



# Chapter 12

## Socio-economics, Tourism and Recreation

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# Chapter 12

## 12 Socio-economics, Tourism and Recreation

### 12.1 Introduction

1. This Chapter of the Environmental Impact Assessment Report (EIAR) evaluates the effects of Carrick Windfarm (hereafter “the Proposed Development”) on socio-economics, tourism and recreation.
2. The assessment considers socio-economics, tourism and recreation separately, with the Study Areas being 5km for recreation, 15km for tourism, South Ayrshire (local Study Area) and Scotland (regional Study Area) for socio-economics.
3. The assessment has been undertaken on the basis of the Proposed Development consisting of up to 13 wind turbines with each wind turbine having an assumed electricity generating output of around 6.6MW, and therefore having a potential total installed capacity of approximately 86MW (Note: potential total installed capacity of 85.8MW has been used for socio-economic calculation purposes).
4. The description of other elements of infrastructure of the Proposed Development assessed in this chapter can be found on **Figure 4.1 Site Layout** and **Chapter 4: Development Description**. The socio-economic, tourism and recreation aspects of the Site selection and design are described in full in **Chapter 3: Site Selection and Design**. **Appendix 4.1 Offsite Access Appraisal** considers the potential socio-economic, tourism and recreation aspects effects of the proposed offsite access route to the Site, concluding that there would be no potential significant effects likely to occur as a result of the offsite access route upgrade works and as a result, this has not been assessed further within this chapter.
5. This Chapter is intended to be read as part of the wider EIAR, with particular reference to **Chapter 5: Landscape and Visual Impact Assessment**, **Chapter 9: Noise**, **Chapter 11: Access, Traffic and Transport**, **Chapter 13: Other Issues** and **Figure 12.1: Socio-economics, Tourism and Recreation Receptors**.

### 12.2 Legislation, Policy and Guidance

6. The following section details the legislation, national policy and local policy that is relevant to the Proposed Development.

#### 12.2.1 Legislation

##### Land Reform (Scotland) Act 2003 (as Amended 2016)

7. The Land Reform Act provides a right of access for walkers, horse-riders and cyclists to most land and inland water. These legal rights are based on the principle of responsible access, with obligations both on the access users and on the managers of the land.

8. The legislation also states that local authorities develop a core paths plan to establish and designate a network giving the public reasonable access throughout their area. Such a system of paths may include footways, footpaths, cycle tracks and bridleways. Rights of access and core paths are considered as part of the recreation and tourism assessment within this chapter.

#### 12.2.2 National Policy

##### National Planning Framework 3

- The National Planning Framework 3 (NPF3) outlines the long-term spatial Government Economic Strategy for Scotland. The NPF3 emphasises the Scottish Government’s commitment to increasing sustainable economic growth across all areas of Scotland. It also provides an Action Programme which identifies the implementation of the strategy.
9. The NPF3 states that one of Scotland’s visions is to become a world leader in low carbon energy generation, including onshore energy generation. It identifies energy and tourism as key sectors.

##### Fourth National Planning Framework: Position Statement

10. The Fourth National Planning Framework (NPF4) sets out plans for new approach and investment to address climate change, as well as focus more on improved health and wellbeing and a better natural environment for people in Scotland.
11. It states that a significant shift is required to achieve net-zero emissions by 2045, where one of the key opportunities are “*Supporting renewable energy developments, including the re-powering and extension of existing wind farms, new and replacement grid infrastructure, carbon capture and storage and hydrogen networks*”.

##### Scottish Planning Policy

12. The Scottish Planning Policy (SPP) sets out national planning policies that reflect Scottish Ministers’ priorities for operation of the planning system and for development and use of land. The Scottish Government states that it’s central purpose is to focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. A core value of the planning service is to facilitate “*sustainable economic growth, particularly the creation of new jobs and the strengthening of economic capacity and resilience within communities*.”
13. The Supporting Business and Employment policy identifies that the planning system should:
  - “promote business and industrial development that increases economic activity while safeguarding and enhancing the natural and built environments as national assets”; and
  - “give due weight to net economic benefit of proposed development”.
14. The SPP also states that “*Proposals for business, industrial and service uses should take into account surrounding sensitive uses, areas of particular natural sensitivity or interest and local amenity and make a positive contribution towards placemaking*.”
15. The SPP also notes that “*planning should protect, enhance and promote green infrastructure, including open space and green networks, as an integral component of successful placemaking*.”
16. With regard to tourism, the SPP Promoting Rural Development states that “*Plans should set out a spatial strategy which... promotes economic activity and diversification, including, where appropriate, sustainable development linked to tourism and leisure, forestry, farm and croft diversification and aquaculture, nature conservation, and renewable energy developments, while ensuring that the distinctive character of the area, the service function of small towns and natural and cultural heritage are protected and enhanced*.”

### 12.2.3 National Strategy

#### Industry Strategy: Building a Britain Fit for the Future

17. UK's Industry Strategy stated that the UK will be moving to cleaner economic growth through low carbon technologies and the efficient use of resources. The government will aim to “*maximise the advantages for UK industry from the global shift to clean growth*” and “*increase our support for innovation so that the costs of clean technologies, systems and services are reduced across all sectors...*”.

#### Scotland's Economic Strategy

18. Scotland's Economic Strategy stated one of the four priorities for sustainable growth is “*Investing in our people, infrastructure and assets*” in which the Scottish Government will prioritise investment to ensure that “*Scotland protects and nurtures its nature resources and captures the opportunities offered by the transition to a more resource efficient, lower carbon economy.*” Another action within the Scotland's Economic Strategy is to “*Invest in Scotland's infrastructure to help Scottish businesses to grow, innovate, and create good quality employment opportunities.*”

#### A Low Carbon Economic Strategy for Scotland

19. The document outlines the strategy in transitioning Scotland's economy towards low carbon. It covers the economic opportunities, barriers, drivers and socio-economic impacts of a low carbon economy including employment in the energy sector. The strategy recognises that onshore wind is the technology that could make the most immediate positive impact on Scotland's low carbon economy, it says; “*the Scottish Government will continue to encourage large, medium and small-scale developments that are sited appropriately.*”

### 12.2.4 Local Policy

#### South Ayrshire Local Development Plan

20. The following Local Development Plan (LDP) policies are relevant to the socio-economics, tourism and recreation assessment:
- LDP Policy: Sustainable development – South Ayrshire Council will support the principles of sustainable development by making sure that all development meets the requirements set out within the Local Development Plan.
  - LDP Policy: Tourism – South Ayrshire Council “will look favourably on proposals which will provide or improve tourist and leisure facilities and we will support keeping and improving existing significant leisure, recreation and tourist facilities.”
  - LDP Policy: Tourism - South Ayrshire Council will take account of the Ayrshire and Arran Tourism Strategy when considering applications for planning permission. Further details of the Ayrshire and Arran Tourism Strategy is provided in Section 12.5.2.9;
  - LDP Policy: Galloway and Southern Ayrshire Biosphere – South Ayrshire Council “will support development that promotes the aims of the biosphere and shows an innovative approach to sustainable living and the economy, and supports improving, understanding and enjoying the area as a world-class environment;”
  - LDP Policy: Dark skies – South Ayrshire Council “will presume against development proposals within the boundaries of the park that would produce levels of lighting that would adversely affect its ‘dark sky’ status”; and
  - LDP Policy: Outdoor Public Access and core paths – South Ayrshire Council “will only support proposals which would have a negative effect on a core path or other significant access route if we are satisfied that they provide a suitable alternative route.”

### 12.2.4.1 South Ayrshire Council Core Paths Plan

21. South Ayrshire Council has adopted core paths, which are key public access routes, within the Council's jurisdiction. A map showing the location of the core paths is available on the South Ayrshire Council website (South Ayrshire Council, 2020a). The core paths are shown on **Figure 12.1: Socio-economics, Tourism and Recreation Receptors.**

### 12.2.5 Guidance

22. There is no specific guidance available on approaches to assessing the effects of a proposed onshore windfarm development on socio-economics, tourism and recreation. The methodology used has been based on professional experience, accepted practice, and draws upon industry reports on the sector including, for example:
- Onshore Wind: Economic Impacts in 2014 (RenewableUK, 2015); and
  - Economic benefits from onshore windfarms (BVG Associates, 2017).

## 12.3 Consultation

23. This section considers the scoping responses that formed part of the Scoping Report and shows where they are addressed in this Chapter. The consultee, their response(s) and how they have been addressed are summarised in Error! Reference source not found..

Consultee	Response	Action
Scottish Rights of Way and Access Society (ScotWays)	Indicated a number of rights of way are in the Site Boundary including; National Catalogue of Rights of Way (CROW) SKC7, Scottish Hill Tracks (SHT routes 78, 80, 81 and 82 cross the Site and/or lie along the boundary), core paths, Old Road through Straiton Heritage Path.	The Scottish Hill Tracks, core paths and Heritage Path have been considered in this assessment.  <b>Section 12.6</b> of this chapter provides further detail on the potential effects on these receptors and the proposed embedded mitigation measures.
	Raised concerns regarding separation between the wind turbines and the onsite public access network, in particular SKC7 and Scottish Hill tracks 80 and 81. Scotways noted that there is little guidance regarding the siting of wind turbines in relation to established paths and rights of way but did highlight the: Extract from the Welsh Assembly Government's Technical Advice Note on Renewable Energy (TAN 8) Proximity to Highways and Railways.	As detailed in Chapter 3: Site Selection and Design, the layout of the wind turbines in relation to the public access routes has been considered through design development. The assessment considers the location and type of wind turbines (see Section 12.6 of this chapter for further details).  It is noted that Welsh Assembly Government's Technical Advice Note on Renewable Energy (TAN 8) is a dated document and specific to Wales. There is no guidance specific to Scottish development in this area.
	Anticipated that an Access Management Plan (AMP) would be drawn up for the	An AMP would be prepared as part of the Construction Environmental

Consultee	Response	Action
	Proposed Development in order to ensure continued public recreational access, and to protect the recreational routes across the Site. Consultation with the access team at South Ayrshire Council while drafting the Access Management Plan has been recommended by ScotWays.	Management Plan (CEMP). The AMP would be developed in consultation with South Ayrshire Council.  <b>Section 12.6</b> of this chapter provides further detail on the potential effects on these receptors and proposed embedded mitigation measures.
	Concerned that there was no proposal to limit the lifetime of the Proposed Development.	The EIAR reports effects on the basis of the proposed Development operating without a defined lifetime.
Galloway and Southern Ayrshire UNESCO Biosphere	It is the view of the 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.	The elements that contribute to the Galloway and Southern Ayrshire UNESCO Biosphere have been considered within the socio-economic, recreation and tourism assessment ( <b>see Sections Error! Reference source not found. and 12.6</b> of this chapter).  Further details on the elements of the Galloway and Southern Ayrshire UNESCO Biosphere that have been considered in the assessment are provided in <b>Section 12.5.2.6</b> . Further consideration of the biosphere is provided in the Planning Statement that accompanies the application.
	The consultee suggested to consider “tourism impact of the proposal the EIA take due notice of the growing interest in promoting the UNESCO Biosphere as a tourism destination.	
	The consultee also identified several tourism receptors including, “Galloway Hills and Wild Land Area (WLA), Carrick Forest Drive and National Cycle Route 7, a long- distance route which forms part of the Ayrshire Alps Cycle park and our own Loch Doon and Carrick Forest Drive promoted Biosphere route that concludes with a walk up Cornish Hill.”	The Galloway Hills and WLA, Carrick Forest Drive, National Cycle Network 7, Ayrshire Alps Road Cycle Park (AARCP) (Glenalla route), AARCP (Tairlaw route) and Loch Doon and Carrick Forest Drive promoted route have been considered within the recreation assessment. For further details see <b>Sections Error! Reference source not found. and 12.6</b> of this chapter.
	The consultee expressed concerns on how the lighting of the wind turbines would impact on the night skies both for astronomy and wilderness in the Wild Land Area at the core of the UNESCO Biosphere. The consultee requested confirmation of how this would be dealt	The Applicant proposes to install an aircraft detection lighting system (ADLS) activated light to each turbine, meaning turbine lights would rarely be visible, this was found to avoid any likely significant landscape and visual effects due to aviation lighting in <b>Chapter 5: Landscape and Visual Impact Assessment</b> of

Consultee	Response	Action
	with as part of the Proposed Development.	this EIAR. Further detail on the system operation is provided in <b>Appendix 13.4: Indicative Aviation Lighting Landscape and Visual Impact Mitigation Plan</b> on this proposal and how it is being taken forward.  <b>Section 12.6</b> considers potential effects on visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone. The assessment draws on <b>Chapter 5: Landscape and Visual Impact Assessment</b> of this EIAR.
Mountaineering Scotland	The consultee noted that the Site lies within the Galloway Forest Park, within the Galloway Dark Skies Park and partly within its core area, less than 1km from WLA 01 Merrick, and 5km from the Galloway Hills Regional Scenic Area. From the nearest proposed wind turbine, Shalloch on Minnoch is 7km and The Merrick 12km. Both are Corbetts and popular hillwalking destinations.	The assessment considers the Galloway Forest including the Galloway Corbetts and Donalds. The assessment also considers the Dark Sky Park and Merrick WLA. Section 12.6 of this chapter provides further detail on the potential effects on these receptors.  The potential impacts of the Proposed Development on the Galloway Hills Regional Scenic Area have been assessed in <b>Chapter 5: Landscape and Visual Impact Assessment</b> of this EIAR.  The Site Boundary at the time of Scoping was significantly larger and it is worth nothing that the Site Boundary now is an increased distance from these receptors.
	The consultee suggested the tourism and recreation assessment should consider open hills, all Galloway Corbetts and 15 Donalds. While some others are included as proposed viewpoints, it should be acknowledged that visual impact is not simply an impact in itself but depending on context can have behavioural consequences in terms of tourism and recreation.	The assessment considers the Galloway Forest including the Galloway Corbetts and Donalds.  <b>Section 12.6 of this chapter</b> provides further details on the potential effects on access, severance and amenity of Galloway Forest. The assessment draws on <b>Chapter 5: Landscape and Visual Impact Assessment</b> of this EIAR.

Consultee	Response	Action
Crosshill, Straiton and Kirkmichael Community Council	The consultee indicated that due to the height of the wind turbines Study Areas for recreation and tourism should be enlarged to 20km. Turnberry Golf Course and Glen App Castle are world-class assets and should be included in assessments along with others.	<p>A 5km and 15km Study Area has been used for recreation and tourism assessment respectively. The Study Areas have been defined based on professional judgement and are deemed appropriate to capture the likely significant effects of the Proposed Development. These Study Areas are further supported by <b>Chapter 5: Landscape and Visual Impact Assessment</b>, which notes there would be no significant effects on visual amenity beyond 5-6 km from the proposed wind turbines.</p> <p>Additionally, receptors outside these Study Areas have been considered if an effect on tourism and recreation was anticipated. For example, the assessment has also considered receptors such as the Galloway Forest Park.</p> <p>Although the Trump Turnberry Golf Course is just outside the 15km Study Area it has been considered as a local tourist attraction (<b>see Appendix 12.1: Tourist Attractions Baseline</b>). Due to the approximate 31km distance and intervening vegetation between the Proposed Development and the Glen App Castle, it is not anticipated that there would be a significant effect on the access or amenity of this receptor.</p>
	The list of small-scale settlements and communities, recreation facilities, tourist facilities and attractions, and tourist accommodation is incomplete.	The assessment has considered receptors within the Study Areas. A variety of websites have been used to identify these receptors. Settlements have been identified based on South Ayrshire Local Development Plan interactive map.
	The Scoping Report should include an independent tourism impact study. Only by doing this will the Applicant know what the local tourism business are, their turnover, the type and number of visitors they attract, and where they come from, the 'tourist spend' which the visitors bring	The assessment details the impacts of the Proposed Development on tourism. The assessment has considered the potential effects on tourism receptors such as tourist assets and tourism accommodation ( <b>see Section 12.6 of this chapter</b> ).

Consultee	Response	Action
	to the area, and the likely effect of the wind farm proposals on their business.	This tourism assessment has been undertaken by a third party.
	With regard visitors' decisions to holiday in the area, the report by Mountaineering Scotland 2017 should also be referenced.	The Mountaineering Scotland 2017 study 'Wind farms and tourism in Scotland' has been taken into consideration within the assessment ( <b>see Section 12.4.3.3</b> of this chapter).
	<p>The consultee has listed a number of receptors that are suggested to be included in the assessment, including:</p> <ul style="list-style-type: none"> <li>Glen App Castle and Gardens;</li> <li>Recognised walks around various villages as well as other attractions;</li> <li>Stinchar Falls.</li> <li>Walkers, cyclists and wild campers using Loch Bradan;</li> <li>Wedding venues; and</li> <li>South West Coastal 300 route.</li> </ul>	<p>A 5km and 15km Study Area has been used for recreation and tourism assessment respectively. The Study Areas have been defined based on professional judgement and are deemed appropriate to capture the likely significant effects of the Proposed Development. These Study Areas are further supported by <b>Chapter 5: Landscape and Visual Impact Assessment</b>, which notes there would be no significant effects on visual amenity beyond 5-6 km from the proposed wind turbines. The assessment has considered walking routes within the Study Areas.</p> <p>Additionally, receptors outside these Study Areas have been considered if an effect on tourism and recreation was anticipated. For example, the assessment has also considered receptors such as the Galloway Forest Park.</p> <p>Due to the approximate 31km distance and intervening vegetation between the Proposed Development and the Glen App Castle and Gardens, it is not anticipated that there would be a significant effect on the access or amenity of this receptor.</p> <p>Stinchar Falls and walkers, cyclists, wild campers and anglers using Loch Bradan have been included in the assessment.</p> <p>Wedding venues within the Study Area have been considered in the assessment (<b>see Sections Error! Reference source not found. and</b></p>

Consultee	Response	Action
		<p><b>12.6</b> of this chapter for further details).</p> <p>The only section of the South West Coastal 300 route that would have potential visibility would be between Maybole and Dalmellington on the B741. As described in <b>Chapter 5: Landscape and Visual Impact Assessment</b>, it is considered that there would be minimal visibility of the Proposed Development along the length of the B741, and there would be no significant visual effects on users of this road. Therefore, it is not anticipated that there would be a significant effect on the access or amenity of this receptor.</p>
Daily Community Council	<p>The consultee indicated that the Study Area should be 20km due to the height of the wind turbines.</p>	<p>A 5km and 15km Study Area has been used for recreation and tourism assessment respectively. The Study Areas have been defined based on professional judgement and are deemed appropriate to capture the likely significant effects of the Proposed Development. These Study Areas are further supported by <b>Chapter 5: Landscape and Visual Impact Assessment</b>, which notes there would be no significant effects on visual amenity beyond 5-6 km from the proposed wind turbines.</p> <p>Additionally, receptors outside these Study Areas have been considered if an effect on tourism and recreation was anticipated. For example, the assessment has also considered receptors such as the Galloway Forest Park.</p>
	<p>The consultee suggested the following receptors should be included in the assessment:</p> <ul style="list-style-type: none"> <li>• Turnberry Golf Course;</li> <li>• Girvan Golf Course;</li> <li>• Maybole Golf Course.</li> <li>• Walks around Maybole;</li> <li>• Walks further to the West in the wilder moorland areas of Carrick Forest and beyond;</li> <li>• Traffic coming from Cairnryan up the coastal A77 through</li> </ul>	<p>The assessment has considered receptors within the Study Areas. A variety of websites have been used to identify these receptors.</p> <p>Although the Trump Turnberry Golf Course is just outside the 15km Study Area it has been considered as a local tourist attraction (see <b>Appendix 12.1: Tourist Attractions Baseline</b>).</p>

Consultee	Response	Action
	<p>Ballantrae and tourist attraction/hotel Glen App;</p> <ul style="list-style-type: none"> <li>• The view also from the Firth of Clyde by boat for tourists as well as locals; and</li> <li>• Travel by air.</li> </ul>	<p>It is anticipated that there would not be a significant effect on access, severance and amenity of air travel. This is because air travel would be fast paced, and the Proposed Scheme would only be visible for a small section of the flight.</p>
	<p>There are other small-scale settlements, recreation facilities and activities, local tourist activities and accommodation. There are other Trails/Paths that should be included, for example, Dailly Trails, Carrick Way, Girvan Paths, Straiton Paths, Maybole Paths.</p>	<p>The assessment has considered receptors within the Study Areas. A variety of websites have been used to identify these receptors.</p> <p>Walking routes have been considered within the Study Areas as detailed in <b>Sections Error!</b> Reference source not found. and <b>12.6</b> of this chapter.</p>
	<p>Local employment during construction should be properly monitored. The consultee has had experience of very limited fulfilment of this mitigation in the past.</p>	<p>The Applicant will ensure the principal contractor works proactively with contractors and suppliers to provide employment opportunities in the local area. It is anticipated that the principal contractor would hold a local 'meet-the-buyer' open day. This would provide an opportunity for local contractors and suppliers to present their business to the principal contractor (see <b>Section 12.6.1</b> of this chapter).</p> <p>The Applicant has monitored local content of past windfarm projects, as evidenced by the 2017 BVG Associates research (see <b>Section 12.5.1.1</b>).</p>
	<p>The consultee queried who will be providing an independent assessment for recreation and tourism impacts.</p>	<p>The assessment presents an assessment on the impacts of the Proposed Development on tourism and recreation. The assessment has considered the potential effects on recreation receptors (e.g., walking trails) and tourism receptors such as tourist assets and tourism accommodation (see <b>Section 12.6</b> of this chapter). This tourism assessment has been undertaken by a third party.</p>
	<p>The consultee indicated that more effort should be made to identify small businesses, attractions (e.g. smaller</p>	<p>A 5km and 15km Study Area has been used for recreation and tourism assessment respectively. The Study</p>

Consultee	Response	Action
	wedding venues), activities (e.g. wild camping, fishing, horse riding, off-road biking), recreational areas (fishing lochs such as Loch Bradon/Linfern Loch, walks/trails around Lochs and villages, etc) which are not necessarily on a Visit Scotland website or database. Too much emphasis has been made of desk-top information.	<p>Areas have been defined based on professional judgement and are deemed appropriate to capture the likely significant effects of the Proposed Development. These Study Areas are further supported by <b>Chapter 5: Landscape and Visual Impact Assessment</b>, which notes there would be no significant effects on visual amenity beyond 5-6 km from the proposed wind turbines.</p> <p>Additionally, receptors outside these Study Areas have been considered if an effect on tourism and recreation was anticipated. For example, the assessment has also considered receptors such as the Galloway Forest Park.</p> <p>Further effort has been made to capture the assets within the Study Areas.</p>
Glasgow Prestwick Airport	GPA agree with the socio-economics, recreation and tourism baseline collection approach and do not know of any receptors not identified in the Scoping Report.	Noted. No action required.

Table 12.1 Scoping Consultation Responses

24. A number of comments were also raised in the pre-application response in relation to the socio-economic, tourism and recreation assessment as detailed in **Table 12.2**.

Consultee	Response	Action
South Ayrshire Council	<p>The adverse impact on the landscape and Dark Skies Park raises concerns both in terms of the effects on these assets and the impact on the tourism industry which depends upon these resources.</p> <p>Assets in Ayrshire and surrounding areas particularly sensitive to inappropriate development include areas designated for their scenic or recreational potential, such as the Galloway Hills, the Galloway Forest Park, the Dark Skies Park and the Galloway &amp; Southern Ayrshire Biosphere and its associated ecosystem centred around a series of core Natura sites.</p>	<p>The assessment considers tourism as well as recreational assets such as the Galloway Hills, Dark Sky Park, Merrick WLA, National Cycle Network 7 and Galloway and Southern Ayrshire UNESCO Biosphere (as part of the Dark Sky Park). For further details see <b>Sections</b> Error! Reference source not found. and <b>12.6</b> of this chapter.</p>

Consultee	Response	Action
	The application should consider what opportunities exist to enhance the existing walking routes and to create new recreational opportunities and links to existing ones.	Potential enhancement measures have been considered as part of the Proposed Development as detailed in <b>Section 12.6.4</b> .

Table 12.2 Pre-application Response Summary

25. Consultation has also been undertaken to inform the recreation and tourism assessment as described in **Table 12.3**.

Consultee	Date	Consultation Type	Summary
South Ayrshire Council Access Officer	2 September 2020	Meeting	<p>Three different options were considered for maintaining access of recreational routes within the Site Boundary during construction, including:</p> <ul style="list-style-type: none"> <li>Maintaining access along the existing routes with the implementation of health and safety protocols for walkers;</li> <li>Localised diversions during specific construction activities; and</li> <li>A wider diversion around the entirety of the Site.</li> </ul> <p>The potential wider diversion routes were discussed during the meeting. It was proposed that recreational routes that cross the centre of the Site (core path SA47; SKC/HT385/3, SKC/HT385/2; CROW SKC/SKC7/1 and Old Road through Straiton Heritage Path) could be diverted to the west of the Site along National Cycle Network 7/ AARCP (Glenalla) and a forest track along the northerly boundary of the Site. It was proposed that Scottish Hill Track SKC/HT82/6 and SKC/HT82/7 could be diverted along the core paths to the south of these routes.</p> <p>The South Ayrshire Council officer confirmed that there were no pedestrian counters along the routes that cross the Site and that usage of the core paths is likely to be low.</p> <p>The South Ayrshire Council Access Officer welcomed enhancement opportunities such as improving the condition of the above routes and providing way markers and signposts.</p> <p>It was agreed an Access Mitigation Plan (AMP) would be prepared for the Proposed Development post consent.</p>



Table 12.3 Consultation Summary

## 12.4 Assessment Methodology and Significance Criteria

### 12.4.1 Study Area

26. There are no recognised standards or methodologies for assessing the socio-economic, recreation and tourism effects of windfarms, and the Study Areas have been defined based on professional judgement.
27. The 'local level' Study Area for the socio-economic assessment is the administrative area of South Ayrshire. Scotland is the 'regional level' Study Area for the assessment of socio-economics impacts.
28. The tourism and recreation assessments focus on a 15km and 5km Study Area respectively, in order to capture any receptors most likely to be affected by the Proposed Development. The Study Area is based on the distance between the Scheme boundary and receptor. Additionally, receptors outside these Study Areas have been considered if an effect on tourism and recreation was anticipated.
29. The cumulative assessment of effects considers other developments within 30km of the Proposed Development. A 30km Study Area has been used to capture the potential cumulative effects that may arise from the zone of influence from the Proposed Development (15km) and a cumulative scheme (15km).

### 12.4.2 Desk Study

30. A desk-based baseline data collection exercise has been undertaken, which included a review of available information in order to determine baseline conditions. The following data sources have been reviewed:
  - Ordnance Survey Mapping;
  - National Records of Scotland;
  - Office for National Statistics NOMIS;
  - South Ayrshire Council core paths map;
  - Office of National Statistics (ONS);
  - Scottish Index of Multiple Deprivation (SIMD) 2016;
  - Scottish Tourism Alliance;
  - VisitScotland;
  - NatureScot<sup>1</sup> website;
  - Scotland's Great Trails website; and
  - Sustrans website.

### 12.4.3 Field Surveys

31. No field survey has been undertaken as part of the socio-economic, tourism and recreation assessment. However, some photographic evidence has been provided by WSP surveyors regarding the condition of the core path (SKC/SKC7/1).

### 12.4.3.1 Scope of the Assessment

32. The following effects of the Proposed Development have been considered in the assessment in accordance with the EIA Scoping Report and EIA Scoping Opinion:
  - spend per annum; estimated net, indirect and induced job generation; and net, indirect and induced gross value added (GVA) during construction and operation;
  - direct and indirect effects on tourism during the construction and operation;
  - direct and indirect effects on recreation (including for example rights of way, core paths and other routes) during the construction and operation; and
  - cumulative effects on employment, tourism and recreation in conjunction with other developments.
33. The impacts of the Proposed Development are considered at varying spatial levels according to the nature of the impact as described in **Section 12.4.1** of this chapter.
34. As the renewable industry remains relatively young, there is a lack of data around the potential economic impact of the decommissioning phase of windfarms. In addition, evidence suggests that windfarms are more likely to be re-powered rather than decommissioned in the future. Lastly, consent is also being sought 'in perpetuity', i.e. with no time limit, and therefore decommissioning of the Proposed Development as a whole is not proposed. The effects of decommissioning have therefore not been considered further in this chapter.

### 12.4.3.2 Assessment Methodology for Socio-economics

35. The assessment of the generation of employment opportunities, spend per annum and GVA has been based on the RenewableUK research assumptions and the scale and size of the Proposed Development. Research undertaken by BVG Associates on the economic benefits from onshore windfarms has also been considered as part of the assessment.
36. The assessment has been undertaken on the basis of the largest anticipated MW output of the Proposed Development. This is consisting of up to 13 wind turbines with each wind turbine having an electricity generating output of up to 6.6MW, and therefore having a potential total installed capacity of approximately 86MW. Therefore, a best-case scenario has been assessed for generation of employment opportunities, spend per annum and GVA.
37. Based on the RenewableUK study, the weighted average construction cost of an onshore windfarm development was calculated to be approximately £1.32 million per MW installed capacity. The three main areas of construction spend include: wind turbine; balance of plant; and grid connection. It is likely to be an undervaluation as it excludes pre-construction development and ground investigation works (which have a high local content percentage). The study suggested that for the construction of an onshore windfarm development that there is one employee per £137,942 (2015 figures) in turnover and a GVA/Turnover rate of 0.432. The RenewableUK study provides an assumed regional breakdown of construction cost spend as stated in **Table 12.4 Construction Spend Estimate (RenewableUK, 2015)**
38. .. These assumptions have been used in the assessment presented in **Section 12.6** of this chapter. A displacement factor of 25% has been applied for the projected jobs and GVA generated by the Proposed Development during construction. A Scottish Government "Type II Multiplier" has been used to predict indirect and induced employment (i.e. 1.9) and GVA (i.e. 2) generated during the construction of the Proposed Development. These induced and indirect multipliers have been used to identify the net direct, indirect and induced jobs and GVA generated during the construction of the Proposed Development.

<sup>1</sup> Formerly Scottish Natural Heritage

Geographical Region	Regional Breakdown of Construction Cost Spend (%)
Local (South Ayrshire)	12%
Scotland	36%
UK	47%
Outside the UK	53%
Total for the Proposed Development	100%

Table 12.4 Construction Spend Estimate (RenewableUK, 2015)

39. For the operational phase, an assumed average cost of approximately £59,867 per MW installed capacity per annum has been applied, as well as the average turnover per employee of £121,935 and the GVA / Turnover rate of 0.430. These assumptions are based on the outcomes of the 2015 research undertaken by RenewableUK which also provides a regional breakdown of operational cost spend as stated in as set out in **Table 12.5 Operation Spend Per Annum (RenewableUK, 2015)**
40. . These assumptions have been used in the assessment presented in **Section 12.6** of this chapter. A displacement factor of 25% has been applied for the projected jobs and GVA generated by the Proposed Development during operation. A Scottish Government “Type II Multiplier” has been used to predict indirect and induced employment (i.e. 1.9) and GVA (i.e. 1.4) generated during the operation of the Proposed Development. These induced and indirect multipliers have been used to identify the net direct, indirect and induced jobs and GVA generated during the operation of the Proposed Development.

Geographical Region	Regional Breakdown of Operational Cost Spend (%)
Local (South Ayrshire)	42%
Scotland	58%
UK	87%
Outside the UK	13%
Total for the Proposed Development	100%

Table 12.5 Operation Spend Per Annum (RenewableUK, 2015)

41. The results of the 2017 BVG Associates research have been considered in the assessment. Based on the eight windfarms considered, with a combined capacity of 474MW, the research indicates that the development, commissioning and operational phases represent a total investment of around £1.6 billion; approaching £3.4 million per MW. This research provides a benchmark of investment cost per MW.

#### 12.4.3.3 Assessment Methodology for Tourism

42. A qualitative assessment has been undertaken based on the changes in availability, accessibility, severance, and amenity on tourist receptors (tourist attractions and tourist accommodation) during the construction and operation of the Proposed Development. For the purpose of this assessment, amenity is considered to be a combination of visual amenity, air quality and noise levels experienced by users of tourist attractions.
43. A qualitative assessment of the impacts of the Proposed Development on visitors’ decisions to holiday in the Study Area has also been undertaken taking into consideration Scotland specific research, such as the Visit Scotland Position Statement (Visit Scotland, 2014a), BiGGAR Economics research document ‘Wind Farms and Tourism Trends in Scotland’ (BiGGAR Economics, 2021) and Mountaineering Scotland ‘Wind farms and tourism in Scotland’ (Mountaineering Scotland, 2017).

#### 12.4.3.4 Assessment Methodology for Recreation

44. A qualitative assessment has been undertaken to assess the effect of the Proposed Development on informal and formal recreation facilities and activities, including designated routes, within 5km of the Site Boundary.

45. The assessment considered changes in accessibility, severance, and amenity on the recreational receptors during construction and operation of the Proposed Development. For the purpose of this assessment, amenity is considered to be a combination of visual amenity, air quality and noise levels experienced by users of the recreational facilities and activities.

#### 12.4.4 Significance Criteria

46. Professional judgment has been used to assess potential impacts on socio-economics, tourism and recreation. The significance level attributed to each effect has been assessed based on the magnitude of change due to the Proposed Development, and the sensitivity of the affected receptor.
47. The overall significance of the likely socio-economics, tourism and recreation effects has been based on the below.

##### 12.4.4.1 Sensitivity

48. Determining the sensitivity of receptors is based upon the baseline conditions. Specific values in terms of sensitivity are not attributed to the resources/receptors due to their diversity in nature and scale, however the assessment instead takes account of the qualitative (rather than quantitative) ‘sensitivity’ of each receptor and, in particular, on their susceptibility and ability to respond to change.

##### 12.4.4.2 Magnitude

49. Impact magnitude relates to whether the Proposed Development would result in changes to the receptor and the scale of these changes. Specific values in terms of magnitude are not attributed to each resource/receptor, however the impact magnitude is considered qualitatively.
50. The duration of impact is also considered, with more weight given to permanent changes than to temporary ones. Temporary effects are generally associated with the construction works, and may be short, medium or long term. Permanent effects are generally those associated with the operation of the Proposed Development.

##### 12.4.4.3 Significance

51. The significance of an effect takes into consideration the sensitivity of the receptor and the magnitude of an impact and uses the descriptors of the likely significance of effect set out in **Chapter 2: EIA Process and Methodology**. For the purposes of this assessment, a moderate or major effect has been considered Significant in the context of the EIA regulations.

##### 12.4.4.4 Residual Effects

52. The assessment considers additional mitigation proposed to reduce adverse effects of the Proposed Development and sets out the residual effects.

#### 12.4.5 Limitations to Assessment

53. The assessment is based on desk studies using a mixture of publicly available sources and information provided by consultees. It is assumed this information is accurate and up to date.
54. There is no specific guidance for the assessment and therefore this assessment has been based on professional judgement.

## 12.5 Baseline Conditions

55. This section provides the baseline information on socio-economics, tourism and recreation within the respective Study Areas defined in **Section 12.4.1**.

### 12.5.1 Socio-economics

#### 12.5.1.1 Renewable Energy Employment and Investment

56. National Statistics show that in 2020, wind energy in Scotland accounted for 72.0% (23,075 GWh) of all renewable energy generated, followed by hydro energy with 19.3% (6,187 GWh) (Department for Business, Energy & Industrial Strategy, 2021).

57. The ONS (ONS, 2019) survey estimated that the onshore wind sector in Scotland had a total turnover of £2.84 billion, including £1.435 billion direct and £1.405 billion indirect turnover in 2017. The survey estimated that there were 5,800 full-time equivalent (FTE) jobs in the onshore wind sector in Scotland in 2017, including 2,300 direct FTE and 3,500 indirect FTE.

58. The RenewableUK study suggests that direct, supply chain and wider economic benefits as a result of the onshore wind sector would provide benefits throughout the UK. The report indicates that the annual cost of operating and maintaining an onshore windfarm ranges from £23,000 to £130,000 per MW installed. The study indicates the proportion of construction, and operation spend in the local area, region, the UK and outside the UK. The average construction and operation cost per MW installed, as well as the per employee cost in turnover, turnover rate and GVA for onshore windfarm are also reported in the RenewableUK report. This information informs the socio-economics assessment and is presented in **Section 12.6** of this chapter.

59. The BVG Associates 2017 study of eight onshore windfarms located in the south west of Scotland concluded that local windfarm expenditure for the eight onshore windfarms are from three key aspects: local suppliers working on the windfarms; accommodation for workers on the windfarms; and expenditure from community payments, rent and rates. Four main categories account for the overall aggregated development and capital expenditure (local, Scottish and the UK), which are project development and management; wind turbines; civil works; and electrical works. Meanwhile, the overall aggregated operational expenditure consists of: transmission operations, maintenance and service (OMS); windfarm OMS; and decommissioning. The study also indicates that annual funds from the eight windfarms for distribution by communities was approximately £2.5 million at 2016 prices.

60. The BVG study states that a total of £1,276 million GVA in the UK and a total of £297 million local value added (LVA) has been estimated over the lifetime of the eight windfarms. The study also estimates that the eight windfarms would generate 31,118 UK FTE years including 7,768 local FTE years, as well as generating £814 million UK earning including £194 million local earning over the lifetime of the eight projects. This research has been considered within the socio-economic assessment presented in **Section 12.6** of this chapter.

61. The RenewableUK Onshore Wind Prospectus (RenewableUK, 2021) suggests that the onshore wind policy targets set for UK-wide and Scotland (30 gigawatts (GW) and 20.4GW respectively), would support a green economic recovery in the UK by supporting high value jobs across development, supply chain and operation activities. The report indicates that Scotland is expected to see benefit from new onshore wind by providing 17,000 jobs and £27.8 billion based on the Scotland onshore wind policy target. The report also estimates that through the delivery of 30GW of onshore wind, the geographical dispersal of new jobs to be created in South Ayrshire and surrounding local authorities, would account for 50.3% of new jobs created in Scotland. The percentage of jobs to be created within South Ayrshire and the surrounding local authorities is predicted to be significantly higher than the remaining regions in Scotland. This suggests that South Ayrshire is well placed to provide onshore wind economic opportunities.

62. The RenewableUK Onshore Wind Prospectus also suggests the importance of onshore wind for the nation in delivering and achieving net zero at lowest cost by cutting 6 million tonnes of CO<sup>2</sup> per annum, as well as lowering energy bills for consumers by £25 per annum.

#### 12.5.1.2 Population

63. Error! Reference source not found. **Table 12.6** provides a breakdown of proportion of population for different age groups in South Ayrshire, Scotland and UK in 2020. The UK has been included in the baseline section to provide context for the baseline conditions. South Ayrshire has a smaller proportion of the population at working age (people aged between 16 and 64) when compared to Scotland and the UK.

Population Group	South Ayrshire	Scotland	UK
Total population	112,100	5,466,000	67,081,200
16-64	65,800 (58.7%)	3,493,100 (63.9%)	41,845,000 (62.4%)

Table 12.6 Population and Demography in 2020 (NOMIS, 2021)

#### 12.5.1.3 Deprivation

64. The SIMD 2020 (SIMD, 2019) uses a combination of information relating to seven 'domains': income; employment; health; education and skills; housing; geographic areas; and crime to create an overall score of deprivation.

65. Deprivation is scored between SIMD deciles (1 to 10), with Decile 1 being most deprived and Decile 10 being least deprived. Deprivation is also ranked with 1 being the most deprived and 6,976 the least deprived. The Site is located in the Maybole, North Carrick and Coylton ward, and Carrick North part (S01012441) on the SIMD website. The SIMD 2020 ranks Carrick South as Decile 6 with an overall deprivation rank of 3,916. It does not fall within the top 20% most deprived area within Scotland.

#### 12.5.1.4 Employment and Economic Activity

66. The NOMIS Job Densities Report (NOMIS, 2021), is available on a Local Authority-wide and sub-regional level and indicates the availability of employment and labour demand. As of 2019, the job density levels (i.e. the ratio of total jobs to the population aged 16-64) in South Ayrshire was 0.82. This is the same as the average across Scotland (0.82) but lower than the average across UK (0.87) and indicates that there is a lower availability of employment opportunities within South Ayrshire and Scotland when compared with the UK.

67. **Table 12.7** shows that the rate of economic activity of working age people in the labour force in South Ayrshire is lower when compared with Scotland and UK rate of economic activity. The unemployment rate in South Ayrshire is also higher when compared with the unemployment rate for Scotland and the UK between 2020 and 2021. The average gross weekly income in South Ayrshire is higher when compared to the Scotland and UK average in 2021.

	South Ayrshire	Scotland	UK
Economic Activity Rate (age 16-64)	73.4%	77.8%	78.9%
Unemployment Rate (age 16-64)	4.9%	4.4%	4.5%
Average Gross Weekly Pay for Full-Time Workers by place of residence (2020)	£601.9	£595.0	£585.5

Table 12.7 Economic Indicators (2020-2021) (NOMIS, 2021)

68. There were estimated to be a total of 46,000 employee jobs in South Ayrshire in 2019, of which 63% were full-time and 37% were part-time (NOMIS, 2020). **Table 12.8** shows the breakdown of total employees by each industry sector in 2019.

Industry Sector	South Ayrshire (%)	Scotland (%)	UK (%)
B: Mining and quarrying	0.2	1.1	0.2
C: Manufacturing	10.9	6.8	8.0
D: Electricity, gas, steam and air conditioning supply	0.1	0.7	0.4
E: Water supply; sewerage, waste management and remediation activities	0.3	0.8	0.7
F: Construction	5.4	5.5	4.9
G: Wholesale and retail trade; repair of motor vehicles and motorcycles	17.4	13.5	15.0
H: Transportation and storage	5.4	4.2	4.9
I: Accommodation and food service activities	10.9	8.3	7.7
J: Information and communication	1.1	3.4	4.3
K: Financial and insurance activities	1.3	3.4	3.5
L: Real estate activities	1.5	1.5	1.7
M: Professional, scientific and technical activities	4.3	7.2	8.8
N: Administrative and support service activities	3.8	8.2	8.9
O: Public administration and defence; compulsory social security	5.4	6.3	4.4
P: Education	7.6	8.3	8.7
Q: Human health and social work activities	19.6	16.0	13.1
R: Arts, entertainment and recreation	3.3	2.8	2.5
S: Other service activities	2.2	1.7	2.0

Table 12.8 Proportion of Total Employees in Each Industry Sector In 2019 (NOMIS, 2021)

69. Overall, the data shows that South Ayrshire supports a broad range of economic activity. The proportion of total employees across the industry sectors in the Study Area are broadly in line with the national average. The proportion of employees working in construction in South Ayrshire (5.4%) in 2019 is marginally lower than Scotland (5.5%). However, South Ayrshire has a higher portion of employees in accommodation and food service activities (10.9%) than the Scottish (8.3%) and national average (7.7%). In addition, a large portion of the population of South Ayrshire work in human health and social work activities and wholesale and retail trade in South Ayrshire.

### 12.5.1.5 Baseline Socio-economic Context Summary

70. The economic studies referred to in **Section 12.5.1** of this chapter indicate that onshore windfarm projects in Scotland are expected to provide a positive impact on the local and regional economy during both construction and operation.
71. The working age population in South Ayrshire is lower than the regional average, while the unemployment rate for the working age population is marginally higher than the regional but lower than the national rate. This, along with the lower job density level, indicates that South Ayrshire is likely to have a slightly lower availability of economic opportunities when compared with Scotland.

### 12.5.2 Tourism

#### 12.5.2.1 Scotland's Tourism Strategy

72. Scotland's Tourism Strategy (Scottish Tourism Alliance, 2012) states that the key attributes of growth for tourism in Scotland are:
- nature, heritage and activities;
  - business tourism;
  - destination towns and cities; and
  - events and festivals.
73. It also sets out the tourism strategy to deliver an additional £1 billion growth or more in visitor spend to £5.5-6.5 billion by 2020. The strategy identifies three main pillars of growth (UK, European countries and countries further afield including USA, Australia and Canada), as well as the global emerging markets. It also identifies potential assets that could be developed in Scotland, such as creating walking and cycling, adventure tourism, food and drink, and local history and culture in rural destinations. Other assets identified as having growth potential include activities and adventure; business tourism; cruises; golf; mountain biking; and sailing.
74. A Review of the Tourism Scotland 2020 Strategy (Scottish Tourism Alliance, 2018) shows that the total overnight visitor spends; total growth markets overnight spend; and tourism turnover were generally growing between 2012 and 2017.
75. Neither Scotland's Tourism Strategy nor the Tourism Scotland 2020 Yearly Review have indicated that windfarm projects are considered to be a barrier to tourism growth.

#### 12.5.2.2 Onshore Wind - Policy Statement Refresh 2021: Consultative Draft

76. The Scottish Onshore Wind Policy Statement (Scottish Government, 2021) states that "*The Scottish Government is encouraged to see onshore wind developments*" and considers onshore wind could result in significant opportunities for local and national tourism.
77. It also states that there is a reduced number of onshore wind opposition from 12% in 2015, to 5% in 2020.

#### 12.5.2.3 Visit Scotland Position Statement

78. The Position Statement (VisitScotland, 2014a) states that "*wind farms have a limited impact on visitors' decisions to holiday in Scotland*". It also indicates that no evidence has been found by the Scottish Parliament's Energy Committee that windfarms have a negative effect on tourism industry. Visit Scotland also note that "*Renewable energy brings visitors to Scotland in its own right and encourages them to spend money in our tourism businesses.*"

#### 12.5.2.4 Tourism in Scotland's Regions

79. Tourism provides an important contribution to the national, regional and local economies. Key Facts on Tourism in Scotland 2018 (VisitScotland, 2019a) indicates that the sustainable tourism employment in Scotland was approximately 206,600 in 2017, with most jobs created in relation to the beverage serving activities; hotels; and amusement and recreation activities. There was approximately £4,127.1 million GVA generated in Scotland in 2017 as a result of tourism.
80. Tourism in Scotland's Regions 2013 (VisitScotland, 2014b) shows that there were 4,900 sustainable tourism jobs in South Ayrshire and approximately £83.7 million GVA generated due to tourism in 2011. Tourism in Scotland's Regions 2016 (VisitScotland, 2017a) shows that for South Ayrshire, there were 6,000 sustainable tourism jobs in 2015 and approximately £108.8 million GVA generated due to tourism in 2014. This indicates that tourism is a growing industry in South Ayrshire.
81. Tourism in Scotland's Regions 2016 (VisitScotland, 2017a) reported that there were 615,000 trips to Ayrshire and Arran from the UK in 2016 and 78,000 from overseas, with the average duration of stay being 3.5 and 5.6 nights respectively. The annual average accommodation occupancy rates in Ayrshire and Arran was 66% for hotels, 28% for guest houses and 'bed and breakfasts', and 45% for self-catering accommodation in 2016.
82. Scotland Visitor Survey 2015 and 2016 (VisitScotland, 2017b) shows that the main reasons that tourists were attracted to Ayrshire and Arran were: the scenery and landscape (68%); 'to get away from it all' (36%); "I have spent a holiday/short break in [Ayrshire and Arran] before and wanted to do so again" (34%); and "[Ayrshire and Arran] is a place I have always wanted to visit" (32%). The most popular activities during their visit in Ayrshire and Arran were:
- sightseeing (72%);
  - visiting a beach (62%);
  - visiting historic house, stately home, castle (54%);
  - short walk/stroll (53%);
  - visiting country park/garden (40%);
  - long walk, hike or ramble (40%);
  - shopping (39%); and
  - visiting a woodland/forest area (39%).
  - visiting a visitor/heritage centre (30%); and
  - bird watching/watching wildlife (30%).
83. Whilst local data is not available, it is considered that reasons for visiting the local area would be broadly similar with a focus on the Galloway Forest Park, Merrick WLA and Galloway Dark Sky.

#### 12.5.2.5 Mountaineering Scotland (Mountaineering Scotland, 2017)

84. Mountaineering Scotland suggest that the effect of windfarms on tourism and/or recreation depends on:
- the characteristics of the Proposed Development, both individually and as part of regional and national patterns;
  - the nature of the local tourism offer and market, and that of competitors; and
  - the characteristics of local tourists.

#### 12.5.2.6 Galloway and Southern Ayrshire UNESCO Biosphere

85. The Galloway and Southern Ayrshire UNESCO Biosphere includes a core area, buffer zone and transition zone that covers the majority of south west Scotland. The Proposed Development lies within the Biosphere buffer zone and at the edge of the transition zone. The Biosphere core area is located approximately 5 km south east of the Proposed Development. The designation signifies that the area of the Galloway and Southern Ayrshire has been recognised by UNESCO as a world class environment for people and nature. All Biosphere Reserves

seek to involve local communities and all interested stakeholders in planning and management. They integrate three main "functions": (United Nations Educational, Scientific and Cultural Organisation, 2020):

- conservation of biodiversity and cultural diversity;
- economic development that is socio-culturally and environmentally sustainable; and
- logistic support, underpinning development through research, monitoring, education and training

86. The socio-economic, tourism and recreation assessment considers elements that contribute towards the economic development and logistic support functions of the Galloway and Southern Ayrshire UNESCO Biosphere. The Galloway and Southern Ayrshire UNESCO Biosphere has also been considered in **Chapter 5: Landscape and Visual Impact Assessment** and **Chapter 7: Ecology and Biodiversity**. The Planning Statement, that accompanies the Section 36 application, provides further consideration of the Biosphere.

#### 12.5.2.7 Merrick Wild Land Area (NatureScot, 2017)

87. Wild land areas (WLA) are the most extensive areas where high levels of a sense of wildness can be found and include remote mountains and moorland, isolated sections of coast and uninhabited islands. The Merrick WLA is located approximately 3km south east of the Site Boundary. It is noted that the area has comparatively less recreational usage by the public than the surrounding area of the Galloway Forest Park, with little obvious recreational provision, providing a relatively strong sense of remoteness.

#### 12.5.2.8 Galloway Dark Sky Park

88. The Proposed Development is located within the Galloway Dark Sky Park, however, all proposed wind turbines would be located outside of the core area. A Dark Sky Park is a place with exceptionally dark night skies, where there is a commitment to keeping those skies dark, by controlling lighting. Since 2009, Galloway Forest Park has been designated by the International Dark-Sky Association as the fourth Dark Sky Park in the world, and the first in the UK, named a Gold Tier park (Forestry and Land Scotland, 2020b).

#### 12.5.2.9 Ayrshire and Arran Tourism Strategy 2012/17 (Ayrshire Economic Partnership, 2011)

89. The tourism strategy for Ayrshire and Arran was developed by the Ayrshire Economic Partnership (AEP), where members include South Ayrshire Council. The AEP aims to increase annual visitors to Ayrshire and Arran by 10%, as well as to enhance and conserve natural, heritage and cultural assets in the region by the end of 2017. The strategy also acts as a guideline for policy making in South Ayrshire.
90. The strategy identifies that there are eight individual sectors for tourism in Ayrshire and Arran and its associated potential yield. These comprise culture and heritage including Robert Burns (very strong); activities and natural environment (very strong); golf (very strong); sailing (very strong); food and drink (strong); islands (strong); weddings and civil partnerships (moderate); and business tourism (moderate).
91. The strategy also identifies that tourism is central to the Scottish economy, worth some £11 billion (and supporting around 270,000 jobs).

#### 12.5.2.10 Tourist Attractions

92. Baseline information on tourist attractions are detailed in **Appendix 12.1: Tourist Attractions Baseline**.

#### 12.5.2.11 Summary of Baseline Tourism Context

93. Tourism is a growing industry in South Ayrshire with tourists visiting the UK and overseas. According to Scotland Visitor Survey 2015 and 2016, the majority of the tourists are attracted to South Ayrshire's scenery and landscape.

94. There is one main Ayrshire and Arran tourist attraction, numerous local tourist attractions and tourist accommodation providers located in the Study Area. The regional and local tourist attractions are mainly country parks, museums, castles and golf courses. The majority of the receptors are located along the coast, with the closest local tourist attraction and tourist accommodation located within the Site Boundary and 3.6km west respectively. This suggests that the area surrounding the Proposed Development is popular with tourists, in particular along the coast.

### 12.5.3 Recreation

95. A number of formal and informal recreational routes are located within the 5km Study Area. These are presented in **Table 12.9** and **Figure 12.1: Socio-economics, Tourism and Recreation Receptors**. It should be noted that a number of paths have more than one label (e.g. as a core path and Hill Track).

Recreational Routes	Approximate distance to the Site Boundary
Core path SA47	Cross the Site Boundary
Core path SA49	Cross the Site Boundary
Old Road through Straiton Heritage Path	Cross the Site Boundary
National Catalogue of Rights of Way (CROW) SKC/SKC7/1	Cross the Site Boundary
Scottish Hill Track SKC/HT385/2	Cross the Site Boundary
Scottish Hill Track SKC/HT385/3	Cross the Site Boundary
Scottish Hill Track SKC/HT82/2	Cross the Site Boundary
Scottish Hill Track SKC/HT82/6	Cross the Site Boundary
Scottish Hill Track SKC/HT80/10	Cross the Site Boundary
Scottish Hill Track SKC/HT76/9	Cross the Site Boundary
Scottish Hill Track SKC/HT82/7	Cross the Site Boundary
Forest Roads – roads within Galloway Forest Park	Cross the Site Boundary
Two National Byways	Immediately adjacent to the Site Boundary
Scottish Hill Track SKC/HT76/11	Immediately east of the Site Boundary
AARCP (Tairlaw route)	Immediately east of the Site Boundary
core path SA56	Approximately 0.5km east of the Site Boundary
Sustrans National Cycle Network Route 7	Approximately 1.0km west of the Site Boundary
AARCP (Glenalla route)	Approximately 1.0km west of the Site Boundary
Scottish Hill Track SKC/HT80/9	Approximately 1.3km south east of the Site Boundary
Cornish Hill Trail	Approximately 1.3km south east of the Site Boundary
Carrick Forest Drive	Approximately 1.4km south east of the Site Boundary
Galloway and Southern Ayrshire UNESCO Biosphere promoted route	Approximately 1.4km south east of the Site Boundary
Scottish Hill Track SKC/HT80/8	Approximately 1.7km south west of the Site Boundary
Scottish Hill Track SKC/HT385/4	Approximately 2.0km north of the Site Boundary
Scottish Hill Track SKC/HT82/3	Approximately 2.6km south west of the Site Boundary
Scottish Hill Track SKC/HT385/5	Approximately 2.6km north of the Site Boundary
Scottish Hill Track SKC/HT82/1	Approximately 2.7km south west of the Site Boundary

Recreational Routes	Approximate distance to the Site Boundary
Scottish Hill Track SKC/HT385/1	Approximately 3.0km south west of the Site Boundary
Routes to the Colonel Hunter Blair Monument	Approximately 3.6km north of the Site Boundary
Scottish Hill Track SKC/HT80/3	Approximately 3.7km south west of the Site Boundary
Barr Trail	Approximately 3.7km south west of the Site Boundary

Table 12.9 Recreational Routes (South Ayrshire Council, 2020a; Heritage Paths, 2020; Sustrans, 2020; and South Ayrshire Council, 2020b)

96. Galloway Corbetts and Donalds are located in Galloway Forest Park. Corbetts are mountains in Scotland that are between 2,500 and 3,000 feet high, whilst Donalds are mountains in Scotland that are over 2,000 feet high. These comprise the following:

- Galloway Corbetts:
  - Merrick (outside of the Study Area for recreation receptors);
  - Shalloch on Minnoch (outside of the Study Area); and
  - Corserine (outside of the Study Area); Cairnsmore of Carsphairn (outside of the Study Area).
- Donalds:
  - Merrick (outside of the Study Area);
  - Corserine (outside of the Study Area);
  - Carlin's Cairn (outside of the Study Area);
  - Cairnsmore of Carsphairn (outside of the Study Area);
  - Kirriereoch Hill (outside of the Study Area);
  - Shalloch on Minnoch (outside of the Study Area);
  - Meikle Millyea (outside of the Study Area);
  - Milldown (outside of the Study Area);
  - Tarfessock (outside of the Study Area);
  - Meaul (outside of the Study Area);
  - Mullwharchar (outside of the Study Area);
  - Cairnsgarroch (outside of the Study Area);
  - Craignaw (outside of the Study Area);
  - Coran of Portmark (outside of the Study Area); and
  - Dungeon Hill (outside of the Study Area).

97. There are several recreational facilities and areas located in the 5km Study Area, including:

- Galloway Forest Park (within and outside the Site Boundary as detailed in Section 12.5.5);
- Tairlaw Car Park and picnic area (immediately adjacent to the Site Boundary);
- Galloway Dark Sky Park Core Area (approximately 725m south east of the Site Boundary);
- Stinchar Falls (approximately 1.2km south of the Site Boundary) (accessible via forest tracks and Scottish Hill tracks);
- Forest Drive Car Park and picnic area (approximately 1.4km south east of the Site Boundary);
- Bradan Car Park (approximately 1.9km south east of the Site Boundary); and
- Dark Sky Park Loch Bradan Car Park (approximately 2.4km east of the Site Boundary).

### 12.5.4 Loch Bradan

98. It is understood that fishing is undertaken in Loch Bradan for permit holders (Forestry and Land Scotland, 2020). It is also understood that Loch Bradan is popular for walking, cycling and wild camping.

### 12.5.5 Galloway Forest Park

99. The Galloway Forest Park is located within and beyond the Study Area and provides opportunities for walking, easy family cycling, mountain biking and wildlife experiences. There are a number of promoted walking and cycling routes throughout the Galloway Forest Park, with the majority of promoted routes in the southern extent of the park. Three visitor centres are located within the Galloway Forest Park:

- Kirroughtree;
- Glentool; and
- Clatteringshaws.

## 12.6 Potential Effects

100. This section outlines the potential effects during the construction and operation of the Proposed Development, including embedded mitigation measures.

### 12.6.1 Mitigation by Design and Embedded Mitigation

101. The following section details good practice mitigation measures that would be implemented as part of the construction and operation of the Proposed Development.

#### 12.6.1.1 Embedded Mitigation during Construction

102. A CEMP would be prepared by the principal contractor and agreed with South Ayrshire Council prior to the start of construction. The Outline CEMP (see **Appendix 4.2: Outline Construction Environmental Management Plan**) would form the basis of the CEMP. The CEMP would include an AMP which would be agreed in consultation with the South Ayrshire Council Access Team and Sustainable Travel Team. The AMP would ensure continued access for users of the recreational routes crossing the Site (core path SA47; core path SA49; Scottish Hill Track SKC/HT385/3, SKC/HT385/2, SKC/HT82/2; SKC/HT82/6, SKC/HT80/10; SKC/HT76/9; SKC/HT82/7; CROW SKC/SKC7/1; forest road within Galloway Forest Park; and Old Road through Straiton Heritage Path). However, diversions would be implemented in order to allow continued access for these routes. Areas immediately surrounding the construction activities may be temporarily restricted during construction for informal recreational activities such as walking, cycling and horse riding. The area and duration of such restrictions would be kept to a minimum as is required for the work to be conducted safely and efficiently. In addition, in keeping with good practice for construction sites, notices would be placed in prominent locations around the Site with details of any areas with restricted access. The diversions and restricted access are not anticipated to be in place throughout the full 22 months of the construction period, but only during specific phases of the construction period.

103. ScottishPower Renewables (now referred to as 'The Applicant') would ensure the principal contractor would work proactively with contractors and suppliers to provide employment opportunities in the local area. It is anticipated that the principal contractor would hold a local 'meet-the-buyer' open day. This would provide an opportunity for local contractors and suppliers to present their business to the principal contractor.

104. The CEMP would include public liaison (e.g. public notices) that would be issued prior to the commencement of construction works informing local residents and businesses of dates and durations of the works.

### 12.6.1.2 Embedded Mitigation during Operation

105. When maintenance activities are undertaken during the operation of the Proposed Development, appropriate safety measures including adequate warning signs and exclusion areas would be required to ensure safety for the public.

### 12.6.2 Construction

#### 12.6.2.1 Effects on Socio-economics

106. The Proposed Development includes 13 wind turbines with a capacity of around 6.6MW each, giving a combined generating capacity of approximately 86MW.

107. According to the research by RenewableUK, on average, 36% of the construction costs is spent in the Scottish economy and 12% spent in the local area. Error! Reference source not found. **Table 12.9** summarises the construction spend across each geographical region which has been based on assumptions in the 2015 RenewableUK research (£1.32 million per MW installed capacity).

Geographical Region	Region Breakdown	Estimated Spend
South Ayrshire	12%	Up to £13,590,720
Scotland	36%	Up to £40,772,160
UK	47%	Up to £53,230,320
Outside UK	53%	Up to £60,025,680
Total for the Proposed Development	100%	Up to £113,256,000

1. Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.10 Projected Gross Construction Spend

108. As shown in **Table 12.10**, the Proposed Development is estimated to generate up to £13.6 million of gross construction spend (excluding development costs such as planning, environmental and Legal professional services) and up to £40.8 million at the local and Scottish level respectively.

109. Research undertaken by RenewableUK also indicates that, on average, there is one employee per £137,942 in turnover and a Gross Value Added (GVA<sup>2</sup>)/Turnover rate of 0.432. Using these assumptions, gross employment generated by the Proposed Development and the amount of gross GVA contribution can be estimated based on the construction spend and is presented in **Table 12.11**.

Geographical Region	Estimated Turnover	Estimated Jobs Generated	GVA
South Ayrshire	Up to £13,590,720	Up to 99	Up to £5,871,191
Scotland	Up to £40,772,160	Up to 296	Up to £17,613,573
UK	Up to £53,230,320	Up to 386	Up to £22,995,498
Outside UK	Up to £60,025,680	Up to 435	Up to £25,931,094
Total for the Proposed Development	Up to £113,256,000	Up to 821	Up to £48,926,592

2. Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

<sup>2</sup> Gross Value Added is the most commonly used measure in economic impact assessments of sectors, organisations and public policy.

Table 12.11 Estimated Gross Employment and Gross GVA During Construction

110. As shown in **Table 12.11**, the Proposed Development is estimated to generate up to 99 gross jobs in South Ayrshire and a gross GVA contributions of up to £5,871,191. Within Scotland, the Proposed Development is estimated to generate up to 296 gross jobs and provide gross GVA contributions of up to £17,613,573.
111. **Table 12.12** presents the temporary employment and GVA generated by the Proposed Development taking leakage, displacement and multiplier effects into account.

Geographical Region	Net Direct (Displacement)		Indirect and Induced	
	Estimated Jobs Generated	GVA	Estimated Jobs Generated	GVA
South Ayrshire	Up to 74	Up to £4,403,393	Up to 67	Up to £4,403,393
Scotland	Up to 222	Up to £13,210,180	Up to 200	Up to £13,210,180
UK	Up to 289	Up to £17,246,624	Up to 260	Up to £17,246,624
Outside UK	Up to 326	Up to £19,448,320	Up to 294	Up to £19,448,320
Total for the Proposed Development	Up to 616	Up to £36,694,944	Up to 554	Up to £36,694,944

3. Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.12 Estimated Net Employment and GVA and Indirect and Induced Employment and GVA During Construction

112. As shown in **Table 12.13**, the Proposed Development is estimated to generate a total of up to 140 net jobs in South Ayrshire per annum over the construction period and a total net GVA contributions of up to £8.8 million per annum over the construction period. Within Scotland, the Proposed Development is estimated to generate a total of up to 421 net jobs per annum over the construction period and provide a total of net GVA contributions of up to £26.4 million per annum over the construction period.

Geographical Region	Estimated Jobs Generated	GVA
South Ayrshire	Up to 140	Up to £8,806,787
Scotland	Up to 421	Up to £26,420,360
UK	Up to 550	Up to £34,493,247
Outside UK	Up to 620	Up to £38,896,641
Total for the Proposed Development	Up to 1,170	Up to £73,389,888

4. Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.13 Total Net Estimated Employment and GVA During Construction

113. The research undertaken by BVG Associates suggests investment of up to £3.4 million per MW installed capacity for the development, commissioning and operation of an onshore windfarm. This number is higher than the research undertaken by RenewableUK, which indicates that there would be a total of up to £1.5 million per MW installed capacity. The assessment of the Proposed Development has used the RenewableUK figures and therefore provides a precautionary scenario in relation to the jobs generated during the construction of the Proposed Development.
114. Based on the expected scale of employment generation and GVA, it is anticipated that the Proposed Development would have a direct, temporary, short-term (18 months) **Minor Beneficial** effect on socio-economic receptors in South Ayrshire and **Negligible** effect in Scotland.

115. The Proposed Development would not have a significant effect on the viability of forestry businesses when taking into consideration the financial compensation and the compensatory planting that would be created on a substitute planting site (see **Chapter 13: Other Issues**). As a result, the socio-economic effect on forestry businesses is assessed as **Negligible**.

## 12.6.2.2 Effects on Tourism and Recreation

### 12.6.2.2.1 Local Tourist / Recreation Assets

116. This section assesses tourist/recreation assets that are not recreational routes, with recreational routes being assessed in **Section 12.6.2.2.3** of this chapter.
117. The Proposed Development is located within the Galloway Forest Park (which also includes the Galloway Hills). The Merrick WLA is located approximately 2.9km south east of the Site Boundary. It is anticipated that access to these receptors would be maintained throughout the construction period. It is understood that Newton Stewart Road would remain open with the implementation of traffic management (i.e. traffic lights) during any upgrade works. In addition, Newton Stewart Road would remain open during deliveries of materials for the construction of the Proposed Development. Although deliveries may result in temporary congestion, as detailed in **Chapter 11: Access, Traffic and Transport**, there would be ample spare road capacity on the surrounding road network during construction.
118. The construction of the Proposed Development would however affect the amenity of these areas. As described in **Chapter 5: Landscape and Visual Impact Assessment**, it is considered that effects on visual amenity during the construction stage would not be significant during the early stages and the same as for the completed development as standing wind turbines increasingly become a feature of the Site (see **Section 12.6.3.2.2**). As detailed in **Chapter 9: Noise**, good practice measures would be applied to control noise generated from construction activities. It is anticipated that there would be an increase in noise levels in the Galloway Forest Park with these measures in place. However, as the impact would be temporary and in a small, localised area, it is anticipated that this would have a limited effect on these recreational resources. As detailed in the Outline CEMP (see **Appendix 4.2: Outline Construction Environmental Management Plan**), measures would be implemented during the construction of the Proposed Development in order to limit the generation and spread of dust. Therefore, it is anticipated that the construction of the Proposed Development would have an overall direct/indirect, temporary, short-term **Minor adverse** effect on these receptors.
119. The Proposed Development is located within the Galloway Dark Sky Park. As detailed in **Chapter 5: Landscape and Visual Impact Assessment**, it is considered that effects on visual amenity during the construction stage would not be significant during the early stages and the same as for the completed development as standing wind turbines increasingly become a feature of the site (see **Section 12.6.3.2.2**). When considering the potential effects of the Proposed Development on the night sky, there would be a direct/indirect temporary, short-term, **Negligible** effect on visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone.
120. As outlined in **Appendix 12.1: Tourist Attractions Baseline**, the next closest tourist receptor, that is not a recreational route, is Blairquhan Castle (wedding venue). Blairquhan Castle is located approximately 5.9km north. As detailed in **Chapter 11: Access, Traffic and Transport**, there would be spare road capacity on the surrounding road network during construction. In addition, it is anticipated there would be no road closures or diversions associated with the upgrading works and construction works.
121. Due to the intervening periphery foothills and enclosure from the woodland associated with Blairquhan Castle, the Proposed Development would have a limited impact on the visual amenity of this receptor. Due to the distance between the receptor and Proposed Development, there is unlikely to be air quality or noise impacts



from the Proposed Development on these receptors. As a result, the overall effect on access, severance and amenity is assessed as **Negligible**.

122. As detailed in the **Chapter 5: Landscape and Visual Impact Assessment**, it is anticipated that there would be no significant effects on visual amenity beyond approximately 6km. In addition, it is not anticipated that there would be air quality or noise impacts due to the distance between the Proposed Development and other receptors. Therefore, as the other tourist assets are located further than 6km from the Proposed Development, the Proposed Development would have a **Negligible** effect or less for access, severance and amenity on the other tourist receptors.
123. Stinchar Falls is located approximately 1.2km south of the Site Boundary. Walkers can access Stinchar Falls via forest tracks and Scottish Hill tracks. An AMP would be implemented to ensure continued access for users of the Scottish Hill Track (SKC/HT82/6 and SKC/HT82/7) and pedestrian access to Stinchar Falls, including diversions where required. It is anticipated that the Proposed Development would have a limited impact on recreational amenity at Stinchar Falls because of the screening afforded by the enclosure of the valley and forestry. Overall, it is anticipated that there would be a **Negligible** effect on users of Stinchar Falls during construction.
124. Loch Bradan is popular for walking, cycling and wild camping and is located to the east of Newton Stewart Road (C46W). It is anticipated that access to Loch Bradan would not be affected during construction for the reasons mentioned in **paragraph 117**. As shown in the Zone of Theoretical Visibility (**Figure 5.1a: Blade Tip and Hub Height Zone of Theoretical Visibility (A1)**) accompanying **Chapter 5: Landscape and Visual Impact Assessment**, the construction works could be visible from the eastern extent of Loch Bradan. However, the Site would not be visible from the picnic area near Loch Bradan. Due to the distance between Loch Bradan and the Proposed Development, there are anticipated to be limited air quality and noise impacts from the Proposed Development during construction. Overall, the Proposed Development would have an indirect, temporary, short-term **Minor Adverse** effect on walkers, cyclists and wild campers at Loch Bradan due to the views of the construction works.
125. Loch Bradan is also used by permit holders for recreational fishing. As detailed in **Chapter 6: Hydrology, Hydrogeology, Geology and Soils**, there is no hydrological connection from the Site to Loch Bradan. It is therefore anticipated that the water quality of Loch Bradan would not be affected by the Proposed Development during construction and would not affect the fish population. Therefore, the effect has been assessed as **Negligible** for anglers using Loch Bradan.

#### 12.6.2.2.2 Tourist Accommodation

126. There is tourist accommodation located within 15 km of the Proposed Development (see **Appendix 12.1: Tourist Attractions Baseline**). It is likely that construction workers will create additional tourist accommodation demand locally during the construction phase. Since there are several accommodation lettings in the area, it is not considered that the construction of the Proposed Development would limit accommodation for tourists.
127. Overall, the construction effect of the Proposed Development on tourism is assessed to be **Negligible**.

#### 12.6.2.2.3 Recreation Trails and Activities

128. A number of recreational trails are located in close proximity to the proposed wind turbines, construction compounds, substation and access roads. The location of the Proposed Development and recreational trails are presented in **Figure 12.1: Socio-economics, Tourism and Recreation Receptors**. The assessment has considered recreational paths, informal recreational activities, cycle routes and Carrick Forest Drive separately.

129. For recreational paths, the proposed construction access road would primarily be located along existing forest tracks. A number of operational forest tracks which are shown in **Figure 4.1 Site Layout** would be upgraded in order to accommodate the construction traffic and abnormal loads. New access roads have also been proposed in order to link the existing forest tracks to the proposed wind turbines. Upgrading the existing forest tracks and construction traffic using these routes would impact on the recreational routes crossing the Site). The construction of the wind turbines and associated infrastructure could also impact on these routes.
130. An AMP would be implemented to ensure continued access for recreational routes crossing the Site. However, diversions may be required in order to allow continued access for these routes. The provisional diversion route for Scottish Hill Track SKC/HT82/6 and SKC/HT82/7 was discussed with the South Ayrshire Council Access Officer as shown in **Table 12.3**. Overall, with the above measures in place, the effect on access to recreational paths has been assessed as direct, temporary, short-term **Minor Adverse**.
131. With regard to amenity and indirect effects on recreational paths, a Landscape and Visual Amenity assessment has been undertaken for the Proposed Development. As described in **Chapter 5: Landscape and Visual Impact Assessment**, it is considered that effects on visual amenity during the construction stage would not be significant during the early stages and the same as for the completed development as standing wind turbines increasingly become a feature of the site (see **Section 12.6.3.2.3**).
132. As detailed in **Chapter 9: Noise**, good practice measures would be applied to control and minimise noise generated from construction activities. It is anticipated that there would be an increase in noise levels, in particular, for users of recreational routes that cross the centre of the Site with these measures in place. Users of other paths within 300m of the construction works could also experience increased noise levels. However, as the impact would be temporary and for a relatively short section of the routes due to the construction phasing and localised nature of the construction works, it is anticipated that this would have an indirect, temporary, short-term **Minor Adverse** effect on recreational users.
133. As detailed in the Outline CEMP (see **Appendix 4.2: Outline Construction Environmental Management Plan**), measures would be implemented during the construction of the Proposed Development in order to limit the generation and spread of dust.
134. Overall, when considering the impacts of the Proposed Development on access, severance and amenity of these recreational paths, the Proposed Development is assessed to be direct and indirect, temporary, short-term **Minor Adverse** effect.
135. Informal walking, horse riding and cycling would be restricted from the area surrounding the construction activities and construction compound for health and safety purposes. The spatial and temporal extent of such restrictions would be kept to the minimum as is required for the work to be conducted safely and efficiently. Considering the small area that would be affected and other recreational routes available, the affect has been assessed as **Negligible**.
136. National Cycle Network Route 7 and AARCP (Glenalla route) are located approximately 1km west of the Site Boundary and follow the same route (see **Figure 12.1: Socio-economics, Tourism and Recreation Receptors**). AARCP (Tairlaw route) is located along the road to the east of the Site Boundary. It anticipated that access along the route would not be directly affected during the construction of the Proposed Development. However, construction traffic and abnormal load traffic would use AARCP (Tairlaw route) and the National Cycle Network Route 7 between Glentroll and the junction at the Bell Memorial Car Park. There would be a peak of 152 vehicle movements along these roads based on the worst-case scenario as detailed in **Section 11.7 of Chapter 11: Access, Traffic and Transport**. However, these routes are used for timber haulage without restriction as regulated by the Road Traffic Act 1988. Overall, when considering the existing usage of these routes, there would be a direct, temporary, short-term **Minor Adverse** effect.

137. The Carrick Forest Drive is located approximately 1.4km south east of the Site Boundary and travels in an easterly direction. As detailed in **Chapter 11: Access, Traffic and Transport**, there would be spare road capacity on the surrounding road network during construction. Newton Stewart Road would remain open with the implementation of traffic management (i.e. traffic lights) during the upgrade works. In addition, Newton Stewart Road would remain open during deliveries of materials for the construction of the Proposed Development; although deliveries may result in temporary congestion. Therefore, reduced access to and along the Carrick Forest Drive due to the Proposed Development is anticipated to be limited. The upgrade works would be visible for drivers using Newton Stewart Road to access Carrick Forest Drive. The works would affect the amenity of the drive to Carrick Forest Drive but due to the nature of the activity (e.g. scenic driving) and short section of the route that would be affected it is anticipated that these impacts would be limited. The construction works could be visible from the Carrick Forest Drive, however due to the nature of the activity (e.g. scenic driving) and the very limited stretch of road the construction works would be visible from, it is anticipated that the Proposed Development would have an overall **Negligible** effect on Carrick Forest Drive.

### 12.6.3 Operation

#### 12.6.3.1 Socio-economics

138. The Proposed Development would give a combined generating capacity of approximately 86MW.

The RenewableUK research indicates that 58% of the operation spend for onshore windfarms benefits the Scottish economy and 42% benefits the local economy. **Table 12.14** summarises the gross operation spend per annum for each geographical region using RenewableUK's weighted average operation cost (£59,867 per MW installed per annum).

Geographical Region	Region Breakdown	Estimated Spend
South Ayrshire	42%	Up to £2,157,367
Scotland	58%	Up to £2,979,221
UK	87%	Up to £4,468,832
Outside UK	13%	Up to £667,757
Total for the Proposed Development	100%	Up to £5,136,589

Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.14 Gross Operation Spend Per Annum

139. As shown in **Table 12.15**, the Proposed Development is estimated to generate up to £2.2 million and up to £3 million of gross operation spend per year at the local and Scottish level respectively.

140. Research undertaken by RenewableUK also indicates that, on average, the turnover per employee is £121,935 and the GVA/Turnover rate is 0.430 per year. Using these assumptions, gross employment generated by the Proposed Development and the amount of gross GVA contribution can be estimated for the operation phase and presented in **Table 12.15**.

Geographical Region	Estimated Turnover	Estimated Jobs Generated	GVA
South Ayrshire	Up to £2,157,367	Up to 18	Up to £927,668
Scotland	Up to £2,979,221	Up to 24	Up to £1,281,065
UK	Up to £4,468,832	Up to 37	Up to £1,921,598
Outside UK	Up to £667,757	Up to 5	Up to £287,135
Total for the Proposed Development	Up to £5,136,589	Up to 42	Up to £2,208,733

Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.15 Estimated Gross Job Generated and Gross GVA During Operation

141. As shown in **Table 12.15**, the projected level of gross employment at the Scottish level for the Proposed Development is up to 24, contributing up to £1.3 million in gross GVA per year. At the local level, the operation phase of the Proposed Development is predicted to generate up to 18 gross jobs, contributing up to £0.9 million in gross GVA per year.

142. **Table 12.16** presents the permanent employment and GVA generated by the Proposed Development taking leakage, displacement and multiplier effects into account.

Geographical Region	Net Direct (Displacement)		Indirect and Induced	
	Estimated Jobs Generated	GVA	Estimated Jobs Generated	GVA
South Ayrshire	Up to 13	Up to £695,751	Up to 12	Up to £278,300
Scotland	Up to 18	Up to £960,799	Up to 16	Up to £384,320
UK	Up to 27	Up to £1,441,198	Up to 25	Up to £576,479
Outside UK	Up to 4	Up to £215,351	Up to 4	Up to £86,141
Total for the Proposed Development	Up to 32	Up to £1,656,550	Up to 28	Up to £662,620

Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.16 Estimated Net Employment and GVA and Indirect and Induced Employment and GVA During Operational

143. As shown in **Table 12.17**, the Proposed Development is estimated to generate a total of up to 25 net jobs in South Ayrshire and a total net GVA contributions of up to £1 million per year. Within Scotland, the Proposed Development is estimated to generate a total of up to 35 net jobs and provide a total of net GVA contributions of up to £1.3 million per year.

Geographical Region	Estimated Jobs Generated	GVA
South Ayrshire	Up to 25	Up to £974,051
Scotland	Up to 35	Up to £1,345,118
UK	Up to 52	Up to £2,017,678
Outside UK	Up to 8	Up to £301,492
Total for the Proposed Development	Up to 60	Up to £2,319,170

Source: WSP calculation based on RenewableUK assumptions (RenewableUK, 2015)

Table 12.17 Total Net Estimated Employment and GVA During Operation

144. The research undertaken by BVG Associates indicates that there is a total of £3.4 million per MW installed capacity for the development, commissioning and operation of a windfarm over a year's study period. This number is higher than the research undertaken by RenewableUK, which indicates that there would be a total of £1.5 million per MW installed capacity for the development, construction and operation of a windfarm development. This assessment therefore provides a precautionary scenario in relation to the jobs generated during the operation of the Proposed Development.

145. At the operational phase, the Proposed Development is anticipated to have a positive albeit **Negligible** socio-economic effect in in South Ayrshire and a **Negligible** effect in Scotland.

146. The Proposed Development would not have a not significant effect on the viability of forestry businesses when taking into consideration the financial compensation and the compensatory planting that would be created on

a substitute planting site (see **Chapter 13: Other Issues**). Therefore, there is anticipated to be a **Negligible** socio-economic impact on the forestry economy during the operation of the Proposed Development.

### 12.6.3.2 Effects on Tourism and Recreation

147. The Applicants' experience suggests that windfarm developments can have a positive effect on tourism, attracting additional visitors to the area. Whitelee Windfarm, near Eaglesham, comprises 215 wind turbines, making it the largest operational onshore windfarm in the UK. 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 wind turbines and the development around them can in fact be visitor attractions in their own right.

#### 12.6.3.2.1 Local Tourist Attractions and Tourist Accommodation

148. According to a research report published by BiGGAR Economics in 2021, onshore windfarms in Scotland do not cause a decrease in tourism employment either at a national or local level. The study examined tourism related employment trends in the immediate vicinity of 16 wind farms conducted between 2015 and 2019. The study also re-investigated the onshore wind energy sector and the employment in the sustainable tourism sector in Scotland between 2009 and 2015.

149. The BiGGAR Economics study indicates that both onshore wind turbine installation capacity and the sustainable tourism employment sector have seen growth between 2009 and 2019 at a local authority level in Scotland. The installed capacity has increased from 1,753.2MW in 2009 to 5,029.8MW in 2015 and 7,968.7MW by 2019, where employment in sustainable tourism sector grew by 20% between 2009 and 2019.

150. The BiGGAR Economics study analysed tourism related employment for 16 wind farms in operation between 2015 and 2019 at a local level. The study indicates that in the majority (11 out of 16 windfarms) tourism related employment performed better during construction and operational phase of the wind farms, in the areas surrounding wind farms (within a 15km radius of the windfarm) when compared with the performance in the Scotland as a whole.

151. The BiGGAR Economics study also re-investigated tourism related employment for the 28 windfarms between 2015 and 2019 at a local level. The study indicates that in the majority (18 out of 28 windfarms) tourism related employment performed better in the areas surrounding wind farms (within a 15km radius of the windfarm) when compared with the performance in the Scotland as a whole. The study states that two windfarm areas within South Ayrshire, Mark Hill (109.1%) and Arecleoch (-15.8%) has a larger increase and decrease in tourism employment when compared with South Ayrshire (7.8%) between 2009 and 2015.

152. As described in **Section 12.5.2.2** of this chapter, the VisitScotland Position Statement states there are no evidence indicate that windfarms have a negative effect on tourism industry.

153. Based on the above research results, it is considered that the Proposed Development would not affect tourism and tourism-based businesses (e.g. tourist accommodation) during the operational phase. As a result, the effect of the Proposed Development on tourism and tourism-based businesses (e.g. tourist accommodation) is assessed to be **Negligible**.

#### 12.6.3.2.2 Tourism/Recreation Assets

154. The Proposed Development is located within the Galloway Forest Park (including Galloway Hills). The Merrick WLA boundary is located approximately 3km south east of the Site Boundary. It is anticipated that access would be maintained during operation for maintenance works; however, there could be some congestion due to delivery of materials and construction vehicles. However, the Proposed Development would affect the amenity of these assets as detailed below.

155. As described in **Chapter 5: Landscape and Visual Impact Assessment**, it is anticipated that the Proposed Development would have significant effects on the naturalness and remoteness attributes of the Merrick WLA within 3km of the northern boundary, which is the least sensitive part of the WLA. However, the Proposed Development would not significantly affect the attributes and qualities of the Merrick WLA overall.

156. It is anticipated that good practice measures would be applied to control and minimise noise and dust generated from maintenance activities during operation. However, as the impact would be temporary and localised, it is anticipated that this would have a limited effect on tourist and recreation assets.

157. Overall, it is anticipated that the Proposed Development would have a direct, permanent, long-term **Minor Adverse** effect on the amenity of these receptors due to the localised nature of the effect.

158. The Proposed Development is also located with the Galloway Dark Sky Park buffer zone. As described in **Chapter 4: Development Description**, the wind turbines have a blade tip height over 150m which means they would need to be lit for aviation safety purposes. However, the Applicant proposes to fit ADLS activated lights to each turbine which would mean the lights would only be switched on when an aircraft transits the Site. Given the lights are only required for aircraft flying at night in the vicinity of the Site at altitudes of up to 3,000ft above mean sea level, it is anticipated that the lights would be rarely on in this quiet airspace. As set out in **Chapter 5: Landscape and Visual Assessment**, it is therefore considered that the Proposed Development would have no visual effects on visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone. Overall, there would be a direct, permanent, long-term **Negligible** effect on visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone.

159. Stinchar Falls is located approximately 1.2km south of the Site Boundary. Walkers can access Stinchar Falls via forest tracks and Scottish Hill tracks. During operation, it is anticipated that pedestrian access to Stinchar Falls during maintenance activities would be maintained. The Proposed Development would have a limited impact on recreational amenity at Stinchar Falls because of the enclosure of valley and forestry screening. Overall, it is anticipated that there would be a **Negligible** effect on users of Stinchar Falls during operation.

160. It is understood that Loch Bradan is popular for walking, cycling and wild camping and is located to the east of Carrick Forest Drive. As shown in the Zone of Theoretical Visibility (**Figure 5.1a: Blade Tip and Hub Height Zone of Theoretical Visibility (A1)**) accompanying **Chapter 5: Landscape and Visual Impact Assessment**, the Proposed Development could be visible from the eastern extent of Loch Bradan. However, the Proposed Development would not be visible from the picnic area near Loch Bradan. Due to the distance between Loch Bradan and the Proposed Development, there are anticipated to be negligible air quality<sup>3</sup> and noise impacts on Loch Bradan for maintenance works during operation. Overall, the Proposed Development would have a direct, permanent, long-term **Minor Adverse** effect on walkers, cyclists and wild campers at Loch Bradan because of the views of the Proposed Development.

161. It is understood that fishing is undertaken in Loch Bradan for permit holders. As detailed **Chapter 6: Hydrology, Hydrogeology, Geology and Soils**, there is no hydrological connection from the Site to Loch

<sup>3</sup> Air quality was scoped out of the Environmental Impact Assessment because no significant air quality effects were anticipated at that stage.

Bradán. It is therefore anticipated that the water quality of Loch Bradán would not be affected during construction and would not affect the fish population. Access to the loch by anglers is anticipated to be maintained during operation for maintenance works; however, there could be some congestion due to delivery of materials and construction (maintenance) vehicles. However, as this would be for a limited time and access would be maintained, the effect has been assessed as **Negligible** for anglers using Loch Bradán.

#### 12.6.3.2.3 Recreational Routes

162. This assessment has considered recreational paths, informal recreational activities, cycle routes and Carrick Forest Drive separately.
163. The Site would be accessible to the public, including users of recreational routes crossing the Site and informal users, during the operational phase of the Proposed Development. However, from time to time there may be brief temporary exclusions of the areas surrounding specific wind turbines during operation for maintenance works and maintenance vehicles would need to use the forest tracks.
164. For recreational paths, due to the small area where access would be restricted (i.e. around the wind turbines) for occasional maintenance works during operation, the effect on access has been assessed as **Negligible**.
165. With regard to amenity and indirect effects on recreational paths, **Chapter 5: Landscape and Visual Impact Assessment**, it is anticipated that the Proposed Development would have significant visual effects on Old Road through Straiton Heritage Path, Scottish Hill track SKC/HT385/3, Scottish Hill track SKC/HT385/2, CROW SKC/SKC7/1, core path SA47, SA49, SA56 and Cornish Hill Trail. It also indicates that there would be significant adverse visual effects for walkers to the Colonel Hunter Blair Monument which overlooks the Site from the north east.
166. It is anticipated that good practice measures would be applied to control and minimise noise and dust generated from maintenance activities during operation. There could be an increase in noise levels along the recreational routes, in particular along recreational routes that cross the Site with these measures in place. During operation, users of other recreational paths within 300m of the maintenance works could also experience increased noise levels. However, as the impact would be temporary and localised, it is anticipated that this would have a limited effect on recreational paths.
167. It is anticipated that measures would be implemented during any maintenance activities during operation to reduce the spread of dust. With these measures in place, it is anticipated that the Proposed Development would have a limited impact on air quality for users of these recreational paths during maintenance works.
168. Overall, when considering the impacts of the Proposed Development on access, severance and amenity of recreational paths, the Proposed Development is assessed to be direct and indirect, temporary, short-term **Minor Adverse** effect.
169. During operation, informal walking, horse riding and cycling may, from time to time, be restricted from the area surrounding specific maintenance activities for health and safety purposes. The area and duration of such restrictions would be kept to a minimum as is required for the work to be conducted safely and efficiently. Considering the small area that would be affected and other recreational routes available, the effect on informal walking, horse riding and cycling has been assessed as **Negligible**.
170. National Cycle Network Route 7 and AARCP (Glenalla route) follow the same route and are located approximately 1km west of the Site Boundary (see **Figure 12.1: Socio-economics, Tourism and Recreation Receptors**). AARCP (Tairlaw route) is located along the road to the east of the Site Boundary. As described in **Chapter 5: Landscape and Visual Impact Assessment**, visibility of the Proposed Development along National Cycle Network 7 would only be for a short stretch alongside the Site extents and from limited parts between Maybole and the Site. It is expected that the Proposed Development would be visible from AARCP

(Tairlaw route). During operation, it is anticipated that access along the route would be maintained during maintenance works, but maintenance traffic and traffic and abnormal load traffic could use AARCP (Tairlaw route) and part of National Cycle Network Route 7. As views of the Proposed Development would be along relatively short stretches of the cycle routes and maintenance works would be infrequent, it is anticipated that there would be a **Negligible** effect on users of these cycle routes.

171. During operation, it is anticipated that access would be maintained to Carrick Forest Drive during maintenance works; however, there could be some congestion due to delivery of materials and construction vehicles. The Proposed Development could be visible from the Carrick Forest Drive. However, due to the nature of the activity (e.g. scenic driving) and the very limited stretch of road the Proposed Development could be visible from, it is anticipated that the Proposed Development would have an overall **Negligible** effect on Carrick Forest Drive.

#### 12.6.3.2.4 Wider Effects

##### 12.6.3.2.4.1 Community Benefit Funding

172. To date, the Applicant has contributed £45 million in benefit funds to support initiatives and projects for those communities local to our windfarm sites, with more than £8 million going directly to local communities in South Ayrshire. A wide range of local projects and community initiatives have been supported by the funds including:
- Dersalloch Windfarm contributed £5,000 to Carrick gardening club to grow vegetables to support the local food bank and people in the community in hardship;
  - Dersalloch Windfarm contributed £150,000 towards a place making project in partnership with South Ayrshire Council to improve play spaces across and deliver environmental projects across north Carrick;
  - Dersalloch Windfarm has contributed £35,000 towards the upgrade of Straiton Co-operative including new display equipment, fridge, freezer and refurbishment of the attached premises;
  - Arecleoch Windfarm contributed £25,000 towards the provision of two advisor delivering a Carrick Money Advice service through Stepping Stones for Families over two years; and
  - Arecleoch Windfarm has contributed £23,000 towards primary school pupils from across south Carrick attending outdoor education events with the Ayrshire Rivers Trust.
173. The Applicant is committed to offering a package of community benefits to local communities and the opportunity to invest in the operational windfarm. Community benefit funds would provide a long-term revenue which could be used to support community projects. Local communities would have the flexibility to choose how the money is spent and prioritise it on the things which matter most to them.
174. The nature of the benefits associated with community benefit funding can be illustrated by the community benefit funding from existing operational SPR windfarms.

##### 12.6.3.2.4.2 Community Investment

175. In addition to a community benefit fund, the local community could also participate in a community investment scheme through the Proposed Development.
176. The Applicant would hold discussions with local stakeholders and FLS to determine which communities would be appropriate to participate in any opportunity to invest, should they choose to do so. The Applicant is committed to keeping local communities informed as the project progresses and would provide information in a timely manner so the communities are able to fully assess the opportunity.

#### 12.6.4 Enhancements

177. The Applicant's experience on other renewable energy projects has shown that wind energy and recreational walking and other outdoor pursuits 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 the Applicant has incorporated core paths and other routes into site design and worked with organisers of long-distance trails:

- Kilgallioch Windfarm contributes £50,000/yr towards the roles of 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 Windfarm and the Applicant is supporting the Kintyre Way management organisation to improve the path/route;
- At Rigged Hill Windfarm the Ulster Way organisation diverted the route to take advantage of the windfarm tracks and views that the windfarm offers. The local walking club regularly walks this route; and
- Whitelee Windfarm is the largest onshore windfarm in the UK with 130km of tracks used for walking and cycling it welcomes an estimated 200,000 visitors each year. The Visitor Centre was awarded a Gold Green Business Tourism award in 2015 for its impact on the environment and working to increase sustainability. This year, Whitelee Windfarm was awarded a Green Flag Award which recognises and rewards well managed parks and green spaces, setting the benchmark standard for the management of recreational outdoor spaces across the United Kingdom and around the world.

178. The Applicant is proposing to implement a number of recreational enhancements as part of the Proposed Development. Enhancement measures currently being proposed by the Applicant include:

- provide waymarkers or signposts along the existing core path SA47 located within the Site Boundary;
- improve the condition of sections of the existing core path SA47, located within the Site Boundary;
- provision of bins and seating areas within the Site Boundary (details and locations to be agreed with the landowner); and
- provision of information boards along the Old Road through Straiton heritage path within the Site Boundary to inform readers of the heritage of the route.

179. The Applicant is proposing to convert one of the temporary construction compounds to a permanent car park for recreational users upon completion of the construction works. Creation of this car park has the opportunity to benefit users of recreation routes and sites by improving accessibility in proximity to the recreation assets. The details of the car park would be subject to agreement with the landowner and should consent be obtained for the Proposed Development, the Applicant would develop an access plan in conjunction with South Ayrshire Council Access Officer.

180. The Applicant is committed to working with local stakeholders and consultees to identify additional recreational improvement and enhancement opportunities, where these are within the Site Boundary or if on third party land they will be subject to the approval of landowners.

## 12.7 Mitigation

### 12.7.1 Construction Mitigation

181. As no significant effects are predicted, no additional mitigation has been proposed for socio-economics, tourism and recreation during construction.

### 12.7.2 Operation Mitigation

182. As no significant effects are predicted, no additional mitigation has been proposed for socio-economics, tourism and recreation during operation.

## 12.8 Residual Effects

### 12.8.1 Construction

183. Given that no additional mitigation measures are proposed during construction, there would be no change in the residual findings in **Section 12.6** of this chapter.

### 12.8.2 Operation

184. Given that no additional mitigation measures are proposed during operation, there would be no change in the residual findings in **Section 12.6** of this chapter.

### 12.8.3 Residual Effects

185. **Table 12.18** present the summary of the residual effects of the Proposed Development on socio-economics, tourism and recreation.

Description of Effect	Pre-mitigation Effect		Mitigation Measure	Residual Effect	
	Magnitude	Significance		Magnitude	Significance
<b>During Construction</b>					
Estimated total net construction job generation and total net GVA in South Ayrshire.  (approximately £8.8 million GVA and approximately 140 jobs in South Ayrshire).	N/A	Minor Beneficial	No additional mitigation measures proposed.	N/A	Minor Beneficial
Estimated total net construction job generation and total net GVA in Scotland.  (approximately £26.4 million GVA and approximately 421 jobs in Scotland).	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on forestry businesses.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on Merrick WLA and Galloway Forest Park.	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on visitors to the promoted Dark Sky viewpoints, Visitor centres or observatories within the Buffer Zone.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible

Description of Effect	Pre-mitigation Effect		Mitigation Measure	Residual Effect	
	Magnitude	Significance		Magnitude	Significance
Effects on tourist receptors	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on Stinchar Falls.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effect on walkers, cyclists, wild campers at Loch Bradan	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on anglers using Loch Bradan	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on tourist related businesses	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on access and amenity of recreational paths.	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on informal walking, horse riding and cycling	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on National Cycle Network Route 7, AARCP (Tairlaw route)	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on Carrick Forest Drive	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
<b>During Operation</b>					
Estimated total net operation job generation and total net GVA in South Ayrshire  (approximately £1 million GVA and approximately 25 jobs in South Ayrshire).	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Estimated total net operation job generation and total net GVA in Scotland  (approximately £1.3 million GVA and approximately 35 jobs in Scotland).	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible

Description of Effect	Pre-mitigation Effect		Mitigation Measure	Residual Effect	
	Magnitude	Significance		Magnitude	Significance
Effects on forestry businesses.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on tourism and tourism-based businesses (e.g. tourist accommodation)	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on Merrick WLA and Galloway Forest Park.	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on Stinchar Falls.	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effect on walkers, cyclists, wild campers at Loch Bradan	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on anglers using Loch Bradan	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on access and amenity of recreational paths.	N/A	Minor Adverse	No additional mitigation measures proposed.	N/A	Minor Adverse
Effects on informal walking, horse riding and cycling	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on National Cycle Network Route 7, AARCP (Tairlaw route)	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible
Effects on Carrick Forest Drive	N/A	Negligible	No additional mitigation measures proposed.	N/A	Negligible

Table 12.18 Residual Effects Table

## 12.9 Cumulative Assessment

186. This section presents the potential cumulative effects with the 22 cumulative schemes located within 30 km of the Site. **Figure 5.9: Cumulative Sites Location Plan 30km Study Area** presents the location of the

cumulative schemes surrounding the Proposed Development. Two of these cumulative schemes are Knockcronal Windfarm and Craiginmoddie Windfarm, which would lie directly north and west respectively of the Site.

### 12.9.1 Construction

187. The construction of the Proposed Development along with these cumulative schemes would generate additional construction related spend, employment and GVA. It is anticipated that when considering the schemes cumulatively, there would be a **Moderate Beneficial** effect on socio-economic conditions during construction.
188. As detailed within **Section 12.6** of this chapter, evidence indicates that windfarms have a limited impact on visitors' decisions to holiday in Scotland, except for Merrick WLA, Galloway Forest Park and Loch Bradan. Therefore, it is anticipated that when considering the schemes cumulatively, there would be a **Minor Adverse** effect on tourism during construction.
189. It is anticipated that public access to recreational routes and tourism assets would be maintained along the existing route or diverted for cumulative schemes during construction. This would mean the effect on access to recreation routes and tourist assets is unlikely to be significant. There would be a cumulative effect on amenity, in particular, when considering Craiginmoddie Windfarm and Knockcronal Windfarm. The construction period of Craiginmoddie Windfarm and Knockcronal Windfarm was not known at the time of writing, however, for the purposes of this assessment it was assumed they overlap. The most noticeable changes would be very localised along the recreational routes and for a short term. The cumulative visual amenity effects on the recreational routes are anticipated to be temporary during construction, with the localised effects not anticipated to be greater than the operational effects. There would also be extended impacts in relation to air quality and noise generation on recreational routes and tourism assets during construction. Overall, when considering the cumulative effects of the Proposed Development and cumulative schemes there would be a cumulative effect of **Minor Adverse** effect during construction.

### 12.9.2 Operation

190. The operation of the Proposed Development along with the cumulative schemes would generate additional operation related spend, employment and GVA. In addition, there would be combined benefits in relation to community benefit funds and shared ownership offers (if offered by the other proposed developments). It is anticipated that when considering the schemes cumulatively, there would be a **Minor Beneficial** effect on socio-economic conditions during operation of the Proposed Development.
191. As detailed within **Section 12.6** of this chapter **12.5.2.2**, evidence indicates that windfarms have a limited impact on visitors' decisions to holiday in Scotland. Therefore, when considering the schemes cumulatively there would be a **Negligible** effect on tourism during operation.
192. It is anticipated that all recreational routes and tourist assets surrounding the cumulative developments would be accessible for the majority of the operation phase. During operation, it is anticipated that there would be temporary exclusions for maintenance works for the cumulative schemes, but this would be limited. However, there would be a cumulative effect in relation to amenity, in particular, when considering Craiginmoddie Windfarm and Knockcronal Windfarm. As detailed in **Chapter 5: Landscape and Visual Impact Assessment**, there would be cumulative effects for visual amenity on recreational routes but, for the majority of recreational routes, this would not result in a greater significance of effect than the Proposed Development on its own. However, there would be a new significant effect or increased level of significance on the Maybole to Girvan extent of NCN7 and core path SA1, Merrick summit as well as Colonel Hunter Blair Monument Viewpoint. During operation, there would also be potential cumulative impacts in relation to air quality and noise generation on recreational routes and tourism assets during maintenance works if they happened concurrently.

Overall, when considering the cumulative effects of the Proposed Development and cumulative schemes there would be a cumulative effect of **Minor Adverse** effect during operation.

## 12.10 Summary

193. The Proposed Development would have impacts on socio-economics, tourism and recreation during construction and operation. The following effects of the Proposed Development have been considered in the assessment in accordance with the EIA Scoping Report and EIA Scoping Opinion:
- spend per annum; estimated net, indirect and induced job generation; and net, indirect and induced gross value added (GVA) during construction and operation;
  - direct and indirect effects on tourism during the construction and operation;
  - direct and indirect effects on recreation (including for example rights of way, core paths and other routes) during the construction and operation; and
  - cumulative effects on employment, tourism and recreation in conjunction with other developments.
194. A number of embedded mitigation measures would be implemented to reduce adverse effects during the construction and maintenance works during operation. These mitigation measures include, for example:
- preparation of an AMP to be agreed in consultation with the South Ayrshire Council Access Team and Sustainable Travel Team;
  - a CEMP would be prepared by the principal contractor and agreed with South Ayrshire Council prior to the start of construction; and
  - public liaison (e.g. public notices) that would be issued prior to the commencement of construction works informing local residents and businesses of dates and durations of the works.
195. With the implementation of the embedded mitigation measures, it is anticipated that the Proposed Development would have a **Minor Beneficial (Not Significant)** residual effect on spend per annum, estimated job generation and GVA in South Ayrshire during construction and **Negligible (Not Significant)** residual effect during operation. There would be a **Negligible (Not Significant)** effect on job generation and GVA at the Scottish level during construction and operation. It is anticipated that there would be a **Negligible (Not Significant)** residual effect on forestry businesses, tourism, tourism-based businesses, Stinchar Falls, anglers using Loch Bradan, informal recreational activities, Carrick Forest Drive, Galloway Dark Sky Park and visitors to the promoted Dark Sky viewpoints, visitor centres or observatories within the Buffer Zone during construction and operation. There would be a **Minor Adverse (Not Significant)** effect on cyclists during construction and **Negligible (Not Significant)** effect during operation. It is anticipated that the Proposed Development would have a **Minor Adverse (Not Significant)** effect on Merrick WLA, Galloway Forest Park during construction and operation. A **Minor Adverse (Not Significant)** residual effect on recreational paths and walkers, cyclists and campers using Loch Bradan is also anticipated during construction and operation.
196. The Proposed Development would also provide opportunities to the local community through community benefit funds and the shared ownership/community investment scheme. It is anticipated that the Proposed Development would also provide enhancements to the local area by upgrading sections of the existing forest tracks. Further enhancement opportunities are being explored by the Applicant including, for example, the provision of waymarkers and signposts along the existing core path SA47 located within the Site Boundary, improved the condition of the core path SA47, providing information boards along the Old Road through Straiton heritage path and converting one of the temporary SPR construction compounds into a permanent car park.

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