



Dunside Wind Farm

Socio-Economic and Tourism Assessment

June 2023

Socio-Economic and Tourism Assessment of Dunside Wind Farm

A report to EDF Energy Renewables Ltd
June 2023





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1.

Executive Summary

Scotland has pledged to ambitious climate change targets, with the Climate Change (Emissions Reductions) Act 2019¹ committing Scotland to the reduction of emissions to net zero by 2045. This commitment to a net zero economy is now central to economic policy. This transformation will require an increase in renewable energy generation, to replace other forms of generation and to facilitate the decarbonisation and electrification of the economy.

The development of onshore wind projects such as Dunside Wind Farm (“the Proposed Development”) offer an opportunity to generate economic impact regionally and nationally while driving the delivery of a more sustainable economy in Scotland.

The Proposed Development could deliver a series of economic benefits during the phases of development and construction and following operations. In particular, it was estimated that during its development and construction, the Proposed Development could generate:

- £9.5 million Gross Value Added (GVA) and 129 years of employment in South-East Scotland; and
- £39.9 million GVA and 591 years of employment in Scotland.

During its operations and maintenance, each year the Proposed Development could generate:

- £0.6 million GVA and 7 jobs in South-East Scotland; and
- £1.9 million GVA and 22 jobs across Scotland.

The Proposed Development will also contribute to public finances through payment of non-domestic rates, which could amount to £0.7 million each year. This will support the funding of local public services in the context of challenging public sector finances.

To support local ambitions and needs, it has become common practice to offer community benefit funding, with Scottish Government guidance suggesting £5,000 per annum per installed MW. This level of funding would generate around £0.5 million every year for the local economy, equivalent to £18.9 million over the lifetime of the wind farm.

Over time, research evidence has consistently found that there is no relationship between onshore wind developments and tourism activity in Scotland. In 2021, BiGGAR Economics produced a report analysing the relationship between the construction of onshore wind farms and tourism employment at the national,

¹ Scottish Government (2019), Climate Change (Emissions Reduction Targets) (Scotland) Act 2019



regional, and local level.² The report concluded that there was no pattern or evidence suggesting that the development of onshore wind farms in Scotland had any negative effects on the tourism economies of the country as a whole, local authority areas or the immediate areas surrounding wind farms.

An assessment has also been undertaken focusing on tourism assets that are located within 15km of the Proposed Development. It found that the wind farm repowering proposals are not expected to affect the local accommodation providers, recreation trails and tourism attractions.

The development of the Proposed Development can make a significant contribution to Scotland's economic strategy, which is now being driven by climate change commitments and deliver a range of local economic and community benefits, without any adverse effects on other aspects of the economy such as tourism.

² BiGGAR Economics (2021), Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms



2. Introduction

BiGGAR Economics was commissioned by EDF Energy Renewables Ltd to assess the potential economic impact associated with the Proposed Development.

2.1 Background

The Proposed Development is an onshore wind farm development by EDF Energy Renewables Ltd located to the East of the Lammermuir Hills in the Scottish Borders. It is to the East of Fallago Rig Wind Farm and will use the access infrastructure and extend the existing substation to connect to the national grid.

The Proposed Development will be comprised of 15 turbines, each expected to generate around 7.2 MW of electricity. The total installed capacity of the wind farm is therefore expected to be 108 MW.

The objectives of this study are to:

- quantify the potential economic impacts of the Proposed Development for the regional and national economies;
- assess the potential for any adverse effects on the local tourism economy, in terms of changes to visitor motivations and resulting expenditure, as a result of the of the Proposed Development; and
- outlining the potential for the local community to benefit from the Proposed Development.

2.2 Study Areas

The Proposed Development is located within the electoral ward of Mid Berwickshire, which is in the local authority of the Scottish Borders. It is however within very close proximity to the border with East Lothian, as shown in Figure 2-1. The study areas therefore considered throughout this report are:

- Electoral Ward of Mid Berwickshire;
- South-East Scotland (comprised of the Scottish Borders and East Lothian); and
- Scotland.

Figure 2-1 Dunside Wind Farm



Source: BiGGAR Economics

2.3 Report Structure

The report is structured as follows:

- section 3 places the Proposed Development in the context of national and regional economic strategies;
- section 4 provides a baseline socio-economic profile of the local area, in comparison to regional and national indicators;
- section 5 considers the economic impact from the Proposed Development; and
- section 6 outlines the key drivers of tourism in the local economy and considers the relationship between onshore wind farms and tourism.



3. Strategic Context

This section outlines the national and regional context and how the Proposed Development would support these strategic aims.

3.1 National Strategic Context

3.1.1 National Performance Framework

The National Performance Framework³ sits at the top of the policy hierarchy in Scotland, with all other policies and strategies designed to meet its purpose and outcomes.

The purpose of the National Performance Framework is:

To focus on creating a more successful country with opportunities for all of Scotland to flourish through increased wellbeing, and sustainable and inclusive economic growth.

The National Performance Framework explicitly includes 'increased well-being' as part of its purpose and combines measurement of how well Scotland is doing in economic terms with a broader range of well-being measures. It is designed to give a more rounded view of economic performance and progress towards achieving sustainable and inclusive economic growth and well-being across Scotland and aims to:

- create a more successful country;
- give opportunities to all people living in Scotland;
- increase the well-being of people living in Scotland;
- create sustainable and inclusive growth; and
- reduce inequalities and give equal importance to economic, environmental, and social progress.

The National Performance Framework sets out 11 outcomes, underpinned by 81 indicators, that combine to give a better picture of how the country is progressing towards these goals. As well as GDP and employment measures, the outcomes reflect the desired fabric of communities and culture, education, the environment, health and well-being and measures to help tackle poverty. It is these indicators on which the Scottish Government focuses its activities and spending to help meet the national outcomes.

³ Scottish Government, Scotland's National Performance Framework.



The 11 national outcomes are that people:

- **children and young people:** grow up loved, safe and respected so that they realise their full potential;
- **communities:** live in communities that are inclusive, empowered, resilient and safe;
- **culture:** are creative and their vibrant and diverse cultures are expressed and enjoyed widely;
- **economy:** have a globally competitive, entrepreneurial, inclusive and sustainable economy;
- **education:** are well educated, skilled and able to contribute to society;
- **environment:** value, enjoy, protect and enhance their environment;
- **fair work and business:** have thriving and innovative businesses, with quality jobs and fair work for everyone;
- **health:** are healthy and active;
- **human rights:** respect, protect and fulfil human rights and live free from discrimination;
- **international:** are open, connected and make a positive contribution internationally; and
- **poverty:** tackle poverty by sharing opportunities, wealth, and power more equally.

The Proposed Development would contribute to achieving several of the national outcomes through the development, construction, and operational phases of the wind farm.

3.1.2 Scotland's National Strategy for Economic Transformation

In March 2022, the Scottish Government released the National Strategy for Economic Transformation⁴, which set out its ambition for Scotland's economy over the next 10 years. The Scottish Government's vision is to create a wellbeing economy where society thrives across economic, social and environment dimensions, which delivers prosperity for all Scotland's people and places. Of particular importance is the ambition to be greener, with a just transition to net zero, a nature-positive economy and a rebuilding of natural capital.

A key longer-term challenge identified in the strategy is to address deep-seated regional inequality, which includes in rural and island areas that face problems such as a falling labour supply, poorer access to infrastructure and housing. The transition to net zero presents a further opportunity of delivering positive employment, revenue, and community benefits.

To deliver its vision and address the economy's challenges, five programmes of action have been identified (with a sixth priority of creating a culture of delivery), including:

- establishing Scotland as a world-class entrepreneurial nation;

⁴ Scottish Government, (2022). Scotland's National Strategy for Economic Transformation.



- strengthening Scotland's position in new markets and industries, generating new, well-paid jobs from a just transition to net zero;
- making Scotland's businesses, industries, regions, communities and public services more productive and innovative;
- ensuring that people have the skills they need to meet the demands of the economy, and that employers invest in their skilled employees; and
- reorienting the economy towards wellbeing and fair work.

The strategy notes that Scotland has substantial energy potential, with a huge wind energy potential, and that it has developed a growing green industrial base. This provides a strong foundation for securing new market opportunities arising from the transition to net zero, for example in the hydrogen economy and in the decarbonisation of heating systems, where Scotland may be able to secure first-mover advantage and will need continuing investment and support. Renewable energy also has a role to play in supporting productive businesses and regions across Scotland.

3.1.3 Climate Change (Emissions Reduction Targets) (Scotland) Act

In 2019, the Scottish Parliament passed the Climate Change (Emissions Reduction Targets) (Scotland) Act (Scottish Parliament, 2019). The Act sets a legally binding target of achieving "net-zero" carbon emissions by 2045, five years ahead of the date set for the UK. Amendments to the bill also raised the interim targets to 70% carbon emissions reductions by 2030 and 90% by 2040. Renewable energy is part of this strategy. By promoting and supporting the efficiency and growth of the renewable energy sector, the development of the Proposed Development, would contribute to the changes the Scottish Government seeks to bring about.

3.1.4 Local Energy Policy Statement

The Scottish Government's latest statement on Local Energy Policy⁵ highlights the role of localised energy solutions as part of a green recovery to the Covid-19 pandemic and towards a net-zero and decarbonised economy. The strategy is interlinked with other strategic documents in a concerted effort to increase energy efficiency; reduce emissions and eradicate fuel poverty.

The statement identifies the wide range of stakeholders involved in local energy and sets out the following key principles:

- people: engaging with stakeholders from the outset and supporting the different ways each of these will want to be involved;
- places: local energy projects should reflect the features of the local area and work in collaboration with others;
- network and infrastructure: consider the existing energy infrastructure in the area and secure high level and quality of supply to all;
- pathway to commercialisation: create projects that are commercially viable, can be replicated in the future and support net zero emissions; and

⁵ Scottish Government (2021), Local Energy Policy Statement.



- opportunity: projects should create high value jobs and support the wider industry and its workforce.

3.1.5 Tourism Strategy: Scotland's Outlook 2030

Following on from the Tourism Scotland 2020 (TS2020) strategy⁶, a collaborative network of industry experts created Scotland's Outlook 2030, which is focused on creating a world-leading tourism sector in Scotland that is sustainable in the long-term.

The strategy is focused on four key priorities:

- people;
- places;
- businesses; and
- experiences.

The strategy recognises the effects of climate change, technological advancements, Brexit and changing consumer behaviour on tourism and highlights the need for collaboration between government, communities, and the public and private sectors⁷.

There are six conditions that the strategy has highlighted as being crucial for success:

- using technological advancements and information to understand changes and trends in tourist behaviours;
- ensuring policies are in place that support the vision;
- enabling investment opportunities into Scotland's tourism market;
- improving transport and digital infrastructure;
- greater collaboration between businesses in the industry; and
- positioning Scotland as a great place to live and visit locally and globally.

A main commitment of the strategy is to address the effects of energy demand associated with tourism and make the sector commit fully to Scotland's ambition of becoming a net-zero society by 2045.

3.2 National Planning Framework 4

The Fourth National Planning Framework (NPF4)⁸ was published by the Scottish Government in February 2023. The document considers Scotland's spatial principles, national planning policy, national developments, and regional priorities.

The objective of policies related to natural places is to protect, restore and enhance natural assets in Scotland. Policy 4 d) states that development proposals that will

⁶ Scottish Tourism Alliance (2012), Tourism Scotland 2020.

⁷ Scottish Tourism Alliance (2020), Scotland's Outlook 2030.

⁸ Scottish Government (2023), National Planning Framework 4.



affect local nature conservation sites or landscapes will only be supported where the development will not have considerable adverse impacts on the area, and where negative impacts are clearly outweighed by social or economic benefits, particularly at the local level. These impacts should be during project design and mitigation. Whilst not required by NPF4, Chapter 6 considers whether there could be any implications for tourism.

The objective of energy policy stated in NPF4 is to encourage, promote and facilitate all forms of renewable energy. This includes renewable energy generation, energy storage, investment in energy transmission and distribution infrastructure. The central aim is the expansion of renewable, low-carbon and zero-emissions technology. However, energy proposals are expected to be pro-active in their approach to generating positive socio-economic impacts. In particular, Policy 11)c states:

(Energy) Development proposals will only be supported where they maximise net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities.

This is addressed in Chapter 5.

The objective of policies relating to community wealth building is to encourage, promote and facilitate a new strategic approach to economic development that builds a wellbeing economy at the local, regional, and national level. Policy 25 states that development proposals which contribute to local or regional community wealth building strategies and are consistent with local economic priorities will be supported. This is addressed in section 5.5.

3.3 Regional Strategies

3.3.1 South of Scotland Regional Economic Strategy

In September 2021, the South of Scotland Regional Economic Partnership published a Regional Economic Strategy⁹, outlining the aims of the organisations for the South of Scotland, including:

- supporting fairer, more meaningful work;
- creating affordable, desirable and energy-efficient homes and widening choice;
- improving the health and welfare of those who are most disadvantaged within the region;
- building the capability and capacity of social enterprises and the Third Sector;
- investing in social infrastructure and education to enhance life prospects;

⁹ South of Scotland Regional Economic Partnership (2021), South of Scotland Regional Economic Strategy



- putting the environment and sustainability at the forefront of the region's growing economy;
- protecting, enhancing, and enjoying the region's abundant natural capital; cultural and heritage assets and vibrant arts and festivals backdrop; and
- building wealth which benefits the local economy, communities, and people.

The ten-year strategy outlines the vision for the South of Scotland to be a region which is 'green, fair, and flourishing'. As part of its aim to become a green economy leader, the partners will work to support piloted approaches to land use and natural capital; encourage a growing circular economy enabling local green jobs; and support enhanced, future-proofed energy networks and zero carbon technologies.

The strategy highlights the partners' priorities of growing and diversifying the economy, in part through building upon the region's sectoral strength in the generation of renewable energy. The strategy also sets the priority of utilising the economic opportunities presented by the transition to net zero, noting that the region is well placed to develop renewable heat and power to support Scotland's net-zero targets and create green jobs.

3.3.2 Scottish Borders Economic Strategy¹⁰

The Scottish Borders Economic Strategy is a ten-year strategy with the vision of the Scottish Borders ranking amongst the top performing and most productive rural economies in Scotland by 2023. The region faces an aging population alongside outwards migration of young people and has a reliance on the public sector for employment.

To achieve its vision, the strategy has identified four key aims:

- creating conditions for businesses to compete;
- building on current assets;
- developing the future workforce; and
- providing leadership.

The strategy also has the objective of ensuring current and future economic activity in the area's key sectors: textiles, tourism, food and drink, renewable energy, and the creative industry.

The Proposed Development would boost economic activity in the region's renewable energy sector and, would provide employment opportunities which can help to retain the younger generation. Its community benefit package can also help to diversify the local economy.

3.3.3 Scottish Borders Local Development Plan¹¹

The Scottish Borders Local Development Plan was adopted in 2016 and set out policies and land use within the Scottish Borders. The aims of the plan are that by

¹⁰ Scottish Borders Council (2013), Scottish Borders Economic Strategy 2023

¹¹ Scottish Borders Council (2016), Scottish Borders Local Development Plan



2025, the Scottish Borders will have improved employment opportunities, greater housing availability, and enhanced connectivity. The main challenges for the Scottish Borders identified in the plan are in the following areas:

- demographics (an increasing and ageing population);
- economy (lower wage levels than the national average and vacant shop units in town centres);
- infrastructure (transport links, and digital connectivity); and
- environment and climate change.

The central aims of the Scottish Borders Local Development Plan to address these challenges are:

- to ensure there is a wide range of quality land and premises for business and industry;
- to protect strategically important business opportunities;
- to encourage the development and growth of town centres;
- to ensure there is a sufficient supply of land for affordable housing;
- to promote improved connectivity by transport and digital networks; and
- to integrate climate change adaptation requirements such as flood prevention and sustainable energy production.

3.3.4 East Lothian Economic Development Strategy 2012-2022¹²

In 2012, the East Lothian Partnership reviewed an existing strategy which outlines the opportunities available for East Lothian to maximise its sustainable economic competitiveness, providing a framework to guide economic development in the region. The strategy outlines five strategic objectives for the area:

- to be the best place in Scotland to set up and grow a business;
- to be Scotland's leading coastal, leisure and food & drink destination;
- to build on the region's proximity to Edinburgh to encourage study, work and spending in East Lothian;
- to provide high quality employment pathways for East Lothian's workforce; and
- to become Scotland's most sustainable local economy.

As part of the objective to become Scotland's most sustainable local economy, the strategy highlights the opportunities available to the region in the development of public transport, local jobs, and low carbon sectors such as renewables. The strategic document also highlights the potential for the creation of high-quality jobs associated with the renewable energy sector, as the long-term operation and maintenance of renewable energy projects would enable companies in East Lothian to take advantage of supply chain opportunities created by developments.

The Proposed Development would significantly contribute towards these goals, generating jobs in the local area in sectors associated with construction and development, as well as long-term roles in the local economy associated with the

¹² East Lothian Partnership (2018), East Lothian Economic Development Strategy Review and Refresh



operation of the wind farm. Projects such as the Proposed Development would also support the goal of establishing a sustainable local economy for East Lothian, allowing the region to benefit from the low carbon renewable energy sector while generating economic impacts in the region's economy.

3.3.5 East Lothian Local Development Plan 2018¹³

In 2018, East Lothian Council published a local development plan which outlines the strategy of the local authority on how it aims to guide development in the area. The plan lays out the vision for East Lothian in line with the Edinburgh City Region's Strategic Development Plan that "by 2032, the Edinburgh City Region is a healthier, more prosperous and sustainable place which continues to be internationally recognised as an outstanding area in which to live, work and do business."

The East Lothian Local Development plan outlines four main objectives for East Lothian Council:

- Promote sustainable development;
- Help grow the economy, increasing housing supply and reducing inequalities;
- Protect and enhance the area's high quality environment and its special identity;
- Ensure adequate infrastructure capacity and an appropriate use of resources.

As part of the objective to promote sustainable development, the plan emphasises that it is vital that provisions are made for appropriate renewable energy generation opportunities. The Proposed Development would also contribute to the objective of growing the economy, as the renewable energy project would contribute to the economic growth of the region and generate high quality jobs which attract people to live and work in the area.

3.4 Summary of Strategic Context

The Proposed Development is aligned with policies at a national and regional level. The development would directly contribute to the themes within the National Performance Framework surrounding the economy, business, and the environment, as well as the wider goal of the Scottish Government to transition to a net zero economy by 2045 while establishing Scotland as a leader in renewable energy.

The Proposed Development aligns with the relevant policy priorities outlined in the National Planning Framework 4, and the local economic impacts are considered in Chapter 5. The Proposed Development would also contribute to the established aims of the regional area. Scottish Borders and East Lothian strategies highlight the opportunities which renewable energy projects present for South-East Scotland. The development would support the wider aim of the region to establish a more sustainable economy, as well as generating high-quality, sustainable jobs in the region.

¹³ East Lothian Council (2018), East Lothian Local Development Plan



4.

Local Economic Context

This section considers the socio-economic context of the Proposed Development, including population structure, economic activity, education, and relative deprivation.

The aim of the socio-economic baseline is to set the Proposed Development and its potential for economic benefits within existing socio-economic conditions.

4.1 Demographics

4.1.1 Population Estimates

In 2021, the population of South-East Scotland was 223,100 accounting for 4.1% of the total population of Scotland. The population of the Mid Berwickshire was 10,626 which is equivalent to 4.8% of the total population of South-East Scotland.

The share of the population of the Mid Berwickshire aged 16-64 years old was 58%, which is marginally less than across South-East Scotland (60%). In both areas, the share of the population of working age is less than the Scottish average (64%). The proportion of residents aged 65 and over in both the Mid Berwickshire (27%) and South-East Scotland (23%) are significantly higher than the national average (19%). The share of the population aged 0-15 years old is 15% in the Mid Berwickshire, and 17% in South-East Scotland, and for Scotland as a whole.

Table 4-1 Population Estimates, 2021

	Mid Berwickshire	South-East Scotland	Scotland
Total	10,626	223,100	5,466,000
0-15	15%	17%	17%
16-64	58%	60%	64%
65+	27%	23%	19%

Source: National Records of Scotland (2022), Mid-2021 population estimates Scotland.

4.1.2 Population Projections

Over the period between 2018 and 2043, the population of South-East Scotland is projected to increase from 221,060 to 237,881, which is equivalent to an 7.6% increase. This is greater than what is expected for Scotland as a whole, where the population is projected to increase by 2.5% over the same period.



The proportion of South-East Scotland residents aged 16-64 years old is projected to decrease over time, with the share of working age population declining from 60% in 2018 to 55% by 2043. This is lower than the projected share of 60% accounted for by this demographic nationally by 2043. This is equivalent to a reduction of 1,800 working age people.

Both South-East Scotland and Scotland are projected to have older populations by 2043. The population of South-East Scotland aged 65 and over is projected to increase to 29% over the period, above the Scottish total population (25%).

Given the relatively similar population structure of the Local Area compared to South-East Scotland, it is likely that the Local Area will experience similar population changes. The creation of employment in the onshore wind sector will be important in retaining people of working age in South-East Scotland, which will be key in supporting an increasingly older population.

Table 4-2 Population Projections, 2018-2043

	South-East Scotland		Scotland	
	2018	2043	2018	2043
Total	221,060	237,881	5,438,100	5,574,819
0-15	17%	15%	17%	15%
16-64	60%	55%	64%	60%
65+	22%	29%	19%	25%

Source: National Records of Scotland (2022), Population Projections 2018-2043.

4.2 Industrial Structure

The employment structure of the Mid Berwickshire, South-East Scotland, and Scotland is displayed in Table 4-3. Manufacturing is the largest employer in Mid Berwickshire, where it employs 24.4% of those in work. This is greater share than in both South-East Scotland and Scotland as a whole, where it employs 8.5% and 6.8% of the workforce respectively. Wholesale and retail trade is a significant sector of employment in Mid Berwickshire, with 16.2% of the labour force employed in the industry. This is greater than in South-East Scotland (14.9%), and Scotland as a whole (14.1%). Construction also employs relatively more people in Mid Berwickshire (9.5%) than in South-East Scotland (7.1%) and Scotland as a whole (6.0%).

Human health and social work activities is a significant sector of employment in Mid Berwickshire, with 14.9% of the workforce employed in the industry. This is less than in South-East Scotland (16.1%), and Scotland as a whole (15.3%). Accommodation and food services which is associated with the tourism industry, employs 4.3% of workers in Mid Berwickshire. This is a smaller proportion of the workforce than in South-East Scotland (7.4%) and Scotland as a whole (7.5%). Professional, scientific,



and technical activities also account for a smaller share of the labour force in Mid Berwickshire (4.6%), compared to South-East Scotland (6.2%) and Scotland (6.4%).

Table 4-3 Industrial Structure, 2021

	Mid Berwickshire	South-East Scotland	Scotland
Manufacturing	24.4%	8.5%	6.8%
Wholesale and retail trade	16.2%	14.9%	14.1%
Human health and social work activities	14.9%	16.1%	15.3%
Construction	9.5%	7.1%	6.0%
Education	6.8%	9.0%	8.3%
Transportation and storage	4.9%	2.3%	4.1%
Professional, scientific, and technical activities	4.6%	6.2%	6.4%
Accommodation and food services	4.3%	7.4%	7.5%
Real estate activities	3.0%	1.4%	1.5%
Arts, entertainment, and recreation	2.4%	3.7%	2.4%
Agriculture, forestry, and fishing	2.2%	8.8%	3.4%
Administrative and support services	1.9%	4.8%	7.7%
Public administration and defence	1.6%	4.0%	6.3%
Water supply; sewerage, waste management and remediation	0.9%	0.9%	0.8%
Other service activities	0.9%	1.7%	1.8%
Electricity, gas, steam, and air conditioning supply	0.8%	1.0%	0.7%
Information and communication	0.5%	1.4%	3.0%
Total Employment	3,695	80,730	2,622,700

Source: Office for National Statistics (2022), Business Register and Employment Survey (BRES) 2021

4.3 Economic Activity

The unemployment rate in South-East Scotland (4.8%) was above the Scottish average of 3.5%. South-East Scotland has a greater share of its working age population which are economically active (80.1%) compared to Scotland as a whole



(76.5%). As shown in Table 4-4, the median annual gross wage of South-East Scotland residents was £26,154, which was below the Scottish national average (£27,698).

Table 4-4 Economic Activity, 2021/22

	South-East Scotland	Scotland
Economic Activity	80.1%	76.5%
Unemployment Rate	4.8%	3.5%
Median Annual Gross Earnings (resident)	£26,154	£27,698

Source: ONS (2022), Annual Population Survey Apr-2021-Mar 2022 and Annual Survey of Hours and Earnings – resident analysis 2022

4.4 Education

In South-East Scotland, 47.0% of those aged 16-64 hold NVQ4+ qualifications, which is equivalent to a higher education degree. This is below the share of people with this qualification across Scotland (50.0%). Similarly, there are less residents in South-East Scotland (62.5%) that hold NVQ3+ qualifications compared to the entirety of Scotland (64.8%). There are marginally more residents of working age in South-East Scotland (81.0%) who hold NVQ2+ qualifications than in Scotland as a whole (79.6%). In addition, in South-East Scotland has a lower proportion of residents aged 16-64 years old with no qualifications (6.3%) compared to the national average (7.8%).

Table 4-5 Qualification Levels, 2021

	South-East Scotland	Scotland
NVQ4+	47.0%	50.0%
NVQ3+	62.5%	64.8%
NVQ2+	81.0%	79.6%
NVQ1+	89.7%	86.4%
Other Qualifications	4.1%	5.8%
No Qualifications	6.3%	7.8%

Source: ONS (2021), Annual Population Survey Jan 2021 – Dec 2021.

4.5 Scottish Index of Multiple Deprivation (SIMD)

The Scottish Index of Multiple Deprivation (SIMD) is a relative measure of deprivation which ranks small areas of Scotland across seven dimensions: income, employment, education, health, access to services, crime, and housing. These areas can be ranked



based on which quintile (fifth of the distribution) they belong to, with a small area in the first quintile being in the 20% most deprived areas in Scotland.

There are 14 small areas in Mid Berwickshire, none of which are in the most or the least deprived quintile. There are 275 small areas in South-East Scotland, 6.2% of which are in the most deprived quintile, and 13.8% are in the least deprived quintile. Most of the small areas in Mid Berwickshire are in the middle of the distribution, with 50.0% being in the third quintile. The remaining small areas are in the second and fourth quintile, with 21.4% and 28.6% residing there respectively. Mid Berwickshire has relatively lower levels of both deprivation and affluence than South-East Scotland, with the majority of its small areas grouped in the middle of the distribution.

Table 4-6 Scottish Index of Multiple Deprivation by Quintile, 2020

	Mid Berwickshire	South-East Scotland
1 (most deprived quintile)	0.0%	6.2%
2	21.4%	22.9%
3	50.0%	29.8%
4	28.6%	27.3%
5 (least deprived quintile)	0.0%	13.8%

Source: Scottish Government (2020), Scottish index of Multiple Deprivation 2020.

4.6 Summary of Socio-Economic Context

Mid Berwickshire and South-East Scotland both have a higher proportion of residents aged 65 and over compared to Scotland as a whole, and this difference is projected to increase over time. The unemployment rate is also higher in South-East Scotland than across Scotland as a whole. Employment in both Mid Berwickshire and South-East Scotland is distributed across a wide range of sectors, with manufacturing being a sector of particular strength in Mid Berwickshire.

The majority of the Mid Berwickshire is clustered in the middle of relative deprivation for Scotland and has fewer areas in both the most and least deprived quintiles than both the wider South-East Scotland and Scotland as a whole.



5. Economic Impact

This section estimates the economic impact that could be generated by the Proposed Development.

5.1 Economic Impact Methodology

5.1.1 Modelling the Economic Impact of Onshore Wind Farm Developments

The approach followed to estimate the economic impact of onshore wind developments is based on industry best-practice. In particular, it draws on evidence on the construction and operational costs associated with a range of onshore wind farm projects across the UK conducted in 2015 by BiGGAR Economics, on behalf of RenewableUK¹⁴, and recent case studies of actual construction and operational costs in the sector.

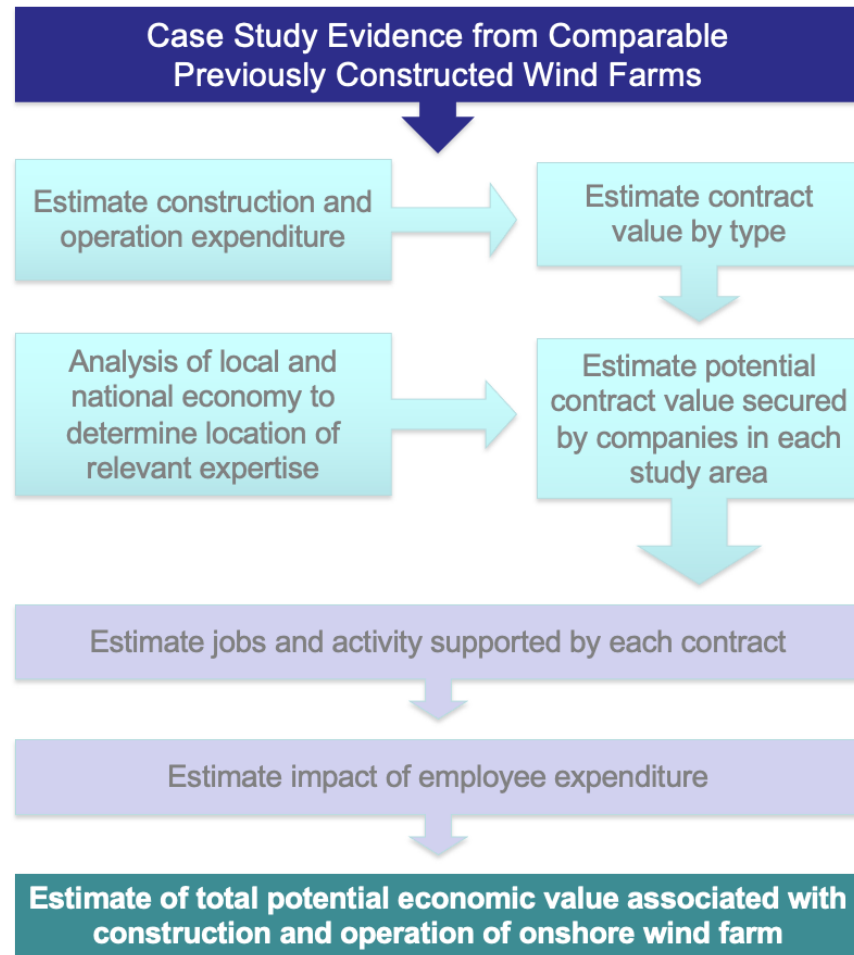
This method has been used over time to estimate the economic impact associated with a number of onshore wind developments. As shown in Figure 5-1, the modelling exercise consists of four stages:

- development and planning;
- turbines;
- balance of plant; and
- grid connection.

The decommissioning impact associated with the Proposed Development at the end of its lifetime is not directly estimated, as it will be dependent on the technology available at the time and the on the industrial structure of the local, regional, and national economy. These factors are unknown at this stage and for this reason decommissioning impacts have not been considered at this stage. Overall, we would expect these impacts to be similar in scale to those occurring during the construction of the project. In the context of an impact assessment, however, their magnitude would be smaller than during the construction period because of the differences in timescales between the two periods. In particular, the further activity is into the future, the lower its Net Present Value (i.e., the value of present spending is weighted more than that of future activity). To account for the different ability of businesses across Scotland in fulfilling onshore wind contracts, assumptions are adjusted based on BiGGAR Economics' experience working with developers in South-East Scotland.

¹⁴ RenewableUK (2015), Onshore Wind: Economic Impacts in 2014.

Figure 5-1 Approach to Economic Impact



5.1.2 Measures of Economic Impact

Economic impacts are reported with respect to the following measures:

- **Gross Value Added (GVA):** a commonly used measure of economic output, GVA captures the contribution made by an organisation to national economic activity. This is usually estimated as the difference between an organisation's turnover and its non-staff operational expenditure; and
- **Employment:** this is expressed as years of employment for temporary contracts and as annual jobs for operations and maintenance contracts. Years of employment are used to report the short-term employment that is supported by the construction and development of the wind farm. As an example, a job that lasts for 18 months would support 1.5 years of employment.

5.1.3 Sources of Economic Impact

The assessment will consider the following sources of economic impact:

- direct impacts: the economic value generated through the contracts associated with the Proposed Development;



-
- indirect impacts: the impact from the expenditure of contractors within their supply chains; and
 - induced impacts: the impact from spending of those workers carrying out contracts for the Proposed Development and on behalf of its contractors.

5.1.4 Study Areas

Economic impacts were estimated with respect to the following study areas:

- South-East Scotland (Scottish Borders and East Lothian); and
- Scotland.

5.2 Development and Construction

The estimation of economic benefits from the development and construction of the Proposed Development draws on the extensive work that BiGGAR Economics has undertaken in the onshore wind sector. This includes an evaluation of existing wind farm developments carried out in 2015 by BiGGAR Economics on behalf of RenewableUK. The analysis has been updated over time based on evaluations of individual wind farm developments and on experience with developers working across Scotland. This body of evidence allows to estimate costs per MW based on a development's number of turbines, its capacity, or a combination of the two.

Based on the development of the Proposed Development that is comprised of 15 turbines and an assumed total generating capacity of 108 MW, it was estimated that the total construction and development expenditure would be approximately £111.2 million. Expenditure was then split according to the following component contracts:

- development and planning;
- turbine;
- balance of plant; and
- grid connection.

The largest expenditure component was associated with turbines, equivalent to £69.0 million, or 62% of total development and construction spending. Balance of plant contracts would contribute around 23% of total expenditure, with development and planning and grid connection accounting for 8% and 7% of total development and construction spending respectively.



Table 5.1 Development and Construction by Contract Type

	% Capex	Value (£m)
Development and Planning	8%	8.6
Turbines	62%	69.0
Balance of Plant	23%	25.4
Grid Connection	7%	8.2
Total	100%	111.2

Source: BIGGAR Economics Analysis of case study evidence from comparable previously constructed wind farms. Note: Totals may not sum due to rounding.

To estimate the economic impacts from the development and construction of the wind farm, it was first necessary to make assumptions on the ability of businesses within each study area to carry out contracts.

Based on available data evidence from similar developments within South-East Scotland, it was estimated that around 41% of the wind farm’s contracts could be carried out by Scottish businesses, with a value of £45.9 million. It was estimated that spending on businesses based in South-East Scotland would be around £13.6 million, equivalent to 12% of total development and construction expenditure.

The largest opportunity for Scottish businesses could be in contracts associated with balance of plant, which could be worth £23.0 million. Balance of plant would also be the largest opportunity for businesses in South-East Scotland, worth up to £4.9 million.

Table 5.2 Development and Construction Expenditure by Study Area

	South-East Scotland		Scotland	
	%	£m	%	£m
Development and Planning	48%	4.1	93%	8.0
Turbines	2%	1.4	11%	7.3
Balance of Plant	19%	4.9	91%	23.0
Grid Connection	40%	3.3	92%	7.5
Total	12%	13.6	41%	45.9

Source: BIGGAR Economics Analysis. Note: Totals may not sum due to rounding.

Having estimated the size of the contracts that could benefit each of the study areas, it was possible to consider the Gross Value Added (GVA) and short-term employment that these could support. This was done by splitting each contract category into its component contracts and assigning each to an industrial sector,



based on its Standard Industrial Classification (SIC)¹⁵ code. Direct GVA was then estimated by applying the relevant turnover per GVA from the UK Annual Business Survey (ABS)¹⁶.

It was estimated that the development and construction of the Proposed Development could generate £7.1 million direct GVA in South-East Scotland and £23.3 million direct GVA in Scotland.

Table 5.3 Development and Construction, Direct GVA by Study Area (£m)

	South-East Scotland	Scotland
Development and Planning	2.7	4.7
Turbines	0.7	3.7
Balance of Plant	2.3	11.5
Grid Connection	1.5	3.4
Total	7.1	23.3

Source: BiGGAR Economics Analysis. Note: Totals may not sum due to rounding.

In a similar way, it was possible to estimate the number of direct jobs supported by spending in development and construction contracts. This was done by dividing the expenditure in each contract by the turnover per job ratio for the relevant sector. In this way, it was estimated that the development of the Proposed Development could generate 99 direct years of employment in South-East Scotland and 360 direct years of employment in Scotland.

Table 5.4 Development and Construction, Direct Employment by Study Area and Contract Type (Years of Employment)

	South-East Scotland	Scotland
Development and Planning	17	48
Turbines	18	74
Balance of Plant	35	170
Grid Connection	28	67
Total	99	360

Source: BiGGAR Economics Analysis. Note: Totals may not sum due to rounding.

Expenditure in construction and development contracts is also expected to generate 'knock-on' effects across the economy. In particular, it will be associated with further rounds of expenditure along the supply chain and with the spending of the salaries of

¹⁵ Office for National Statistics (2009), Standard Industrial Classification of industrial Activities (SIC 2007).

¹⁶ Office for National Statistics (2020), Annual Business Survey 2018 - Revised.



those involved in the development and construction of the wind farm. These are referred to as 'indirect' and 'induced' impacts.

To estimate indirect and induced impacts, it was necessary to apply the relevant Type 1 and Type 2 GVA and employment multipliers from the Scottish Government Input-Output Tables¹⁷ to direct GVA and direct employment. Since the multipliers refer to sectoral interactions occurring at the level of the Scottish economy, it was necessary to adjust them when considering impacts taking place in South-East Scotland.

By summing the direct, indirect, and induced impacts it was estimated that the construction and development of the Proposed Development could generate:

- £9.5 million GVA and 129 years of employment in South-East Scotland; and
- £39.9 million GVA and 591 years of employment in Scotland.

5.3 Operations and Maintenance

The existing Fallago Rig Wind Farm employs 11 full time, locally based staff, including those who have graduated through the EDF apprenticeship programme. The Proposed Development would add to this employment and expand the learning opportunities for those currently employed.

The first stage in estimating the economic impact from the operations and maintenance of the Proposed Development was to consider the total expenditure required for its operation each year. Based on the number of turbines and the wind farm's capacity, it was estimated that the annual cost of operations and maintenance (Opex) could be around £3.1 million.

It was assumed that businesses in South-East Scotland could benefit from a total £0.8 million in operations and maintenance contracts (25% of Opex) each year, whereas annual expenditure in Scottish contractors could be up to £2.1 million (69% of Opex).

Table 5.5 Operations and Maintenance Spending by Study Area

	South-East Scotland		Scotland	
	%	£m	%	£m
Operations and Maintenance	25%	0.8	69%	2.1

Source: BiGGAR Economics Analysis.

The total turnover generated in each study area was then divided by the turnover per GVA and turnover per job ratios of the sectors expected to carry out operations and maintenance contracts. In this way, it was estimated that the Proposed Development

¹⁷Scottish Government (2020), Supply, Use and Input-Output Tables.



could generate £0.4 million direct GVA and five direct jobs in South-East Scotland, and £1.1 million direct GVA and 12 direct jobs across Scotland.

As for the development and construction of the wind farm, it was necessary to estimate the indirect and induced impacts associated with operations and maintenance contracts. This was done by applying the relevant Type 1 and Type 2 GVA and employment multipliers.

Summing the direct, indirect, and induced impacts, it was estimated that during its annual operations and maintenance the Proposed Development could generate:

- £0.6 million GVA and 7 jobs in South-East Scotland; and
- £1.9 million GVA and 22 jobs across Scotland.

5.4 Non-Domestic Rates

The development of the Proposed Development is also expected to provide a stream of revenue to the Scottish Borders Council through the annual payment of non-domestic rates.

To estimate the extent of this revenue, it was necessary to consider the average rateable value per MW of a development within the Scottish Borders. Based on evidence from existing developments, this was estimated as £10,000 per MW. With an expected generating capacity of 97.5 MW, it was estimated that The Proposed Development could generate £756,000 in non-domestic rates each year of operation, equivalent to £30.2 million over its operational lifetime.

For the period of 2023/24, the Scottish Borders Council has a budget¹⁸ of £343.8 million. The Proposed Development would strengthen the financial position of the Council, supporting additional spending on public services, though in practice not all of the income would necessarily go to the Council since the distribution of non-domestic rate revenues are determined nationally.

5.5 Community Benefits

The Proposed Development will also directly benefit the local communities during the operational phase through direct funding and environmental improvements.

5.5.1 Community Benefit Funding

Community benefits, an annual payment that is made by the developer to those communities in the proximity of a wind farm, have become common practice to support local ambitions and needs. While they do not constitute a material consideration at the planning stage, commitment to a comprehensive package of

¹⁸ Scottish Borders Council (2023), Council Tax and Spending 2023/24



community benefits has a role in fostering a good relationship between the developer and the community hosting the development.

To provide a framework on how to deliver community benefits, in 2019 the Scottish Government released its 'Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments'¹⁹, which updated previous guidance issued in 2015. The Scottish Government recommends onshore wind developers to deliver community benefit funding worth £5,000 per MW of installed capacity. The document also encourages developers to engage in holistic ways to maximise benefits locally, going beyond a purely monetary approach.

Scottish Government guidance recommends that recipient communities develop a Community Action Plan, setting out their priorities and aspirations. This document will then be used by the local community to streamline funding to those projects delivering the largest local benefits.

A level of funding consistent with Scottish Government guidance could result in local communities receiving each year up to £540,000 in community benefit funding. This could support local aspiration and projects and generate economic impacts. The presence of the Proposed Development would provide local communities with additional funding, which could support them in delivering larger interventions.

5.5.2 Habitat Management

In addition to direct funding, the Proposed Development will also contribute to the natural capital of the area, through mitigation and enhancement actions that will:

- improve habitat connectivity across the site;
- manage these areas for a variety of wildlife; and
- increase climate resilience.

These actions are requirements of the National Planning Framework 4 and result in a no-net-loss of biodiversity as required by Scottish Borders Council. While these gains cannot be quantified in economic terms at this stage, there is evidence that improved bio-diversity and well managed habitats can contribute to the well-being of the communities that can access these spaces. A recent study²⁰ examined the relationships between recreational time spent in nature and self-reported health and well-being. It showed that the likelihood of reporting good health or high well-being increased significantly for those who spent at least 120 minutes in nature, compared with those who had not contact with nature. The Natural Capital Asset Index²¹ has found that over time, the contribution that Scotland's Natural Capital has made to Scotland's well-being has grown since 2000, particularly as habitats are invested in to enhance their biodiversity.

¹⁹ Scottish Government (2019), Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments.

²⁰ White, Alcock, Grellier et al (2019), Spending at least 120 minutes a week in nature is associated with good health and wellbeing.

²¹ NatureScot (2022) Scotland's Natural Capital Asset Index - 2022



6. Tourism and Recreation

This section provides a baseline of tourism activity in the area and assesses any potential impact of the wind farm on local tourism activity.

6.1 Tourism Strategic Context

6.1.1 Tourism Strategy: Scotland's Outlook 2030

Following on from the Tourism Scotland 2020 (TS2020) strategy²², a collaborative network of industry experts created Scotland's Outlook 2030, which is focused on creating a world-leading tourism sector in Scotland that is sustainable in the long-term.

The strategy is focused on four key priorities:

- people;
- places;
- businesses; and
- experiences.

The strategy recognises the effects of climate change, technological advancements, Brexit and changing consumer behaviour on tourism and highlights the need for collaboration between government, communities, and the public and private sectors²³.

There are six conditions that the strategy has highlighted as being crucial for success:

- using technological advancements and information to understand changes and trends in tourist behaviours;
- ensuring policies are in place that support the vision;
- enabling investment opportunities into Scotland's tourism market;
- improving transport and digital infrastructure;
- greater collaboration between businesses in the industry; and
- positioning Scotland as a great place to live and visit locally and globally.

A main commitment of the strategy is to address the effects of energy demand associated with tourism and make the sector commit fully to Scotland's ambition of becoming a net-zero society by 2045.

²² Scottish Tourism Alliance (2012), Tourism Scotland 2020.

²³ Scottish Tourism Alliance (2020), Scotland's Outlook 2030.



6.2 Tourism Baseline

6.2.1 Sustainable Tourism GVA and Employment

In its 2015 economic strategy²⁴ the Scottish Government identified six sectors as growth sectors, that is, economic sectors where Scotland had a comparative advantage. Sustainable tourism was one of the sectors identified.

In 2021, the number of people employed in the sector in both East Lothian and the Scottish Borders was 3,500, equivalent to 1.7% of the 209,000 people working in the sector across Scotland. Employment in tourism was significantly impacted by Covid-19 in 2021 as the sector was particularly sensitive to the regulations and behavioural changes caused by the pandemic. As this year represented atypical tourism activity, data for 2019 has been analysed to provide a more typical view of the performance of the sector.

As shown in Table 6-1, the sector in 2019 employed 4,000 people in East Lothian and 4,500 in the Scottish Borders. These local areas account for 1.7% and 2.0% of the total employment of 229,000 in the sustainable tourism sector in Scotland respectively. In the same year, the sectors generated £55.2 million GVA in both East Lothian and the Scottish Borders, equivalent to 1.2% of the total £4,503.7 million GVA generated by the sector across Scotland that year.

Table 6-1 Sustainable Tourism: Employment and GVA

	Scottish Borders	East Lothian	Scotland
GVA (£m)	55.2	55.2	4,503.7
Employment	4,500	4,000	229,000

Source: Scottish Government (2022), Growth Sector Database.

6.2.2 Visitors to Scottish Borders

For the case of tourism in the Scottish Borders in 2019, there was a total of 3.0 million annual day visitors, spending £61.2 million in total, an average of £20 per trip. The Scottish Borders accounted for 2.1% of day visits to Scotland.

In the same year, there were 0.34 million annual domestic overnight visitors to the Scottish Borders, with a total spend of £62.3 million. Domestic overnight visitors spent more on average compared to day visitors, with an average spend per trip of £184.

According to the data on international overnight visitors, there were 29 thousand international overnight visitors in the Scottish Borders, contributing £8.5 million in spending. This accounted for 0.8% and 0.3% of total international overnight visits and spending respectively. International visitors spent the most on average per trip.

²⁴ Scottish Government (2015), Scotland's Economic Strategy.



Across the Scottish Borders, international overnight visitors spent an average of £295 per trip.

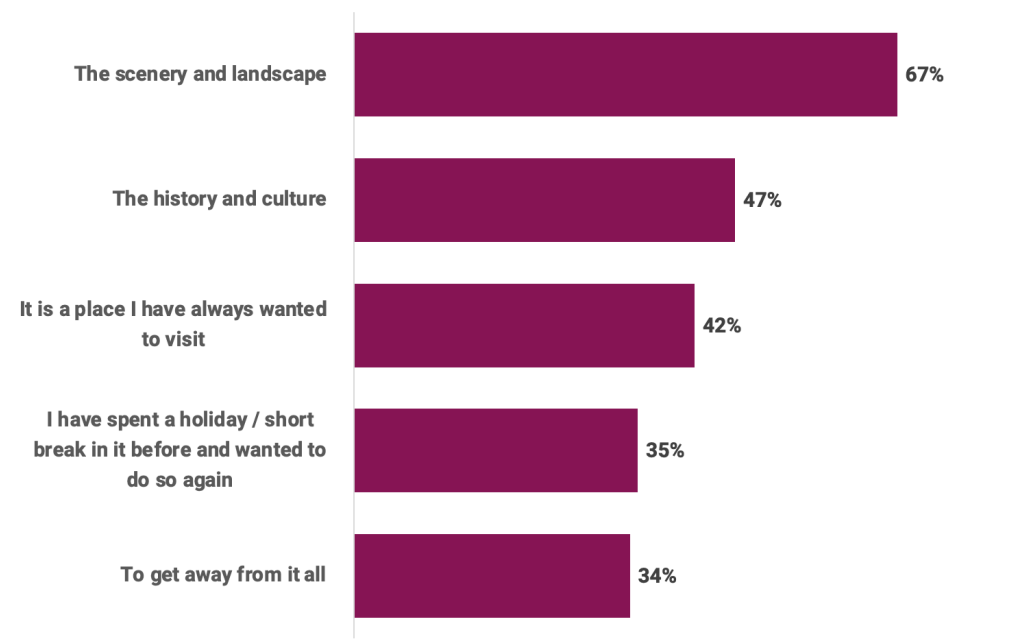
Table 6-2 Visits and Visitor Spending, 2019

	Scottish Borders	Scotland
Visitor Numbers		
Day Visitors	3,001,000	144,914,000
Domestic Overnight Visitors	340,000	12,426,000
International Overnight Visitors	29,038	3,540,000
Spend (£)		
Day Visitors	61,173,000	5,186,557,000
Domestic Overnight Visitors	62,667,000	2,989,333,000
International Overnight Visitors	8,557,099	2,458,608,000

Source: Great Britain Tourism Survey (2019), Great Britain Day Visits Survey (2019).

Research conducted by Visit Scotland identified that the top motivation for visiting the Scottish Borders is the scenery and landscape (Figure 6-3), followed by the history and culture of the area.

Figure 6-1 Motivations for Visiting Scottish Borders



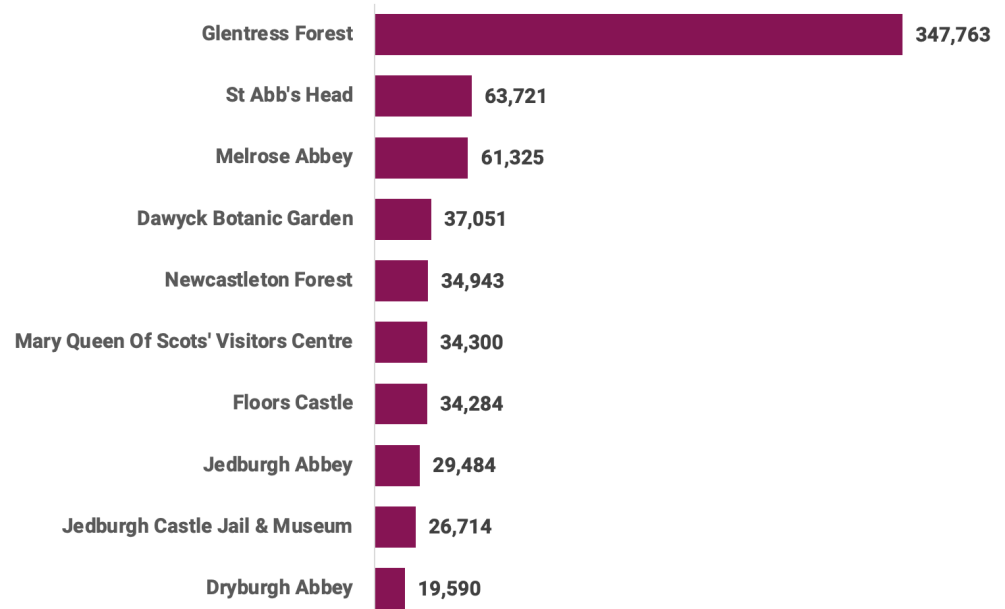
Source: Visit Scotland (2018), The Scotland Visitor Survey 2015 & 2016

The top ten most visited tourist attractions in the Scottish Borders are shown in Figure 6-4. Of the most visited attractions in the region, none were located within 15



km of the Proposed Development. The closest attraction, Melrose Abbey, is located approximately 22 km away from the Proposed Development.

Figure 6-2 Regional Tourist Attractions (Number of Visitors)



Source: Visit Scotland: Insight Department - Scottish Borders Factsheet 2019

6.2.3 Visitors to East Lothian

A range of statistics are available on tourism visitor numbers and visitor spend in East Lothian and Scotland, including the Great Britain Day Visitor Survey, the Great Britain Tourism Survey and the International Passenger Survey which are averages over a 3-year period (2017-2019).

As with the section above, 2019 data has been used to provide the most accurate picture of typical tourism activity, in comparison to 2020 data which was impacted by the Covid-19 pandemic. In 2019, there was a total of 3.3 million annual day visitors to East Lothian, spending £44.2 million in total, an average of £14 per trip. East Lothian accounted for 2.2% of day visits to Scotland, where there were 144.9 million visitors, spending a total of £5.2 billion, an average of £36 per trip.

In the same year, there were 0.15 million annual domestic overnight visitors to East Lothian, with a total spend of £34.3 million. Domestic overnight visitors spent more on average compared to day visitors, with an average spend per trip of £224. This was also the case for domestic overnight visits across Scotland as a whole, with the total 12.4 million domestic overnight visitors spending £3.0 billion across Scotland, an average of £241 per trip.

Data on international overnight visitors was not available at the local authority level for East Lothian. Across the Lothians (East, West & Mid-Lothian), there were 70.6 thousand international overnight visitors, contributing £34.0 million in spending, accounting for 2.0% and 1.4% of total international overnight visits and spending



respectively. International visitors spent the most on average per trip. Across the Lothians (East, West & Mid-Lothian), international overnight visitors spent an average £480 per trip, compared to £694 per trip spent by international overnight visitors across Scotland.

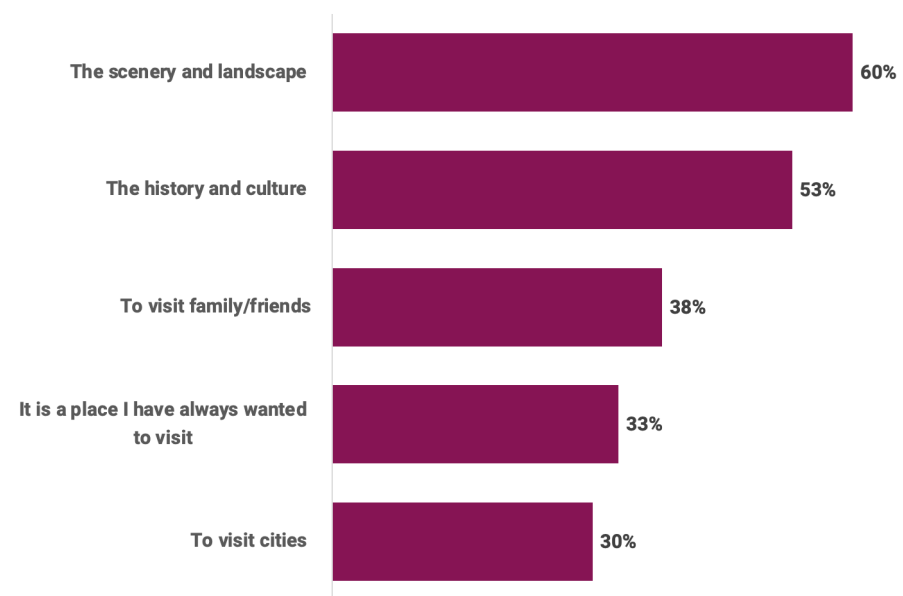
Table 6-3 Visits and Visitor Spending, 2019

	East Lothian	Scotland
Visitor Numbers		
Day Visitors	3,260,000	144,914,000
Domestic Overnight Visitors	153,000	12,426,000
International Overnight Visitors*	70,560	3,540,000
Spend (£)		
Day Visitors	44,146,000	5,186,557,000
Domestic Overnight Visitors	34,333,000	2,989,333,000
International Overnight Visitors*	33,841,000	2,458,608,000

Source: Great Britain Tourism Survey (2019), Great Britain Day Visits Survey (2019). * Lothians (East, West, and Mid)

Research conducted by Visit Scotland²⁵ identified that the top motivation for visiting the Lothians is the scenery and landscape (Figure 6-3), with 60% of survey respondents giving this answer. The history and culture of the area and visiting family and friends were also in the top five motivations for visiting.

Figure 6-3 Motivations for Visiting Lothians (East, West, Mid)



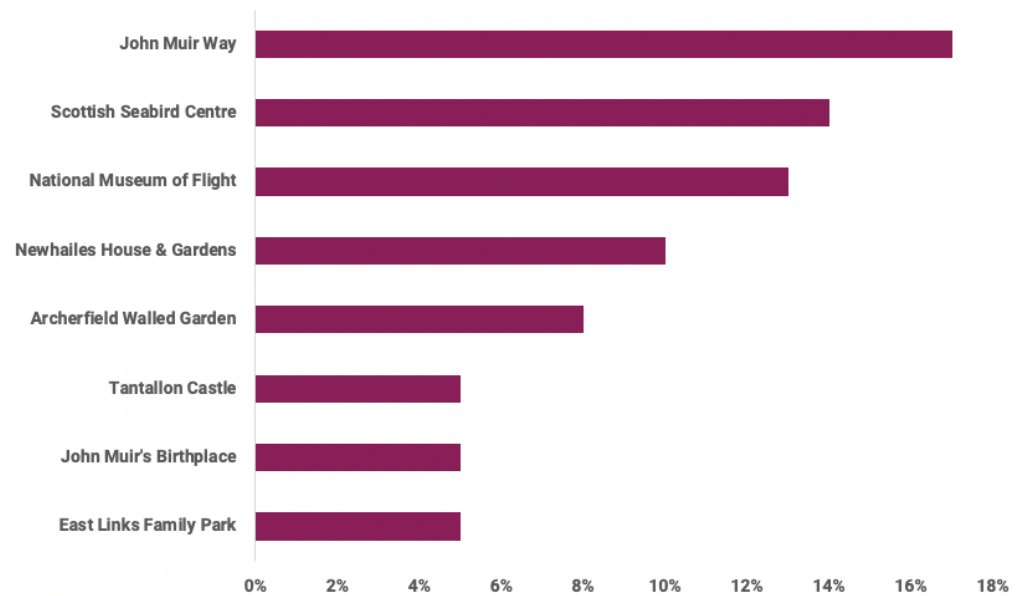
²⁵ Visit Scotland (2018), The Scotland Visitor Survey 2015 & 2016



Source: Visit Scotland (2018), The Scotland Visitor Survey 2015 & 2016

The top eight most visited tourist attractions in East Lothian are shown in Figure 6-4. Of the most visited attractions in the region, none were located within 15 km of the Proposed Development. The closest attraction, East Links Family Park, is located approximately 18 km away from the Proposed Development.

Figure 6-4 Regional Tourist Attractions (% of total visits in East Lothian)



Source: East Lothian Council (2021), East Lothian Visitor Statistics & Insights

6.2.4 Local Visitor Attractions

Local visitor attractions found within a 15 km radius of the Proposed Development are set out in Table 6-4, alongside a description of the attraction. A radius of 15 km was chosen as this is considered the maximum distance at which the turbines will generally be visible and is the established distance for investigating local tourism impacts. The attractions were identified through a web search of Visit Scotland and Trip Advisor.

Table 6-4 Local Visitor Attractions

	Description	Distance to Site (km)
Mutiny Stones	Monument in the Lammermuir Hills dated from 3rd Millennium BC	<1
Dunside Hill Cairn	Monument that comprises a burial cairn dated from the Neolithic or Bronze-Age	<1
Whiteadder Watersports Centre	Watersport centre featuring activities such as kayaking, sailing and swim	5



Castle Park Golf Course	18-hole golf course	7
Yester Castle	Ruined 13th-century castle and tower	8
Whitecastle Fort	Unexcavated, early Iron Age hill fort	9
Gifford Golf Club	18-hole golf course	10
Stoneypath Tower	Historic 16th century castle	11
Duns Motocross	Motocross facility	11
Flat Cat Gallery	Art Gallery	12
The Royal Burgh of Lauder Golf Course	9-hole golf course with views of the Lauderdale District	13
Lennoxlove House	Historic 15th-century castle featuring centuries-old architecture, paintings, and antiques	14
Soutra Aisle	Part of the medieval hospital church and family burial	14
Marchmont House	House built in 1750 featuring social events, guided tours, and artistic events	15
Duns Golf Club	18-hole golf course	15

6.2.5 Local Accommodation Providers

Accommodation providers were identified using Visit Scotland’s accommodation database and a web search of local accommodation on TripAdvisor, Booking.com and Google Maps.

A total of 37 accommodation providers were identified within 15 km of the Proposed Development, concentrated mainly around Lauder and Haddington with some providers in Duns, Gordon, Berwickshire, Pathhead and Humbie.

There was one accommodation provider located within 5 km of the site that was a:

- self-catering provider;

There were 15 accommodation providers identified within 5 and 10 km of the site, including:

- Three hotels (including: Carfraemill, Tweeddale Arms Hotel and the goblin ha Hotel);
- 11 self-catering providers; and
- one caravan park.

A total of 22 accommodation providers were located between 10 and 15 km of the Proposed Development, including:



- three hotels (including: The Black Bull Hotel, Lauderdale Hotel and The Juniperlea Inn);
- 14 self-catering providers;
- two bed and breakfasts;
- two caravan parks; and
- one wedding venue with accommodation included.

Research by Visit Scotland (2019)²⁶ indicates that accommodation, and therefore tourism activity, in the region is seasonal. The annual average occupancy rate for Guest Houses and B&B in the region in 2019 was 82%, with occupancy rates highest in the months between August and September. Rates were lower for hotels, hostels and self-catering with occupancy rates averaging 74%, 72% and 37% respectively. Occupancy rates for these accommodation providers were highest between June and July.

6.2.6 Recreational Trails and Core Paths

The Southern Upland Way is the main long-distance route that passes within 15km of the Proposed Development. The full route covers 341 km between Portpartrick on the West Coast of Scotland to Cockburnspath on the East Coast. At its closest point, on the section between Lauder and Longformacus, the Southern Upland Way will cross the site boundary. It is estimated that there are an average of 80,000 users annually of the Southern Upland Way, including 1,000 end to end users²⁷. This makes it the 6th most popular of Scotland's Great Trails.

There are multiple core paths^{28,29} within 15 km of the Proposed Development, which were identified from the East Lothian Council and the Scottish Borders Council websites. The core paths (including rights of way) identified within a 15 km radius of the Proposed Development include:

- Path 71, West Longformacus
- Path 16, West Longformacus
- Path 194, North Oxton
- Path 189, Longformacus
- Path 85, Abbey St Bathans
- Path 89, Abbey St Bathans
- Path 50, Duns
- Path 52, Duns
- Path 51, Duns
- Path 75, Greenlaw
- Path 69, Greenlaw
- Path 183, Greenlaw

²⁶ Visit Scotland (2020), Insight Department: Edinburgh and Lothians 2019

²⁷ Scottish natural Heritage (2018) Scotland's networks of paths and trails: key research findings

²⁸ East Lothian Council (2022), Core paths. Available at:

https://www.eastlothian.gov.uk/info/210569/countryside_and_wildlife/12044/core_paths

²⁹ Scottish Borders Council (2022), Core paths. Available at:

https://www.scotborders.gov.uk/directory/62/scottish_borders_core_paths



-
- Path 76, Gordon
 - Path 79, Gordon
 - Path 17, Lauder
 - Path 15, Lauder
 - Path 13, Lauder
 - Path 23, Oxton
 - Path 22, Oxton
 - Path 30, West Cranshaws
 - Path 28, West Cranshaws
 - Path 25, Lammermuir Central
 - Path 23, Lammermuir Central
 - Path 24, Lammermuir Central
 - Path 54, Lammermuir West
 - Path 53, Lammermuir West
 - Path 55, Lammermuir West
 - Path 56, Lammermuir West
 - Path 228, Lammermuir East
 - Path 21, Garvald
 - Path 20, Garvald
 - Path 236, Garvald
 - Path 220, Garvald
 - Path 22, Garvald
 - Path 326, Gifford
 - Path 219, Gifford
 - Path 216, Gifford
 - Path 217, Gifford
 - Path 235, Gifford
 - Path 314, Gifford
 - Path 474, Gifford
 - Path 488, Gifford
 - Path 489, Gifford
 - Path 4, Gifford
 - Path 2, Gifford
 - Path 487, Gifford
 - Path 478, Gifford
 - Path 476, Gifford
 - Path 5, Pencaitland
 - Path 339, Pencaitland
 - Path 338, Pencaitland
 - Path 337, Pencaitland
 - Path 119, Pencaitland
 - Path 329, Pencaitland
 - Path 344, Pencaitland
 - Path 427, Pencaitland
 - Path 22, Pencaitland
 - Path 62, Pencaitland



-
- Path 61, Pencaitland
 - Path 66, Pencaitland
 - Path 63, Pencaitland
 - Path 263, Pencaitland
 - Path 262, Pencaitland
 - Path 302, Pencaitland
 - Path 301, Pencaitland
 - Path 64, Pencaitland
 - Path 248, Dunbar
 - Path 247, Dunbar
 - Path 19, Dunbar
 - Path 38, Dunbar
 - Path 40, Dunbar
 - Path 39, Dunbar
 - Path 479, Dunbar
 - Path 470, East Linton
 - Path 233, East Linton
 - Path 36, East Linton
 - Path 258, East Linton
 - Path 459, East Linton
 - Path 32, East Linton
 - Path 83, East Linton
 - Path 414, East Linton
 - Path 82, East Linton
 - Path 413, East Linton
 - Path 31, Haddington East
 - Path 415, Haddington East
 - Path 312, Haddington East
 - Path 8, Haddington East
 - Path 260, Haddington East
 - Path 11, Haddington East
 - Path 9, Haddington East

A series of recreational trails within 15 km of the Proposed Development were identified through the portal Walkhighlands. They are set out in Table 6.5 below alongside a description of them and their distance from the Proposed Development.



Table 6.5 Recreational Trails

	Description	Distance to Site (km)
Priestlaw Hill circular from Whiteadder Reservoir	A 11 km circuit which follows the route of the old Herring Road from Whiteadder Reservoir to climb up into the Lammermuirs.	1.5
Meikle Says Law	Meikle Says Law is the highest of the Lammermuir hills, and this 10 km walk is an ascent across countryside and burns.	2.5
Lammer Law and Hopes Reservoir	This 14.5km circular walk climbs Lammer Law, and descends past the Hopes reservoir.	5
Gamelshiel Castle and Spartleton Hill	A 7 km hill circuit passing the ruins of Gamelshiel Castle before climbing to the summit of Spartleton Hill.	5.5
Herring Road and Clints Dod, near Stenton	A 19km circuit over the open heathery moors of the eastern Lammermuirs, giving views towards the North Sea.	6
Burn Mill circuit, Lauder	A 3km circular walk giving views over Lauder and the surrounding. Climbing down it ends on an old granary mill	12
Blackchester Fort circuit, Lauder	This 12km walk climbs part of Blackchester hillfort and then across farmland to descend afterward and following the Harry Burn back to Laude	12
Traprain Law, near Haddington	A short 1.75km climb to the summit reveals an extensive hill fort with panoramic views over the local area.	14
Ellemford bridge circuit, Abbey St Bathans	A 10.75km walk that follows the course of the Whiteadder River from Abbey St Bathans to Ellemford Bridge	14
Haddington and the River Tyne	This 3.5km walk combines the town's finest buildings with an attractive stroll along the banks of the River Tyne.	15

Source: Walkhighlands (2023)



6.3 Assessing the Relationship Between Wind Farm Developments and the Tourism Economy

Tourism assessments focus on the tourism economy, as defined by the spending of visitors and the employment supported by the sector. For a change in spending to take place it is necessary that, as a result of a wind farm development, visitors change their behaviour. This may result, for instance, in deciding not to visit the area, not recommending the area, or not visiting again. In turn, this decision has to lead to a fall in the level of employment of the sector and spending by visitors at a given attraction or accommodation provider.

As recorded in visitors' surveys, visitors tend to spend time in a given area for a range of reasons. These include, for instance, scenery and landscape; history and culture; and the place's reputation.

When considering individual tourism sites, the extent to which they are susceptible to change in their surroundings varies, based on:

- their relative importance for the local tourism economy;
- their users; and
- the reasons behind the attraction's appeal (its views, its heritage value, its historical value, its value in relation to local folklore etc.).

In addition, the scale of the impact on the surroundings of a wind farm development is expected to depend on factors, including:

- distance from the wind farm; and
- the interaction between the wind farm and the assets' features.

The interaction between the susceptibility to change of an attraction and the extent to which it will be impacted by the development determine the wind farm's relative impact. For these changes to have an effect, it is then required that they have an impact on the tourism economy, through reduced spending and a reduction in the employment supported by the sector.

The rest of this chapter considers evidence on wind farms and tourism in Scotland and whether the Proposed Development may affect any of the tourism assets identified in the baseline.

6.4 Evidence on Wind Farms and Tourism

Over time, a series of works have considered the relationship between wind farm developments and tourism activity.



The most comprehensive study of potential effects of wind farms on tourism was undertaken in 2008 by the Moffat Centre at Glasgow Caledonian University³⁰. The study was based on what could happen and found that, although there may be minor effects on tourism providers and a small number of visitors may not visit Scotland in the future, the overall effect on tourism expenditure and employment would be very limited.

Since this study, wind farms have become a more common feature in Scotland and any negative effects on the tourism economy as a result of their existence would now be apparent.

In 2021, BiGGAR Economics produced a report analysing the relationship between the construction of onshore wind farms and tourism employment at the national, regional, and local level.³¹

Nationally, the report found that, while Scotland had experienced a significant increase in onshore wind energy (with the number of turbines increasing from 1,082 in 2009 to 3,772 in 2019) whilst employment in tourism-related sectors had increased by 20%. At the local authority level, those which had seen the largest increase on onshore wind energy also experienced increases in tourism employment equal to, or greater than other areas across Scotland.

The report included case studies of 44 onshore wind farms constructed between 2009 and 2019. This included an updated analysis of 28 wind farms included in a previous report³² constructed prior to 2015, and 16 additional wind farms constructed between 2015 and 2019. The study reported on changes in tourism-related employment in the small areas within 15km of each wind farm. Of the 28 wind farms previously analysed, the surrounding local areas of 18 experienced an increase in tourism employment above the Scottish average in the years following the construction. Of the 16 local areas surrounding the additional 16 onshore wind farms, 11 experienced increases in tourism employment which outperformed the Scottish average. These results suggested that tourism employment in local areas across Scotland changed independently of wind farms located in the area.

The report concluded that, there was no pattern or evidence suggesting that the development of onshore wind farms in Scotland had any negative effects on the tourism economies of the country as a whole, local authority areas or the immediate areas surrounding wind farms.

These conclusions are not a surprising finding given that:

- there are high levels of public support for renewable energy;³³

³⁰ Moffat Centre (2008), The Economic Impact of Wind Farms on Scottish Tourism.

³¹ BiGGAR Economics (2021), Wind Farms & Tourism Trends in Scotland: Evidence from 44 Wind Farms

³² BiGGAR Economics (2017), Wind Farms and Tourism Trends in Scotland

³³ BEIS (2022). Public Attitudes Tracker: Energy Infrastructure and Energy Sources. Winter 2021, UK.



- as wind farms are well-established in Scotland, tourists might already expect to see wind farms when visiting Scotland, especially rural Scotland;
- the factors that determine the success of the tourism sector do not include the presence or otherwise of an onshore wind farm; and
- issues that influence tourism include the ability and willingness to travel, economic performance (and so whether tourists have disposable income available for leisure trips), exchange rates, the quality of the overall tourism product, the effectiveness of destination marketing and the quality and value for money of the services offered by tourism businesses.

6.5 Impact on Local Tourism and Recreation Sites

Having considered impacts on the local tourism economy over time, the analysis in this section focuses on whether the presence of the Proposed Development would have any effect on the area's key drivers of tourism and on local accommodation providers.

6.5.1 Key Drivers of Local Tourism and Recreation

The tourism and recreation baseline (section 6.2) identified 16 visitor attractions within 15 km of the Proposed Development.

Several of these attractions are golf courses and outdoor sport centres (Castle Park Golf Course, Gifford Golf Club, The Royal Burgh of Lauder Golf Course, Duns Golf Club, Whiteadder Watersports Centre, and Duns Motocross). Motivations for playing the sport are unlikely to be deterred by the presence of the wind farm and therefore no negative effects on the attraction are expected.

In terms of culture, history and art, tourists may also be interested in visiting the ancient monuments of **Mutiny Stones** and **Dunside Hill, The Yester Castle, Stonepath Tower, Lennoxlove House** and **Flat Cat Gallery**. In addition, visits to **Marchmont House** would be motivated by an interest in history, social events, weddings, and artistic events. Interest in history and historical landmarks would motivate tourists to visit the medieval hospital church of **Soutra Aisle** and **Whitecastle Fort**. The cultural heritage assessment found that there could be some significant effects on assets very close to the Proposed Development. However, as the cultural and historical aspects of most of the attractions listed above would not be impacted by the presence of a wind farm, it is not expected that the Proposed Development would result in negative effects the majority of these attractions.

The **Southern Upland Way** is not listed as one of the key drivers of tourism and recreation in the area, however it is one of Scotland's Great Trails and will be close to the Proposed Development. Guidance on assessing the impact of developments on recreational paths has been produced by NatureScot³⁴. This requires assessors to consider the potential impacts of:

³⁴ Scottish Natural Heritage (2018) Environmental Impact Assessment Handbook



- loss or closure of a recreational path;
- diversion requirements;
- reduction or enhancement of amenity;
- obstruction or restrictions of access;
- enhancement of access; and
- changes to setting and context.

The Proposed Development will not result in the closure, diversion, or any obstruction to the Southern Upland Way itself. The area of the route with visibility of the Proposed Development is relatively short and the visibility of the additional turbines from the route is unlikely to affect the amenity of walkers on the route given that Fallago Rig Wind Farm is already visible from this area of the path. It therefore does not represent any significant change to the overall setting.

The landscape is one of the many reasons why people chose to walk in the country, including in this section of the Southern Upland Way. A study by NatureScot³⁵ found that after “Exercising a dog: (42%) the top 5 motivations for visiting the outdoors in Scotland were:

- Health/exercise (41%);
- Relax/unwind (34%)
- Enjoy fresh air/pleasant weather (22%)
- Peace/quiet (19%); and
- Enjoy scenery/wildlife (18%).

Therefore, while the visibility of the turbines has the potential to impact the amenity of the route for some walkers, it is unlikely to be the primary motivation for choosing to walk the route for the majority of visitors. Additionally, this localised section of the Southern Upland Way already has views of Fallago Rig Wind Farm and is a small proportion of the overall route. Therefore, the Proposed Development is unlikely to have any further impact on visitors to the Southern Upland Way.

6.5.2 Tourism Accommodation

The tourism baseline identified 37 accommodation providers located within 15 km of the Proposed Development. They are clustered primarily around the areas of Lauder and Haddington with some providers are located in Duns, Gordon, Berickshire, Pathhead and Humbie. Of the 37 providers, 25 were self-catered, six were hotels, two were bed and breakfasts, three were campsites or caravan parks, and one wedding venue with accommodation included.

One accommodation provider is located within 5 km of the Proposed Development, which is a self-catering provider.

³⁵ Stewart, D. & Eccleston, J. 2020. Scotland’s People and Nature Survey 2019/20 – outdoor recreation, health, and environmental attitudes modules. *NatureScot Research Report No. 1227*.



This provider highlighted their secluded 50-acre estate with far-reaching views, a garden marquee and outstanding architecture as a unique place for wedding events and holiday rentals.

As these major motivations to visit would not be impacted by a wind farm, it is not expected that accommodation providers within 5 km of the site would experience any negative effect on tourism activity due to the Proposed Development.

An additional 15 accommodation providers are located between 5 and 10 km away. This includes 11 self-catering providers, three hotels and one caravan site.

The self-catering providers marketed their modern amenities, the opportunity to connect with wildlife and nature. Many also highlighted their proximity to local walking routes, beaches, golf courses, and the City of Edinburgh. One provider is also located on a working farm, where visitors can take part in tours and experiences on the farm, as well as participate in outdoor activities. Other benefits marketed by these providers include the countryside views, and location near tourist attractions.

Hotels located within 5 and 10 km of the site highlighted their location in picturesque villages and near the City of Edinburgh. Other significant motivators included the quality of their restaurants and the opportunity to spend time from away the city. One of the providers marketed its proximity to two golf courses. Another provider marketed its location near the village hall and the beautiful village park.

The caravan park also marketed its location near to Thirlestane Castle and its views of the Lammermuir Hills.

As these major motivations to visit would not be impacted by a wind farm, it is not expected that accommodation providers within 5 and 10 km of the site would experience any negative effect on tourism activity due to the Proposed Development.

The remaining 22 providers are located between 10 and 15 km away from the Proposed Development. This includes 14 self-catering providers, two bed and breakfasts, three hotels, one caravan parks and one accommodation for weddings.

Various self-catering providers marketed their modern amenities and additional facilities such as private gardens. Many also highlighted their proximity to local attractions, walking routes and golf courses.

Bed and breakfasts in the area marketed their locations near Edinburgh, golf courses and local attractions. One of the providers is located in a working farm that provides the opportunity of relaxing walks.

Hotels marketed their location near local attractions, sport centres and outdoor activities. One provider highlighted its proximity to the Lammermuir Hills as ideal for walkers of all abilities.



The caravan park markets its proximity to Thirlestane Castle and the City of Edinburgh. One of them emphasised its locations close to walking routes and golf clubs.

As these motivations to stay with the accommodation providers located between 10 and 15 km away would not be impacted by the presence of a wind farm, it is not expected that they will experience any negative effects on activity as a result of the Proposed Development.

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