Chapter 14

Socio-economics, Recreation and Tourism

SCOTTISHPOWER RENEWABLES

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Chapter 14
Socio-economics, recreation and tourism

14.1 Executive summary

1. This chapter assesses the potential socio-economic effects of the proposed Development and the likely significance of these on tourism, recreation, and employment generation.

2. The assessment has been undertaken on the basis of the development consisting of up to 21 wind turbines with a total installed capacity of around 126 megawatts (MW). In addition, there would be an energy storage facility of around 31.5 MW in capacity. The proposed Development offers opportunities for provision of goods and services from the local area as well as direct and indirect employment during construction and operation.

3. Based on the installed capacity the assessment of the proposed Development's economic impact found that:

- The development expenditure during the construction phase is estimated to be approximately £183 million, approximately £14.5 million of which would be spent in the local (Dumfries & Galloway and East Ayrshire) economy and approximately £31.2 million in Scotland as a whole;
- During the 22 months' construction phase, the proposed Development is expected to support, in net terms, approximately 98 person-years of employment benefiting local residents. Nationally (for Scotland as a whole), the proposed Development would be expected to support approximately 368 person-years of employment;
- During the operational phase, the proposed Development is expected to require between 3 and 5 new full time employees (engineers and technicians) locally and further posts would be created elsewhere in Scotland. Additional benefits would accrue to the local supply chain as a result of services supplied to the operation of the proposed Development;
- The local economy would be expected to be boosted by a total of £6.9 million of net Gross Value Added[1] (GVA) during the construction period. The Scottish economy would benefit by some £26.2 million net GVA.
- During the operational phase (assessed over a nominal 40 year life) the proposed Development would contribute lifetime GVA of just under £75 million to the local economy through direct, indirect and multiplier effects, and over £170 million to the economy of Scotland as a whole.

NOTE: estimates of expenditure within Scotland assume that turbine towers are not purchased in Scotland. If this option is available, there would be a substantially increased benefit to Scottish jobs and GVA.

4. Information from other renewable energy projects developed by ScottishPower Renewables (SPR) indicates that a wide selection of supply chain businesses could expect to benefit from the investment in the local and Scottish economy, including haulage, aggregates supply, forestry services, building services and plant hire, fencing, and security. SPR is committed to employing good practice measures with regard to maximising local procurement and would adopt established good practice measures such as 'Meet the Developer/Contractor Days'. It is considered likely that the proposed Development would operate in combination with other renewable energy projects in the area to encourage the development of relevant skills and longer term business opportunities as southern Scotland continues to capitalise on its natural energy resources as part of its commitment to economic recovery and response to climate change. SPR is committed to engaging with strategic bodes such as South Of Scotland Enterprise to enable local benefits to be maximised.

5. In terms of the tourism and visitor economy, a number of published studies have been reviewed which indicate a general consensus showing that the presence of the proposed Development would not have a deterrent effect on people visiting the

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

area. For both construction and operational phases, therefore, the socio-economic effects at the level of Dumfries & Galloway and East Ayrshire are considered to be beneficial.

6. SPR is working with communities throughout Scotland and is committed to offering a package of community measures to local communities that would include the opportunity for community benefit payments to be made and for communities to invest in the proposed Development. To date, SPR has voluntarily awarded more than £15.5 million in community benefit funding arising directly from renewable energy projects to communities in Dumfries & Galloway and East Ayrshire, supporting initiatives such as community facilities, environmental projects, heritage projects and skills and employment support. Such direct project-specific benefits are in addition to wider financial support distributed through the Scottish Power Foundation that benefit projects such as the Prince's Foundation programmes based at Dumfries House in East Ayrshire, which focus on training and education. As with other projects including Arecleoch Extension, Clauchrie, Carrick and Harestanes South, SPR is also offering a shared ownership opportunity to local communities. It is expected that any proposed income streams from community benefit payments and profit from investment in the project would provide a long term, flexible revenue which could be used to support community projects within the local area.

7. Benefits accruing from the scale and nature of the proposed income streams could, as on previous projects, have a long lasting positive effect on access to resources, improvement to local amenities and quality of life of local residents as well as economic benefits. The long-term nature of the income would allow the local communities to plan ahead, to draw in other sources of match funding to maximise the benefits and investment projects could be designed to match local priorities.

8. With regard to local recreational and tourism assets, no significant effects are expected during construction of the proposed Development subject to appropriate good practice management of construction traffic along the access roads to the Site and within the Site. Beneficial effects (also not significant) may be experienced by some businesses, such as accommodation businesses and shops that supply goods and services to construction workers.

9. A creative and considered package of enhancement measures is proposed to support recreational and tourism uses within the Site during the operational phase based on consultation with stakeholders. In particular, measures would focus on users of and connections to the Southern Upland Way, with a new circular route being developed, and the path to the Colt Hill Striding Arch upgraded. Taking account of the proposed mitigation measures, no significant adverse effects have been identified during the operational phase. Whilst the primary land use would remain commercial forestry, the potential to enhance the existing recreational and tourism uses of the Site is considered to be beneficial.

10. Overall the proposed Development is expected to have a positive economic effect albeit not significant in EIA terms, and no significant adverse effect on tourism and recreation. Benefits arising through spending by construction workers and operational staff, as well as through benefits packages (including potential for investment) would support local businesses and communities as part of a wider cumulative benefit to the economy through the development of renewables and green jobs.

14.2 Introduction

11. The Site is located principally within the administrative boundary of Dumfries & Galloway Council, although part of the proposed access route A is located in East Ayrshire. The Site and immediately surrounding area are upland and characterised by commercial forestry and open moorland.

12. Local settlements are focussed along the A76 to the north of the site, the principal communities being Kirkconnel and Sanquhar in Dumfries & Galloway, and New Cumnock in East Ayrshire, all of which lie within 10km of the Site. Communities to the east and southeast of the Site such as Thornhill, Tynron and Moniaive are also served by the A76 and A702 but are generally more remote from the Site. To the south and west, the area is one of uninhabited uplands with only sporadic farm and residential properties located along the valleys.

13. The Southern Upland Way, one of Scotland's Great Trails, passes through the Site.

14.3 Approach to assessment and methods

14.3.1 Legislation, policy and guidance

National Planning Framework 3 (2014) (NPF3)

14. NPF3 is the spatial expression of the Scottish Government's Economic Strategy and sets out a long-term vision for development and investment across Scotland over the next 20 to 30 years. NPF3 aims "*to share the benefits of growth by encouraging economic activity and investment across all of Scotland's communities, whilst protecting our natural and cultural assets"*. A sustainable, economically active rural area, which attracts investment and supports vibrant, growing communities, is said to be essential to the Government's vision.

15. With regard to rural development, NPF3 identifies that in rural areas there should be strengthened links between people and the land, including increased community ownership of rural assets.

16. NPF3 also sets out that development of a national long-distance walking and cycling network will link key outdoor tourism locations across the country and will be an important tourism asset in its own right; as such, it is identified as a National Development.

Scottish Planning Policy (2014) (SPP)

17. SPP Paragraph 29 requires that policies and decisions should, amongst other matters, give 'due weight to net economic benefit'.

18. SPP Paragraph 169 identifies the development management considerations that decision makers should apply when assessing individual applications for renewable energy developments. Considerations relevant to this assessment include:

- net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities;
- the scale of contribution to renewable energy generation targets;
- public access, including impact on long distance walking and cycling routes and scenic routes identified in the National Planning Framework (NPF); and
- impacts on tourism and recreation.

19. Paragraph 79 requires that the planning system promotes economic activity and diversification including, where appropriate, sustainable development linked to renewable energy developments. Paragraph 93 sets out the policy principle that the planning system should give due weight to the net economic benefit of proposed development.

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

20. This guidance was updated in 2019 as a result of the Scottish Government's recognition that the renewables industry is in a period of transition, following changes to UK Government support schemes. This means that new models of community benefits, and new approaches, are likely to be needed. The revised guidance places a greater focus on achieving a lasting legacy for local communities underpinned by a well-developed community action plan. The guidance notes that within the previous 12 months, 214 projects had offered community benefits packages totalling over £15 million.

21. The guidance sets the expectation that community benefits can take the form of a comprehensive package, which may include monetary payments or other benefits. Scottish Government recommends that part of this package is composed of an annual cash sum which involves a degree of local control, and recommends a community benefit package for onshore wind developments with a value equivalent to £5,000 per installed megawatt per year, index-linked for the operational lifetime of the project.

22. The guidance provides that the package of benefits offered may vary in line with the priorities of community/communities involved, and the size and scope of the renewable energy project. However, it states that community benefits should relate to the specific needs and aspirations of local people. The guidance advises that possession of a community action plan is key to

delivering a community's aspirations and ambitions, and guidance is provided as to how this should be developed with a view to establishing a lasting legacy.

Scottish Government (2019) Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments

23. This guidance was updated in 2019 and provides guidance on the process of a renewable energy business making an offer, and a community accepting that offer. The aim of the review was to ensure that Scottish communities continue to benefit from local projects in a manner that is appropriate for the current and future context in which renewable energy projects are developed, and advises on how local communities, renewable energy companies and local authorities can work together to achieve this.

Scottish Government (2016) Draft Advice on Net Economic Benefit and Planning

24. The draft advice on net economic benefit from the Scottish Government provides advice to developers on the methodology to be used when modelling economic benefits. The advice states the importance of using assumptions that are completely transparent, evidence-based and as accurate as possible. The assessment is expected to consider the net economic benefit by comparing the estimated economic position where the development proceeds with the position if the proposal does not go ahead.

Scottish Natural Heritage (2019) Good Practice During Wind Farm Construction

25. The SNH Good Practice Guidance on windfarms contains advice on management measures during construction to provide for continuing public access. Access rights may be suspended on land on which construction work is being carried out, except for routes that are core paths or rights of way. The Guidance advises that management measures should be flexible enough to take reasonable account of public access requirements and adapt as the site progresses. The Guidance emphasises the importance of effective communication. During operation, public access will often share vehicular tracks with maintenance traffic, but this position is common to a wide range of tracks used for forestry and upland estate management and is unlikely to require any special provision.

Tourism Scotland 2020

26. Tourism Scotland 2020 advises that tourism is one of Scotland's key economic contributors. It identifies four groups of assets that contribute to the tourist appeal of Scotland. These are:

- nature, heritage and activities;
- destination towns and cities;
- events and festivals; and
- business tourism.

27. The document sets an aspiration to increase annual visitor spend in Scotland by £1 billion by 2020 from the baseline in 2011 (at 2011 prices). It identifies the need to develop market opportunities associated with the assets listed above.

14.3.2 Local Policy

28. The Development Plan for Dumfries and Galloway, within which the majority of the Site is located, comprises the Dumfries and Galloway Local Development Plan 2 (DGLDP2) along with its adopted Supplementary Guidance. This includes the Wind Energy Development (WED) Supplementary Guidance.

29. The Site is close to the boundary with East Ayrshire and proposed access route A (but no turbines) is located within East Ayrshire. The Development Plan for East Ayrshire comprises the East Ayrshire Local Development Plan (EALDP), the East Ayrshire Minerals Local Development Plan, and its adopted Supplementary Guidance.

Dumfries & Galloway Local Development Plan 2 (2019)

30. The DGLDP2 vision for Dumfries & Galloway involves a sustainable economy built on sustainable principles, which recognises the importance of its landscape, natural and historic environments and the need to maintain and enhance its distinctive landscape character while facilitating positive change, promoting growth, maximising the use of existing infrastructure and enhancing connectivity. It will have maximised its location to attract investment to create employment and investment opportunities which will in turn attract people of working age to the region.

31. The Spatial Strategy includes the following statement at paragraph 3.9: "*The key investment need is to build the economy through leading edge digital technology and develop the region's low carbon credentials, generating and distributing cheap, clean energy to power the electrification of the economy*."

32. Policy OP1: Development Considerations, states at section f) that "*Development proposals should limit the impacts of climate change, support resilience, and promote sustainable development"* including by:

- *"assisting the development of the local economy through sustainable economic growth"*

33. Policy ED9: Tourism states that tourism is a key sector within Dumfries and Galloways economy. The DGLDP2 highlights the Biosphere and Dark Sky Park, both of which are international designations, as tourism assets.

34. Policy ED10: Galloway and Southern Ayrshire Biosphere states:

"*The Council supports the designation and aims of the Biosphere and will encourage development that demonstrates innovative approaches to sustainable communities and the economy, and supports the enhancement, understanding and enjoyment of the area as a world class environment. Development must be appropriate to the role of the different zones within the Biosphere*".

35. The Site, in common with much of Dumfries and Galloway and East Ayrshire, is located within the Transition Zone of the Biosphere.

36. Policy ED11: Dark Skies states

"*a) Galloway Forest Dark Sky Park: The Council supports the designation of the Galloway Forest Dark Sky Park, and will assess proposals for development on their merits, securing levels of lighting that are appropriate to the nature of the development, contribute to sustainable development, and do not adversely affect the objectives of the Dark Sky Park designation.*

The LDP Access issues and the protection of core and other important routes and access rights therefore need to be considered when making decisions on planning applications and access rights will be material considerations in considering planning applications. New development should also incorporate new and enhanced access opportunities, linked to wider access networks".

37. The Site is located partially within the Transition Zone of the Dark Skies Park but all proposed turbines are located 14 km or more from the outer Park boundary and over 22 km from the Core Area.

38. Policy CF4: Access Routes states:

"*a) Development Affecting Existing Access Routes*

The Council as Access Authority will assert, protect and keep open and free from obstruction any route, waterway or other means by which access rights may reasonably be exercised. Development proposals should not impact adversely on any of the aforementioned access routes and Core Paths.

The Council will not grant planning permission to development proposals which would result in the loss of such access routes unless a satisfactory alternative route or mitigating measures can be secured. In such cases, future access provision, including any changes to existing access, must be shown in an Access Route Plan.

b) Provision of New Access Routes

New development should consider access issues at an early stage of the design process and, where appropriate, incorporate new and enhanced access opportunities, linked to wider access networks and green networks. For small scale developments these considerations can be demonstrated in an Access Route Statement but for all residential development of 5 units or above and other major developments, an Access Route Plan demonstrating how access routes will be incorporated may be required.

New or alternative access routes and enhancements to existing routes will be supported, especially if these can form part of green networks.

The Council will seek reasonable opportunities from developers to create, manage, maintain and improve access through planning conditions or legal agreements".

39. Policy IN1: Renewable Energy states

"*The Council will support development proposals for all renewable energy generation and/or storage which are located, sited and designed appropriately*". The acceptability of any proposed development will be assessed against considerations including:

- *"the impact on tourism, recreational interests and public access".*

40. Policy IN1: Renewable Energy goes on to state that to enable assessment sufficient detail should be submitted, to include the following as relevant to the scale and nature of the proposal:

- *"net economic impact, including local and community socio-economic benefits such as employment associated business and supply chain opportunities".*

41. Policy IN2: This states that the acceptability of any proposed wind energy development will be assessed a number of considerations, including:

- *"Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities".*

42. Other impacts and considerations to be addressed under IN2 include:

"*a) the extent to which the proposal avoids or adequately resolves any other significant adverse impact on the natural environment, including biodiversity, forests and woodland, carbon-rich soils, hydrology, the water environment and flood risk, the historic environment, cultural heritage, tourism and recreational interests and public access*".

Supplementary Guidance

43. Adopted supplementary guidance documents all directly relate to a policy in LDP2 and have the same weight as the Plan in the decision making process.

Wind Energy Development: Development Management Considerations (2020)

44. This SG further explains IN2, and states with regard to socio-economic issues that:

"*B1 Planning applications should be supported with a statement, proportionate to the scale of the development, of the socio-economic benefits for the surrounding communities and the wider area that will arise from the development. This will include the overall number of jobs created (including their nature i.e. permanent / temporary, FTE status, etc) and economic activity associated with procurement, construction, operation (including ongoing maintenance) and decommissioning/restoration. It should also include details of any potential benefits to local communities as a result of proposed community ownership. The statement should include an accurate assessment of the potential socio-economic effects of the development and, if necessary, any mitigation measures which are recommended and should include an assessment of any potential cumulative impacts. Such impacts may be in relation to businesses (both local and national), employment (direct and indirect) and any other impacts on investment in the local economy.*

B2 Community benefit payments made by wind farm developers to local communities are not considered, by the Council, to be a socio-economic benefit".

45. The SG also expands on tourism and recreational interests, and notes, the importance of tourism to the economy. It states *"therefore any detrimental impacts on this economic sector resulting from wind energy developments should be minimised. However, it is also recognised that potential positive effects may also occur from a development, as some wind energy developments have become tourist attractions and a base for recreational pursuits in their own right. In assessing proposals, the relative scale of existing recreation and tourism facilities in the area should be taken into account*".

46. The SG identifies strategic and individual tourist and recreational interests in the region and that they should primarily be considered by the applicant as potentially sensitive visual receptors such as the forest parks, the Galloway Forest Dark Sky Park and the Galloway and Southern Area Biosphere. Applicants should also demonstrate how they "*have taken into account local tourism and recreational facilities, including tourist accommodation, the impacts the development may have on these facilities, the impact from viewpoints, the impact on the factors which contribute to the appeal of these destinations and any mitigation measures they think are appropriate to overcome issues identified.*

Following development existing public access to the site for walkers, and, where appropriate, cyclists and horse-riders, should be maintained or enhanced. The specific detail of this should be stated in the access route statement/plan".

Dumfries and Galloway Regional Economic Strategy (2017)

47. The Economic Strategy sets out the vision and objectives for Dumfries & Galloway. It identifies tourism/leisure/hospitality as one of five sectors of particular economic importance to the local economy. Energy, particularly renewables and their supply chain, is identified as one of three sectors with identified growth potential and which are in a position to provide more highly paid, skilled employment.

East Ayrshire Local Development Plan (2017)

48. The importance of economic issues is reflected in the vision of the EALDP. Economy and skills is a key theme of the East Ayrshire Community Plan, and the EALDP is designed to support the implementation of the Economy and Skills Action Plan with a view to reducing unemployment and deprivation.

49. Policy IND 3 Business and Industrial Development in the Rural Area states that new commercial development will be encouraged and supported where it meets one or more of a number of criteria, including: *"Renewable energy developments within the Rural Area that have been subject to detailed consideration against identified policy criteria".*

50. With regards to tourism, the UNESCO designated Galloway and Southern Ayrshire Biosphere is highlighted in the EALDP as being a special area and site of excellence to promote conservation and sustainable development on a regional scale. The majority of the core area and Buffer Zone are within Dumfries and Galloway. Map 11 of the EALDP identifies the Site as within the 'Transitional Area', i.e. the part of the area where most people live and work and in which sustainable economic and community development will be promoted. Policy TOUR 5: Galloway and Southern Ayrshire Biosphere states that the Council "*will encourage developments and proposals that support the aims of the Biosphere, particularly where they provide an innovative approach to sustainable living and the economy*".

51. The EALDP recognises that opportunities to support the renewable energy agenda must be explored and that the EALDP should continue to support wind energy proposals in suitable locations. The EALDP recognises the opportunity offered for communities to share in the benefits arising for use of local wind resources and supports a framework for Community benefit in line with the SPP and Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments. Furthermore, it states that whilst the Council encourages all wind energy developers and communities to use the established framework for the purpose of securing the most appropriate community benefits, where wind energy developers propose alternative arrangements which have the support of the community, and are in line with the Scottish Government's good practice principles, this would be an acceptable alternative approach.

52. Schedule 1: Renewable Energy Assessment Criteria includes the criteria which must be assessed in considering proposals for renewable energy schemes. Criteria include:

- *"Impacts on tourism and recreation;*
- *Public access, including impact on long distance walking and cycling routes and scenic routes identified in National Planning Framework 3;*
- *Net economic impact, including local and community socio-economic benefits such as employment, associated business and supply chain opportunities".*

Supplementary Guidance

Planning for Wind Energy (PWESG) (2017)

53. PWESG requires that wind energy applications should provide an assessment of any potential impacts of the development on any relevant tourism resources, including heritage and cultural attractions, important strategic routes and the core paths

network and rights of way. The Council recognises that wind energy developments themselves can make a positive contribution to the local tourism offer. Developers are encouraged to incorporate within their proposals, measures to promote their site as part of East Ayrshire's tourism offer. Such proposals will form part of the assessment of the proposal's economic impact.

54. PWESG also requires wind energy proposals to be accompanied by detailed information outlining the economic benefits of the development for the local area and at a regional and national level. As a minimum, this should detail:

- direct job creation associated with construction and operation;
- indirect job creation and supply-chain opportunities for local businesses; and
- wider benefits to the local economy pertaining to any particular recreational / public access features that the proposal may include.

55. PWESG advises that, in considering a proposal, the socio-economic benefits of a community or shared ownership scheme "*will be fully taken into account and balanced against all other matters*".

East Ayrshire Tourism Action Plan 2017/2020

56. The Tourism Action Plan, which flows from the Ayrshire and Arran Tourism Strategy 2012-17, sets out a list of targeted action points to improve the tourism offering within East Ayrshire. High on the list of priorities are actions that improve and promote cycling activities, and encouragement and promotion of events.

East Ayrshire Council Core Paths Plan 2010

57. The East Ayrshire Core Paths Plan 2010 establishes the network of Core Paths for the local authority area as required by the Land Reform Scotland Act (2003). The core paths in the vicinity of the Site are shown on Figure 14.1. There are no core paths within the Site.

East Ayrshire Economic Development Strategy 2014-2025

The Economic Development Strategy sets out the vision and objectives for the East Ayrshire economy, and focuses specifically on how the economy can be restructured from its former reliance on coalmining and other key industries that in recent years have been in decline. Renewables are identified as a priority growth sector along with food and drink and software development. In this regard it is noted that SPR's world-leading renewable energy Control Centre is located in East Ayrshire. It is the home base for SPR's highly skilled Control Room, Systems and Performance Analysis teams for the UK.

Community Action Plans

The communities of both Sanquhar & District and Kirkconnel & Kelloholm prepared community action plans in 2015 informed by extensive community engagement. The action plans received funding from the Coalfields Regeneration Trust, an organisation which is aimed at reinvigorating former coalfield areas. The importance of the former coalmining economy, and the priority for local communities to respond to that legacy, is highlighted by the choice of a pithead silhouette for the Upper Nithsdale Community Trust which manages windfarm funds on behalf of the two communities.

Sanquhar and Kirkconnel Community Action Plans 2015-2020

58. The Action Plan was prepared following an extensive process of community engagement carried out over a period of seven months in 2015. The Action Plan emphasises the legacy of coalmining in the area and the challenge of attracting new industry to help retain jobs, and reduce excessive commuting and outward migration especially of young people. The Action Plan sets out priorities and a strategy for community action, including social, economic and environmental initiatives.

59. Five key themes are identified as priorities for action: a sustainable and resilient community, cultural heritage, local facilities and activities, town environment, and natural environment. The first theme, "*a sustainable and resilient community*", comprises initiatives such as support for small businesses, encouragement of skills development including with regard to green energy repair and maintenance, and making Sanquhar more attractive as a business destination.

New Cumnock Community Action Plan 2014-2019 (NCCAP)

60. The NCCAP was prepared following extensive public engagement in 2013, guided by a steering group of local stakeholders and supported by East Ayrshire Council. The NCCAP sets out issues affecting the community such as population decline and unemployment; identifies what people like and dislike about the community; and sets out an action plan for development of the community over the 5 year period to 2019. An interim update was published in 2019.

61. The Plan identifies five themes requiring immediate action, of which three relate directly to issues around recreation, the local economy, tourism and jobs. Recently, the New Cumnock Development Trust developed a masterplan for New Cumnock and is currently working on an updated Community Action Plan, which will follow as a subsequent project.

South of Scotland Enterprise (SOSE)

62. SoSE was set up in April 2020 as the economic and community development agency for the South of Scotland. Its vision is to work with the people and communities across the South of Scotland to establish the region as a centre of opportunity, innovation and growth.

SOSE Operating Plan 2020/2021 (September 2020)

63. This is the first operating plan for the new organisation and it emphasises that the approach of SOSE will be inclusive, balancing jobs alongside communities and the environment. Whilst aiming to establish long term goals, the immediate focus must continue to be on supporting businesses, communities, and individuals to recover from the wide-ranging impacts of the Coronavirus pandemic. The Opportunity Plan identifies the land and energy resources of the region as being of national interest, with significant potential to be a catalyst for green growth and green jobs. This is in line with recent Government statements such as that by the First Minister on 1 September 2020[2] which set out a 'national mission' to create green jobs and training opportunities as part of Scotland's recovery from the Covid-19 crisis.

14.3.3 Study area

64. A two-tiered study area has been adopted for this assessment, defined below.

Wider Study Area (WSA)

65. The WSA is intended to encompass the area within which significant effects, as a result of the proposed Development, on employment and the local economy could occur. The WSA is based on the administrative areas of Dumfries & Galloway and East Ayrshire. 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 Dumfries & Galloway and East Ayrshire.

Local Area of Influence (LAI)

66. The LAI forms the focus for assessment of both direct and indirect effects, as a result of the proposed Development, on those receptors that would be likely to experience effects at a more local level, specifically tourism and recreational assets. The study area has been defined by a 10 km radius from the boundary of the proposed Development. Facilities or notable points of focus for visitor attraction within this area have been reviewed and consideration given to those with visibility of the proposed Development as informed by the Zone of Theoretical Visibility (ZTV). If any significant tourism facilities are located just outside the boundary of the study area, these have been included.

14.3.4 Effects assessed in full

67. Employment and economic effects arising from the construction and operation of the proposed Development have been assessed quantitatively.

68. The assessment of the LAI includes effects on tourism receptors that are promoted regionally/nationally and are, therefore, likely to draw in visitors from outside the area.

69. Land use effects, including recreational use, on the Site during construction stage have been assessed in full.

14.3.5 Effects scoped out

70. As the construction phase of the proposed Development would be relatively short term (22 months) it is not expected that construction workers from outside the WSA would have a significant effect on the demand for housing, health or educational services. Effects on demand for such community services have therefore been scoped out.

71. Recreational activities outwith the Site have been scoped out unless they are associated with businesses or promoted regionally/nationally and are therefore likely to draw in visitors from outside the area.

[2] https://www.gov.scot/publications/first-minister-programme-government-1/

72. Effects on forestry management within the Site are addressed in **Technical Appendix 3.2**.

14.3.6 Baseline determination

73. Baseline conditions have been determined using desk survey techniques, including access to Points of Interest and Address point data from geographic information system (GIS) databases.

Data sources

74. 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. Data sources referred to in undertaking this assessment are referenced in full in this chapter and provided in section 14.6.

Field survey

75. No specific field survey has been undertaken with regard to socio-economic, recreation and tourism effects, although information has been gathered where relevant from surveys undertaken in respect of other disciplines, notably landscape and visual (**Chapter 7: Landscape & Visual Impact Assessment**).

14.3.7 Consultation

76. The assessment has used desk-based information sources to assess the likely effects of the proposed Development, supplemented by consultation with stakeholders where necessary. Information to inform the baseline has been sought as part of the scoping process from various sources, including community councils, British Horse Society Scotland, Scottish Natural Heritage, Scotways, and VisitScotland. Direct contact has been also been made with the Southern Upland Way (SUW) ranger team for Dumfries & Galloway.

77. Consultation responses are summarised in **Table 14.1.**

Table 14.1: Consultation – key issues

Consultee	Date of correspondence	Comments	Action	Reference within EIA Report
Dumfries & Galloway Council– Countryside Access Officer	12 March 2020	Drew attention to the need to keep Core Paths and Rights of Way open, and in particular the route of Core Path 504, the SUW. If any diversions or other access mitigation measures are proposed, these will need to be agreed with the Council's Countryside Access Team.	This is addressed by proposing alternative routes and local diversions during construction where necessary	Sections 14.5.2 and 14.5.4
Dumfries & Galloway Council – SUW Ranger West (scoping response)	12 March 2020	Identified the need to address effects on the Southern Upland Way, the Polskeoch Bothy and other local features such as Allan's Cairn and the Colt Hill Striding Arch.	Construction phase effects are addressed by proposing alternative routes and local diversions during construction where necessary. During operation, mitigation measures are proposed to enhance the experience for recreational users: access enhancements and local diversions. enhancement of archaeological features	Sections 14.5.2 and 14.5.4
VisitScotland		Highlights that scenery and the natural environment have become the two most important	The socio-economic assessment takes account of the findings of the landscape	Section 14.5.3 and 14.5.4

Consultee	Date of correspondence	Comments	Action	Reference within EIA Report
		factors for visitors in recent years when choosing a holiday location. Rrequested that full consideration is given to Scottish Government's 2008 research on the impact of windfarms on tourism, and to provide a tourism impact assessment statement. Consideration should be given to any adverse local impacts on tourism are minimised: • The number of tourists travelling past en-route elsewhere • The views from accommodation in the area • The relative scale of tourism impact i.e. local and national • The potential positives associated with the development • The views of tourist organisations, i.e. local tourist businesses or VisitScotland.	and visual impact assessment as part of its qualitative assessment, including potential effects on visitor numbers. This chapter assesses the likely effects of the proposed Development on tourism receptors within the local area, and on the tourism economy as a whole, based on recent published research rather than bespoke studies. The assessment includes views from tourist routes including footpaths and bridleways, and views from accommodation businesses. The assessment considers both potential adverse and beneficial effects.	
Scotways (paid-for service to identify paths and rights of way)	11 March 2020	Identifies the following Rights of Way: DN25, DS15, DN159, DN160, DN161, DS244, DS245 and DS246 are affected by the area outlined in red shown on the Scoping Site Location Plan. DN25 and DS15 are recorded as rights of way whilst the remaining routes are recorded as 'Other Routes'. The Scotways response also identifies paths promoted as Heritage Paths and Scottish Hill Tracks. Scotways also seeks clarity on the setback distances to footpaths and rights of way. For the SUW, as a nationally important route, Scotways would request a greater setback than normal. Scotways preference would be for an Access Management Plan should be provided prior to any consent being granted.	All recorded recreational routes are shown on **Figure 14.1** and described in the baseline conditions**.** Effects arising from the construction or operation of the proposed Development are fully assessed with respect to routes considered to be of national importance, and consideration is also given to other designated paths and rights of access. The advisory separation distances have been taken into consideration in the design of the proposed Development but has not been applied for all turbines due to the scale of the turbines. An Access Management Plan is proposed as a pre-development condition.	Section 14.4.4 (Baseline) Sections 14.5.2 and 14.5.4

Consultee	Date of correspondence	Comments	Action	Reference within EIA Report
		Cumulative impact on Southern Upland Way should be taken into account.		
British Horse Society		BHS' standard guidance is that there should be a separation distance of at least four times the overall height of turbines (i.e. to tip of blade) for core paths, nationally promoted routes such as Scotland's Great Trails and other promoted riding routes, as these are most likely to be used by equestrians unfamiliar with turbines. BHS encourages developers to pay regard to horses when considering surfacing of tracks and access controls (e.g. gates). Measures are also required to manage traffic on routes where people may be riding.	The advisory separation distances have been taken into consideration in the design of the proposed Development but has not been applied in the design of the turbine layout based on experience on other renewable energy developments where horse riders regularly use tracks very close to turbines, such as Whitelee and Middleton windfarms. Details of surfacing of proposed Development access tracks will be agreed following consent.	Section 14.5.4
Meeting (web-based) with SUW Ranger West	12 May 2020	Various measures to ensure that the route of the Southern Upland Way is not blocked during construction and enhancement measures during the operational phase were discussed.	Construction phase effects are addressed by proposing alternative routes and local diversions during construction where necessary. During operation, mitigation measures are proposed to enhance the experience for recreational users: access enhancements and local diversions. enhancement of archaeological features.	Sections 14.5.2 and 14.5.4

14.3.8 Approach to assessment of effects

78. There are no published standards or technical guidelines that set out a preferred methodology for assessing the likely socio-economic effects of onshore renewable energy developments. However, there is a series of commonly used methodologies and 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. These have been adopted here and are described in the following text.

79. The approach to the socio-economic assessment is presented in two parts, addressing both the construction phase aspects of the proposed Development and the longer-term economic effects once the proposed Development is built and operational.

Assessment of likely effects on the WSA

80. This part of the assessment comprises a quantitative assessment of the likely direct, indirect and induced effects of the proposed Development on the WSA (as defined in Section 14.3.1) in terms of investment, employment, additional Gross Value Added (GVA)[3] and contribution to the labour market.

81. The employment effects that are attributable to the proposed Development are divisible into three components. These are:

- **direct:** the employment and other economic outputs that are directly attributable to the delivery of the proposed Development. These include any new jobs that are created to manage and supervise the construction and operational phases of the proposed Development and that are filled by employees of SPR or the appointed Contractor (or sub-contracted employees);
- **indirect:** employment and other outputs created in other companies and organisations that provide services to the proposed Development (i.e. procurement and other supply chain effects); and
- **induced:** additional jobs and other economic outputs that are created in the wider economy as a result of the spending of employee incomes and other ripple effects that occur as a result of direct and indirect effects of the proposed Development.

82. Construction phase job creation and investment has been assessed through the use of employment estimates provided by SPR and the estimated construction elements categories within which these jobs would fall. SPR has recent relevant experience of developing a project of a similar scale (23 turbines) at Dersalloch Windfarm, and this experience has been used as appropriate in this assessment. The assessment addresses the potential effects of the wind turbine element of the proposed Development to the labour market and the local supply chain and economic output in terms of GVA. The estimate for construction phase GVA is calculated using the latest regional estimates for the average yield of GVA per worker for the construction and civil engineering sector in Dumfries & Galloway and East Ayrshire has been obtained from the Office of National Statistics (ONS).

83. Information gathered from the baseline data review has been used to develop a quantitative economic model which includes direct, indirect and induced effects of the proposed Development.

84. In the case of operational phase effects, quantitative economic modelling has been undertaken based on information regarding likely creation of permanent jobs provided by SPR. As well as direct job creation (e.g. facility management and maintenance), the assessment models indirect and induced job effects (i.e. supply chain jobs and multiplier effects). Reference is also made to the potential for jobs arising from investment of funds from the proposed community investment scheme and community benefit fund. Again, experience on other windfarms in Scotland provides a detailed understanding of the likely level of local employment and expenditure during the operation of the proposed Development.

85. This chapter assesses the significance of the likely socio-economic effects of the proposed Development based on the magnitude of the impacts and the sensitivity of the receptor groups. The following sections set out the criteria for establishing magnitude of impact and sensitivity of the receptors.

Assessment of the likely effects on the LAI

86. The proposed Development may have direct and indirect effects on tourism and recreation receptors within the LAI. This part of the socio-economic assessment comprises a qualitative assessment of the effects of the proposed Development on receptors within the LAI including core paths and rights of way, long distance routes, and tourist attractions. Recreational receptors that are not promoted regionally/nationally are not assessed in full unless they fall within the Site, although they are recorded where they fall within 10 km of the Site boundary. Tourism receptors include accommodation businesses.

87. As with effects on the WSA, significance of the likely socio-economic effects of the proposed Development is assessed based on the magnitude of the impacts and the sensitivity of the receptor groups. The following sections set out the criteria for establishing magnitude of impact and sensitivity of receptors.

Sensitivity of receptor

88. There are no published standards that define receptor sensitivity relating to 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

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

or be influenced by the identified effects. For example, a receptor (such as a public footpath or a supply chain 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).

89. Based upon professional judgement and experience on other large-scale projects, four levels of sensitivity are used: high; medium; low; and negligible. These are defined in **Table 14.2**.

Table 14.2: Socio-economic sensitivity criteria

Sensitivity	Description
High	The receptor: • has little or no capacity to absorb change without fundamentally altering its present character; or • is of high socio-economic, recreational, or tourism value[4]; or • is of national or international importance; or • is accorded priority in national policy; or • 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; or • has a moderate socio-economic, recreational or tourism value; or • is of regional importance; or • is accorded priority in local policy; or • has some alternatives with available capacity within its catchment area; or • 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; or • is of low socio-economic, recreational or tourism value; or • is of local importance; or • is accorded low priority in policy; or • 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.

90. In considering the sensitivity of a receptor it is important to remember that, in the case of socio-economic assessment, the sensitivity is often subjective and different receptors 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. This assessment is based on the assumption of a worst-case which assumes that there is a negative perception of the proposed Development.

Magnitude of impact

91. There are no published standards that define thresholds of magnitude 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

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

impacts have been developed for this assessment based on experience on other similar projects. The following four levels of magnitude have been adopted using professional judgement: high; medium; low and negligible. 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 14.3**.

Table 14.3: Magnitude of impact

Receptor Group	High	Medium	Low	Negligible
WSA economy	An impact that would dominate over baseline economic conditions by >10 %.	An impact that would be expected to result in a moderate change to baseline economic conditions by >5 %.	An impact that would be expected to result in a perceptible difference from baseline economic conditions by >0.5 %.	An impact that would not be expected to result in a measurable variation from baseline economic conditions.
WSA labour market	An impact that would dominate over baseline labour market conditions and/or would affect a large proportion (>10 %) of the existing resident workforce.	An impact that would be expected to result in a moderate change to baseline labour market conditions and/or would affect a moderate proportion (>5 %) of the existing resident workforce.	An impact that would be expected to result in a perceptible difference from baseline labour market conditions and/or would affect a small proportion (>0.5 %) of the existing resident workforce.	An impact that would not be expected to result in a measurable variation from baseline labour market conditions.
WSA tourism and visitor economy	An impact that would dominate over baseline tourism and visitor economy conditions.	An impact that would be expected to result in a moderate change to baseline tourism and visitor economy conditions.	An impact that would be expected to result in a perceptible difference to baseline tourism and visitor economy conditions	An impact that would not be expected to result in a measurable variation from baseline tourism and visitor economy conditions
Tourism and visitor assets	An impact 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.	An impact 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.	An impact 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.	An impact that would be unlikely to result in a noticeable difference to tourism and visitor assets in the LAI.

Potential effects

92. The level of effect of an impact on socio-economic, recreational and land use receptors was initially assessed by combining the magnitude of the impact and the sensitivity of the receptor. The level of effects presented in **Table 14.4** provides a guide to the decision-making process.

Table 14.4: Level of effects matrix

Sensitivity or value of resource or receptor	Magnitude of impact **High**	**Medium**	**Low**	**Negligible**
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Minor	Negligible
Low	Moderate	Minor	Negligible	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

93. Effects may be positive (beneficial) or negative (adverse). 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 impact magnitude levels are not clear or are borderline between categories or the impact is intermittent.

94. The level of effects matrix shown in **Table 14.4** 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.

Mitigation

95. 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, details of which are set out in **Technical Appendix 3.1: Outline Construction Environmental Management Plan (Outline CEMP)**. Any additional mitigation measures that would reduce the level of any significant effects are set out and considered prior to assessing residual effects.

Significance of effect

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

14.3.9 Statement of significance

97. The assessment approach has been to describe the baseline conditions, to identify likely effects from 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.

98. Any significant effects which would be direct, indirect, secondary, cumulative, short, medium and long term, permanent or temporary are examined and their significance assessed. These effects have been identified as being positive or negative.

14.4 Baseline conditions

99. The WSA for the assessment of socio-economic effects focuses on the Dumfries & Galloway and East Ayrshire administrative areas, although data for Scotland are provided for comparison as appropriate.

14.4.1 Population

100. According to the most recent mid-year estimates, the Dumfries & Galloway population stands at 148,900, the proportion of this population of working age (16-64) is 58.4 %. The East Ayrshire population stands at 122,000, with a higher working population of 62.3 %. The working population for both is lower than Scotland's average at 64.2 % (NOMIS a, 2019).

14.4.2 Labour market and supply chain

101. The Office of National Statistics (ONS) Annual Population Survey reports that there were 67,800 economically active residents in Dumfries & Galloway between April 2019 and March 2020, implying an economic activity rate of 5.6 %. The survey also reported that there were 58,700 economically active residents in East Ayrshire, implying an economic activity rate of 75.8 %. Both are similar to the rate for Scotland as a whole (77.1 %). Over the calendar year 2019 there were approximately 125,700 residents of the WSA in employment (NOMIS, 2020).

102. The average employment rate for Scotland stands at 74.5 % (NOMIS, 2019). The employment rate in Dumfries & Galloway is similar to this at 75.1%, whereas the employment rate in East Ayrshire at 72.1 % is slightly lower (NOMIS, 2020).

103. The unemployment rate in Dumfries & Galloway between April 2019 and March 202 was 2.9 %, 0.4 % lower than the average for Scotland as a whole (3.3 %) (NOMIS, 2020). The unemployment rate in East Ayrshire was 4.5 %, 1.2 % higher than the national average (NOMIS, 2020).

104. Economic inactivity (i.e. those of working age who are not employed or seeking work) is similar in Dumfries & Galloway (24.4 %) (NOMIS, 2020) and East Ayrshire (24.2 %) to Scotland as a whole (22.9 %) (NOMIS, 2020).

105. The level of self-employment in Dumfries & Galloway (12.1 %) and East Ayrshire (11.0 %) as of April 2019 to March 2020 is higher than the Scottish average (8.8 %) (NOMIS, 2020).

106. 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 14.5** (NOMIS, 2020). Dumfries & Galloway has higher than average proportions of its workforce in caring and leisure, skilled trades, process plant & machine operatives and elementary occupations compared with Scotland as a whole, and a lower than average proportion of its workforce in professional roles and administrative and secretarial. Skilled trades and process plant & machine operative occupations are likely to include skills and services that would be required for construction and operation of the proposed Development.

107. East Ayrshire has higher than average proportions of its workforce in managerial, directors and senior official positions, Administrative & secretarial and Skilled Trades compared with Scotland as a whole. Alongside a lower than average proportion of workforce in professional positions, associate professional & technical positions, caring & leisure, and process plant and machine operative roles.

Table 14.5 Employment by Occupation

Occupation	Dumfries & Galloway (%)	East Ayrshire (%)	Scotland (%)
1 Managers, directors and senior officials	8.6	9.7	9.4
2 Professional	18.3	15.5	21.5
3 Associate professional & technical	10.0	14.2	14.0
4 Administrative & secretarial	8.0	12.7	9.2
5 Skilled trades	14.1	13.2	10.5
6 Caring, leisure and other service	12.7	10.2	10.0

Occupation	Dumfries & Galloway (%)	East Ayrshire (%)	Scotland (%)
7 Sales and customer service	7.4	7.8	8.2
8 Process plant & machine operatives	7.6	5.0	6.2
9 Elementary	13.3	11.6	10.7

108. Degree-qualified (or equivalent) residents of working age account for 37.3% of the population of Dumfries & Galloway, and 38.7 % of the population of East Ayrshire, both of which are lower than the average for Scotland as a whole (45.3%). The proportion of the working age population with no qualifications is 9.0% in Dumfries & Galloway and 9.1% in East Ayrshire, lower than the average for Scotland as a whole (9.8%) (NOMIS, 2019).

109. According to the ONS Annual Survey of Hours and Earnings (ASHE) for 2019, average weekly gross earnings levels for residents of Dumfries & Galloway were £480.80, which is £96.90 lower than the Scottish average of £577.70. (NOMIS, 2019). The ONS ASHE also shows that the average weekly earnings for residents of East Ayrshire was £597.80, so £20.10 more than the Scotland average.

110. Data on an area's business population can be obtained from the ONS UK Business Counts data series, which is sourced from the Interdepartmental Business Register (NOMIS, 2018). This data source can be 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 14.6** provides the latest (2018) data on the structure of the local business base.

Table 14.6: Structure of the business population of Dumfries & Galloway and East Ayrshire 2018

Industry	Dumfries & Galloway	East Ayrshire	Scotland
	%	%	%
A : Agriculture, forestry & fishing*	n/a	n/a	n/a
B : Mining and quarrying	0.1	0.8	1.1
C : Manufacturing	10.5	7.5	7.2
D : Electricity, gas, steam and air conditioning supply	0.4	0.5	0.7
E : Water supply; sewerage, waste management and remediation activities	1.1	0.9	0.8
F : Construction	5.3	5.0	5.5
G : Wholesale and retail trade; repair of motor vehicles and motorcycles	17.5	12.5	13.9
H : Transportation and storage	4.4	3.8	4.3
I : Accommodation and food service activities	8.8	7.5	8.1
J : Information and communication	0.9	1.0	3.2
K : Financial and insurance activities	1.1	1.8	3.5
L : Real estate activities	1.6	0.8	1.3
M : Professional, scientific and technical activities	7.0	4.4	7.1
N : Administrative and support service activities	5.3	8.8	8.2
O :Public administration and defence; compulsory social security	4.4	8.8	6.3
P : Education	8.8	6.2	7.8

Industry	Dumfries & Galloway	East Ayrshire	Scotland
Q : Human health and social work activities	19.3	25.0	15.7
R : Arts, entertainment and recreation	2.6	3.1	2.8
S : Other service activities	1.8	1.8	2.1

*Data not recorded on NOMIS

111. The data in **Table 14.6** show that within the WSA the accommodation and food services sector, often associated with tourism, is similar to the average for Scotland as a whole.

14.4.3 Tourism Economy

112. In the period 2016-2018 annual average tourism revenue (domestic and overseas visitors) in Dumfries & Galloway amounted to £397 million, an increase of 18% from the previous period (2015 – 2017). Day visits comprised 61% of expenditure and overnight stays 39% (Visit Scotland, 2018).

113. The published Visit Scotland data for Ayrshire and the Isle of Arran do not distinguish between different parts of the area, although from local knowledge it would be expected that other parts of Ayrshire, especially along the coast, and The Isle of Arran, attract a greater proportion of tourism visits than East Ayrshire. This is assumption is supported by the fact that South Ayrshire, for example, has 10.9% of its businesses in accommodation and food services sector, well above the average for the WSA (NOMIS, 2018), compared with 7.5% in East Ayrshire. In the period 2016-2018 annual average tourism revenue (domestic and overseas visitors) in Ayrshire and the Isle of Arran amounted to £596 million, an increase of 9% from the previous period (2015 – 2017), and day visits comprised 65% of expenditure. The EAC website[5] states that tourism revenue in East Ayrshire in 2018 amounted to £95.6 million.

114. The Dumfries & Galloway Visitor Survey 2015-2016 (Visit Scotland, 2016) shows the most popular reason for visiting Dumfries & Galloway was for the 'scenery & landscape' (63%); 'holidayed here before and wanted to return' (43%) followed by 'to get away from it all' (41%) and the history & culture (35%). The same source for the combined region of Ayrshire and Arran shows the most popular reason for visiting the region was for the 'scenery & landscape' (68%); followed by 'to get away from it all' (36%) and 'holidayed here before and wanted to return' (34%).

14.4.4 Local Area of Influence

Recreational use of the Site

115. The land use at the Site is largely commercial forestry. There are no formal recreational facilities located within the Site itself, although tracks and other paths within the Site are used for informal recreational activities such as walking, horse riding, and cycling. The primary recreational asset within the Site is the Southern Upland Way, described below (paragraph 123) and there are a number of Core Paths, rights of way and Heritage Paths passing through the forest. Access rights under the terms of the Land Reform (Scotland) Act 2003 also apply.

Formal tourism and recreation assets

116. Formal tourism and recreational assets are generally businesses and/or attractions that charge an entry fee for admission or have a commercial element. There are limited numbers of such receptors within the LAI, with the majority of businesses that serve the tourism and recreational market such as shops, public houses and accommodation also providing a service to local residents and other businesses. The formal tourism and recreation receptors within the LAI are listed below and their locations are shown on **Figure 14.1 Socio Economic Receptors.**

- Sanquhar Tolbooth Museum;
- Sanquhar Castle;
- Drumlanrig Castle;
- Sanquhar Golf Club;
- Crawick Multiverse;
- New Cumnock Golf Club; and
- Clarks Little Ark (Petting Zoo).

[5] https://www.eastayrshirecommunityplan.org/Performance/EastAyrshirebyNumbers/EconomyandSkills/TourismInEastAyrshire.aspx

117. Drumlanrig Castle is located out with the LAI but is nevertheless included due to its proximity and regional importance as a tourist destination. Apart from Drumlanrig Castle, all the above receptors are recognised for their local or sub-regional importance only and are therefore of low to medium sensitivity. Drumlanrig Castle is considered of medium sensitivity as it is of regional importance.

118. There is also a potential tourism value to shops, pubs and other service providers that serve the local community, but also benefit from sales to visitors to the area. In the LAI, such service providers are concentrated in the communities along the A76 at New Cumnock, Kirkconnel and Sanquhar. These local service providers are of local importance and low sensitivity to the tourism economy.

Accommodation businesses

119. Approximately 32 accommodation businesses fall within the LAI, mainly clustered around the communities of Sanquhar, Moniaive and Thornhill. Full details are provided in **Technical Appendix 14.1.** Some of the accommodation businesses are also a combined accommodation and restaurant, one of which is the 4 star hotel and restaurant Blackaddie Country House Hotel.

120. None of the accommodation businesses identified are considered to be of more than local importance and their sensitivity is therefore low.

Informal tourism and recreational receptors

121. These receptors include routes and other land used for walking, cycling, horse riding and other informal recreation, together with visitor attractions that have no commercial element.

Walking

122. The Southern Upland Way is a promoted long-distance trail that passes through the Site for approximately 7 km. The Southern Upland Way is Scotland's first and only official coast-to-coast long distance route, running across the country from the Irish Sea to the North Sea. It is a 338 km long distance route, providing a coast to coast traverse of southern Scotland from Portpatrick, to Cockburnspath, and is one of Scotland's Great Trails. The Southern Upland Way is considered to be of national value and high sensitivity.

123. There is a bothy used by walkers and other visitors to the area located on the Southern Upland Way near Polskeoch, which is available for walkers and other visitors to use on an informal basis. Although not within the red line application boundary, the bothy is surrounded on all sides by the Site. The bothy is considered to be of local value and low sensitivity to the tourism economy.

124. The Southern Upland Way takes a short detour within the Polskeoch Forest to pass by Allan's Cairn, a monument to covenanters. The Cairn is considered to be of local value and low sensitivity to the tourism economy.

125. As the Southern Upland Way emerges from the southern edge of the Site near Colt Hill, the route passes close to one of the Striding Arch sculptures designed by renowned sculptor Andy Goldsworthy. There are four striding arches in the area south of the Site of which the Colt Hill arch is the most northerly; walks to the Striding Arches are promoted on the Dumfries & Galloway, Visit Scotland and other websites. Although the Southern Upland Way passes close to the Colt Hill arch, access is via a 600 m spur route. The Striding Arches sculptures are considered to be of regional value to the tourism economy and medium sensitivity.

126. Core Paths provide opportunities for walking, cycling, horse riding and other activities, for people of all abilities, though each Core Path is not necessarily suitable for all types of access or ability of user. There are four Core Paths that cross through the Site. Core Path 443 enters from the Sanquhar direction to the north and passes through the centre of the Site, exiting west of Colt Hill. For much of its length within the Site its route is shared by the Southern Upland Way. Core Paths 84 and 51 link into Core Path 443 within the Site from the north and east respectively. Core Path 84 links with Kirkconnel and Core Path 51 links with Tyron via Auchenbrack. Core Path 215 passes west-east through the centre of the Site where its route is shared by the Southern Upland Way.

127. The National Catalogue of Rights of Way (CROW) shows that DN25, DS15, DN159, DN160, DN161, DS244, DS245 and DS246 pass through the Site. DN25 and DS15 are recorded as 'rights of way' whilst the remaining routes are recorded as 'Other Routes'.

128. Elsewhere within the LAI there are three concentrations of Core Paths; these are located around Sanquhar, around New Cumnock, and in the area south of the Site centred on Benbrack, which is the location for another of the Striding Arch sculptures. Core paths are generally considered to be of local importance and low sensitivity, although their value for tourism purposes may be enhanced where they form part of a local network or provide opportunities for circular walks.

129. Within the LAI three routes are promoted by the Heritage Paths Project (Heritage Paths, 2019) for their historic interest, one of which, Sanquhar to Stroanpartick, shares the route of the Southern Upland Way through the Site. The other two routes are:

- Moniaive to Sanquhar Drove Road – a 19.3 km route identified as a drovers road which crosses the LAI to the east of the Site; and
- Old Road from New Cumnock to Dalquhairn – a 17.3 km road which links with the aforementioned Sanquhar to Stroanpartick path to the west of the site, and follows Glen Afton.

130. All trails, paths and routes are shown of **Figure 14.1 Socio-Economic Receptors.** Heritage Paths are considered to be of local to regional value and low to medium sensitivity.

131. The Land Reform (Scotland) Act 2003 conferred general access rights over much of rural Scotland. The lack of any designated or recorded paths in parts of the LAI, including within the Site, does not necessarily preclude the right of the public to use the area for recreational purposes including for walking, cycling and horse riding.

Cycling

132. There are no designated cycle routes within the LAI identified by Sustrans National Cycle Network (Sustrans, 2020). Mountain bikers may however use other routes such as Core Paths and the Southern Upland Way, as well as forestry tracks.

Horse riding

133. There are no designated horse riding trails or trekking stables within the LAI but Core Paths and other routes, including the Southern Upland Way, may be used by horse riders as stated on websites that the access rights extend to horse riding (SUW, 2020). Forestry tracks may also be used by horse riders, and the British Horse Society has advised that they are currently involved in a project to make the Southern Upland Way more multiuse accessible.

Dark Sky Park and Biosphere

134. The Galloway Forest Dark Sky Park lies over 10 km to the south west of the Site, outwith the LAI, and therefore is not considered as a socio-economic receptor. The Site is over 10 km from the Buffer Zone to the Galloway and Southern Ayrshire Biosphere, but within the Transition Area. The Biosphere Partnership Board issued a Windfarm Position Statement in 2016, stating "*it is the view of the (Galloway and Southern Ayrshire) Partnership that wind farm developments within the Biosphere could be acceptable in the transition zone, where substantial community engagement has demonstrated that the majority of communities are supportive of the proposed development and it can be shown that the environmental impact of the development is minimal and effective mitigation can be achieved*."

135. The Biosphere is developing a brand image as well as key visitor attractions, which are mainly focussed at present in the more southern parts of the Biosphere. None of the communities within the LAI are designated as Biosphere communities. The Biosphere website does signpost a small number of existing visitor attractions within the LAI such as Sanquhar Tolbooth Museum and the walking trail at Cairnsmore of Carsphairn. Due to the low key nature of the Biosphere marketing in the Transition Area, it is considered that, currently, the Biosphere designation only marginally reinforces the existing marketing of such attractions and therefore does not have a marked impact the visitor economy of the LAI. Although the popularity of the Biosphere for visitors is likely to increase in future, it is uncertain as to how this would impact on the visitor experience. The Biosphere is therefore not considered as a socio-economic receptor for the LAI.

Events

136. Ultra Great Britain events host a number of 50, 100 and 200 mile marathons across the UK. Ultra Scotland 50 and Ultra Scotland 100 both follow the route of the Southern Upland Way starting in St John's Town of Dalry which is just south of the LAI. The races then follow the Southern Upland Way northwards, passing through the Site. The races take place twice a year, on a Saturday in spring an autumn. The events are considered to be of regional importance and medium sensitivity.

14.5 Assessment of effects

137. This section considers both economic effects for the WSA and effects that may be experienced in respect of local recreation and tourism receptors within the LAI, for both the construction and operational phases.

14.5.1 Potential construction effects on the economy

138. During the 22-month construction phase of the proposed Development there would be economic effects resulting from expenditure on items such as Site preparation, access roads, purchase and delivery of materials, plant, equipment and components. Information provided by SPR, based on experience at other renewable energy developments in Scotland, indicates that there is expected to be a peak on-site workforce of approximately 150 workers; average workforce numbers over the 22-month construction project are expected to be around 50. Some of this workforce would be obtained from the local labour market within the WSA with most of the remainder likely to be sourced from elsewhere in Scotland. The remainder of this section sets out to quantify the likely benefits to local and national jobs and the economy based on the proportion of construction expenditure that would take place within the local and national economy.

139. The main element of the proposed Development comprises 21 wind turbines with an anticipated total installed capacity of 126 MW. In addition, there would be a 31.5 MW energy storage facility. Based on SPR's experience on eight existing windfarms in south west Scotland – detailed in the BVG Associates Report (September 2017) 'Economic Benefits from Onshore Wind'– a series of assumptions have been made about the breakdown of the total development and capital expenditure required to develop and install the proposed wind turbines. Overall expected capital expenditure would amount to approximately £183 million[6]. A breakdown of this estimated total is provided in **Table 14.7**.

Table 14.7 Expected investment (excluding energy storage element)

Item	Description	Approximate investment cost (£m)
Pre-construction development expenditure	The processes up to the point of financial close or placing firm orders to proceed with construction, and project management costs incurred by SPR	9
Turbines/plant	The activity by wind turbine manufacturers and their suppliers, covering nacelle component manufacture and assembly and blade and tower manufacture. It includes transport, installation and commissioning. It excludes the turbine service agreement	115
Civil works	The activity by civil contractors and their suppliers; covering roads and drainage, crane pads, turbine foundation, meteorological mast foundations, cable trenches and buildings for electrical switch gear, SCADA equipment and its installation, and a maintenance and spare part facility	31
Energy storage	Battery storage units and compound	15
Electrical works	The activity by electrical contractors and their suppliers, covering cables, electrical switch gear, protection and control system, maintenance facilities and grid connection.	13
Total		183

Gross employment and GVA estimates

140. In estimating the amount of construction expenditure that is spent within: (1) the WSA and (2) Scotland, a series of assumptions set out in **Table 14.8** has been used as the basis for modelling. These assumptions are based on a combination of the experience on the existing projects in south west Scotland analysed in the BVG report (BVG Associates, 2017) plus

[6] This estimate excludes any importation of aggregates for construction purposes. If stone is not available from Site borrow pits, importation from local quarries could amount to several hundred thousand tonnes at £5 - 10 per tonne.

previous experience with windfarms commissioned by other developers elsewhere in Scotland. (Note: column totals may not sum exactly due to rounding of decimals).

Table 14.8: Expected location of construction and development expenditure (wind turbine element)

Item	WSA		Scotland	
	Expected spend (£m)	% of category total	Expected spend (£m)	% of category total
Development expenditure	2.2	25.0%	6.4	74.4 %
Turbines	0.9	0.8%	2.2	1.9 %
Civil works	10.8	35.0%	20.2	65.6 %
Electrical works	0.6	4.5%	2.4	18.1 %
Total	14.5	8.6%	31.2	18.6 %

141. Applying the above assumptions to the breakdown of expected expenditure from SPR set out in **Table 14.8**, it is expected that construction phase expenditure of approximately £14.5 million (approximately 8.6% of the overall total) would be spent in the WSA. An estimated £31.2 million (18.6 % of the overall total) would be expected to be spent in Scotland as a whole.

142. Additional assumptions covering the energy storage element are based on supplementary information provided by SPR.

143. For the energy storage element of the proposed Development it is estimated that £0.3 million (2.0 %) would be spent within the WSA. An estimated £0.5 million (3.0 %) would be expected to be spent in Scotland as whole.

144. Estimates of the expected direct construction phase employment implications of the proposed Development have been derived using the information on anticipated project expenditure set out in **Table 14.8**, as well as assumptions obtained from the following sources:

- employment and GVA multipliers for Scotland, obtained from Input-Output tables for Scotland published by the Scottish Government;
- employment and GVA multipliers for the UK obtained from Input-Output tables published by the UK Government (BEIS); and
- ratios of turnover per unit of GVA and GVA per employee have been derived from Scottish and UK Government data.

145. Utilising all of the sources summarised above, the estimates of direct gross employment that would be expected to occur if the proposed Development proceeds across both the WSA and Scotland as a whole are set out in **Table 14.9**.

Table 14.9: Estimates of gross construction phase employment (person-years)

Area	Person-years
WSA	116.3
Scotland (including WSA)	301.9

146. It is estimated that 116.3 gross person-years of employment could be generated in the WSA economy during construction. The equivalent total for Scotland as a whole is 301.9 person-years.

147. Turning now to Gross Value Added (GVA), a total of £8.1 million of GVA additional value is expected to be generated during construction in the WSA economy. The equivalent total for Scotland it is £21.6 million. These figures represent the value created in the economy resulting from expenditure in construction of the proposed Development.

148. These estimates are summarised in **Table 14.10.**

Table 14:10: Estimates of construction phase gross value added (£ millions)

Area	GVA (£ million)
WSA	8.1
Scotland (including WSA)	21.6

149. The assessment of effects at the spatial level of Scotland are a 'worst case scenario'. This is because it is assumed for the purpose of this assessment that the turbine towers would not be procured from a Scotland-based supplier. If a procurement decision was made to procure towers from within Scotland the associated benefits to the Scottish economy (in terms of jobs and GVA) would be appreciably greater than the values presented in the table above.

150. In particular, if the turbine towers were procured from a supplier based in Scotland the amount of gross employment associated with the construction phase at the spatial level of Scotland would be estimated to increase from 301.9 person-years to 469.4 person-years, whilst the associated GVA would be expected to increase from £21.6 million to £33.4 million.

Net employment and GVA estimates

151. The focus in the assessment set out above has been on gross effects at two spatial levels (WSA and Scotland as a whole). In order to understand the potential net effects, it is necessary to take into account a number of 'additionality' concepts. Additionality takes account of the fact that the full range of goods and services required for a development may not be available within a certain area or, if available, there may be capacity constraints that result in displacement of availability for other businesses. The net effects of the proposed Development on employment and GVA would be lower than the gross effects as a result of applying the additionality factors.

152. The estimation of net effects takes into account the following additionality factors:

- **Leakage**: is the proportion of project outcomes that benefit individuals or organisations located beyond the relevant area of impact. Leakage is generally higher at a local level, although it also varies by the nature of development type; and
- **Displacement**: is an estimate of the economic activity hosted by the Site that would be diverted from other businesses in the WSA. This again varies by the nature of development type. However, construction projects of relatively limited duration are usually regarded as having very little if any displacement impact.

153. With respect to leakage, the specific assumption used here is derived from local commuting data obtained from the 2011 Census (NOMIS, 2011). The Census found that 69 % of workers whose workplace was located in the WSA were also residents of the WSA. The residual 31% or so workers were resident of other parts of the UK, almost all of whom reside elsewhere in Scotland.

154. These data have been used to calculate the following estimates for leakage:

- WSA: 31 %; and
- Scotland: 0.5 %.

155. It is assumed that local displacement would amount to 5.0 %. Higher levels of displacement are assumed at national (Scotland) level (15 %).

156. In addition to considering the effects of leakage and displacement, which act to reduce the value of the project within the local economy, consideration must be given to estimating the additional jobs and economic value that would be created in the local economy through the (positive) indirect and induced effects of subsequent rounds of direct expenditure in the economy. Values for multipliers vary according to the size and complexity of the economy under consideration and are generally lower at a more localised level. The assumptions used in this assessment with respect to multiplier values are consistent with values found in the latest Scottish Input-Output tables.

157. The additionality assumptions used in this assessment are summarised in **Table 14.11.**

Table 14.11: Additionality assumptions

Additionality factor	WSA	Scotland
Leakage	31.0 %	0.5 %
Displacement	5.0 %	15.0 %
Multipliers	0.29	0.44

Source: *Leakage assumption based on 2011 Census data*

158. The use of these additionality assumptions, taking account of both negative factors (leakage and displacement) together with positive multiplier factors, to estimate the **net** additional effects of the construction of the proposed Development results in the net employment and GVA set out in **Table 14.12.**

Table 14.12: Estimates of net additional construction phase effects

Area	Net person years of employment	Net GVA (£millions)
WSA	98.3	6.9
Scotland (including WSA)	367.7	26.2

159. In net terms, the proposed Development is expected to support 98.3 person-years of employment benefiting residents of the WSA. Assuming a 22-month construction period, this is equivalent to 90.1 temporary FTE jobs for residents of the WSA.

160. As was the case with the gross effects considered in the previous sub-section, the above assessment of net effects at the spatial level of Scotland are a 'worst case scenario'. This is because it is assumed for the purpose of this assessment that the turbine towers are not procured from a Scotland-based supplier. If a procurement decision was to be made to procure towers from within Scotland the associated net benefits to the Scottish economy (in terms of jobs and GVA) would be appreciably greater than the values presented in the table above.

161. In particular, if the turbine towers were procured from a supplier based in Scotland the amount of net employment associated with the construction phase at the spatial level of Scotland would be estimated to increase from 367.7 person-years to 571.7 persons years, whilst the associated GVA would be expected to increase from £26.2 million to £40.6 million.

162. Returning to the worst-case scenario where towers are not procured from a Scottish supplier, over the calendar year 2019 there were approximately 125,700 residents of the WSA in employment (NOMIS, 2020). The addition of employment opportunities equivalent to 90.1 FTE jobs to this total would increase the total number in employment by approximately 0.07 %. The effect on the total local employment base is therefore considered to be negligible (but positive) and so not significant.

163. During the construction phase the local economy would also be expected to be boosted by a total of £6.9 million of net additional GVA during the construction period. In annual terms this is equivalent to a boost to local output of around £3.8 million per annum.

164. Based on data sourced from ONS GVA reference tables for 2016 (updated to 2020 prices using GDP price deflators published quarterly by HM Treasury), the value of economic output (GVA) for the WSA was approximately £4.7 billion. The addition of approximately £3.8 million of GVA per annum to this total would increase the size of the local economy in output terms by approximately 0.08% during the construction phase. This effect on local GVA is considered to be positive but negligible and not significant.

165. At the national level, the proposed Development would be expected to support approximately 368 person-years of employment benefiting residents of Scotland and would generate approximately £26.2 million net GVA. This effect on national employment and GVA is considered to be negligible (but positive) and not significant.

166. **Table 14.13** provides a summary of the above estimates for net employment and GVA expected from the proposed Development.

Table 14.13: Summary of construction benefits

Area	Net employment		Net GVA	
	Person years	FTE (based on 22-month construction period)	Total net GVA (£ millions)	Annual net GVA (£ millions)
WSA	98.3	90.1	6.9	3.8
Scotland (including WSA)	367.7	337.1	26.2	14.3

Supply chain and procurement

167. Procurement of goods and services can have an important effect on the local economy. The potential level of expenditure calculated above shows that, for the proposed Development, local civils contract spend (within the WSA) could be approximately £10.8 million over the 22-month construction period. This estimated level of local expenditure is based on recent experience on projects undertaken by SPR.

168. The types of supply chain companies that could benefit from this expenditure is wide ranging, and is likely to include the following:

- haulage and transport services;
- traffic management;
- materials supply, e.g. aggregates;
- plant and equipment hire;
- vehicle servicing / tyres;
- forestry services;
- fencing;
- fuel;
- security;
- waste management;
- building construction, electrical, plumbing, roofing, flooring, plastering, decorating and joinery services;
- signing and lighting;
- telecommunications;
- drainage;
- planting and seeding;
- cleaning;
- catering; and
- accommodation.

Embedded measures (WSA)

169. SPR is committed to employing good practice measures with regard to maximising local procurement and would adopt established good practice measures such as those set out in the Renewables UK Good Practice Guidance 2014: 'Local Supply Chain Opportunities in Onshore Wind' (Renewables UK, 2014). SPR has a strong track record of developing onshore renewable energy developments in Scotland, and experience from previous construction projects is that expenditure in local goods and services is widely spread and makes a difference to existing businesses.

170. SPR works with a variety of Tier 1 / Tier 2 contractors who are actively encouraged to develop local supply chains throughout the local area, and work with subcontractors to invest in training and skills development. SPR runs 'Meet the Developer / Contractor Days'. Local companies (especially Small and Medium Enterprises (SMEs)) would be invited to attend these days, which would be held locally, to meet with representatives across the SPR development, construction and operational teams, as well as SPR's Principal Contractors. This provides SPR and contractors with the opportunity to brief local businesses on the types of contracts being let during the lifetime of the proposed Development.

171. In terms of a quantitative assessment of effects, the provision of goods and services by local businesses (within the WSA) has been taken into account in the assessment of employment and GVA estimates reported in the previous section. 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 after consent is granted. However, it is evident from recent SPR experience in

Scotland (including the eight windfarms in south west Scotland subject of the BVGA report on economic benefits (BVG Associates, 2017) that suppliers of a wide range of goods and services within East Ayrshire, Dumfries & Galloway and Scotland as a whole would obtain benefit from the proposed Development.

Proposed Mitigation (WSA Construction)

172. As no significant adverse effects have been identified, there is no requirement for mitigation.

Residual Effects (WSA Construction)

173. As no significant adverse effects have been identified there are no residual effects.

Cumulative Effects (WSA Construction)

174. The assessment of the potential effects of the proposed Development has so far been undertaken in isolation, that is without reference to the potential pipeline of other renewable energy developments could be constructed in the WSA over a similar time period to that envisaged for Euchanhead. Within the WSA there is currently 3,000 - 4,000 MW (3-4 Gigawatts) of proposed renewable energy development, some of which is expected to be built within a similar timeframe to the proposed Development.

175. If the proposed Development were to proceed simultaneously with several other renewable energy schemes in the WSA, then there is a possibility that the effects of the project in-combination with other similar developments occurring simultaneously could raise the aggregate effects to an extent where the effect on the local employment and/or GVA generation could be considered to be a significant positive effect on the local economy. Local businesses may decide to expand, or skilled workers may choose to start a new business if they expect that there is a sustainable flow of work in the pipeline, potentially in response to the increase in demand raising the service supply price. This would increase the value of work undertaken in the WSA and incur potential economic benefits. The type of services that may be expected to grow in response to increased demand would include plant hire, accommodation, aggregates supply and other services.

176. The potential to capitalise on such future development has been enhanced in recent months through the creation of SOSE, with its focused remit for enhancing skills and opportunities for employment in the region, and Scottish Government's drive to push forward both the Climate Change agenda and the potential for green jobs to contribute to a green post-Covid recovery. SPR welcomes the creation of the new SOSE organisation and is committed to engaging with it to understand how it can help crystallise potential employment opportunities, and work with SOSE as a serious stakeholder in driving transformational changes for the local economy. SPR has a track record of engaging with similar organisations elsewhere such as ALIENERGY, the energy agency for Argyll, Lomond and the Islands, where SPR has an ongoing commitment to education, skills and training to help develop careers for local people in the energy sector.

177. Whilst a precise conclusion is not possible without additional l information for other projects, in particular on the scale and direction of effects of construction expenditure on other projects, it is reasonable to assume that the local economy would take the opportunity to respond positively to the surge in work available. The likelihood is that, within a reasonable travel to work distance, there would be an ongoing pipeline of work available for new businesses and employees as a result of renewable energy projects being constructed in tandem. This would result in a beneficial effect on construction employment and result in wider benefits through multiplier effects to the local economy.

14.5.2 Potential operational effects on the economy

178. Once operational, the proposed Development would require a team of personnel to provide servicing, maintenance, repairs and other operational support. Based on information obtained from SPR and through experience of this type of work on similar projects, it is estimated that between 5 and 8 engineers and technicians (full time equivalent) would be needed to provide operational support to the project. All of these staff are expected to be based within the study area.

179. 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 project during its operational phase. Examples of such supply chain activity would include the procurement of:

- site and building maintenance and cleaning (e.g. electricians, painters, roofing and flooring contractors, etc);
- waste management and recycling to provide services for hazardous and non-hazardous materials;

- civil engineering contractors for road maintenance, ditching, crane pad repairs, grass cutting, weed control, road furniture and gate repair etc;
- maintenance of fencing;
- fuel supplies;
- plant and equipment hire;
- crane companies to provide lifting services;
- snow clearing;
- supply of consumable items (e.g. lubricants and oils, spare parts, office supplies, etc.);
- statutory turbine inspections;
- catering for meetings and visits; and
- in addition, local shops, cafes, accommodation providers and hotels often experience an increase in business during the operational phase (e.g. extra technicians onsite for during maintenance and servicing).

180. In order to convert gross direct and indirect jobs into net additional jobs, assumptions are needed for leakage and for the potential value of induced effects. For this project the following assumptions are used:

- Leakage: it is assumed that 31 % of jobs benefit non-WSA residents. This assumption is based on Census 2011 commuting data for the district.
- Displacement: it is assumed that displacement effects (e.g. jobs lost in other local businesses as a result of the project) are zero
- Induced effects: it is assumed that the value of the induced multiplier at the spatial level of the WSA is 9 %. This is a standard assumption for assessments for this type of development project.

181. Based on normal assumptions for leakage and the potential knock-on effects of expenditure multipliers (induced effects only), it is estimated that between 5 and 8 net additional (FTE) jobs would be created at the spatial level of the WSA during the lifetime of the operational phase of the project and a similar number to the Scottish economy as a whole.

182. Over the calendar year 2019 there were approximately 125,700 residents of the WSA in employment (NOMIS, 2020). The addition of between 5 and 8 permanent jobs to this total would be positive but negligible. The effect on the local employment base is therefore considered to be negligible and so not significant.

183. The annual effects on economic output (measured by Gross Value Added) during the operational phase of the project have been estimated based on the average performance of other onshore windfarms developed by SPR. The assessment has been undertaken at two spatial levels: the WSA and for Scotland as a whole.

184. Although the application for the proposed Development is for consent in perpetuity, the overall operational impacts of the proposed Development are assessed on the basis of a nominal 40-year operational period. This would generate local GVA worth a cumulative total of just under £75 million (2020 prices, undiscounted). This total is comprised of:

- £38.5 million of direct GVA (51 % of the total);
- £25.7 million of indirect (local supply chain) GVA (34 %); and
- £10.6 million of additional GVA attributable to downstream multiplier effects in the local economy (14 % of the total).

185. **Table 14.14** sets out the operational results and also the average annual effects over the assumed 40-year operational period for the purposes of analysis.

Table 14.14: Operational GVA £m (undiscounted)

Local area results	Direct	Indirect	Induced	Total
'Lifetime' GVA	38.5	25.7	10.6	74.8
Annual GVA	0.96	0.64	0.27	1.87

186. **Table 14.15** below sets out similar results, but this time at the spatial level of Scotland as a whole. Here, the (undiscounted) total operational period lifetime effects are estimated to amount to just over £205 million (2020 prices, undiscounted), comprising:

- £100.7 million of direct GVA (49 % of the total)
- £67.1 million of indirect GVA (33 %)
- £37.3 million of additional GVA attributable to downstream multiplier effects across the Scottish economy (18 % of the total).

Table 14.15: GVA £m (undiscounted)

Scotland results	Direct	Indirect	Induced	Total
'Lifetime' GVA	100.7	67.1	37.3	205.1
Annual GVA	2.52	1.68	0.93	5.13

187. The level of effects on both the local (WSA) economy and Scotland, as a whole, would be negligible (but positive) and not significant.

Community Benefit and Community Investment

188. For the proposed Development, SPR is committed to offering a package of community benefits to local communities that could include not only the opportunity for community benefit, but also for local communities to invest directly in the operational development. SPR's total contribution to date from renewable energy projects in Dumfries & Galloway and East Ayrshire is more than £15.5 million. In the immediate vicinity of the Site, funds have been used for the following schemes:

- Tynron Community Hall Upgrades & Car Park repairs;
- community purchase of local property to let to new residents;
- replacement of old fencing at Moniaive Primary School with recycled plastic fencing;
- contribution to salary at KPT development trust;
- installation of Solar Panels at Glencairn Green Bowling;
- Penpont CC Purchase of large Marquee for Gala event;
- contribution to local upgrades in Kirkconnel & Kelloholm; and
- sponsorship of local youth groups.

189. SPR has started to engage with local stakeholders to identify which communities would be appropriate to participate in these benefits, keeping local communities informed as the project progresses and, in line with Scottish Government guidance, providing information in a timely manner so the communities are able to fully assess the opportunity.

190. SPR is working with local stakeholders and other industry representatives to ensure that renewable energy provides the potential to boost the local economy and create opportunities for local people.

191. It is expected that any proposed income streams from these community benefit payments and profit from investment in the project could be used to support community projects within the local area. Local communities would have the flexibility to choose how the money is spent and prioritise it for the things which matter most to them. Some of the host communities have prepared Community Action Plans in recent years which give an indication as to the type of initiatives that might be considered important within the local area, including the following:

- improve employment opportunities, including creating a "cottage industry model" and developing rural skills;
- opportunities for green energy turbine repair and maintenance apprenticeships;
- improve branding and town signage and interpretation;
- promote town as a walking place, including walking festival and form new core paths;
- improve the town and natural environment;
- focus on tourism including promotion of connection to the Southern Upland Way;
- revitalising local main street;
- developing business starter units and job club; and

- improve and upgrade paths and produce promotional material.

192. Benefits would accrue from the scale and nature of the proposed income streams associated with the proposed Development and, depending on the choices made, could have a lasting positive effect on access to resources, improvement to local amenities and the quality of life of local residents as well as economic benefits. The long-term nature of the income would allow the community to plan ahead, to draw in other sources of match funding to maximise the benefits and investment projects could be designed to match local priorities.

193. Whilst the quantum of funding that would be available is currently uncertain, it is clear from the level of community funding that has been delivered to date by other SPR renewable energy projects in the WSA, which totals more than £15.5 million, that the proposed community investment measures could offer real socio-economic benefits to the local community and do have the potential to be significant.

Effects on tourism and visitor economy

194. SPR's experience suggests that windfarm development can have a beneficial effect on tourism, attracting additional visitors to the area. Whitelee Windfarm straddles parts of East Renfrewshire, South Lanarkshire and East Ayrshire council areas, and comprises 215 turbines, making it the largest operational onshore windfarm in Scotland. According to the East Renfrewshire Council website the visitor centre has received over one million visitors from opening in September 2009 (although visitors to the site as a whole far exceed this number) and has achieved a 4 star visitor attraction by Scottish Tourist Board, and a Gold award from the Green Tourism Business Scheme. Whitelee demonstrates that turbines and the development around them can in fact be visitor attractions in their own right.

195. To evaluate current evidence on the impact of windfarms on tourism and the tourism economy, a review was undertaken of relevant published literature.. This provides context to the assessment of the effects of the proposed Development on specific tourism and recreation receptors.

196. This section provides a summary of the review findings, which is undertaken in the context of the acknowledged importance of tourism to the Scottish economy, and the recognition that the character and visual amenity value of Scotland's landscapes is a key driver of tourism in Scotland. The VisitScotland Visitor Experience Survey 2015/16 confirms the basis of this argument with its ranking of the key factors influencing visitors when choosing Scotland as a holiday location. In this study, over half of visitors rated scenery and the natural environment as the main reason for visiting Scotland: a majority of visitors to Scotland were attracted by the landscape, scenery and the wider environment, which supports important visitor activities such as walking, cycling, wildlife watching and visiting historic sites.

197. A key source of data on the economic impact of windfarms on tourism in Scotland is the 2008 Moffat Report (Moffat Centre, 2008), commissioned by the Scottish Government. This study considered whether there would be any reduction in tourism employment and income for Scotland, as a whole, as a result of the impact of windfarms on tourism and concluded that the negative impact of windfarms on tourism at national level is small and any reduction in employment in tourism would be far less than the numbers directly employed in the wind power industry. Even using a worst-case scenario, the impact of windfarm applications would be very small, and would be more than balanced by the economic benefits of windfarm development.

198. The study also found that large single developments are preferable to a number of smaller developments as it is the basic intrusion into the landscape that generates the initial loss, rather than subsequent developments on the same site.

199. ClimateXChange was asked by the Scottish Government in 2012 to review evidence published since the Moffat Report and to examine what more recent research has to say about the impact of windfarms on tourism in Scotland. The report (ClimateXchange, 2012) concluded that there is no new evidence to contradict the earlier findings that windfarms have little or no adverse impact on tourism in Scotland.

200. Subsequent studies have reported similar findings. One of the most recent is the report by BiGGAR Economics on Wind Farms and Tourism Trends in Scotland, published in October 2017 (BiGGAR Economics, 2017), at which time installed onshore capacity had risen from 2 gigawatts (GW) in 2009 to 5.3 GW in 2015. During this time employment in the sustainable tourism sector also rose by 15% in Scotland as a whole. Tourism in Dumfries & Galloway rose by 13.0 % similar to the national average, whilst experiencing a relatively high level of growth in onshore wind (140%).

201. The BiGGAR study specifically addressed the expectation that any impacts associated with a windfarm development are most likely to be felt strongest in the immediate vicinity of the windfarm. An analysis of the levels of employment in the sustainable tourism sector in the immediate vicinity of onshore wind developments did not find any evidence of these areas being adversely affected. On the contrary it was found that the tourism sector in the majority of areas surrounding windfarms grew faster than in the local authorities where they were situated.

202. Although the BiGGAR study did not suggest that there is any direct relationship between tourism sector growth and windfarm development, it does show that windfarms do not cause a decrease in tourism employment either at a local or a national level.

203. The overall conclusion of this review is that published national statistics on employment in sustainable tourism demonstrate that there is no relationship between the development of onshore windfarms and tourism employment at the level of the Scottish economy, either at local authority level or in the areas immediately surrounding windfarm development. Therefore, the likely effect of the proposed Development when operational on the tourism and visitor economy is assessed as negligible and not significant.

Embedded measures (WSA)

204. SPR would seek to secure positive benefits for the local economy by encouraging the use of local labour, manufacturers and suppliers where possible during the operational phase. The majority of jobs during the operational phase would be related to turbine maintenance and civils maintenance works. SPR runs a graduate trainee scheme which lasts for two years and involves on the job training and placements in various parts/locations of the ScottishPower group including Renewables.

Proposed Mitigation (WSA Operational)

205. As no significant effects have been identified, there is no requirement for mitigation.

Residual Effects (WSA Operational)

206. As no significant effects have been identified there are no residual effects.

Cumulative Effects (WSA Operational)

207. The potential for beneficial cumulative effects is considered likely to occur during the operational phase, as the economy of southern Scotland generally continues to capitalise on the potential of its natural wind resources to develop green jobs. As noted with regard to cumulative construction effects, the potential to capitalise on such future development has been enhanced in recent months through the creation of SOSE and Scottish Government's drive to push forward both the Climate Change agenda and the potential for green jobs to contribute to a green post-Covid 19 recovery.

208. It should be noted that the economic assessment with regard to both construction and operational effects has been undertaken on the basis of historical evidence of the proportion of expenditure that would be expected to flow into the economy of the WSA. Over time, as discussed in the paragraph above, it is likely that increased investment in skills and training will lead to a greater proportion of economic benefits being realised within the WSA. As the proposed Development is expected to commence construction in 2024, there is sufficient time available for improvements in value retention to take effect.

14.5.3 Potential construction effects on local recreational and tourism receptors

Land use

209. The Site comprises primarily commercial forest that is managed by Forestry and Land Scotland on behalf of the National Forest estate, with part of the Site to the west of Polskeoch Forest and along proposed Access Route A being in agricultural land (moorland). Effects of the proposed Development for felling, restocking and forest management practices are described in **Technical Appendix 3.2: Forestry**.

210. Commercial forests are dynamic and their structure continually undergoes change due to normal felling and restocking by the landowner; natural events, such as windblow, pests or diseases; and external factors, such as a renewable energy developments. The Applicant is committed to providing appropriate compensatory planting to mitigate the loss of woodland area, as described in **Technical Appendix 3.2**.

211. Effects on informal recreation uses within the Site are assessed below with regard to recreational assets and activities. The principal recreation and tourism use within the Site is the use of the Southern Upland Way for walking and other recreational activities.

Tourism and recreation assets

Formal tourism and recreation receptors

212. Accommodation businesses in the LAI are expected to benefit from construction if workers seek accommodation in the local area. Similarly, shops, restaurants and other service providers would be expected to benefit from workers using these businesses during the construction period. The main focus of businesses that would derive value from the construction phase are located in communities along the A76 (New Cumnock, Kirkconnel, and Sanquhar).

213. Service providers including accommodation and other tourism businesses that are located close to the access route to the Site may experience adverse effects as a result of construction traffic passing the property. Within the LAI construction traffic effects are most likely to occur along the section of the route between New Cumnock and the Site entrances, both of which lead from the A76. Proposed Access Route A uses a shorter stretch of the A76 and avoids passing through Kirkconnel and Sanquhar. A detailed description is provided in **Chapter 12: Access, Traffic and Transport** which also provides an assessment of effects on road users and other sensitive receptors.

214. The Access, Traffic and Transport assessment takes account of good practice mitigation measures to minimise impacts of construction traffic on other highway users, including users of nearby businesses. Mitigation is proposed in the form of a Construction Traffic Management Plan (CTMP) to actively mitigate the effects on vulnerable road users including cyclists and walkers. An outline CTMP is provided as **Technical Appendix 12.2: CTMP.**

215. The purpose of the outline CTMP is to provide preliminary details of proposed traffic management measures and associated interventions that would be implemented during the construction phase of the proposed Development in order to minimise disruption and ensure safety. The outline CTMP would be supplemented with additional information as appropriate by SPR's appointed contractor(s), prior to commencement of construction activities. The CTMP would be used during the construction phase of the proposed Development to ensure traffic to, from and within the Site is properly managed.

216. The Access, Traffic and Transport assessment concludes that, subject to the proposed mitigation measures, construction traffic would not have a significant effect on road use including community severance and road safety along the A76 where the majority of socio-economic receptors are located.

217. As the sensitivity of the accommodation and tourism businesses within the LAI is low, and the magnitude of adverse effects would also be no greater than moderate due to the proposed traffic management measures described in the outline CTMP, the level of effect on businesses along the construction traffic route would be low (adverse) and not significant. This effect would be further reduced if these receptors obtain additional income from construction workers staying in the area. The impact on other businesses in the LAI unaffected by construction traffic would be beneficial, although as the sensitivity is low the overall level of beneficial effect is not expected to be more than negligible. Beneficial effects on individual businesses may be higher especially where they are regularly used by construction staff, as this would afford them regular income that is not seasonally dependent, but until contracts are let and construction commences it is not known which businesses would benefit.

Informal tourism and recreational receptors

218. The Southern Upland Way passes through the Site and sections of it would be used by construction traffic within Polskeoch and Shinnelhead Forests where it shares the main forestry road which is currently used for timber haulage. The section of the Southern Upland Way that would be used by construction traffic therefore would require temporary closure for a period of several months during the construction phase although diversion/closure would only be as and when required during the construction process. Embedded measures described in **Chapter 3: Description of the proposed Development** and shown on **Figure 14.2** provide for walkers and other recreational users of the Southern Upland Way to have use of an alternative route around the western boundary of the Site. The proposed management measures would be further developed in the Access Management Plan that is proposed as a condition attached to any consent**.**

219. The alternative route would be potentially beneficial for recreational users in that it offers more open views than is available from the heavily forested route within Polskeoch Forest, although a low adverse impact would arise from the lack of a direct

access to Allan's Cairn from the north during periods when the designated route is closed temporarily to recreational users. However, it will be possible to maintain access to Allan's Cairn from the west, near High Countnam, even during the period of temporary diversion, subject to safety measures being in place at crossing points with tracks used by construction traffic. The alternative route for the Southern Upland Way would not have any impact on access to the Colt Hill Striding Arch near the southern boundary of the Site.

220. It is likely that some users of the Southern Upland Way would consider the construction activities to have an adverse impact on their enjoyment of the route, although others may find the activities of interest. The alternative route through Polskeoch Forest is expected to be welcomed by some users due to the more open character of the landscape and opportunities for long distance views.

221. The Southern Upland Way is one of Scotland's Great Trails and is considered to be a receptor of high sensitivity as it is not only a recreational asset but also has a value to the tourism economy. The nature of the impacts during construction would be partly beneficial and partly adverse, depending to some extent on the perception of individual users.

222. The impacts would be incurred intermittently for a temporary period of up to 22 month as and when required during the construction process. The impact on this receptor overall is assessed as low (adverse) due to the intermittent and temporary nature of the effect, which would affect a relatively short section of the overall route. As the value of the receptor is high, this would give rise to a moderate level of effect. A moderate level of effect may be significant. In this location, where users of the Southern Upland Way are regularly subject to short term closures and disruption of the route through the forest is a familiar experience due to forestry operations, the effect is considered unlikely to be significant.

223. There is a general right of access over most rural areas in Scotland and it is therefore to be expected that members of the public may use other parts of the Site for walking, cycling and horse riding. Public access across the Site would need to be managed during construction for safety reasons, and recreational users may need to be excluded from parts of the Site for periods of time, other than along the Core Paths and Rights of Way which will be kept open at all times except when temporary measures are in place for safety reasons. Any temporary closures would need to be agreed with the Council's Access Officer, including provision of alternative routes, and appropriate legal measures put in place. Measures for ensuring public safety during construction will be set out in the Access Management Plan and periods of exclusion would be kept to the minimum necessary for safe working. The Access Management Plan will set out measures to ensure that recreational users of the Site are informed of the construction work and directed into safe areas where there would be no potential conflict with plant or machinery. .

224. Any suspension of access rights would only apply to areas where construction operations are active, rather than the whole of the Site, and will be kept to the minimum area and the minimum duration that is reasonable and practicable. Given that such suspension of access rights would be temporary, already commonly occur for forestry operations and given alternatives for public access in the local area, the impact of excluding the public from parts of the Site for a short term temporary period is considered to be low. As the sensitivity of the receptor is low, the level of effect would be negligible and not significant.

225. Outwith the Site, the Southern Upland Way shares a 100 m section of the public highway (C128n Blackaddie Road) along Access Route B at the Blackaddie Bridge across the River Nith. The Access, Traffic and Transport assessment has concluded that, subject to the proposed mitigation, there would be no significant effect with regard to community severance, pedestrian amenity (and amenity of other vulnerable users such as cyclists) and road safety on users of the Blackaddie Road including users of the Southern Upland Way.. Users of the Southern Upland Way may experience inconvenience at certain times especially if use of the bridge for walkers and other users of the Southern Upland Way has to be temporarily halted to allow passage of abnormal loads, but due to the straight alignment on the approach and exit across the bridge, a convoy of abnormal load vehicles is not expected to cause a significant delay. The impact on this receptor overall is assessed as low (adverse) due to the intermittent and temporary nature of the effect, which would affect only a short section of the overall route. As the value of the receptor is high, this would give rise to a moderate level of effect. A moderate level of effect may be significant. In this situation, as the effect would be experienced for only a short period of time, and would affect only a short section of the route, the effect is considered to be not significant.

Events

226. The Ultra Scotland 50 and Ultra Scotland 100 which take place along the Southern Upland Way could be directly affected by construction activities depending on the location of construction works at the time that one of the events is being held. Due to the biennial nature of the events, the risk of at least one event being affected by construction activities would high, but the

impact would be adequately mitigated by the embedded mitigation that would be put in place including signed diversion. Through consultation at the appropriate time, it may be possible to allow the event to use forestry tracks even during construction provided adequate safety measures are agreed in advance. It is therefore considered that the resulting impact would be low. As the sensitivity of the receptor is medium, the level of effect would be minor, which is not significant.

Proposed mitigation (LAI construction)

227. As no significant effects have been identified, no additional mitigation is required. The assessment of effects on recreational and tourism receptors assumes that the embedded mitigation measures proposed to inform users of the Southern Upland Way about the construction activities, and manage access during periods of activity, would be implemented. These measures would be incorporated in the proposed Access Management Plan that would be secured by condition. It is also assumed that the mitigation measures proposed in **Chapter 12** with regard to use off the highway network, in particular the crossing of Blackaddie Bridge by construction traffic would, subject to consultation with D&GC and the Southern Upland Way rangers, be incorporated into the CTMP.

Residual effects (LAI construction)

228. Allowing for the implementation of the embedded measures and proposed mitigation, no residual adverse construction effects are expected.

Cumulative effects (LAI construction)

229. There is potential for cumulative effects to arise in relation to the construction of a number of prospective or consented projects as described in **Chapter 5: Environmental Impact Assessment Report** should the construction phases overlap with the proposed Development.

230. Effects could be experienced on local roads used by tourists if construction traffic were to use the route proposed for the proposed Development. However, **Chapter 12: Access, Traffic and Transport** has assessed the proposed routes for construction traffic accessing the four proposed windfarms identified as potentially being constructed concurrently with Euchanhead and has found that they would not affect the minor roads leading from the A76 to Access B. Concurrent use of the A76 may occur and has been assessed, although it is considered very unlikely that the peak period of construction of all cumulative windfarm sites would occur simultaneously with that of the proposed Development. Significant cumulative traffic effects are therefore considered unlikely, and consequently any increased traffic on the A76 due to concurrent development is unlikely to be such as to lead to an impact on the tourism economy.

231. No other cumulative construction effects are expected.

14.5.4 Potential operational effects on local recreational and tourism receptors

232. The majority of the proposed turbines would be located at more than the recommended[7] set back distance equivalent to blade tip height, in this case 230 m, from the Southern Upland Way. The average distance from turbines to the closest point of the Southern Upland Way is over 1,500 m. Three of the proposed turbines (T12, T13 and T15) would be within the recommended set back distance. It is not uncommon for long distance routes and other paths to pass close to turbines, and on some sites the presence of the turbines may be considered an attraction in their own right. The fact that only a small proportion of the turbines is within the recommended set back distance means that the experience of users is only affected for a small proportion of their journey time, and therefore the impact on recreational and tourism users is assessed as low. As the sensitivity of the Southern Upland Way is high, the level of effect would be moderate. A moderate effect may be significant, but as not all users are likely to perceive the impact as adverse, this would reduce the level of effect overall and therefore the effect is assessed as not significant.

233. During the operational phase there may be adverse effects due to visual impacts on recreational and tourism receptors; these are considered below. Based on a review of the findings of the assessment in **Chapter 12: Access, Traffic and Transport**, no significant effects are expected due to maintenance vehicles using the access road and Site as this would be on an occasional basis only.

[7] There is no recommended set back distance in Scotland, but in its scoping response Scotways refers to the Welsh Government recommended distance in TAN 8

234. There would also be some minor beneficial effects on local businesses within the LAI arising from expenditure on goods and services by staff and suppliers visiting the proposed Development. This is expected to benefit local shops, food and drink businesses, and accommodation providers. Although the expenditure would be intermittent and is difficult to quantify, the benefit would be enhanced by the fact that workers visiting the proposed Development would do so all year round, unlike tourism expenditure which tends to be seasonal. The businesses that are supported in this way contribute to the level of services available to recreational and tourism visitors to the area, and therefore the additional support is considered to benefit the recreational and tourism asset base of the LAI.

235. Visual effects on recreational receptors are assessed in **Chapter 7: Landscape and Visual**, and the findings have been taken into account in the assessment below, although it is important to note that a significant Visual effect does not necessarily result in a significant socio-economic effect. In assessing recreational effects, there is not a straightforward relationship between users experiencing views of turbines along sections of a route and impacts on usage. Some people may be discouraged from using the route due to the presence of turbines, but for others there may be no adverse impact.

236. The relationship between visual and socio-economic effects has been demonstrated in studies undertaken in respect of windfarm projects; where users have been asked if the presence of turbines would discourage them from using a route the majority are generally found to not be deterred. For example, an independent survey of tourists and day-trippers in the area around the proposed Clashindarroch Windfarm in Aberdeenshire (Gilmorton Rural Development, 2009) found that 84% of respondents did not feel that the proposed windfarm would have an impact on their willingness to revisit the area. The survey also found that there was no difference in the attitude of walkers to other visitors in relation to their willingness to revisit.

237. Assessment of the socio-economic effects resulting from the findings of the Landscape and Visual effects in **Chapter 7** takes account of the fact that the visual experience forms only part of the experience for recreational users. The magnitude of impact for cyclists and horse riders may be less than for walkers as the speed of travel is likely to be faster and individual views are experienced for a shorter period of time, and users are more likely to be focusing on other matters. Even for users who find the presence of a windfarm detracts from their experience, this may simply manifest itself in users choosing not to linger in those sections of the route that have clear views of turbines.

238. The assessment of Landscape and Visual effects considers groups of Visual receptors, which include recreational and tourism receptors and general locations where recreational and tourism receptors are situated. Receptors within the LAI assessed in **Chapter 7** comprise the following groups:

- Sanquhar receptor group
- Kirkconnel/Kelloholm receptor group
- Euchan Water valley receptor group
- Glen Afton receptor group
- hillwalkers above Glen Afton receptor group
- Tynron receptor group
- Shinnel Glen receptor group
- Core Paths within the site and Lorg Glen
- local heritage trail Sanquhar to Stroanpatrick Path (Southern Upland Way)
- Water of Ken valley receptor group
- hillwalkers Cairnsmore of Carsphairn receptor group
- local heritage trails Moniaive to Sanquhar Drove Road
- Cairn Water valley receptor group
- key routes including the Southern Upland Way through the Site
- specific viewpoints including the Striding Arches sculptures

239. One of the key features of the proposed Development is its limited visibility to receptors located in the valleys around the Site within the LAI, including within the settlements of New Cumnock, Kirkconnel, Kelloholm, Sanquhar, and Moniaive, as well as Glen Afton and valleys to the east of the Site. **Chapter 7** finds that, whilst there would be views from Glen Afton, the Euchan Water valley and from the summit of Cairnsmore of Carsphairn, these views would occur in the context of other closer windfarms and significant effects are not predicted. Views from Sanquhar, Kirkconnel Tynron and the A76 would be much more limited and not significant.

240. This means that socio-economic receptors located in the valleys, including Drumlanrig Castle, Sanquhar Castle and Museum, New Cumnock Golf Course and Sanquhar Golf Course and all accommodation businesses noted in the baseline description are expected to have no, or very limited, visibility of the proposed Development. The only business noted in the baseline that is likely to have anything more than a glimpsed view of the proposed Development would be Crawick Multiverse, which is a land restoration project that has transformed a former open cast coal mine into an artland and public amenity. Views of the Site from the Multiverse would be distant (c. 10 km away), and the proposed Development would form a small part of a landscape in which onshore wind already forms an important part. The assessment of Visual effects in **Chapter 7** has considered both the daytime and night time effects on this receptor, which occasionally runs night-time star gazing. Given that these events are to appreciate the night sky, the susceptibility to turbine lighting would be high. The proposed reduced intensity mitigation would reduce the brightness of these lights noticeably during good visibility but would still be present in views. However, as turbine lights would not be located in a position where they would interfere with observations of the night sky, which tend to involve looking upwards rather than towards the horizon in a horizontal plane, no significant visual effect is predicted. As the receptor is of sub-regional importance and low to medium sensitivity, and the adverse impact is assessed as low, the level of effect would be no more than low and not significant.

241. The principal socio-economic receptors within the LAI that have potential to be affected by Visual effects arising from the proposed Development would be recreational routes, in particular, the Southern Upland Way, other paths that pass through the Site, nearby walking routes such as those on the hills above Glen Afton and also the Striding Arch sculptures which are associated with walking routes. **Chapter 7** finds that there would be significant Visual effects for hillwalkers on the Southern Upland Way, Core Paths within the Site, views from the Striding Arches, the heritage path through the Site and hillwalkers above Glen Afton.

242. Users of the Southern Upland Way would have visibility of the proposed Development along a 10 km section of the route (assuming that views are mainly obtained in the direction of walking), between Manquhill Hill and Whing Head, through the centre of the afforested Site, although undulations in landform and variability of forestry cover would mean that views would be intermittent. **Figure 7.11** (ZTV) shows how visibility from the Southern Upland Way would be limited by landform; further notable screening would also be provided by existing forestry, not illustrated by the ZTV. However, within the Site, some of the views would be at close range and include the proposed turbines and Site infrastructure. A significant Visual effect is predicted for this section of the Southern Upland Way.

243. Views from the Southern Upland Way within, towards and from within the Site are likely to be important for some users of the route, although the presence of the proposed Development would not necessarily detract from the experience for all users, as noted above in paragraph 237, especially those who may be using the Southern Upland Way for active recreation such as running, cycling and horse riding and events such as the Ultra Scotland events. However, the presence of the turbines may have a detrimental effect to the enjoyment of using the route for some people, and although this is expected to be only for a relatively small part of their overall journey the magnitude of impact may be medium (adverse). As the receptor is an asset of national importance (one of Scotland's Great Trails), and therefore of high sensitivity, the level of effect is assessed as moderate resulting in a high level of effect that is significant.

244. There are no other socio-economic receptors of high sensitivity within the LAI that have visibility of the proposed Development. The Striding Arches and Heritage Paths are considered to be of regional importance and medium sensitivity. The three Striding Arches on the summits of Benbrack, Colt Hill and Bail Hill are all considered to have views of the proposed Development that result in a significant Visual effect, as described in **Chapter 7**; although it is noted in **Chapter 7** that the level of effect reduces with distance from the Site so that the scale of change at Bail Hill would be slightly less than Colt Hill and Benbrack. The fourth Striding Arch at the Byre at Cairnhead has no visibility. As the view of the sculptures in the context of the landscape is important to their appreciation and attraction to visitors as socio-economic receptors, the overall level of effect on these recreational and tourism assets is assessed as moderate, which may be significant. However, as views from these receptors would take in the proposed Development in the context of several other windfarm developments within nearby views, this moderate level of effect is not considered significant.

245. Other receptors include three Heritage trails that are of low to medium sensitivity. The Sanquhar to Stroanpatrick Path Local Heritage Trail is assessed as part of the Southern Upland Way. **Chapter 7** concludes there would be no significant Visual effect from the Moniaive to Sanquhar Drove Road and the local heritage trail Old Road from New Cumnock to Dalquharin in Glen Afton. There is therefore no predicted socio-economic significant effect with regard to these receptors.

Proposed mitigation (LAI operational)

246. A number of design measures and Site enhancements are proposed, following consultation and discussions with stakeholders, including the Southern Upland Way ranger service, to mitigate the impact of the proposed Development on the Southern Upland Way and other paths within the Site, as well as the Colt Hill Striding Arch.

247. SPR's experience on other renewable energy projects has shown that recreational walking and other activities need not be mutually exclusive activities, and through careful design of mitigation and enhancement measures the development of renewable energy infrastructure can help to improve access for recreational users. Recent examples of such projects include the following sites where SPR has incorporated core paths and other routes into site design and worked with organisers of long distance trails:

- the development of Kilgallioch has brought funding for two rangers for the Southern Upland Way for the life of the windfarm who are in turn enhancing the marketing and maintenance of the Southern Upland Way;
- the Kintyre Way goes through Beinn an Tuirc and SPR is supporting the Kintyre Way management organisation to improve the path/route;
- Rigged Hill – the Ulster Way organisation actually diverted the route to take advantage of the windfarm tracks and views (out of the trees) that the windfarm offers. The local walking club now does a regular route up to the site and back; and
- Whitelee is one of the biggest outdoor pursuit destinations in the central belt, described as follows on East Renfrewshire Council's website "*Since opening to the public in 2009, Whitelee has welcomed over a million visitors and become a popular venue for outdoor recreation*".

248. The following proposed mitigation measures have been designed to benefit informal tourism and recreation within the Site:

- an alternative permanent route for the Southern Upland Way around the western perimeter of the Site that offers more open views across the hills to the west (whilst still retaining the current route that allows access to Allen's Cairn), shown on **Figure 14.2**;
- upgrading the surface of the route from the Southern Upland way to the Striding Arch at Colt Hill;
- recreational access paths providing improved access to the Site from the Southern Upland Way and providing access to a viewpoint within the Site with signage on views, history, ecology, archaeology;
- walker's shelter close to the Southern Upland Way (subject to landowner agreement), the design of which would be fitting to the location, using a combination of local stone and wood;
- signage on views, history, ecology, archaeology features adjacent to the Southern Upland Way; and
- habitat improvements, including broadleaf tree planting and the re-wetting of previously drained peatland areas.

249. It is considered the proposed mitigation would provide substantial benefits to users of the routes through the Site, including the Southern Upland Way, and enhance the accessibility of the Colt Hill Striding Arch to walkers and other recreational users. The proposed level of mitigation is expected to reduce the level of impact, in terms of the recreational users' experience of the routes, to low. For the Southern Upland Way, which is a receptor of high sensitivity, the level of effect would be reduced to moderate which may be significant. However, as users would only experience the proposed Development for a relatively small part of their journey, and not all users would perceive the effects to be adverse, the effect is assessed as not significant.

250. For the Sanquhar to Stroanpatrick Path Local Heritage Trail, which is of medium sensitivity, the proposed mitigation would reduce the level of effect to minor which is not significant.

Residual effects (LAI operational)

251. Following application of the proposed mitigation measures, residual effects would be no greater than moderate (adverse) and are considered to be not significant.

Cumulative effects (LAI operational)

252. There is potential for cumulative visual effects to arise with regard to a number of prospective or consented projects.

253. Effects could be experienced by tourists and recreational users of long-distance routes, in particular if sequential effects arise from the fact that users would see several windfarms from viewpoints along the route. **Chapter 7** has assessed the potential for cumulative effects and distinguishes between: the predicted cumulative effects arising from the proposed Development with operational windfarms (which has been included as part of the LVIA as Scenario 1); the effects arising from the

proposed Development with the operational and consented wind turbines (Scenario 2); and finally, the effects arising from the proposed Development with operational, consented and other proposed windfarms (Scenario 3).

254. In all cases, **Chapter 7** finds that the addition of the proposed Development to the operational and consented wind turbines (Scenario 2) would further reinforce the increased Visual influence from renewable energy but would result in the same level of effect reported for Scenario 1. The levels of Visual effect resulting from the addition of the proposed Development to Scenario 3 would tend to be similar or reduced in level, due to the prior presence of Sanquhar II (along with the fully consented baseline) within the local landscape, as the proposed Development would generally be enveloped by the larger Sanquhar II development.

255. No operational socio-economic cumulative effects are therefore expected.

14.6 Summary and statement of significance

256. 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 recreational assets. The potential effects on the economy and identified assets take account of good practice embedded measures to be adopted. Mitigation measures have been identified with regard to operational effects on local recreational and tourism receptors that reduce the level of adverse effects. Predicted residual adverse and beneficial effects have been assessed as not significant during both the construction and operational phases.

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