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Introduction

13.1 This Chapter considers the likely significant effects that the proposed development may have on the socio-economics, tourism, recreation and land use of the area/region surrounding the site. Where relevant, effects are also considered within the rest of Scotland and the United Kingdom (UK). The specific objectives of this Chapter are to:

- describe the current baseline;
- describe the assessment methodology and significance criteria used in completing the impact assessment;
- describe the potential effects, including direct, indirect and cumulative effects;
- describe the mitigation measures proposed to address any identified likely significant effects; and
- assess the residual effects remaining following the implementation of mitigation measures.

13.2 Impacts on socio-economics, tourism, recreation and land use may arise as a result of direct or indirect interaction between the proposed development and the area/region, where the interactions could be positive or negative.

13.3 Socio-economics, tourism, recreation and land use impacts during the construction phase of the proposed development include the temporary creation of employment opportunities, and potential adverse effects on recreational and tourism receptors. Technical information used to support the economic modelling of employment and Gross Value Added (GVA)[1] effects have been provided by the applicant.

13.4 Once operational, impacts on the local labour market arising from operation and maintenance jobs, would be positive but limited. However, there is also the potential for adverse and beneficial effects during the operation phase on tourism and recreation assets.

13.5 Whilst not a planning consideration, there is potential for further long-term benefits to the community, which could result from any potential community benefit fund payments.

13.6 Planning policies of relevance to this assessment are provided in **Technical Appendix 4.1: Legislation, Planning Policy and Guidance**.

Scope and Consultation

Consultation

13.7 Consultation with stakeholders has principally been conducted by way of the request for a Scoping Opinion, as described in **Chapter 6: Scoping and Consultation**. This is summarised in **Table 13-1**.

[1] Gross value added (GVA) measures the contribution to an economy of an individual producer, industry, sector or region.

Table 13-1: Consultation – Key Issues

Consultee	Summary of Key Issues	Response/Action Taken
Clackmannanshire Council Scoping response 28 April 2023	It is considered that the baseline should include the results of a survey of visitors to the Ochil Hills (western hills and summits possibly including Dumyat) to establish the numbers using the hills for recreation and inform the assessment of the impacts and sensitivity of the site. The scope, timing and arrangements should be agreed with the respective local authorities.	A survey of recreational users of the Ochil Hills has been included as **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, within the baseline and considered within the assessment.
	The assessment should recognise that the development would be visible and prominent from the most visited summits and routes in the western Ochil Hills and should provide an analysis of how it would impact and compare with the existing position in terms of visibility/ effect on important viewpoints/ duration of impact on receptors using the hills.	The assessment has recognised that the proposed development would be visible and prominent from the most visited summits and routes in the western Ochil Hills, initially in paragraph 13.167. The visual impacts are then considered in this assessment from paragraph 13.174, however, visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**.
	Is this scoping out recreational uses outwith the Ochil Hills as other activities within the surrounding hills could be impacted by the proposed development. It should be noted that the Hills are not just used for hillwalking with hill running, mountain biking, horse riding and para gliding	The comment in question intended to scope out linear recreational routes, such as Rights of Way and unmarked paths, which were beyond the boundary of the proposed development. This was due to the considerable number of recreational routes and activities which take place throughout the Ochil Hills. These would be encapsulated within the proposed 10km LAI study area for recreational activities and they would not necessarily all be impacted by the proposed development. The LAI baseline accounted for recreational receptors, provided a narrative as to how these have been filtered based on how likely they are to be impacted and the assessment has, therefore, included a wider spatial range for including recreational receptors regarding the construction impacts from paragraph 13.153.

Consultee	Summary of Key Issues	Response/Action Taken
		By way of **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, the operational impacts upon recreational usage at wider spatial range across the Ochil Hills has also been assessed in paragraph 13.175.
Perth and Kinross Council Scoping response 19 May 2023	Perth and Kinross Council confirms and accepts the scope and assessment methodology proposed. No additional sources of information are considered applicable in this instance.	Noted.
Menstrie Community Council Scoping response 18 April 2023	Has any consideration been taken of the methodology to contact recreational users? For example paragliders, riders, or local ramblers?	A survey of recreational users of the Ochil Hills has been included as **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, within the baseline and considered within the assessment. Visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**, however, have been considered in this assessment from paragraph 13.174.
	Given the height and density of the turbines the visual impact for recreational users will be significant.	The assessment considers the visual impacts on recreational users from paragraph 13.174, however, visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**.
	What effects are there on Myreton or Ben Cleuch.? We have worked hard to ensure Menstrie is a welcoming and suitable environment for walkers to start their route to Dumyat or into the Glens.	The walking routes to Myreton from Menstrie were included as survey points 6 and 9 as part of the survey of recreational users of the Ochil Hills, within **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, with Menstrie noted as the second most popular starting point. Further routes to and from Ben Cleuch are included as survey points 1, 3 and 11, as well routes in east and west directions along the range of the Ochil Hills. The visual impact on Ben Cleuch is considered in paragraph 13.174, however,

Consultee	Summary of Key Issues	Response/Action Taken
		visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**.
	Have local Scouts, Ramblers and Wanders as well as Community Councils been included?	Local groups were consulted as part of the project's Scoping Request, as well as direct consultation with Clackmannanshire Council regarding recreational impacts on the Ochil Hills and local countryside rangers.
ScotWays Scoping response 24 April 2023	<u>Wind Farms and Public Access</u> It is our understanding that there is very little guidance regarding the siting of turbines in relation to established paths and rights of way, so we use the following starting principle in considering what could be reasonable: "*a minimum distance, equivalent to the height of the blade tip, from the edge of any public highway (road or other public right of way) or railway line*." ScotWays considers the above sets out a reasonable principle for a recommended minimum separation distance. There could also be site specific factors which would lead us to prefer a larger minimum separation distance; these could include the affected route being one of Scotland's Great Trails or it being known for equestrian use, for example. ScotWays is likely to object to any proposal where the above principle is not followed, including where a micro-siting allowance could lead to turbine encroachment upon a route because it has been insufficiently buffered.	As noted in **Chapter 2: Site Description and Design Evolution**, "*the proposed development avoids the need for any disruption to any core paths or walking routes, with the exception of temporary disruption to the core path, which crosses the site boundary, during construction*".
	<u>Recreational Amenity</u> As well as direct impacts of development upon public access, ScotWays has an interest in impacts on recreational amenity, so this includes the impact of wind farm development on the wider landscape. We anticipate that the applicant will take into account both recreational amenity and landscape impacts in developing their proposals for this site. We will consider these issues further should this scoping stage lead to a planning application.	A survey of recreational users of the Ochil Hills has been included as **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, within the baseline and considered within the assessment. Visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**, however, have been considered in this assessment from paragraph 13.174.
	<u>Cumulative Impact</u> As ScotWays is aware of a number of wind turbine proposed in this general area, we are particularly	An assessment of cumulative developments, including proposed developments, has been undertaken from paragraph 13.186.

Consultee	Summary of Key Issues	Response/Action Taken
	concerned that the cumulative impact of these proposed developments is taken into account.	
Dunblane community Council Scoping response 24 April 2023	Given the proximity of the Dunblane Community Council area to the proposed site there will be significant impact on many of the following features: Sheriffmuir area in general: There is concern that the proposed development would have an adverse visual impact on the Sheriffmuir area which is extremely important to Dunblane's economy. Within this area are numerous historic and cultural assets which are accessible to the public via an extensive path network which is popular with both residents and visitors to the area. Of particular importance is the Sheriffmuir battlefield site which is popular with international visitors to the area. The accessibility and elevated nature of this site means that the location of many of the key battlefield events can still be identified. This site forms part of Historic Environment Scotland's Inventory of Battlefields (BTL17) and is recognised as one of Scotland's most important battles. Sheriffmuir Battlefield: The site of the decisive 1715 battle between the forces led by The Duke of Argyll and The Earl of Mar. Dunblane retains many links with both Argyll and Mar. The historical significance is a mainstay of Dunblane's tourism offering. Atlantic Wall: The Keir estates formerly owned by David Stirling, who famously founded the SAS lie nearby. In preparation for the 1944 D-Day landings an area of moorland near the proposed development was used to train allied troops. The stone walls built for this training remain in place.	Visual impacts are primarily assessed in **Chapter 7: Landscape and Visual**, however, those relevant to this assessment have been considered from paragraph 13.174. Impacts upon historical assets are considered in **Chapter 11: Cultural Heritage and Archaeology**.
	Dunblane to Alva Mountain Cycle Routes: Significant recent development of mountain bike routes has taken place on Kippendavie estates to the west of the development site. Nascent schemes are in place to formally link the Dunblane routes with routes in nearby Alva and Dollar which could provide a cycle centre of national significance and be a significant driver of future tourist and recreational development. Kippendavie and Dumyat Walking Routes: Access via Dunblane and walking routes through Kippendavie have been subject to recent enhancement and are utilised to access Sheriffmuir, Dumyat, Ben Cleuch and the high moorland area. These major tourist and recreational assets are a significant contributor to the viability of Dunblane as a tourist and recreational centre. The scope of consultation must consider both the impact on current tourist and recreational activities and the scope to detract or enhance plans to further improve the contribution of such assets to the economic and	The effects on recreational routes within the boundaries of the proposed development and those outwith which could still be indirectly impacted have been considered within the assessment. The wider recreational routes within the Ochil Hills were considered within the survey of recreational users of the Ochil Hills, which has been included as **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**, within the baseline and considered within the assessment. The routes around the Kippendavie estates are of a distance where only visual

Consultee	Summary of Key Issues	Response/Action Taken
	social well-being of the Dunblane, Ashfield and Kinbuck Community Council area.	impacts would be expected to occur. Although the estate itself was not considered within **Chapter 7: Landscape and Visual**, the nearby settlement of Dunblane was assessed to have limited visibility of the blades of a small number of turbines and was not considered further.

13.8 A series of public consultation events were held in the local area in June 2023 and November 2023 in addition to general engagement and communication with local Community Councils, community groups, and other key stakeholders. The consultation events provided the public with an opportunity to learn about the proposed development through detailed information boards and visualisations, as well as discussion with the project team. Feedback forms were also provided to encourage people to submit their comments on the proposed development which could then be considered by the applicant.

13.9 Further details about the consultation and engagement activity undertaken by the applicant can be found in the **Pre-Application Consultation (PAC) Report**.

Effects Scoped Out

13.10 Based on past experience of onshore wind farm projects of this scale and the location of the proposed development close to major centres of population, it is not expected that there would be a large influx of workers and their families to the area during the construction phase (estimated to last for approximately 24 months) and, consequently, it is not expected that there would be a significant effect on the demand for housing, health or educational services.

13.11 Land use effects during the operational phase are scoped out as the operation of the wind farm would have minimal effect on recreational uses, compared to the construction phase where land use would be assessed. It is not expected that, once the proposed development is operational, the recreational usage of the land within the site would change, however, there would be a reduction in land available for sheep grazing in some areas of the site.

Approach and Methodology

Scope of Assessment

13.12 This Chapter takes an appropriate and topic-specific approach to the assessment of the proposed development. It provides a worst-case or conservative assessment for socio-economic effects and presents enough information for consultees and the decision makers to comment on and determine the application within the parameters of the proposed development.

13.13 It considers the effect of the proposed development on the economic resource, including employment, within the local, regional and national context, as well as more local effects

such as the potential impacts on tourist attractions and recreation facilities within and in the vicinity of the proposed development.

13.14 Where appropriate conclusions from **Chapter 7: Landscape and Visual** have been utilised to inform the assessments within this Chapter. In those instances, cross references have been provided.

Study Area

13.15 The assessment utilises a two-tiered study area which is considered to be representative of the quantitative and qualitative characteristics of the assessment. The study area for the Socio-Economics, Tourism, Recreation and Land Use assessment was proposed within the Scoping Report and agreed by the statutory consultees. The quantitative economic and employment aspects are defined by the Wider Study Area (WSA), whilst the qualitative tourism and recreation aspects are defined by the Local Area of Influence (LAI), as shown on **Figure 13.1**.

13.16 These two tiers are described as follows:

Wider Study Area (WSA)

13.17 The WSA encompasses the area where economic and employment effects could occur. The WSA is required for certain receptor groups because the majority of the business and labour market effects that could occur would be experienced by population and business centres located across a wider area than that of the fixed location of the proposed development.

13.18 Due to potential indirect effects occurring at a wider spatial area than that of the local authority alone, the WSA is inclusive of three spatial levels:

- the Local WSA (Perth and Kinross, Clackmannanshire, and Stirling Council administrative areas)
- the National WSA (Scotland); and
- the Uk-wide WSA (UK).

Local Area of Influence (LAI)

13.19 The LAI forms the focus for assessment of both direct and indirect effects on those recreation and tourism receptors that are likely to experience effects at a more local level. The LAI for such developments is generally defined by the application boundary, together with an area extending to 5km from the site. Given that the landscape at and around the site is very open, and the sparsity of receptors in this area, the LAI has been extended to include an enlarged 10km LAI, which encompasses Blackford, Gleneagles and Auchterarder in the north, and Dunblane and Bridge of Alan to the west / south west. This LAI would also cover communities south of the site, including as far as Alloa and Clackmannan.

Information and Data Sources

13.20 Information used for the Socio-Economics, Tourism and Recreation baseline within the WSA and LAI was collected through a detailed desktop review of existing studies and datasets outlined in **Table 13-2**.

Table 13-2: Summary of Key Data Sources

Title	Source	Year	Author
Annual Business Survey (ABS)	https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/methodologies/annualbusinesssurveyabs	2023	ONS
Annual Population Survey	https://www.nomisweb.co.uk/datasets/pestnew	2023	ONS
Annual Survey of Hours and Earnings – Resident Analysis	https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/annualsurveyofhoursandearningsashe#:~:text=ASHE%20provides%20information%20about%20the,time%20or%20part%2Dtime%20status	2023	ONS
Business Register and Employment Survey	https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey	2022	ONS
Population Estimates	National Records of Scotland (NRS) (2022b). 91% of Scotland's population live in 2% of its land area. Available at: https://www.nrscotland.gov.uk/news/2022/91-percent-of-scotlands-population-livein-2-percent-of-its-land-area	2023	NRS
Input-output supply and use tables	https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables	2023	ONS
Scottish Annual Business Statistics	https://www.gov.scot/publications/scottish-annual-business-statistics-2021/pages/headline-results/	2023	Scottish Government

Desk Study / Field Survey

13.21 The assessment uses desk-based information sources to assess the likely effects supplemented by consultation with relevant stakeholders where necessary, and professional judgement based on previous experience.

13.22 In 2023, a survey was carried out within the Ochil Hills, within the LAI, on behalf of the applicant, to assess whether the Burnfoot Hill, Burnfoot Hill East, Burnfoot Hill North, and Rhodders wind farms have had any effect on the number of people using the Ochils recreationally (see **Figure 13.3**). See **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**.

13.23 The 2023 survey was based upon a prior survey undertaken in 2006, which was carried out in support of the Burnfoot Hill Wind Farm EIA[2]. The 2006 survey recorded recreational usage within the Ochil hills (covering the area approximately from Alva and Tillicoultry, north to summits such as the Nebit and Ben Cleuch) prior to the construction of the Burnfoot Hill, Burnfoot Hill East, Burnfoot Hill North, and Rhodders wind farms, to understand the recreational baseline of the area.

13.24 The 2023 survey (**Technical Appendix 13.1**) gives an estimate of the current recreational baseline, with the presence of the operational Burnfoot Hill East, Burnfoot Hill North, and Rhodders wind farms. The 2023 survey presents data identifying the level of recreational usage across this part of the Ochils during the survey period.

13.25 The 2023 survey included a monitoring programme of recreational access routes within the Ochils. Automatic People Counters (APC) were used to measure the pedestrian / cyclist etc., traffic in relevant locations. Historic and freely available cell phone data was used to allow a comparison of the numbers of recreational users in this part of the Ochil hills against the data provided by the APCs, and a questionnaire survey was used in order to get more detailed information from people using the Ochil hills, including their views on wind farms.

13.26 Further field surveys have been undertaken during the EIA in respect of other technical disciplines, of most relevance being **Chapter 7: Landscape and Visual**. Information gathered as part of the Landscape and Visual Impact Assessment is considered in the assessment of socio-economic, tourism, recreation and land use effects where relevant.

Assessment Methods

13.27 **Chapter 5: Environmental Impact Assessment** provides an overview of the approach to assessment and explains the parameters being assessed in the EIA. **Chapter 5** also sets out the information on cumulative sites, and the approach to assessing cumulative effects.

13.28 There are no published standards or technical guidelines that set out a preferred methodology for assessing the likely socio-economic effects of an onshore wind farm proposal, although, NatureScot's 'Environmental Impact Assessment Handbook' (2018) makes reference to the potential effects of a development on outdoor recreation and opportunities for mitigation. However, there is a series of commonly used methodologies for such an assessment, including recognised approaches to quantifying economic effects both during the construction of a development and following its completion, that have been widely used in other major projects.

13.29 The assessment approach is to describe the baseline conditions, to identify likely effects from the construction and operation of the proposed development, consider the sensitivity of receptors, and then to assess the likely significance of any effects. Any adverse effects considered to be 'significant' are further considered with regard to bespoke mitigation measures and residual effects following mitigation are then identified.

13.30 The impacts during the decommissioning phase cannot be accurately quantified due to uncertainty over changes in the local, regional and national economies, as well as the spatial context of the proposed development during the 40 year operational phase. The

[2] Clackmannanshire Council Planning Application Reference 06/00121/FULL, Environmental Statement Appendix 5.5: Recreational Access Usage Monitoring and Analysis to Ben Cleuch & Surrounding Uplands

decommissioning phase has therefore been assessed using a qualitative approach based on the outcomes of the construction phase assessment, where the impacts are expected to be largely the same as those during the construction phase, albeit to a lesser degree and in approximately 40 years.

13.31 Any significant effects that would be direct, indirect, secondary, cumulative, short, medium and long term, permanent or temporary are examined and their significance assessed. These effects are identified as being beneficial (positive), adverse (negative) or neutral.

13.32 When assessing the socio-economic effects on employment and GVA, it is useful to distinguish between two types of effects generated by developments such as the proposed development:

- **Direct effects**: employment and GVA which is associated with the first round of capital expenditure within each impact area used in the assessment; and
- **Indirect effects**: employment and GVA associated with the supply of goods and services to main contractors by other companies located within each impact area of the assessment.

13.33 Regarding tourism and/or recreational receptors, direct effects are considered to be those where the receptor would be physically and directly impacted by any stage of the proposed development. For this to occur, the receptor would therefore need to be located within the application boundary (as shown on **Figure 13.1**).

13.34 Indirect effects on tourism and/or recreational receptors are considered to be those where the receptor is beyond the application boundary, but may still receive indirect effects as a result of the proposed development, such as visual or noise effects (see **Figure 13.2**).

Gross Effects During Construction

13.35 The economic effects are assessed using an economic model, which initially estimates the expected direct gross employment and GVA implications of the proposed development. These estimates have been derived using the information on anticipated development expenditure (set out in **Table 13-3**), as well as assumptions obtained from the following sources:

- Employment and GVA multipliers for Scotland, obtained from 'Supply, Use and Input-Output Tables: 1998-2021' (Scottish Government, 2022c);
- Employment and GVA multipliers for the UK obtained from 'Input-output supply and use tables' (ONS, 2022a); and
- Ratios of turnover per unit of GVA and GVA per employee from Scottish and UK Government data (Scottish Government, 2023c) (ONS, 2023a).

13.36 Using all of these sources, estimates have been derived of the direct gross employment and GVA effects that would be expected to be delivered by the proposed development for each of the three WSA levels.

Net Effects During Construction

13.37 The potential for net additional effects is considered and quantified by taking the estimates for the gross effects on the three WSA levels and accounting for three additionality concepts:

- **Leakage**: the proportion of development outcomes that benefit individuals or organisations located beyond the relevant area of impact (e.g., the Local WSA). Leakage is generally higher at a local level, although it varies by the nature of development type;
- **Displacement**: an estimate of the economic activity hosted by the Site that would be diverted from other businesses in the WSA level. This again varies by the nature of development type; and
- **Multipliers**: an estimate for further economic activity associated with additional income and/or project procurement activity stimulated by development activity within the WSA level under consideration.

13.38 The specific values assumed for multipliers for regional and Uk-wide WSAs are sourced from national input-output tables and vary by the development expenditure categories set out in **Table 13-3**. Assumptions about leakage are based on local labour market indicators and experience of other wind farm developments located in Scotland.

Assumed Development Expenditure

13.39 The construction phase of the development would naturally result in an increase of employment, as well as economic effects resulting from expenditure on items such as site preparation, development of access roads, purchase and delivery of materials, plant, equipment, and components, etc. To estimate the generation of GVA and employment resulting from the construction of the proposed development, it is necessary to adopt assumptions regarding the expenditure.

13.40 The applicant has provided technical information relevant to the proposed development that has enabled the prediction of broad estimates of the likely development expenditure. Based on this information, it is assumed that the construction period for the proposed development is expected to occur over a 24-month period.

13.41 A breakdown of this predicted expenditure disaggregated by the main category of spend, using a 2024 price base, is shown on **Table 13-3**. Other information used to enable the development of capital investment expenditure was obtained sources such as BVG Associates (2017) and RenewableUK (Vivid Economics, 2019), as well as project-specific data sourced from other onshore projects recently developed in Scotland.

Table 13-3: Predevelopment, Construction, and Commissioning Cost Estimates (2024 prices)

Category of Expenditure	£ millions
Development and project management costs	4.2
Turbines/plant	76.9
Electricals/grid connection/battery storage	22.3
Civils/contingency and miscellaneous	13.1
Total	**116.5**

13.42 The overall expenditure to construct the proposed development is expected to amount to nearly £117 million.

13.43 The construction phase socio-economic assessment will utilise predictions of the spatial location of expenditure if each category of expenditure, derived from prior experience of

similar developments. This indicative destination of expenditure is then converted into the estimated proportions of expenditure for each of the WSA spatial areas and adopted for the assessment.

Sensitivity Criteria

13.44 There are no published standards that define receptor sensitivity in relation to a socio-economic assessment. As a general rule, the sensitivity of each receptor or receptor group is based on its importance or scale and the ability of the baseline to absorb or be influenced by the identified effects. For example, a receptor (such as a public footpath or an accommodation business) is considered less sensitive if there are alternatives with capacity within the study area. In assigning receptor sensitivity, consideration has been given to the following:

- the importance of the receptor e.g. local, regional, national, international;
- the availability of comparable alternatives;
- the ease at which the resource could be replaced;
- the capacity of the resource to accommodate the identified impacts over a period of time; and
- the level of usage and nature of users (e.g. sensitive groups such as people with disabilities).

13.45 Based upon professional judgement and experience on other onshore wind developments, four levels of sensitivity have been used: high; medium; low; and negligible. These are defined in **Table 13-4**.

Table 13-4: Receptor Sensitivity

Sensitivity	Description
High	The receptor: • has little or no capacity to absorb change without fundamentally altering its present character; • is of high socio-economic, recreational, or tourism value[3]; • is of national or international importance; • is accorded priority in national policy; • has no alternatives with available capacity within its catchment area; or • is a destination in its own right (as regards tourism and visitor attractions).
Medium	The receptor: • has moderate capacity to absorb change without fundamentally altering its present character; • has a moderate socio-economic, recreational or tourism value;

[3] Which may include being of high value to a user group of high sensitivity (e.g. mobility impaired users)

Sensitivity	Description
	• is of regional importance; • is accorded priority in local policy; • has some alternatives with available capacity within its catchment area; • is a destination for people already visiting the area (as regards tourism and visitor attractions); or • forms a cluster of low sensitivity receptors.
Low	The receptor: • is tolerant of change without detriment to its character; • is of low socio-economic, recreational or tourism value; • is of local importance; • is accorded low priority in policy; • has a choice of alternatives with available capacity within its catchment area; or • is an incidental destination for people already visiting the area (as regards tourism and visitor attractions).
Negligible	The receptor is resistant to change and is of low socio-economic, recreational or tourism value, or there is a wide choice of alternatives with available capacity within its catchment area.

13.46 In considering the sensitivity of a receptor it is important to remember that, in the case of a socio-economic assessment, different receptors will have differing sensitivities depending on matters such as the economic profile of the local area, perception of the type of development and attitude to the potential benefits of a development.

Magnitude of Change

13.47 There are no published standards that define the thresholds of the magnitude of change for socio-economic, tourism or recreation impacts. In order to aid clear and robust identification of significant effects, specific and targeted criteria for defining the magnitude of change have been developed for this assessment based on experience of other similar developments. The following four levels of magnitude have been adopted using professional judgement: high; medium; low and negligible.

13.48 These impacts can be beneficial, adverse or neutral. Criteria for each of these levels of magnitude for each receptor group are set out in **Table 13-5**.

Table 13-5: Magnitude Criteria

Receptor Group	High	Medium	Low	Negligible
WSA economy	A change that would dominate over baseline economic conditions by >10%	A change that would be expected to result in a moderate change to baseline economic conditions by >5%.	A change that would be expected to result in a perceptible difference from baseline economic conditions by >0.5%	A change that would not be expected to result in a measurable variation from baseline economic conditions.
WSA labour market	A change that would dominate over baseline labour	A change that would be expected to result in a moderate	A change that would be expected to result in a perceptible	A change that would not be expected to result

Receptor Group	High	Medium	Low	Negligible
	market conditions and/or would affect a large proportion (>10%) of the existing resident workforce.	change to baseline labour market conditions and/or would affect a moderate proportion (>5%) of the existing resident workforce	difference from baseline labour market conditions and/or would affect a small proportion (>0.5%) of the existing resident workforce.	in a measurable variation from baseline labour market conditions.
Tourism and recreation assets	A change that would be expected to cause a major restriction of access to or availability of tourism and visitor assets in the LAI or would result in a major change to existing patterns of use.	A change that would be expected to have a moderate restriction of access to or availability of tourism and visitor assets in the LAI or would result in a moderate change to existing patterns of use.	A change that would be expected to have a small restriction of access to or availability of tourism and visitor assets in the LAI or would result in a small change to existing patterns of use.	A change that would be unlikely to result in a noticeable difference to tourism and visitor assets in the LAI.
Land use	A change that would lead to a major restriction on the operation of a receptor, e.g. forestry business, or complete closure of receptor.	A change that would lead to a moderate to major restriction on the operation of the receptor.	A change that would lead to a minor restriction on the operation of the receptor.	A change that would lead to a negligible restriction on the use of the receptor.

Significance Criteria

13.49 The significance of effect on socio-economic, tourism, recreation and land use receptors is initially assessed by combining the magnitude of the change and the sensitivity of the receptor. A significance matrix is presented in **Table 13-6** and comes from NatureScot's 'Environmental Impact Assessment Handbook' (2018).

Table 13-6: Significance Matrix

Sensitivity or Value of Resource or Receptor	Magnitude of Change			
	High	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

13.50 Effects may be beneficial, adverse or neutral. Where an effect is classified as major, this is considered to represent a 'significant effect' in terms of the EIA Regulations. Where an effect is classified as moderate, this may be considered to represent a 'significant effect' but should always be subject to professional judgement and interpretation, particularly

where the sensitivity or change magnitude levels are not clear or are borderline between categories or the change is intermittent.

13.51 The significance matrix shown in **Table 13-6** therefore provides a guide to decision making but is not a substitute for professional judgement. Impacts and effects can be beneficial, neutral or adverse and these would be specified where applicable. It should be noted that significant effects need not be unacceptable or irreversible.

13.52 A statement of residual effects, following consideration of any specific mitigation measures, is provided.

Mitigation

13.53 The assessment takes account of any environmental principles that are incorporated into the design of the proposed development. These include good practice measures with regard to traffic management, control of noise and dust, signage and provisions for maintaining access for walkers, cyclists and horse-riders, details of which are set out in **Technical Appendix 3.1: Outline Construction and Environmental Management Plan (CEMP)**. Any additional mitigation measures that would reduce the level of any significant effects are set out and considered prior to assessing residual effects.

Cumulative Effects

13.54 In relation to economic effects, cumulative effects depend on the extent to which the supply chain and labour market within the Local WSA have the capacity to meet demand for construction services from a number of similar developments. An assessment has been made as to whether it is considered likely that the cumulative effect indicates a loss of benefit as a result of cumulative developments, or an enhancement of opportunity which would help to develop expertise and capacity in the market. The cumulative effects assessment is able to make a quantitative judgement on potential loss of benefit due to cumulative developments. Enhancement of opportunity is identified only in qualitative terms.

13.55 Other cumulative effects may arise if the construction and/or operation of a number of wind farms were to affect receptors in the LAI.

Assumptions, Limitations and Confidence

13.56 The data available at a national level can vary between Great Britain and United Kingdom. Although it is noted that these terms are often used interchangeably colloquially, it is recognised that there is a geographical difference, therefore a difference in the data may be evident as well. This occurs as a result of specific datasets only having data for mainland Great Britain, whilst others have data for the entire UK.

13.57 Where available, particularly from data sourced from the Office of National Statistic (ONS), Great Britain has been used, however, some sources and documentation used for estimations regarding forecasting the economic and labour impacts of developments of this nature may only be available at a UK spatial level. For the avoidance of doubt, the assessments have been based upon UK data where relevant.

13.58 In common with projects of a similar nature, no field surveys were undertaken to assess the real-time physical state and usage of the recreational and tourism receptors. Data has, however, been retrieved from topics of other Chapters of this EIA Report, where relevant.

13.59 Whilst great care has been taken to use a direct correlation against the 2006 survey, some recreational routes have changed/closed, in some instances permanently, while in others temporarily. In addition, the original 2006 survey was limited to a smaller sample of only three fixed counting points and a smaller sample of recreational users surveyed. Notwithstanding, the original 2006 survey is considered to be a robust data source within the context of the proposed development and provides a strong representation of prior recreational usage within the area.

Baseline Conditions

13.60 This section comprises the existing conditions of the site of the proposed development.

13.61 The baseline conditions are split into the relative study areas, within the WSA (as described in paragraphs 13.17 and 13.18) including:

- population;
- labour market and supply chain; and
- tourism economy.

13.62 This is followed by the baseline conditions of the LAI (as described in paragraph 13.19), whilst noting that the land use conditions, and therefore the land use assessment, is considered to be a localised effect with the spatial area of potential effect being restricted to the site boundary. The LAI baseline comprised:

- Formal recreational receptors;
- Informal recreational receptors;
  - Tourism Attractions;
  - Long-distance routes;
  - Core Paths;
  - Rights of Way;
  - Heritage Paths;
  - Scottish Hill Tracks;
  - Access land;
  - Cycling;
  - Horse riding; and
- Recreational access survey.

Wider Study Area (WSA) Baseline

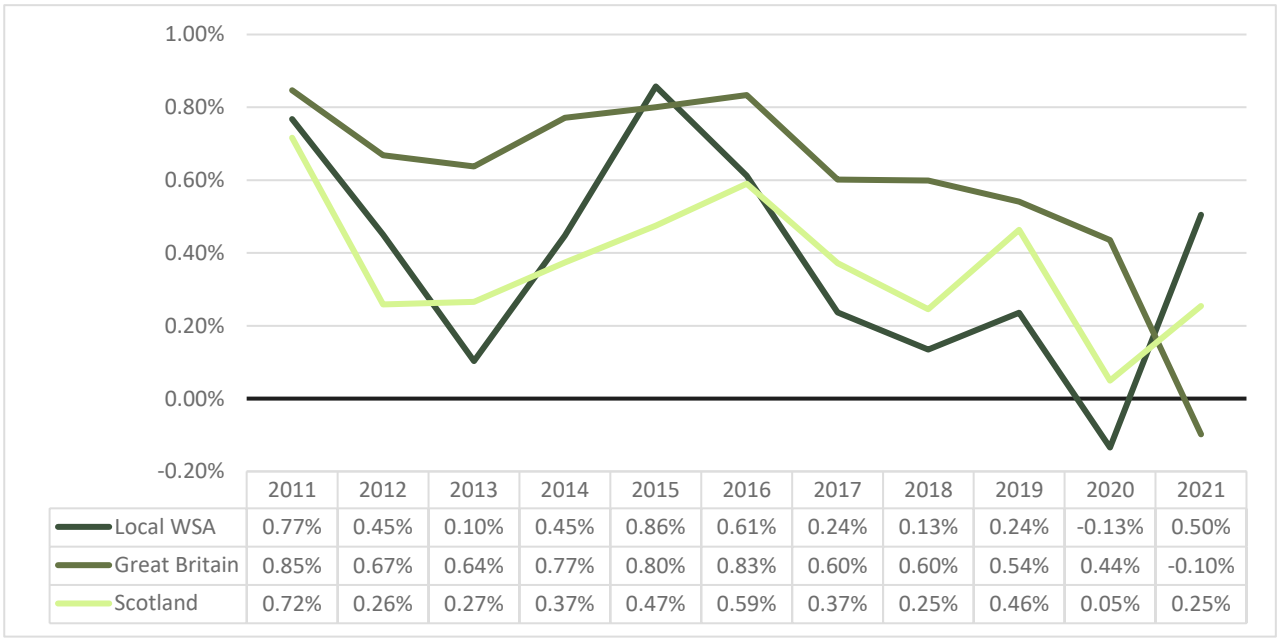
13.63 A baseline review of population and employment data has been undertaken which focuses on the Local WSA (Clackmannanshire, Perth and Kinross and Stirling administrative areas), although data for the National WSA (Scotland) and the UK-wide WSA (UK/Great Britain) are provided for comparison where relevant.

Population

13.64 In June 2021, the population of the Clackmannanshire administrative area was 51,540, the Perth and Kinross administrative area was 153,810, and the Stirling administrative area was 93,470, combining to a total of 298,820 in the Local WSA, which represented approximately 5.45% of Scotland's total population of 5,479,900 (NRS, 2023), whilst the population for Great Britain (GB) is 65,121,700 (ONS, 2022b). For context, 91% of Scotland's population live in 2% of its land area (NRS, 2022).

13.65 The Local WSA experienced an 'in combination' increase of 10,100 residents from 2011 (288,700) over the 10-year period to 2021 (298,820) (ONS, 2022b). This represented a total increase of 3.5%, proportionately lower than that of GB (5.94%) but marginally higher than that of Scotland with 3.4%. **Graph 13-1** details the year-on-year percentage changes in population over the 10 year period to 2021, beginning with the changes from 2010-2011.

Graph 13-1: Changes in Population (2011-2021)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Local WSA	0.77%	0.45%	0.10%	0.45%	0.86%	0.61%	0.24%	0.13%	0.24%	-0.13%	0.50%
Great Britain	0.85%	0.67%	0.64%	0.77%	0.80%	0.83%	0.60%	0.60%	0.54%	0.44%	-0.10%
Scotland	0.72%	0.26%	0.27%	0.37%	0.47%	0.59%	0.37%	0.25%	0.46%	0.05%	0.25%

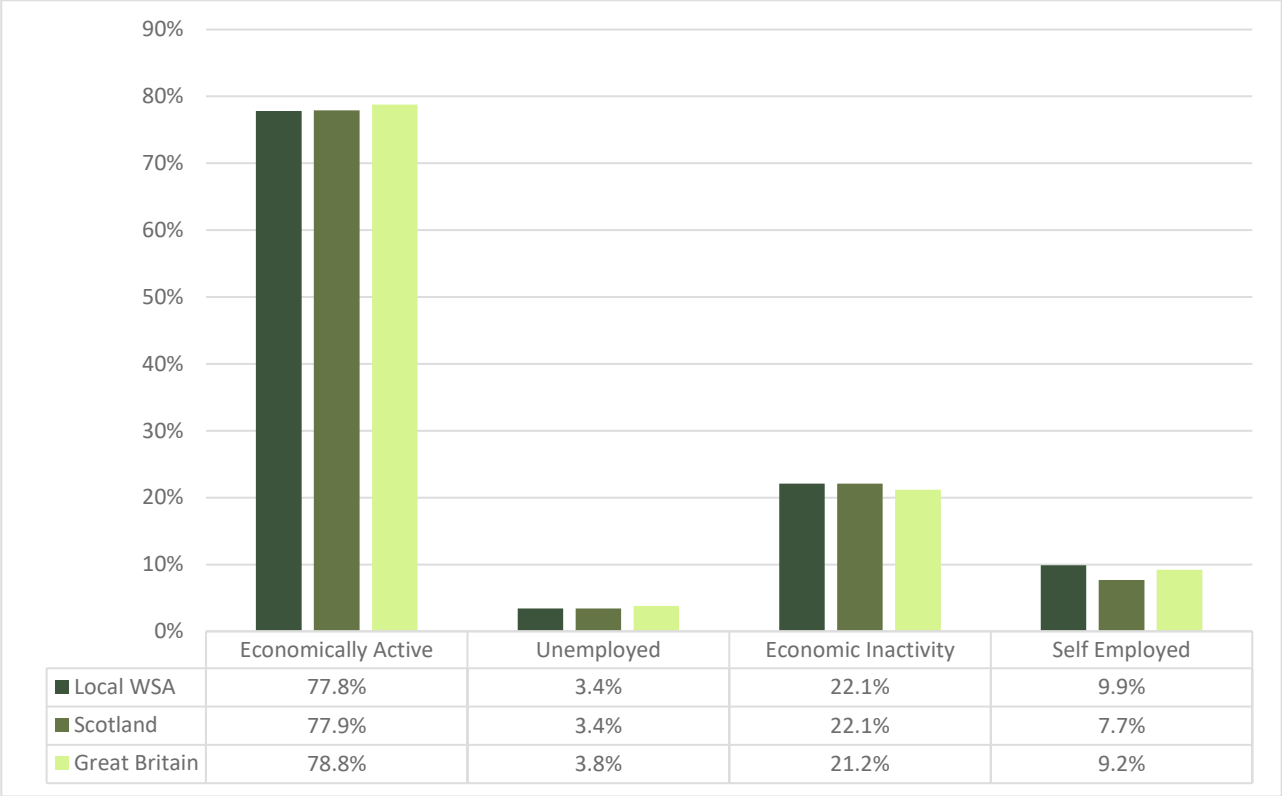
13.66 **Graph 13-1** shows a consistent growth in Scotland, with GB only experiencing a decline in 2021. Overall, the Local WSA experienced consistent population growth, only showing a minor decline in population in 2020, immediately followed by a significant jump in population growth the following year. The Local WSA also showed the least consistent changes, showing both the greatest increase (0.86%) and decrease (-0.13%), although more extreme changes are expected due to the smaller sample size.

13.67 The Local WSA has a smaller working population than average, with 61.6% considered to be of 'working age' (16-64) compared to 63.8% in Scotland and 62.9% in GB. (ONS,2022b).

Labour Market and Supply Chain

13.68 There are 142,600 economically active residents in the Local WSA (ONS, 2022b), which proportionately is a lower rate of activity than in Scotland and GB, although only marginally lower than the former, as shown on **Graph 13-2.** This aligns with the proportionately lower working age population in the Local WSA.

Graph 13-2: Labour Market



	Economically Active	Unemployed	Economic Inactivity	Self Employed
Local WSA	77.8%	3.4%	22.1%	9.9%
Scotland	77.9%	3.4%	22.1%	7.7%
Great Britain	78.8%	3.8%	21.2%	9.2%

13.69 The lower rate of economic activity in the Local WSA is not reflected in the rates of unemployment, which match the average of Scotland (3.4%), and is lower than the GB average (3.8%). Economic inactivity refers to people not in employment who have not been seeking work within the last four weeks and/or are unable to start work within the next two weeks, with the rate of economic inactivity being higher in the Local WSA than in GB, but equal to that of Scotland. The Local WSA also has a higher rate of self-employment than either Scotland or GB.

13.70 Useful insights into the dynamics of the labour market are often revealed by consideration of the occupational structure of those in employment as shown in **Table 13-7** (ONS, 2023b).

Table 13-7: Employment by Occupation Type

Standard Occupational Classification	Local WSA (Total)	Local WSA (%)	Scotland (%)	GB (%)
1. Managers, Directors and Senior Officials	14,900	10.4	7.6	10.5

2. Professional Occupations	40,200	28.0	26.5	27.0
3. Associate Professional Occupations	27,300	19.0	16.1	14.9
4. Administrative & Secretarial Occupations	13,400	9.3	9.1	9.6
5. Skilled Trades Occupations	13,100	9.1	9.7	8.7
6. Caring, Leisure and Other Service Occupations	9,000	6.3	8.3	7.9
7. Sales and Customer Service Occupations	8,500	5.9	7.1	6.1
8. Process Plant & Machine Operatives	4,900	3.4	4.8	5.4
9. Elementary Occupations	12,000	8.3	10.4	9.5

13.71 Of note in **Table 13-7** is the higher proportion of 'Associate Professional Occupations' in the Local WSA than in Scotland and GB, reflected also in the higher rate of 'Professional Occupations' comparatively. Conversely, there is a lower proportion of 'Process Plant & Machine Operatives' in the Local WSA than its comparatives.

13.72 Skilled trades occupations are likely to include skills and services that would be required for wind farm construction and operation. The data from **Table 13-7** shows that the proportion of 'Skilled Trades Occupations' in the Local WSA (9.1%) is broadly on trend with the comparators, being slightly below that of Scotland (9.7%) and slightly above that of GB (8.7%).

13.73 Regarding the qualifications attained by the population, the qualification levels were retrieved from both Scotland (Scotland's Census, 2025) and the England and Wales Census' (ONS, 2021). The qualification levels required grouping in order to allow comparisons to be drawn between the differing Scottish, and England and Wales qualifications (see **Table 13-8**). For example, Levels 1 and 2 are classified based on the number of GCSEs attained, however, both of these levels would be considered 'Lower School' qualifications in Scotland. Further, HND and HNC level qualifications are grouped with degree level or above qualifications in the England and Wales, however, in Scotland these qualifications would be considered levels 4 and 5 respectively (Scotland's Census, 2025). **Table 13-8** outlines the assumptions made to provide a comparison between the differing Scottish, and England and Wales qualifications.

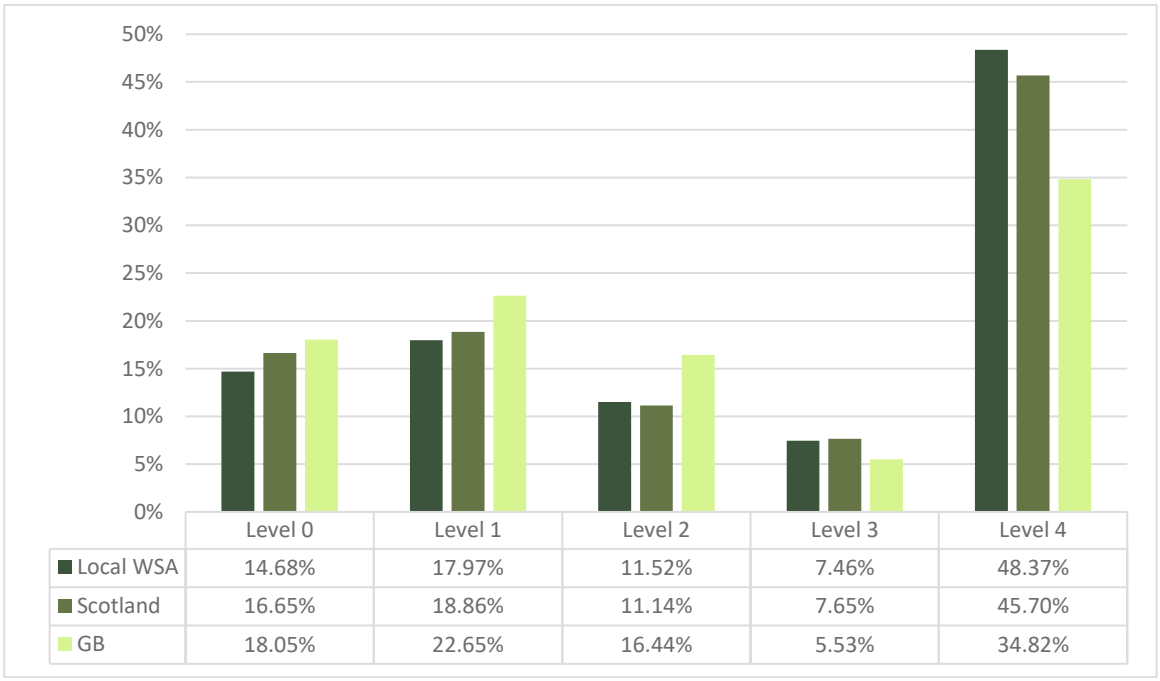
Table 13-8: UK Qualifications Comparison

Comp. Level	Scotland Description	Comp. Level	England and Wales Description
0	No qualifications	**0**	No qualifications
1	Lower School Qualifications	**1**	Level 1: one to four GCSEs passes (for example grade A* to C or grade 4 and above) and any other GCSEs at other grades, or equivalent qualification Level 2: five or more GCSE passes (for example grade A* to C or grade 4 and above) or equivalent qualifications
2	Upper School Qualifications	**2**	Level 3: two or more A levels or equivalent qualifications
3	Apprenticeship Qualifications	**3**	Apprenticeship

Comp. Level	Scotland Description	Comp. Level	England and Wales Description
4	Further Education and sub-degree Higher Education including HNC/HNDs Degree level qualifications or above	**4**	Level 4 or above: Higher National Certificate, Higher National Diploma, Bachelor's degree, or post-graduate qualifications
N/A	N/A	**N/A**	Other qualifications, of unknown level

13.74 Residents of the Local WSA achieved level 4 qualifications at a higher proportion (48.37%) than that of Scotland (45.7%) and both were higher than the GB average (34.82%). This was reflected in the proportion of residents with no qualifications within the WSA (14.68%), which was lower than both the Scottish and GB averages of 16.65% and 18.05% respectively, as shown in **Graph 13-3**.

Graph 13-3: Qualifications



	Level 0	Level 1	Level 2	Level 3	Level 4
Local WSA	14.68%	17.97%	11.52%	7.46%	48.37%
Scotland	16.65%	18.86%	11.14%	7.65%	45.70%
GB	18.05%	22.65%	16.44%	5.53%	34.82%

13.75 Regarding qualifications of levels 1 and 2, **Graph 13-3** shows that there was a higher level of attainment in GB than in the Local WSA and Scotland, likely owing to their respective higher level 4 attainment.

13.76 According to the Office for National Statistics (ONS) Annual Survey of Hours and Earnings (ASHE), the average weekly gross earnings for workers in the Clackmannanshire, Perth & Kinross, and Stirling administrative areas were £631.20, £671.90, and £668.10 respectively (ONS, 2023c). These rates mean that each of local authorities within the Local WSA have lower average weekly gross earnings than both Scotland and GB, which stand at £702.80 and £682.60 respectively.

13.77 Data on an area's business population can be obtained from the ONS Business Register and Employment Survey (2022c) and used to identify the structure of the local business base by sector. This is potentially useful in assessing the capacity of the local area to host

supply chain activity for infrastructure and other large-scale construction projects such as the proposed development. **Table 13-9** provides data on the structure of the local business base for the Local WSA, both in absolute and relative terms, as well as Scotland and GB in relative terms.

Table 13-9: Employee Jobs by Industry

Employee Jobs by Industry[4]	Local WSA (Total)	Local WSA (%)	Scotland (%)	GB (%)
A: Agriculture, forestry and fishing	5,025	4.0	0.7	1.8
B: Mining and quarrying	90	0.1	0.2	1.0
C: Manufacturing	8,750	6.9	7.6	6.8
D: Electricity, gas, steam and air conditioning supply	3,580	2.8	0.4	0.8
E: Water supply; sewerage, waste management and remediation activities	1,400	1.1	0.7	0.7
F: Construction	7,900	6.2	4.9	5.6
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	18,000	14.2	13.9	12.7
H: Transportation and storage	3,000	2.4	5.0	4.0
I: Accommodation and food service activities	14,000	11.1	8.0	8.3
J: Information and communication	3,450	2.7	4.5	3.2
K: Financial and insurance activities	3,075	2.4	3.3	3.3
L: Real estate activities	1,900	1.5	1.8	1.3
M: Professional, scientific and technical activities	7,700	6.1	9.0	7.3
N: Administrative and support service activities	8,700	6.9	9.0	8.0
O: Public administration and defence; compulsory social security	8,500	6.7	4.7	6.5
P: Education	11,750	9.3	8.6	8.7
Q: Human health and social work activities	14,000	11.1	13.5	15.5
R: Arts, entertainment and recreation	4,000	3.2	2.4	3.0
S: Other service activities	1,850	1.5	2.0	1.6

13.78 The data in **Table 13-9** shows that the percentage of ‘construction’ sector jobs in the Local WSA (6.2%) is higher than the averages for both Scotland (4.9%) and GB (5.6%) respectively, indicating potential capacity and skills in the Local WSA for construction services.

13.79 Of relevance to the potential indirect economic benefits of the proposed development is the proportion of ‘accommodation and food service activities’ jobs, which may indicate

[4] Note, the ONS Business Register and Employment Survey excludes self-employed, government-supported trainees and HM Forces

accommodation capacity that could be utilised by construction workers. **Table 13-9** shows that the proportion of workers in this sector is significantly higher in the Local WSA (11.1%) than that of the averages for both Scotland (8.0%) and GB (8.3%).

Local WSA Tourism Profile

13.80 The Local WSA is a popular area for tourism, due to its accessible nature and varied offering. Data is publicly available for the Perth and Kinross administrative area, however, the comparable data for the remaining two local authorities is inclusive of the wider 'Forth Valley', which includes both the Stirling and Clackmannanshire Councils' administrative areas, as well as others in the region.

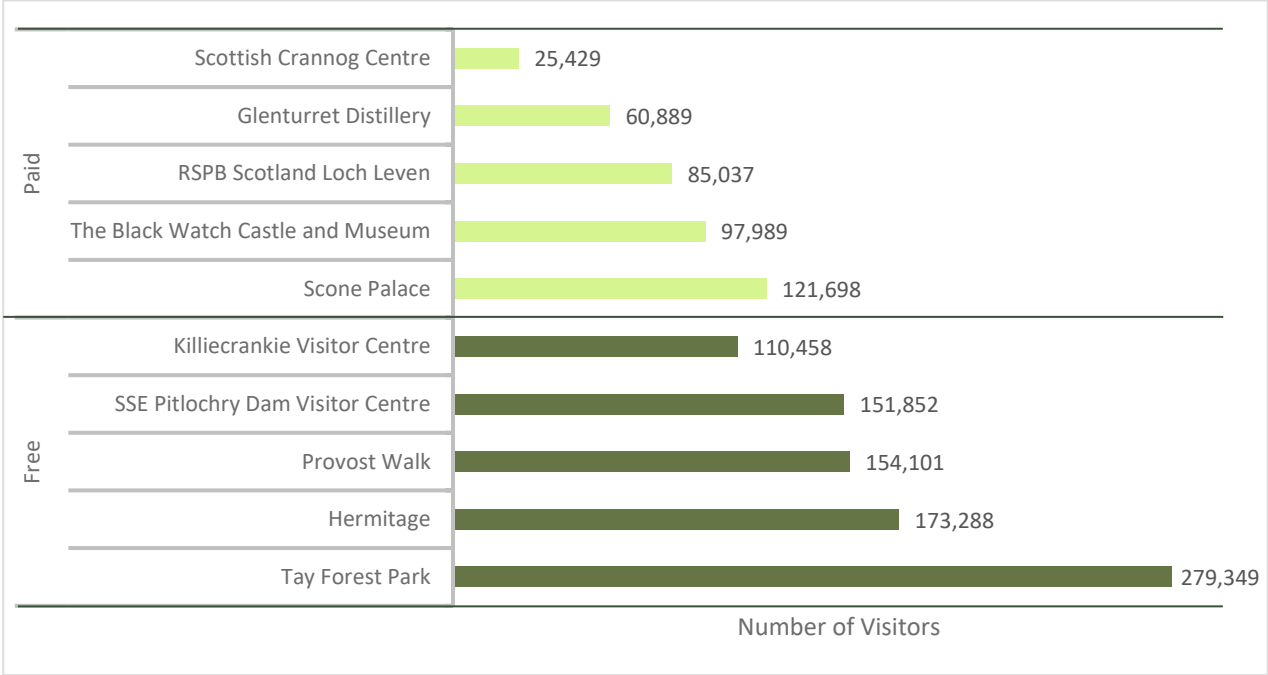
Perth and Kinross

13.81 The economic impact of tourism in Perth and Kinross in 2021 (the latest data currently available), rose to £155 million, an increase of £52.7 million or 51.5% on the previous year (Scottish Tourism Observatory, 2024). Despite this dramatic increase, the economic impact of tourism in 2021 was significantly less than the years immediately prior to the Covid pandemic (£237.9 million and £203.8 million in 2019 and 2018 respectively). However, as with the tourism economies throughout the UK, these figures are expected to improve from 2022 onwards.

13.82 Over the 3-year period from 2017-2019, the average number of visits to the Perth and Kinross administrative areas was 6,360,000, a 5% decline when compared with the 3-year period from 2016-2018. This decline contrasts with the change in number of overnight visits, and the overall tourist spend, which saw increases of 12% and 7% respectively, to 2.7 million nights and £394 million, when compared with the previous 3-year average (Perth and Kinross Council, 2024).

13.83 **Graph 13-4** details the top five free and paid visitor attractions in the Perth and Kinross administrative area, in 2019 (Perth and Kinross Council, 2024).

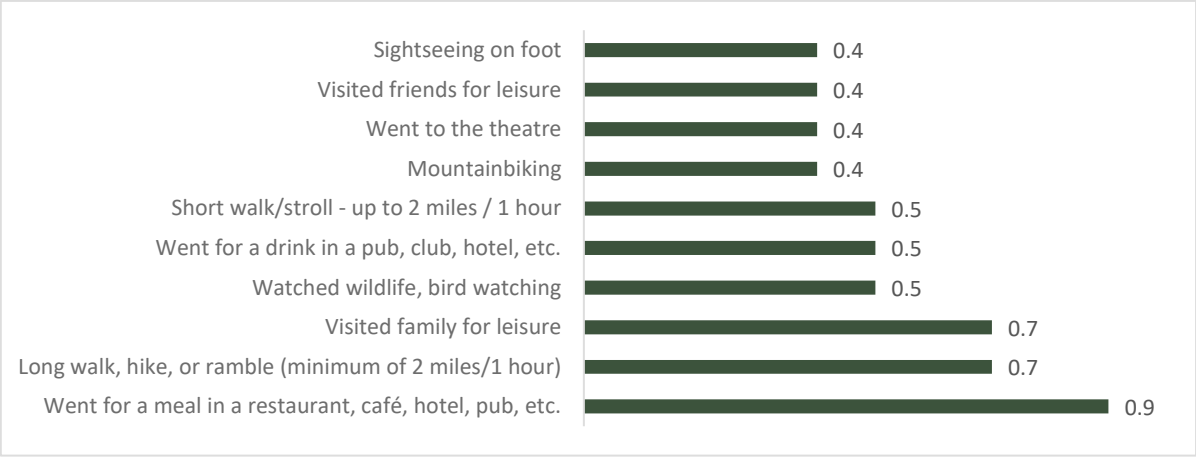
Graph 13-4: Top Five Free and Paid Visitor Attractions in Perth and Kinross 2019



13.84 Provost Walk is the only visitor attraction within the LAI, with 154,101 visitors in 2019 as shown on **Graph 13-4** (Perth and Kinross Council, 2024). Although it is within the LAI, it is important to note that the attraction is located in excess of 5km from the site application boundary, and approximately 10km from the nearest proposed turbine – impacts upon the landscape are considered in **Chapter 7: Landscape and Visual**.

13.85 **Graph 13-5** details the most popular activities undertaken as part of a day trip in the Perth and Kinross administrative area, from 2016-2018 (Perth and Kinross Council, 2024), showing the most popular activity was to go for a meal.

Graph 13-5: Most Popular Activities Undertaken as Part of a Day Trip , Perth and Kinross – 2016 to 2018 Average Annual Figures (Number of Day Trips in Millions)



13.86 As illustrated in **Graph 13-5**, the most popular activities are not geographically limited to the LAI and could be undertaken throughout the Perth and Kinross administrative area.

Forth Valley – Including Stirling and Clackmannanshire

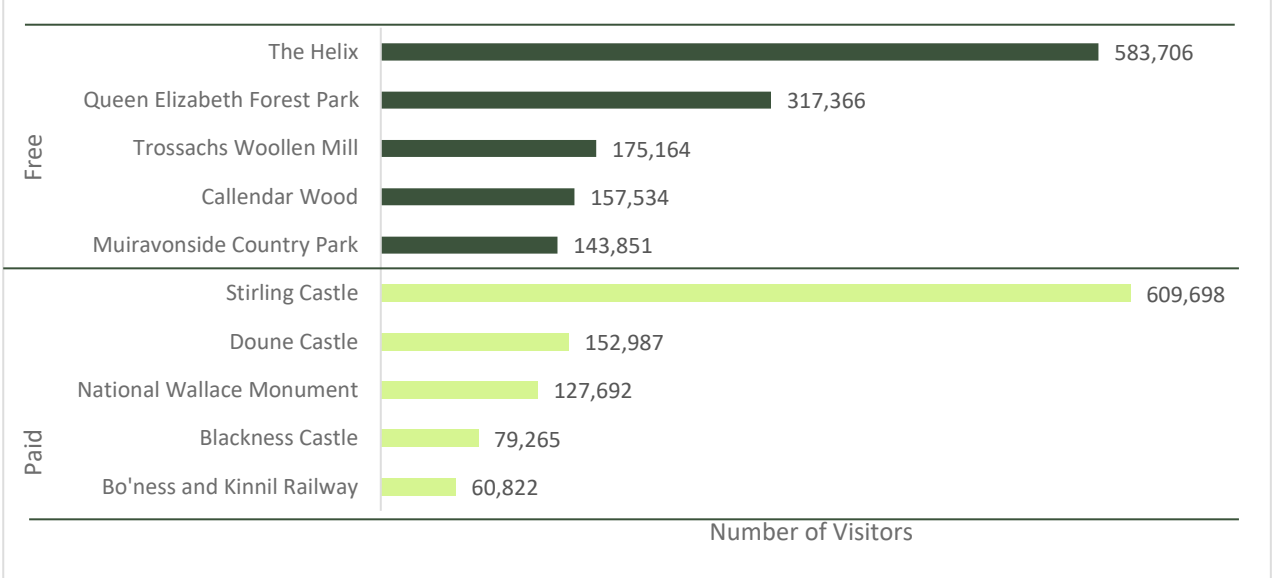
13.87 The economic impact of tourism in Stirling in 2021 (the latest data currently available), rose to £77.3 million, an increase of £6.7 million or 9.5% on the previous year (Tourism Observatory / Scottish Growth Sector Statistics, 2024). This represents a significantly decreased economic impact when compared with pre-pandemic figures (£156.5 million and £129.3 million in 2019 and 2018 respectively), however, as previously discussed these figures would be expected to improve from 2022 onwards.

13.88 The economic impact of tourism in Clackmannanshire in 2021 (the latest data currently available), fell to £13.1 million, a decrease of £2 million or 13.2% on the previous year (Tourism Observatory / Scottish Growth Sector Statistics, 2024). This represents 4 years of consecutive reductions (£23.7 million and £24.5 million in 2019 and 2018 respectively). It is anticipated that the economic impact of tourism in Clackmannanshire has improved from the 2021 statistics (following the end of the Covid pandemic and related restrictions).

13.89 Over the 3-year period from 2017-2019, the average number of visits to Forth Valley (the region comprising Stirling, Falkirk, and Clackmannanshire) was 8,807,000, a 5% decline when compared with the 3-year period from 2016-2018. The number of overnight visits and the overall tourist spend also declined, both by 4% when compared with the previous 3-year average, to 2.097 million nights and £328 million, (VisitScotland, 2021). It should be noted, however, that these data include a far wider region than that of the Local WSA and are therefore higher than what would be expected for the Local WSA.

13.90 **Graph 13-6** details the top five free and paid visitor attractions in the Forth Valley area, in 2019 (VisitScotland, 2021).

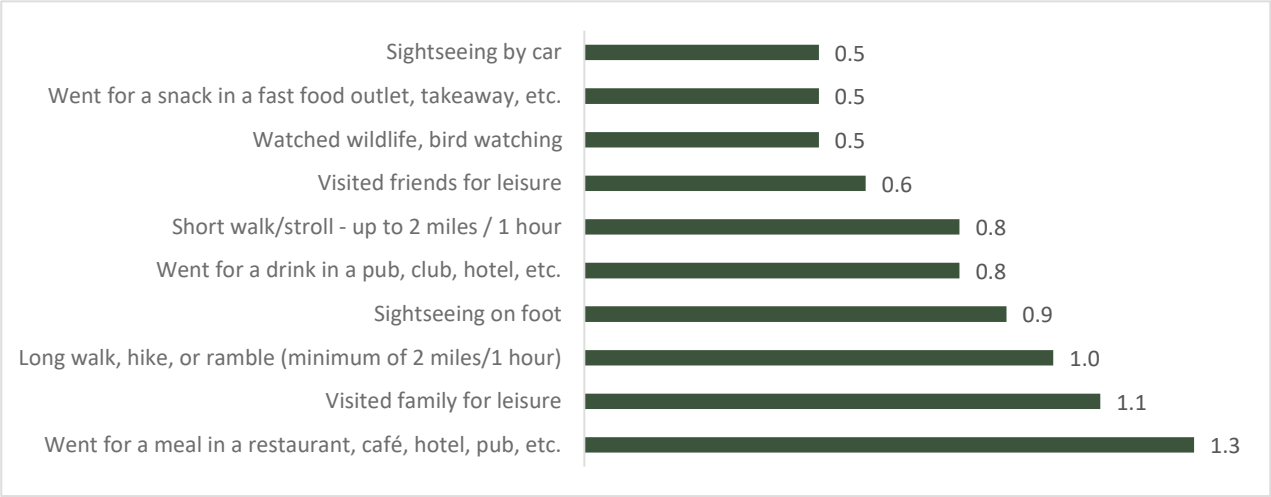
Graph 13-6: Top Five Free and Paid Visitor Attractions in Forth Valley 2019



13.91 Two of the above attractions lie within the LAI; Stirling Castle and the National Wallace Monument, with 609,698 and 127,692 visitors in 2019 respectively, as shown on **Graph 13-6**. However, although these two attractions are within the LAI, it is important to note that both attractions are located in excess of 5km from the site application boundary.

13.92 **Graph 13-7** details the most popular activities undertaken as part of a day trip in the Forth Valley area, from 2016-2018, showing the most popular activity was to go for a meal (VisitScotland, 2021).

Graph 13-7: Most Popular Activities Undertaken as Part of a Day Trip, Forth Valley – 2016 to 2018 Average Annual Figures (Number of Day Trips in Millions)



13.93 As illustrated in **Graph 13-7** the majority of the most popular activities are not geographically limited to the LAI and could be undertaken throughout the Forth Valley region (including potentially in the Falkirk Council administrative area which is outwith the Local WSA).

Local Area of Influence (LAI) Baseline

13.94 The LAI forms the focus for assessment of both direct and indirect effects on those recreation and tourism receptors that are likely to experience effects at a more local level. The LAI is defined by the application boundary together with an area extending to 10km from the application boundary, including main roads, identifiers and towns. The LAI for developments similar to the proposed development is often defined as 5km from the application boundary, however given the scale of the landscape where the proposed development is located, which is very open and has a sparsity of receptors within 5km, the LAI has been extended to 10km from the application boundary. A 10km LAI encompasses Blackford, Gleneagles and Auchterarder in the north, Dunblane and Bridge of Alan to the west / south west. This LAI would also cover the communities south of the site, as far as Alloa and Clackmannan. The LAI baseline includes tourism and recreational receptors, including linear recreational routes such as Core Paths.

Recreation

13.95 This section is split into 'formal' recreation facilities which are considered to be those with paid or controlled entry, such as a museum, as well as other forms of recreation such as Core Paths, cycling routes or beaches, which are considered to be 'informal' and utilised freely without payment, as shown on **Figure 13.2**.

Formal Recreation

13.96 Golf is popular within the LAI and is a potential draw for tourists, with numerous courses within the LAI. With the exception of Gleneagles Golf Course, all of the other golf courses identified within the LAI; (Muthill Golf Club, Alva Golf Club, Tillicoultry Golf Club, Schawpark Golf Course, Braehead Golf Course, Bridge of Allan Golf Club, Dunblane New Golf Club and Stirling Golf Club) would be considered within a local context and low sensitivity due to the wide availability of alternatives and lack of national promotion of the courses.

13.97 Gleneagles describes itself as *"a luxury hotel, spa and golfing destination in the heart of the Scottish countryside"*[5] and consists of an 850-acre estate with a five-star hotel, 10 restaurants and bars, a spa with a pool and gym, three championship golf courses and one 9-hole golf course. Gleneagles also offer a variety of other outdoor pursuits, including but not limited to archery, a shooting and fishing school, an equestrian school, The British School of Falconry, and various other racquet and lawn games. For the aforementioned reasons, Gleneagles would be considered to be of national importance and high sensitivity.

13.98 Stirling Castle lies within the LAI and, as shown on **Graph 13-6**, was the most visited (of both paid and free) tourist attraction in Forth Valley area in 2019 (most recent data), with almost four times as many visitors than the next highest visited paid attraction. Stirling Castle is considered to be of national importance, and high sensitivity. The National Wallace Monument also lies within the LAI, ranked as the third most popular paid attraction in the Forth Valley area, in 2019, with over 125,000 visitors. The National Wallace Monument would also be considered to be of national importance and high sensitivity.

13.99 Further paid attractions which could broadly be considered capable of attracting visitors from beyond their general locale include:

- Tullibardine Distillery;
- Frandy Fishery;
- The Japanese Garden at Cowden;
- Alloa Tower;
- Orchill Loch Trout Fishery;
- Stirling Smith Art Gallery;
- Stirling Old Town Jail;

[5] https://gleneagles.com/

- Dunblane Cathedral; and
- Castle Campbell.

Informal Recreation

13.100 The general area of the LAI is home to various informal recreational activities, such as walking, hiking, and cycling, as shown on **Figure 13.2.** These include a number of designated paths, with the following sections describing the various types of paths and trails within the LAI.

Tourism Attractions

13.101 The LAI is home to an abundance of tourism attractions, many of which are often associated with recreational activities, such as the Tower Trail, require walking to access them, are of historical/archaeological importance and are free to the general public. Those which are particularly noteworthy, in terms of the level of usage, include:

- Clackmannan Tower;
- Sauchie Tower;
- Gartmorn Dam Country Park;
- Cambus Pools Nature Reserve;
- Sheriffmuir Atlantic Wall;
- Clan MacRae Monument;
- Ardoch Roman Fort; and
- Cambuskenneth Abbey.

Long Distance Routes

13.102 Clackmannanshire Council[6] promotes the 'Tower Trail' which, although not a Long-Distance Route in the traditional form, utilises existing roads and pathways such as Core Paths and Heritage Paths to offer linkages between existing attractions. There are no further published long distance recreational routes that have been identified within the LAI. However, it is noted that many parts of the LAI and the site itself, are widely used for various forms of outdoor recreation.

Core Paths

13.103 There are a substantial number of Core Paths located within the LAI owing to the LAI study area encapsulating the vast majority of the Clackmannanshire Council administrative area, as well as large parts of the Perth and Kinross Council, and Stirling Council administrative areas. The full context of Core Paths within the LAI is shown on **Figure 13.2**.

13.104 Of particular relevance to the proposed development are:

[6] https://www.clacks.gov.uk/site/documents/tourism/towertrailbooklet/

- Core Path 62 (Clackmannanshire), which runs from the A9 south to Tillicoultry and passes by the site's north eastern most boundary;
- Core Path BLFD/118 (Perth and Kinross), which runs from the A9 to the north and enters the site boundary at the access road, where it joins Core Path BLFD/113 (Perth and Kinross), which in turn travels northward re-connecting the paths with the A9 and forming a circular route; and
- Core Path BLFD/116 and BLFD/109 (Perth and Kinross) which run east to west along the A9 passing the site's proposed access road.

13.105 The Core Path routes are considered to be of local to medium importance and of low to medium sensitivity depending on the level of access provided to the wider network. Those outlined in the bullet points above are considered to be connected to the wider path network and of medium sensitivity.

Rights of Way

13.106 Through consultation with ScotWays, one Right of Way (RoW) has been identified as bordering, and at points entering, the site boundary, TP193, which runs from the A9 south to Tillicoultry and follows the same route as Core Path 62 shown on **Figure 13.2**.

13.107 This RoW is considered to be of local importance and low sensitivity, owing to having been accorded a lower priority in policy, being an incidental destination for people already visiting the area and these types of routes being unmarked, unpromoted and often unknown to the wider public by their nature in Scotland.

Heritage Paths

13.108 There is one route within the vicinity of the site promoted by the Heritage Paths Project (ScotWays, 2024) for its historic interest, 'Tillicoultry to Blackford Hill Track '[HP353], a 14.7km route comprising mainly rural path with some drove road, shown on **Figure 13.2**. The route runs from Tillicoultry northwards to Blackford and follows the same route as both Core Path 62 and RoW TP193.

13.109 This is considered to be of regional importance and medium sensitivity.

Scottish Hill Tracks

13.110 Land surrounding and inside the site boundary, within the Ochill hills is widely used recreationally for hillwalking on both recorded and unrecorded tracks. Through consultation with ScotWays, Scottish Hill Track (SHT) 131 Tillicoultry to Blackford or Gleneagles [HT724] was identified as bordering the site boundary, shown on **Figure 13.2**. SHT131 runs from Tillicoultry northwards to Blackford and follows the same route as the previously mentioned Core Path 62, RoW TP193 and HP353.

13.111 This is considered to be of local importance and low sensitivity.

Access Land

13.112 The lack of further designated or recorded paths within or adjacent to the site does not preclude the public from accessing the land for recreational purposes in accordance with the Land Reform (Scotland) Act 2003, including walking, cycling and horse riding. From Strava heatmap data (Strava, 2024), the routes listed above are used for recreational

purposes, particularly walking with some cycling, however, the wider site beyond formal recreational routes shows less evidence of activity.

13.113 The access land in this area is considered to be of local importance and low sensitivity.

Cycling

13.114 Sustrans (2024) have mapped the National Route 768 to the south of the proposed development in Alva which is part of the National Cycle Network (NCN). This route follows a mixture of paths and roads connecting with the footpaths of the Ochils and the wider National Route 76 which is mainly located in the southern end of the LAI. This cycle route is part of the wider cycle and path network; therefore, it is believed to be of regional importance and medium sensitivity, owing to these linkages.

Horse Riding

13.115 There are several centres for horse riding located throughout the LAI, however, the site and its immediate surroundings are predominately used for non-equestrian forms of recreation due to the steepness of the hills.

Recreational Access Survey

13.116 In 2023, a survey was carried out, within the Ochill Hills, on behalf of the applicant, to assess whether the Burnfoot Hill, Burnfoot Hill East, Burnfoot Hill North, and Rhodders wind farms have had any effect on the number of people using the Ochils recreationally. See **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**.

- The 2023 survey was based upon a prior survey undertaken in 2006, which was carried out in support of the Burnfoot Hill Wind Farm EIA[7]. The 2006 survey recorded recreational usage within the Ochil hills (covering the area approximately from Alva and Tillicoultry, north to summits such as the Nebit and Ben Cleuch) prior to the construction of the Burnfoot Hill, Burnfoot Hill East, Burnfoot Hill North, and Rhodders wind farms, to understand the recreational baseline of the area.

13.117 Automatic People Counters (APC) were used to measure the pedestrian (and cycling) traffic in relevant locations in order to capture movements to and from, or along, the survey targets, and interpret this data to provide robust estimates of annual use.

13.118 The routes monitored were as follows:

- Blackford to Tillicoultry Path South Side;
- Dumyat Sheriffmuir Road;
- Bridge at top of Mill Glen;
- Hill Path to Tillicoultry, Blackford Side of Hill;
- Lower Glendevon Reservoir;
- Menstrie: top of path near plantation;

[7] Clackmannanshire Council Planning Application Reference 06/00121/FULL, Environmental Statement Appendix 5.5: Recreational Access Usage Monitoring and Analysis to Ben Cleuch & Surrounding Uplands

- Dollar: path along-side Burn of Care trail to Glendevon;
- Nebit Path;
- Menstrie: Jerah Trail;
- Alva Glen Path; and
- Glendevon Reservoir next to Turbines.

13.119 The 2006 survey was closely replicated (although was not identical) in the 2023 survey, to allow for a comparison of the estimates of annual use for the routes in question i.e. an understanding if less, the same, or more people are using these routes now (as of 2023), compared with 2006.

13.120 As well as the 11 APC locations detailed above, the 2023 survey also used historic and freely available cell phone data to bolster the data gathered.

Recreational Access Survey Results

13.121 The results of the 2023 survey (See **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**) show that when compared with the survey undertaken in 2006, and restricting the scope of the 2023 data collected to the areas covered previously in 2006, there was a growth in the number of recreational users in this part of the Ochil Hills of more than 47%.

13.122 This means that in the 17 years from 2006 to 2023, the approximate number of annual recreational users in this part of the Ochils rose from 22,073 to 32,445.

Recreational Access Survey Questionnaire

13.123 In addition to the APC's that were placed at 11 locations in the Ochil Hills, and the freely available cell phone data, a questionnaire survey was also carried out to get more detailed information from people using the Ochil Hills.

13.124 The questionnaire survey was simple in design and had a limited number of questions. This was to increase the level of engagement from recreational users in the Ochil Hills, rather than hamper their journeys or provoke long responses. Full detail of the survey questionnaire and the responses received are detailed in **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey**.

13.125 Responses to the questionnaire showed that recreation and exercise were the predominant reasons for visiting the hills (97%), with a broad age range of users and the majority of people surveyed (67%) travelling alone.

13.126 From the people interviewed, most did not object to, or mind, the existence and visual appearance of the existing turbines, although there was several mentions of noise impacts and also potential negative effects on wildlife.

13.127 There was some apathy, to the development of wind turbines which is reflected in the survey with 38% of those surveyed giving a neither like or dislike answer, however the most common view expressed (46%) is that people thought they were a positive, either for the environment or to help with the reduction in dependence on fossil fuels.

13.128 Regarding potential improvements to the experience of using the Ochils, 41% of those surveyed responded that they would like to see improvements to the existing trails and 38% stated they would like to see increased signage.

Land Use

13.129 The site is predominantly used for sheep grazing and, owing to its location in the Ochil hills, is also used for recreational purposes, namely hillwalking, along with cycling and running.

Assessment of Potential Effects

Embedded Mitigation and Measures

13.130 The proposed development, as described in **Chapter 3: Description of Development**, has been designed to, where possible, mitigate potential negative effects on tourism, recreation and land use. Good practice measures for limiting the adverse effects of the construction works are also provided via an Outline CEMP, (**Technical Appendix 3.1: Outline CEMP)**.

13.131 Measures are set out in **Chapter 3: Description of Development, Technical Appendix 3.1 Outline CEMP,** and also in **Chapter 12: Traffic and Transport**, relating to how delivery of goods and services would be managed during construction so as to minimise impacts on sensitive receptors. The proposed management measures would be further developed in the final detailed CEMP that would be adopted prior to construction commencing.

Potential Construction Effects

13.132 Construction effects are addressed in turn with regard to the WSA and the LAI.

Wider Study Area – Socio-Economics

13.133 The socio-economic construction effects for the proposed development project are assessed for each of the WSA levels, the Local WSA (Clackmannanshire; Perth & Kinross; and Stirling Council administrative areas), the National WSA (Scotland) and the UK-wide WSA (UK).

Gross Effects During Construction

13.134 Combining the employment and GVA multipliers, and the ratios of turnover per unit of GVA and GVA per employee sources, summarised from paragraph 13.35, with the projected development expenditure (£116.5 million), summarised in **Table 13-3**, estimates have been derived of the direct gross employment and GVA effects that would be expected to be delivered by the proposed development for three WSA levels.

13.135 These estimates are presented in **Table 13-10** for both the construction period as a whole (24 months) and on a per annum basis. The employment estimates are provided on a person-year basis and the GVA estimates are presented using a 2024 price base.

Table 13-10: Estimates of Gross Construction Phase GVA and Employment Effects

Spatial Area	GVA overall (£m, 2024 prices)	GVA p.a. (£m, 2024 prices)	Employment total (person years)	Employment p.a. (person years)
Local WSA	4.7	2.4	68	34
Scotland (total, inc. Local WSA)	11.8	5.9	166	83
UK (total, inc. Scotland)	28.5	14.2	402	201

13.136 GVA with a value of £4.7 million would be expected to be generated by the proposed development in the Local WSA economy during the 24 month construction (including development and commissioning) phase. This is equivalent to an average of £2.4 million per annum over this period.

13.137 The equivalent predicted overall GVA total for Scotland is £11.8 million (averaging £5.9 million p.a.), and for the UK as a whole it is £28.5 million (£14.2 million p.a.).

13.138 In terms of employment, a total of 68 person-years of gross temporary employment is predicted to be generated in the Local WSA economy during the anticipated 24 month construction phase. This amounts to an average of 34 person-years per annum during the construction period.

13.139 The equivalent predicted total for Scotland is 166 person-years (83 p.a.), and for the UK it is 402 person-years (averaging 201 per annum).

Net Effects During Construction

13.140 With the addition of the leakage, displacement and multiplier additionality concepts, summarised from paragraph 13.37, the estimates of net additional construction phase effects, both overall and on a per annum basis during the anticipated 24 month construction period, are shown on **Table 13-11**.

Table 13-11: Estimates of Net Additional Construction Phase GVA and Employment Effects

Spatial Area	GVA overall (£m, 2024 prices)	GVA p.a. (£m, 2024 prices)	Employment total (person years)	Employment p.a. (person years)
Local WSA	4.4	2.2	63	32
Scotland (total, inc. Local WSA)	14.3	7.1	202	101
UK (total, inc. Scotland)	31.8	15.9	449	224

13.141 With respect to employment, a total of 63 person-years of net additional temporary employment is predicted to be generated in the Local WSA economy during the construction phase of the proposed development. The equivalent total for Scotland is 202 person-years, and for the UK it is 449 person-years.

13.142 The predicted duration of the construction phase is 24 months. Therefore, the anticipated additional boost to the Local WSA net employment during the construction period is equivalent to an average of 32 jobs annually if the proposed development is permitted and delivered as intended by the applicant.

13.143 In 2022 there were an estimated 144,000 jobs located within the Local WSA. The temporary addition of 32 net jobs (per annum) to this total would increase the number of jobs by around 0.02%. The effect on the local employment base is therefore considered to be **negligible** and therefore, not significant.

13.144 In terms of output, the expected net increase to GVA generated within the Local WSA during the construction period is £4.4 million (averaging £2.2 million p.a.). The equivalent predicted total for Scotland is £14.3 million (averaging £7.1 million p.a.) and for the UK it is £31.8 million (averaging £15.9 million p.a.).

13.145 As of 2022, the estimated annual value of output generated within the Local WSA was approximately £8.48 billion. Converting this to a 2024 price base yields an estimate of £9.71 billion. The temporary augmentation of the local economy by £2.2 million would increase the size of the local economy by around 0.02%. The effect on the value of the local economy is therefore considered to be **negligible** and therefore, not significant.

13.146 At this stage in the development process, it is not possible to quantify economic benefits in respect of individual supply chain companies, as contracts would not be let until consent is granted and a Final Investment Decision has been made. However, it is evident from recent wind farm construction experience in Scotland (including BVGA report on economic benefits (BVG Associates, 2017) that suppliers of a wide range of goods and services within the WSA and Scotland as a whole have the potential to benefit from the proposed development. The 2023 annual Supply Chain Impact Statement by Scottish Renewables has revealed that 89% of Scotland's renewable energy supply chain believe renewable energy is the biggest economic opportunity for Scotland, with 83% having recruited new employees as a result of opportunities in the renewable energy industry.

Local Area of Influence – Tourism and Recreation

13.147 The principal potential impact on receptors beyond the boundaries of the site is expected to be caused by delivery vehicles on local roads. The proposed route to the site via the A9 and any restrictions are assessed in **Chapter 12: Traffic and Transport**. Informal routes utilising the network of unmarked hill tracks would require temporarily diversions where construction activities are taking place. Waymarked trails, such as the BLFD/118 and BLFD/113 Core Paths, would be temporarily directly impacted and require mitigation to ensure the continuity of their usage.

Tourism Effects During Construction

13.148 The construction period for the proposed development would be expected to last approximately 24 months and would be expected to benefit the local economy through expenditure on purchases of accommodation, food, drink, fuel, etc. that are needed to sustain the construction workforce. These beneficial effects would be experienced mainly by businesses within the tourism sector, or those that are partly dependent on tourism for their income e.g. the retail sector. These likely effects are included within the quantification of the net employment effects that are reported in above.

13.149 Anecdotal evidence arising from other wind farm construction projects shows that local businesses such as accommodation providers generally welcome the enhanced level of occupancy that is achieved due to construction contractors using their accommodation during periods of the year that are traditionally considered 'low season'. The sensitivity of these receptors is considered to be medium, and the magnitude of change low due to the

intermittent and temporary nature of the change and the commutable distance to nearby large population centres. The effect is **negligible** (beneficial) and therefore not significant.

13.150 Local businesses, such as food and drink businesses and, to a lesser extent due to the location, accommodation businesses, may experience beneficial effects during construction due to use by construction workers. The magnitude of change may be high for individual businesses, however, given the temporary nature of the potential effect and the impact of 32 patrons broadly across all businesses, the magnitude of change is considered to be low. As the sensitivity of these receptors is low the effect would be **minor** (beneficial) and would not be significant.

13.151 The identified tourism assets are separated from the proposed development by topography and distance, resulting in low sensitivity. Should construction traffic temporarily restrict access to an asset, or views of the construction site enroute to an asset degrade the experience, the magnitude of change would be low due to the temporary and intermittent nature of the change resulting in a **negligible** (adverse) effect which is not significant.

Recreational Effects During Construction

13.152 The site is used for sheep grazing and, owing to the proposed development's location on the Ochil Hills, the land use of the site and surrounding areas is also predominately recreational and is utilised by walkers, runners and cyclists. Access under the right to roam on site would be temporarily affected by the construction period. The sensitivity of the land use is low and the amenity of recreational users within the site would be reduced, however, the temporary nature of the construction and immediate abundance of alternatives results in an overall low magnitude of change. This would result in a **negligible** (adverse) effect which is not significant.

13.153 Two waymarked trails, the BLFD/118 and BLFD/113 Core Paths, are likely to be directly impacted by the construction of the proposed development owing to them being intersected by the access track. These trails are considered to be of medium sensitivity and the impact is likely to result in diversions and/or closures. The development of, and adherence to, a detailed Access Management Plan (AMP) would reduce this impact by specifying agreements for the announcement of any impacts, the plans and processes in place to continue the usage of the paths, and signage used at access points to map out the routes affected and where any potential diversion would be implemented, as well as the length of time they would be affected and contact details of the relevant construction manager.

13.154 The provision of gates which allow for the restriction of vehicular transport whilst allowing for the continual access of recreational users would be described within the AMP, reducing pedestrian – vehicle conflict and increasing the safety of the users. The details of any potential enhancements and/or linkages would be developed further in the AMP in consultation and agreement with the local planning authorities. Recreationally, with plans in place, the amenity of the usage would be temporarily reduced, however, the long-term recreational quality of the routes would be impacted to a lesser degree, resulting in a low magnitude of change. This would result in a **minor** (adverse) and not significant level of effect.

13.155 The BLFD/116 and BLFD/109 Core Paths located along the A9 passing the site's proposed access road are unlikely to experience significant impacts due to only minor works being required to facilitate the delivery abnormal loads to the site. It is considered that cyclists and walkers would be more able to navigate passed potential obstructions,

which would likely be temporary in nature and assessed in **Chapter 12: Traffic and Transport**. The Core Paths are considered to be of medium sensitivity and the magnitude of change would be minor, resulting in a **minor** (adverse) and not significant level of effect.

13.156 Core Path 62 (Clackmannanshire), TP193 RoW, Tillicoultry to Blackford Hill Track Heritage Path [HP353] and 131 Tillicoultry to Blackford or Gleneagles [HT724] SHT all follow the same route from the A9 south to Tillicoultry and passes by the site's north eastern most boundary are considered to be of low to medium sensitivity. As these are three designations for the same path, they will be assessed under the higher sensitivity of the Heritage Path, medium.

13.157 These paths are unlikely to experience any direct impacts from the construction of the proposed development and, therefore, the magnitude of change is considered to be negligible. As the sensitivity of the receptors are medium, the level of effect would be minor in a worst-case scenario, the temporary and intermittent nature of the impact considered to result in a **minor** (adverse) level of effect in a worst-case scenario, which is not significant.

Potential Operational Effects

13.158 Operational effects are addressed in turn with regard to the WSA and the LAI.

Wider Study Area – Socio-Economics

13.159 Socio-economic effects at the operational phase of the proposed development consider employment at the local level of the WSA. Employment at a wider spatial scale is not expected.

Employment Effects During Operation

13.160 Once operational, a permanent workforce would be required to operate and maintain the proposed development. Based on experience of proposed and completed onshore wind farm projects of a comparable size and in similar locations elsewhere in Scotland, it is estimated that there is likely to be between three and five permanent direct jobs created by the proposed development during its operational phase.

13.161 As well as the direct impacts on employment during the construction phase there would also be indirect effects generated throughout the operational phase. Indirect effects arise from the placing of contracts with other businesses – both in the local area and elsewhere in Scotland – supplying services and materials to the proposed development during its operational phase.

13.162 Examples of such supply chain activity would include the procurement of:

- site maintenance, including waste management and recycling;
- onsite forestry and ecology management;
- vegetation management along access roads and tracks;
- maintenance and repair for access roads, ditches, road furniture and gate repair, etc.;
- maintenance of fencing;

- plant and equipment hire;
- supply of consumable items (e.g., fuels, lubricants and oils, spare parts, etc.);
- statutory turbine inspections; and
- catering for meetings and visits.

13.163 In addition to those listed, local shops, cafes, accommodation providers and hotels often experience an increase in business during the operational phase from visitors to the Site (e.g., as a result of extra technicians being needed onsite during wind farm maintenance and servicing).

13.164 Overall, based on experience with similar projects elsewhere in various parts of Scotland, it is expected that there are likely to be between 10 and 13 indirect jobs created by operational and maintenance supply chain effects associated with the proposed development, within the Local WSA.

13.165 Therefore, in terms of the overall potential for operational phase job creation from the combined direct and supply chain effects, the overall total number of gross full-time equivalent jobs that could be created in the Local WSA is estimated to amount to between 14 and 17 permanent jobs (i.e., four direct jobs, plus between 10 and 13 indirect jobs).

13.166 Given that there are estimated to be 144,000 jobs located in the Local WSA (as of 2022), this stimulus to net local job creation would be expected to increase the size of the Local WSA employment base by approximately 0.01% of the current employment baseline. Although beneficial, this effect is assessed to be **negligible** and therefore, not significant.

Local Area of Influence – Tourism and Recreation

13.167 During the operational phase there are expected to be adverse effects, due to visual impacts, on both tourism and recreation receptors, detailed in **Chapter 7: Landscape and Visual**, and the findings have been considered in the assessment below. Although it is important to note that a significant landscape and visual effect does not necessarily result in a significant socio-economic effect as an adverse landscape and visual impact could ultimately have no socio-economic impact.

13.168 No significant effects are expected due to maintenance vehicles using the access road and site as this would be on a regular but low level basis.

Tourism Effects During Operation

13.169 Multiple published studies have examined whether there is a link between the development of wind farms and changes in patterns of tourism spend and behaviour, and the consistent conclusion is that there is little or no adverse effect. One of the most recent and comprehensive studies was undertaken by BiGGAR Economics (2021) which found that trends at a local authority level showed there was "*no relationship between the growth in the number of wind turbines and the level of tourism-related employment*".

13.170 The 2021 study also considered trends at a more localised scale, where an analysis of 16 wind farms which were in the immediate vicinity of tourism-related employment and constructed between 2015 and 2019, as well as a further 28 less recent case studies, found that "*in the majority of cases, tourism-related employment in the vicinity of wind farms had outperformed the trend for Scotland as a whole and for the local authority area in which the wind farm was based*".

13.171 Of the full 44 wind farms analysed in the 2021 study, the study found that there was "*no relationship between tourism employment and wind farm development, at the level of the Scottish economy, across local authority areas nor in the locality of wind farm sites*".

13.172 When conducting academic reviews of other studies as part of the Scottish Government's Renewable Inquiry, a study by ClimateXChange (Dinnie, 2012) found that that "*there is no new evidence to contradict the earlier findings that wind farms have little or no adverse impact on tourism in Scotland*", and a study by the University of Edinburgh (Aitchison, 2012) found that "*the findings from both primary and secondary research relating to the actual and potential tourism impact of wind farms indicate that there will be neither an overall decline in the number of tourists visiting an area nor any overall financial loss in tourism-related earnings as a result of a wind farm development*".

13.173 During operation, the patronage of local businesses would be markedly lower than that of the construction phase, due to there no longer being construction workers in the local area and the low number of operational staff, resulting in no effect. As demonstrated by the BiGGAR study (2021), the impacts on tourism assets would also range from no effect for those which are located indoors, to **negligible** for others which are outdoors, however, they are located at a greater distance than would be expected to result in an impact.

Recreational Effects During Operation

13.174 Core Path 62 (Clackmannanshire) was excluded from the assessment in **Chapter 7** due to a lack of visibility, however, Significant (moderate) visual effects are identified for sections of the combined TP193 RoW, Tillicoultry to Blackford Hill Track Heritage Path [HP353] and 131 Tillicoultry to Blackford or Gleneagles [HT724] SHT paths. The sensitivity of these receptors are considered to be medium. However, as noted in **Chapter 7**, this is specific to sections of the route between Glen Bee and Upper Glendevon Reservoir with minor (not significant) effects of other sections of the routes where the proposed development is still visible. The intermittent nature of when the proposed development's visibility would be considered significant, coupled with the multiple published studies concluding that the presence of wind farms has little or no effect in deterring visitors, concludes that the magnitude of change is therefore low. The resultant level of recreational effect from the proposed development is considered to be **minor** (adverse) and therefore the effect is not significant. Regarding popular hill summits, **Chapter 7** assesses the impact on Ben Cleuch, the highest hill in the Ochils, as High and major (significant) and the impact on Dumyat, the most popular hill, as Medium and moderate (significant).

13.175 **Technical Appendix 13.1: Ochil Hills Recreation Usage Survey** found that the presence of operational wind farms in the Ochils, did not have an adverse impact on the number of people using the Ochils for recreation purposes. Survey data (from 2006 and 2023) has found that there has been an approximate 47% increase in the number of people using the Ochils for recreation during the 17 years to 2023 and subsequently a reduction in the number of visitors due to the construction and operation of the proposed development would not be expected to occur.

13.176 Owing to the nationally promoted nature and high level of usage of the Ochil Hills as a recreational asset, the sensitivity is considered to be high. As discussed, the level of usage has increased since the construction of Burnfoot Hill Wind Farm and is not expected to decrease as a result of the proposed development, resulting in a no effect and a **negligible** level of impact which is not significant.

13.177 A potential walking path is proposed in order to increase recreational opportunities once the proposed development is operational. This potential walking path is shown on **Figure 13.4a-b**.

Community Benefits

13.178 The applicant would provide community benefit in line with the prevailing Scottish Government guidance which is 'to continue at a national level to promote community benefits of the value equivalent to £5,000 per installed megawatt per annum, index linked for the operational lifetime of the project'. It is noted that this is separate to and distinct from the planning and consenting process for the proposed development.

13.179 Based on the 65MW output of the proposed development this could provide a community benefit fund of around £325,000 each year to the local community. This could amount to around £13 million over the 40 year operational life of the proposed development.

13.180 The applicant would look to explore potential models for part community share ownership of the proposed Windburn wind farm, whereby the local communities would have the opportunity to invest into the project.in line with the Scottish Government's Good Practice Principles.

13.181 The locale of wind farms currently under application could also result in further local community benefits, through the implementation of the Onshore Wind Sector Deal for Scotland (Scottish Government, 2023b). This could increase the volume of community benefits received locally, both in terms of investment and employment, which could maximise the local beneficial effects of the proposed and cumulative developments.

13.182 Although the community benefits would be considered as a benefit of the wider project, it is noted that they would not be considered mitigation, have not been factored into the assessment and would not be taken into account in determining the application for the proposed development.

Potential Decommissioning Effects

13.183 In general, the scale and type of effects during the decommissioning stage would be expected to be similar to those anticipated to occur during the construction stage, but to a lesser degree. As the end of the proposed development lifespan would likely be up to 40 years from the date of the beginning of operation, it is recognised that standard industry practice, rules and legislation will change over this time, meaning that no descriptive decommissioning plans or policies can be prepared at this stage.

13.184 A Decommissioning and Restoration Plan (DRP) would be agreed with Clackmannanshire Council, Perth and Kinross Council and other appropriate regulatory authorities in line with best practice guidance and requirements of the time. It is anticipated that the DRP would be the subject of a planning condition and would reflect the relevant legislation and best practice current at the time of decommissioning and restoration.

13.185 On the basis that the magnitude of change for all effects considered will mirror (but is likely to be lower than) the magnitude relating to the construction phase, and that the sensitivity of each receptor is assumed not to change, no significant effects have been identified.

Assessment of Cumulative Effects

13.186 Cumulative effects in relation to socio-economics and land use could arise as a result of a competition for materials, workers, accommodation and further supply chain products in relation to the construction of other prospective or consented projects. They could also occur if the developments were under construction in close proximity to one another, impacting tourism amenity or restricting recreational access.

13.187 Construction of Strathallan Wind Farm Phase 1 has been completed. It is considered unlikely that the construction of Phase 2 would overlap with the construction period of the proposed development due to Phase 1 now being operational, and the relevant pre-commencement planning conditions being discharged.

13.188 However, in a worst-case scenario where the construction phases overlapped, there is not expected to be a scarcity of materials and the related supply chain products which can prove difficult in developments elsewhere due to the proposed development being on the mainland of Scotland, within the relative proximity of two cities. The population of the region, along with nearby local authorities, would mean that it is reasonable to assume that there is a readily available workforce who can construct these developments. The location of the proposed development and cumulative developments within proximity of coastal areas and cities means that a ready supply of accommodation venues would not be as required for the duration of the work. This would be expected to incur a **negligible** level of impact which is not significant.

13.189 Regarding the operational wind farms within the LAI, Burnfoot Hill, Burnfoot Hill East, Burnfoot Hill North and Rhodders wind farms, the evidence set out from paragraph 13.169 details the current research on the effect that onshore wind farms have on the volume and value of tourism in Scotland. The evidence shows that wind farms have a negligible effect on tourism, with no relationship between wind farm development and tourism employment within a local authority and, in some cases, tourism levels still increasing despite wind farms being developed nearby.

13.190 In terms of cumulative operational effects on employment – these are not expected due to the low numbers of operational staff involved and further materials related to the direct and in-direct supply chains also being low, therefore no other operational cumulative effects are expected.

Statement of Significance

13.191 This assessment has considered data from a diverse range of sources to determine the likely effects of the proposed development on the local economy, together with local effects on tourism and recreation assets. The potential effects on the economy and identified assets take account of good practice measures to be adopted.

13.192 The construction of the proposed development would result in an increase in employment of 0.01% and an increase in the size of the Local WSA economy of 0.02%. During operation of the proposed development there would be limited direct and indirect employment creation. There would therefore be a **negligible** (beneficial) effect, which is not significant, on employment and the local economy of the Local WSA as a result of the construction and operation of the proposed development.

13.193 During the construction of the proposed development there is the potential for a **negligible** (beneficial) and not significant effect on accommodation assets through providing construction worker accommodation during the typical ‘low season’.

13.194 There is the potential for tourism assets (such as food and drink businesses) to experience a **moderate** (beneficial) effect, which is not significant, during construction as a result of increased spending in the area. A **negligible** (adverse) effect on tourism assets is possible, although not considered likely, as a result of temporary disruption from construction activities. There would be no effect on tourism assets of the tourism economy as a result of the operation of the proposed development.

13.195 The recreational land use of the site and surrounding areas may experience a temporary **negligible** (adverse) and not significant effect as a result of construction activities. The BLFD/118 and BLFD/113 Core Paths would be directly impacted by the construction of the proposed development, however, with the preparation and implementation of an AMP there would be a **minor** (adverse) and not significant level of effect.

13.196 The BLFD/116 and BLFD/109 Core Paths located along the A9 may be impacted by the construction of the site's proposed access road, resulting in a **minor** (adverse) and not significant level of effect. Whilst the combined Core Path 62 (Clackmannanshire), TP193 RoW, Tillicoultry to Blackford Hill Track Heritage Path [HP353] and 131 Tillicoultry to Blackford or Gleneagles [HT724] SHT routes may be temporarily, indirectly impacted, resulting in a **minor** (adverse) level of effect in a worst-case scenario, which is not significant.

13.197 During the operational phase users of the combined Core Path 62 (Clackmannanshire), TP193 RoW, Tillicoultry to Blackford Hill Track Heritage Path [HP353] and 131 Tillicoultry to Blackford or Gleneagles [HT724] SHT paths to the east of the site may experience a **minor**, and not significant, effect as a result of views of the proposed development from the recreational routes.

13.198 The assessment concludes that there are no significant adverse effects that would require the implementation of additional mitigation measures.

13.199 The effects associated with the proposed development during construction and operation are summarised in **Table 13-12**.

Table 13-12: Summary of Predicted Residual Effects

Receptor	Magnitude of Change	Significance of Effect	Mitigation Proposed	Residual Effect
WSA Labour Market	Negligible	Negligible	None	Negligible
WSA Economy	Negligible	Negligible	None	Negligible
WSA Tourism Economy	Negligible	Negligible	None	Negligible
Tourism Businesses	Low	Minor (beneficial)	None	Minor (beneficial)
Tourism Assets	Low	Negligible	None	Negligible
Land Use	Low	Negligible	None	Negligible
BLFD/118 and BLFD/113 Core Paths	Low	Minor (adverse)	AMP	Minor (adverse)
BLFD/116 and BLFD/109 Core Paths	Low	Minor (adverse)	None	Minor (adverse)
Core Path 62 (Clackmannanshire), TP193 RoW, Tillicoultry to Blackford	Negligible	Minor (adverse)	None	Minor (adverse)

Receptor	Magnitude of Change	Significance of Effect	Mitigation Proposed	Residual Effect
Hill Track Heritage Path [HP353] and 131 Tillicoultry to Blackford or Gleneagles [HT724] SHT				
WSA Employment	Negligible	Negligible	None	Negligible
Tourism	No effect	Negligible	None	Negligible
Recreation	No effect	Negligible	None	Negligible
All impacts	Minor	Minor (adverse)	DRP	Minor (adverse)
Competition for Resources	Negligible	Negligible	None	Negligible

References

Aitchison, C. (2012). Tourism Impact of Wind Farms: Submitted to Renewables Inquiry Scottish Government. Edinburgh: The University of Edinburgh. Available at: https://www.pure.ed.ac.uk/ws/portalfiles/portal/4647070/Aitchison_C_WindFarms_2012.pdf

BiGGAR Economics (2021). Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms. Penicuik: Biggar. Available at: https://biggareconomics.co.uk/wp-content/uploads/2021/11/BiGGAR-Economics-Wind-Farms-and-Tourism-2021.pdf

BVG Associates (2017). Economic benefits from onshore windfarms. Available at: https://bvgassociates.com/wp-content/uploads/2017/09/BVGA-18510-Economic-impact-onshore-wind-report-r3.pdf

Clackmannanshire Council (2015). Clackmannanshire Local Development Plan. Available at: https://www.clacks.gov.uk/document/6862.pdf

Dinnie, E. (2012). The Impact of Wind Farms on Scottish Tourism. Edinburgh: ClimateXChange. Available at: https://www.climatexchange.org.uk/media/1686/the_impact_of_windfsarms_on_scottish_tourism.pdf

HM Treasury (2022). The Green Book: Central Government Guidance on Appraisal and Evaluation. Available at: https://assets.publishing.service.gov.uk/media/623d99f5e90e075f14254676/Green_Book_2022.pdf

National Records of Scotland (NRS) (2022b). 91% of Scotland's population live in 2% of its land area. Available at: https://www.nrscotland.gov.uk/news/2022/91-percent-of-scotlands-population-livein-2-percent-of-its-land-area

National Records of Scotland (NRS) (2023) Population Estimates Time Series Data. Available at: https://www.nrscotland.gov.uk/publications/mid-2023-population-estimates/#:~:text=Scotland%27s%20population%20was%20estimated%20to,in%20at%20least%2076%20years.

NatureScot, SEPA, FCS and Scottish Renewables (2019). Guidance – Good practice during Wind Farm construction. Available at: https://www.nature.scot/doc/guidance-good-practice-during-wind-farm-construction

ONS (2021). Highest level of qualification variable: Census 2021. Available at: https://www.ons.gov.uk/census/census2021dictionary/variablesbytopic/educationvariablescensus2021/highestlevelofqualification

ONS (2022a). Input-output supply and use tables. Available at: https://www.ons.gov.uk/economy/nationalaccounts/supplyandusetables/datasets/inputoutputsupplyandusetables

ONS (2022b). Population estimates – local authority based by five year age band. Available at: https://www.nomisweb.co.uk/datasets/pestnew

ONS (2022c). Business Register and Employment Survey. Available at: https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/businessregisterandemploymentsurvey

ONS (2023a). Annual Survey of Hours and Earnings (ASHE). Available at: https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/annualsurveyofhoursandearningsashe#:~:text=ASHE%20provides%20information%20about%20the,time%20or%20part%2Dtime%20status.

ONS (2023b). Annual Business Survey (ABS). Available at: https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/methodologies/annualbusinesssurveyabs

ONS (2023c). Annual Survey of Hours and Earnings (ASHE). Available at: https://www.ons.gov.uk/surveys/informationforbusinesses/businesssurveys/annualsurveyofhoursandearningsashe

ONS (2024) Regional and local authority GVA estimates.

Perth and Kinross Council (2019). Perth & Kinross Local Development Plan. Available at: LDP_2_2019_Adopted_Interactive.pdf (pkc.gov.uk)

Perth and Kinross Council (2024). Perth and Kinross LDP3 2027 - Evidence Report. Available at: TP029_Tourism.pdf (pkc.gov.uk)

Scotland's Census (2025). Quality Assurance report - Education, labour market and travel to work. Available at: https://www.scotlandscensus.gov.uk/2022-results/scotlands-census-2022-quality-assurance-reports/quality-assurance-report-education-labour-market-and-travel-to-work/

Scottish Government (2019a). Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2019/05/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/documents/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-

developments/govscot%3Adocument/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments.pdf

Scottish Government (2019b). Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2019/05/scottish-government-good-practice-principles-shared-ownership-onshore-renewable-energy-developments/documents/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments/govscot%3Adocument/scottish-government-good-practice-principles-community-benefits-onshore-renewable-energy-developments.pdf

Scottish Government (2022a). Onshore Wind Policy Statement. December 2022. Available at: https://www.gov.scot/publications/onshore-wind-policy-statement-2022

Scottish Government (2022b). Scotland's National Strategy for Economic Transformation. Available at: https://www.gov.scot/publications/scotlands-national-strategy-economic-transformation/

Scottish Government (2022c). Supply, Use and Input-Output Tables: 1998-2019. Available at: https://www.gov.scot/publications/input-output-latest/

Scottish Government (2023a). National Planning Framework 4. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf

Scottish Government (2023b). Onshore Wind Sector Deal for Scotland. Available at: https://www.gov.scot/publications/onshore-wind-sector-deal-scotland/

Scottish Government (2023c). Scottish Annual Business Statistics 2021. Available at: https://www.gov.scot/publications/scottish-annual-business-statistics-2021/pages/headline-results/

Scottish Natural Heritage (2018). Environmental Impact Assessment Handbook: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland. Available at: https://www.nature.scot/sites/default/files/2018-05/Publication%202018%20-%20Environmental%20Impact%20Assessment%20Handbook%20V5.pdf

Scottish Renewables, SNH, SEPA, Forestry Commission (Scotland), Historic Scotland (2019). Good Practice During Windfarm Construction (4th Edition).

Scottish Tourism Observatory (2024). Tourism Businesses in Scotland. Available at: https://tourismobservatory.scot/data/insights/tourism-businesses-in-scotland/?backid=1496

ScotWays (2024). Heritage Paths. Available at: https://scotways.com/heritage-paths/

Strava (2024). Global Heatmap.

Sustrans (2024). National Cycle Network routes in the Inner Forth area. Available at: National Cycle Network routes in the Inner Forth area - Sustrans.org.uk

VisitScotland (2021). Forth Valley Factsheet 2019. Available at: https://www.visitscotland.org/binaries/content/assets/dot-org/pdf/research-papers-2/regional-factsheets/forth-valley-factsheet-2019.pdf

Vivid Economics (2019). Quantifying Benefits of Onshore Wind to the UKRenewableUK. Available at: https://www.vivideconomics.com/wp-content/uploads/2019/08/Quantifying_the_Benefits_of-report-.pdf