Technical Appendix 12.1: Socio-economics, Tourism and Recreation Methodology

12.1 Technical Appendix - Socio-economics, Tourism and Recreation Methodology

12.1 Introduction

12.1.1 This Technical Appendix outlines the approach to the assessment of significance and the economic impact methodology that is used in **Chapter 12 Socio-economics, Tourism and Recreation (EIAR Volume 1)**.

12.2 Assessment Methodology and Significance Criteria

Assessing significance

Sensitivity

12.2.1 The sensitivity of receptors has been assessed based on professional judgement and previous experience of comparable developments elsewhere. The criteria used to do this is shown in **Table 12-1.**

Table 12-1: Sensitivity Criteria

Sensitivity	Description
Very high	The asset/receptor has little or no capacity to absorb change without fundamentally altering its present character and/or is of very high tourism, recreational or socio-economic value, or of national importance. For example, it is a destination (for attractions), with a substantial proportion of visitors on a national level.
High	The asset /receptor has low capacity to absorb change without fundamentally altering its present character and/or is of high tourism, recreational or socio-economic value, or of importance to Scotland.
Medium	The asset/receptor has moderate capacity to absorb change without substantially altering its present character, has some tourism, recreational or socio-economic value and/or is of regional importance. For example, it is a popular destination among current visitors, with a significant contribution to the regional economy.
Low	The asset/receptor is tolerant to change without detriment to its character, has low tourism, recreational and/or socio-economic value, or is of local importance. For example, it is an incidental destination for current visitors.
Negligible	The asset/receptor is resistant to change and/or is of little tourism, recreational or socio-economic value. For example, an incidental destination with low current numbers of visitors.

Magnitude

12.2.2 The magnitude of economic impacts on the Scottish and the economies of Perth and Kinross and Stirling has been assessed using BiGGAR Economics economic impact model and professional judgement. The magnitude of change on tourism and recreation assets has been assessed with reference to published research evidence and experience of comparable wind farms. The criteria used to do this are provided in **Table 12-2.**

Table 12-2: Magnitude Criteria

Magnitude	Description
High	Major loss/improvement to key elements/features of the baselines conditions such that post development character/composition of baseline condition will be fundamentally changed. For example, a major long-term alteration of socio-economic conditions, a major reduction/improvement of recreational assets, or a substantial change to tourism spend.
Medium	Loss/improvement to one or more key elements/features of the baseline conditions such that post development character/composition of the baseline condition will be materially changed. For example, a moderate long-term alteration of socio-economic conditions, a

Magnitude	Description
	moderate reduction/improvement in the recreational asset, or a moderate change to tourism spend.
Low	Changes arising from the alteration will be detectable but not material; the underlying composition of the baseline condition will be similar to the pre-development situation. For example, a small alteration of the socio-economic conditions, a small reduction/improvement in the recreational asset, or a small change in tourism spend.
Negligible	Very little change from baseline conditions. Change is barely distinguishable, approximating to a "no change" situation.

Significance

12.2.3 The predicted significance of the effect was determined through a standard method of assessment based on professional judgement, considering both sensitivity and magnitude of change as detailed in **Table 12-3.** Major and moderate effects are considered significant in the context of the EIA Regulations.

Table 12-3: Significance Criteria

Magnitude of Change	Sensitivity				
	Very High	**High**	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Moderate	Minor
Medium	Major	Moderate	Moderate	Minor	Negligible
Low	Moderate	Moderate	Minor	Negligible	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible	Negligible

12.2.4 For the assessment of recreational effects, magnitude and significance criteria will be assessed following guidelines provided by NatureScot. The criteria for this are outlined in **Table 12-4.**

Table 12-4: NatureScot Assessment of Scale of Effects Criteria

Assessment Factor	Commentary
The magnitude of impacts on access, or on settings in which recreation takes place	Direct physical effects may vary from complete loss of a resource to minor and/or marginal impacts. Visual or noise effects might be accommodated or open to mitigation in an urban edge setting, bust much less acceptable or even beyond amelioration in remoter countryside.
The nature, intensity, frequency of occurrence or timing of the effect	These will be important factors in assessment of the acceptability of effects on recreation. At the less intense levels of effect, the outcomes may be acceptable or open to mitigation either in intensity or through time limitations on certain activities within the development.
Potential for the effects to increase over time	This is a precautionary point of reasonable anticipation of how effects might increase in scale over the years and thereby make mitigation ineffective.
Scarcity vale of the	This factor recognises there are considerable geographic imbalances in the supply of recreation opportunities, and where a resource is in short supply then less compromise may be feasible.

recreation resource on a wider strategic scale	As examples, some parts of the country are very poorly endowed with accessible open water space.
Recognition of the recreation opportunity spectrum (ROS)	The recreation opportunity spectrum is a basic principle of recreation planning that provision should be made for people's recreation needs along a range which provides for gregarious, active and some noisy recreations at one end of the scale, and solitude and quiet enjoyment at the other.

Method of Baseline Characterisation

Extent of the Study Area

12.2.5 The baseline description considered the Study Areas of:

- the Local Area (as defined as the electoral wards of Strathearn, Trossachs and Teith);
- Perth and Kinross and Stirling (as defined by Stirling Council Authority and Perth and Kinross Council Authority); and
- Scotland.

12.2.6 The Study Areas considered for the economic analysis were:

- Perth and Kinross and Stirling; and
- Scotland.

12.2.7 For the tourism and recreation assessment, the analysis focussed on the area within a 15 km radius of the Proposed Development (i.e., from the closest turbine). This is consistent with the approach commonly used in similar assessments.

Desk Study

12.2.8 The following data sources have informed the assessment:

- Perth and Kinross Council (2024) Core Paths, Strathearn;
- Kantar (2020). The Great Britain Day Visitor Survey Annual Report 2017-19;
- Kantar TNS (2020). The Great Britain Tourism Survey Annual Report 2017-2019;
- National Records of Scotland (2023), Mid-2022 Population Estimates;
- National Records of Scotland (2023), Electoral Ward Population Estimates by Sex and Single Year of Age 2022;
- National Records of Scotland (2020), Population Projections for Scottish Areas, 2018-based;
- Office for National Statistics (2023), Business Register and Employment Survey 2022;
- Office for National Statistics (2023), Annual Population Survey 2022;
- Office for National Statistics (2023), Annual Survey of Hours and Earnings 2022;
- Office for National Statistics (2021), International Passenger Survey 2019;
- Scottish Government (2020), Scottish Index of Multiple Deprivation 2020; and
- Scottish Government (2022), Growth Sector Statistics.

Field Survey

12.2.9 The drafting of this chapter did not require any field surveys. The authors are familiar with the socio-economy, and tourism and recreation economy of the Local Area and Perth and Kinross and Stirling. Where relevant to the assessment of effects on tourism and recreation, the analysis has considered information from surveys undertaken in respect of other disciplines.

Method of Assessment

12.2.10 For the assessment of socio-economic effects, no specific legislation or guidance is available on the methods which should be used when assessing the socioeconomic effects of a proposed wind farm for an EIA Report. For this reason, to identify and assess the significance of predicted socioeconomic effects, the assessment has been based on professional judgement for the degree of change resulting from the Proposed Development, using methods commonly used in EIAs for onshore windfarm developments, as outlined below.

12.2.11 The assessment of economic effects was undertaken using a model that has been developed by BiGGAR Economics specifically to estimate the socio-economic effects of wind farms.

12.2.12 The units of measurement which are used to quantify the economic impacts of the Proposed Development are:

- GVA;
- Years of employment; and
- Jobs.

Stages in Socioeconomic Analysis

12.2.13 To begin estimating the economic activity supported by the Proposed Development, it was first necessary to consider the expenditure carried out during the construction and development, and operation and maintenance phases. The total expenditure figure was then divided into its main components using assumptions regarding the share that could be expected by the main contractor and sub-contractors. This provides an estimate for each main contract category that could be secured in each Study Area, as defined in **paragraph 12.2.5** and **paragraph 12.2.6**.

12.2.14 There are three sources of economic activity:

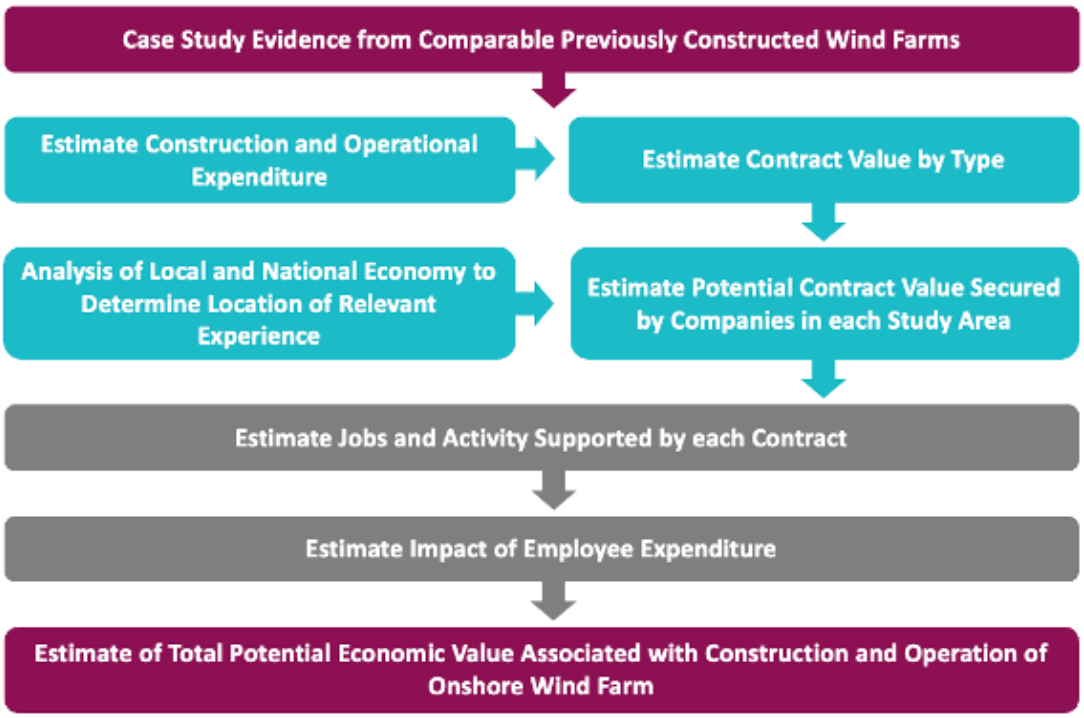
- Primary contracts and the jobs they support;
- Wider spending in the supply chain (indirect effect); and
- Spending of people employed in these contracts (induced effect).

12.2.15 There are four key stages of this model, which are illustrated in Figure 12-1.

12.2.16 Estimation of the capital and operational expenditures;

- Estimation of the value of component contracts that make up total expenditure;
- Assessment of the capacity of businesses in the Study Areas to perform and complete component contracts; and
- Estimation of economic impact from resultant figures.

Figure 12-1 Approach to Economic Impact Assessment



Stages in Tourism and Recreation Analysis

12.2.17 The potential effects of windfarms on tourism and recreation have been the subject of several research studies. A review of the latest available research evidence has been undertaken. These include reference to the following studies:

- The Economic Impact of Wind Farms on Scottish Tourism[1];
- Wind Farms and Tourism Trends in Scotland[2]; and
- Wind Farms and Tourism Trends in Scotland: Evidence from 44 Wind Farms[3].

12.2.18 The evidence from these studies provides the context for the assessment of effects on individual visitor attractions, accommodation providers and recreational trails. The analysis is based on understanding how the Proposed Development will interact with the underlying features of each receptor and the magnitude of change experienced by each.

Limitations and Assumptions

12.2.19 Publicly available statistics, including those on employment and economic activity published by the Office for National Statistics ('ONS'), are usually published with a time lag of between one and two years. To ensure the analysis reflects the latest available evidence, the baseline has been compiled close to the chapter's submission.

12.2.20 The baseline data used to describe tourism activity, the number of domestic overnight visits and visitor spending is based on evidence from 2019. The baseline data used to describe tourism activity, the number of domestic overnight visits and visitor spending is based on evidence from 2019. This is VisitScotland reports local authority visitor data using three year averages to account for data quality issues. To avoid using data from the time covering Covid-19 restrictions in 2020 and 2020 VisitScotland

[1] Glasgow Caledonian University/Moffat Centre (2008). The Economic Impacts of Wind Farms on Scottish Tourism
[2] BiGGAR Economics (2017). Wind Farms and Tourism in Scotland
[3] BiGGAR Economics (2021). Wind Farms and Tourism Trends in Scotland: Evidence from 44 Winds Farms

hopes to report 2022 – 2024 data for local authorities in 2025, however, at the time of the assessment, this data is not available.

12.2.21 Whilst some information gaps have been identified, it is considered that there is sufficient information to enable an informed decision to be taken in relation to the identification and assessment of likely significant environmental effects on socio-economics, tourism, and recreation.

Table 12-5: Summary of Potential Significant Effects

Likely Significant Effect	Mitigation Proposed	Significance	Outcome/ Residual Effect
Construction			
£14.0 million GVA and 156 years of employment in Perth and Kinross and Stirling	N/A	Negligible and beneficial	Not significant
£48.3 million GVA and 564 years of employment in Scotland.	N/A	Negligible and beneficial	Not significant
Effects on Local tourism economy	N/A	Negligible and adverse	Not significant
Effect on recreational walks and core paths	N/A	Negligible and adverse	Not significant
Effect on accommodation providers	N/A	Negligible and beneficial	Not significant
Effect on visitor attractions	N/A	Negligible and adverse	Not significant
Operation			
£1.3 million GVA and 9 jobs in Perth and Kinross and Stirling	N/A	Negligible and beneficial	Not significant
£3.1 million GVA and 25 jobs in Scotland.	N/A	Negligible and beneficial	Not significant
Up to £372,000 annual community benefit payments	N/A	Negligible and beneficial	Not significant
Payment of non-domestic rates	N/A	Negligible and beneficial	Not significant
Effect on local tourism economy	N/A	Negligible and adverse	Not significant
Effect on recreational walks and core paths	N/A	Negligible and adverse	Not significant
Effect on accommodation providers	N/A	Negligible and beneficial	Not significant
Effect on visitor attractions	N/A	Negligible and adverse	Not significant