accessed on: 15/10/25

Scottish Government. (2022). Regional Economic Policy Review, Paper 1 - The National Perspective Regional Economic Policy Advisory Group. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/12/regional-economic-policy-review-paper-1-national-perspective/documents/regional-economic-policy-review-paper-1-national-perspective-regional-economic-policy-a Accessed on: 12/09/25

Scottish Government. (2025). Scotland's Labour Market Insights: July 2025. Available at: https://www.gov.scot/publications/scotlands-labour-market-insights-july-2025/pages/people-in-work/ Accessed on: 10/09/25

Scottish Government. (2024) Statistics, Supply, Use and Input-Output Tables: 1998-2021. Available at: https://www.gov.scot/publications/input-output-latest/ Accessed on: 12/10/25

Skills Development Scotland. (2024). Regional Skills Assessment, Aberdeen City and Shire. Available at: https://www.skillsdevelopmentscotland.co.uk/media/trlkj4sb/rsa-regional-report-aberdeen-city-and-shire.pdf Accessed on: 21/09/25

UK Government. (2024). Invest 2035: The UK's Modern Industrial Strategy. Available at: https://assets.publishing.service.gov.uk/media/6711176c386bf0964853d747/industrial-strategy-green-paper.pdf Accessed on: 02/09/25

Williams, D., Tsoukalas, J., Wessels, B., and Gaska, P. (2025). Scotland's Productivity Challenge: The Productivity Institute. Available at: https://www.productivity.ac.uk/wp-content/uploads/2025/01/PIP045-Scotland-Insights-Paper-January-2025.pdf Accessed on: 04/09/25