

16 Socio Economics

Introduction

- 16.1 This chapter considers the potential social and economic effects of the proposed wind farm development, taking account of construction, operation and decommissioning. All effects are considered to be negative unless otherwise stated. It details the likely employment generation and business related opportunities which will result from the proposal, and predicted effects on the current land use and recreational users of the proposed wind farm site and the surrounding area. In addition, the chapter discusses the likely effects of the proposed wind farm on the local tourism industry, in light of published findings by the Scottish Government, Visit Scotland and RenewableUK.
- 16.2 The key objectives of the assessment are:
- To identify the principal social and economic effects that may result from the wind farm and assess the significance of these effects;
 - To recommend measures for avoiding or reducing any identified adverse effects, and/or enhancing any positive effects where possible; and
 - To highlight any residual negative effects that cannot be mitigated and to identify any residual positive effects from the proposal.

Study Area Description

- 16.3 This assessment has been undertaken by RES and aims to identify the social and economic effects of the proposed wind farm on people living, working and undertaking recreational activities within Dumfries and Galloway, focusing particularly on the proposed wind farm site and surrounding local area.

Legislation and Policy Context

National Legislation and Policy

Scottish Planning Policy (SPP)

- 16.4 Scottish Planning Policy (SPP) states that the overarching purpose of the Scottish Government is to increase sustainable economic growth. The SPP advises that the planning system should proactively support development that will contribute to sustainable economic growth and planning authorities should take a positive approach to development, recognising and responding to economic and financial conditions in considering proposals that could contribute to economic growth (paragraph 33 of SPP). Planning authorities should, through development plans, support the development of a diverse range of renewable energy technologies to ensure that an area's renewable energy potential is realised and optimised in a way that takes account of relevant economic, social, environmental and transport issues and maximises benefits (paragraph 184 of SPP).

Regional Policy

South of Scotland Competitiveness Strategy (2007 - 2013)

- 16.5 The South of Scotland Competitiveness Strategy sets out how the South of Scotland will seek to increase the overall performance and competitiveness of the economy in the region. Within this, there is a focus under Priority Seven to “...develop the business opportunities from the production of renewable energy - wind, biomass, wave etc.”

Dumfries and Galloway Structure Plan

- 16.6 Structure Plan Strategy Statement I *The Local Economy* states that “...economic development which diversifies and strengthens the local economy in a sustainable manner” will be supported. This strategy statement is exemplified in Policy D27 Development of Agriculture which supports proposals for farm diversification providing there is no detrimental effect on the quality of the rural environment.
- 16.7 Policy D37 *Private Sector Contributions* seeks to secure contributions from developers for the provision of infrastructure, community facilities and environmental amenity related to appropriate development.
- 16.8 Policy S24 *Major Infrastructure Development* provides guidance on locating large infrastructure projects and sets out criteria which must be met on site selection, landscape and environmental effect, and effect on amenity of the area. It is noted that “large scale infrastructure developments can have significant community and environmental impacts.”

Local Policy

Annandale and Eskdale Local Plan (2006)

- 16.9 The adopted Annandale and Eskdale Local Plan contains detailed land use policies. However, issues such as Energy Development will be covered in the new Local Development Plan and Supplementary Planning Guidance (to be adopted October 2013) that has yet to be produced. In the interim, development proposals relating to these matters will be assessed in terms of the relevant Structure Plan Policies.

Tourism

Tourism Framework for Change

- 16.10 *Scottish Tourism: The Next Decade - a Framework for Change* sets out how the tourism industry in Scotland needs to develop and change in order to grow. Scotland has ambitious targets for 2015 to grow tourism gross revenue by 50% and visitor numbers by 20%.

Dumfries and Galloway - Area Tourism Partnership Plan Strategy for Growth 2007-2009

- 16.11 The vision for the region is to “...establish Dumfries and Galloway as a world-class destination” which will “...maximise long-term economic and social benefits”. As set out in the objectives, this can be achieved by maximising “...natural resources in an integrated and sustainable way”.

Issues Identified During Consultation

Table 16.1: Issues identified during consultation

Consultee	Issue Raised	Response / Action Taken
Dumfries and Galloway Council (DGC)	Local socio-economic effects and effects on nearby communities and settlements	Potential effects are identified in paragraphs 16.31-16.32. Residual effects are identified in paragraphs 16.45-16.78.
DGC	Effects on tourism in wider area.	Potential effects on tourism are identified in paragraphs 16.30-16.32, Residual effects are identified in paragraphs 16.56-16.72.
DGC	Public access and safety - use of the proposed wind farm site during construction and operation by the public.	Potential effects on public health, safety and access are identified in paragraphs 16.31-16.32. Residual effects are identified in paragraphs 16.54-16.55 and 16.76-16.78.

Assessment Methodology

Baseline Characterisation

16.12 Information was obtained from various appropriate sources on the current socio-economic and tourism climate within the immediate vicinity of the proposed wind farm and wider region.

Method of Assessment

16.13 There are no established guidelines to inform the assessment of social and economic effects of proposed wind farms. Therefore, professional judgement has been used throughout the assessment, informed by desk based research and consultation where applicable. A number of data sources were used to describe the socio-economic and tourism baseline including population, household numbers, population density, employment in key sectors, unemployment and economic inactivity and deprivation.

Data Sources

16.14 The following data sources have been used in the compilation of this assessment:

- Labour Market Profile for Dumfries and Galloway, Office for National Statistics (2010)
- Tourism in Southern Scotland, Visit Scotland (2011)
- Dumfries and Galloway Council (www.dumgal.gov.uk)
- Population Estimates, General Register Office for Scotland (2010)
- Communications with DGC Access Officer

Consultation

16.15 As explained in **Chapter 7: Environmental Impact Assessment Process**, a request for a Scoping Opinion was made to Dumfries and Galloway Council (DGC) in October 2005 and again in January

2009. Potential socio-economic effects were not highlighted in the consultation responses as a significant issue.

Field Survey Methodology

16.16 Field survey work was not required to inform the assessment of potential social and economic effects.

Significance Criteria

16.17 Criteria for determining the significance of social and economic effects are provided in Table 16.2. The significance criteria primarily consider the magnitude of effects (e.g. number of people, recreation activities or economic activities affected). However, when applying the criteria, professional judgement has been employed and consideration taken of receptor sensitivity where appropriate.

16.18 Effects judged to be of major or moderate significance are considered to be 'significant effects' in accordance with the EIA Regulations.

Table 16.2: Significance Criteria

Significance Criteria	Description of Significance
Major	Where the extent of the effects on economic activities, local businesses, tourism and recreation or the local population is large in scale or magnitude, and a large number of people or activities will be affected (either positively or negatively).
Moderate	Where the extent of effects on economic activities, local businesses, tourism and recreation or the local population is small in scale or magnitude, but a large number of people or activities will be affected (either positively or negatively). or Where the extent of effects on economic activities, local businesses, tourism and recreation or the local population is large in scale or magnitude, but only a small number of people or activities will be affected (either positively or negatively).
Minor	Where the extent of effect on economic activities, local businesses, tourism and recreation or the local population is small in scale or magnitude and will only affect a small number of people (either positively or negatively).
Negligible	Where the extent of effects on economic activities, local businesses, tourism and recreation or the local population is barely noticeable in scale or magnitude, and will only affect a small number of people or activities (either positively or negatively).

Baseline Conditions

Current Baseline

16.19 This section presents information on the existing social and economic conditions in Dumfries and Galloway in terms of population, demographics and employment. It also provides details on known recreation and tourism activities in the area and information on the current land use of the proposed wind farm site.

Social and Economic Conditions

16.20 Table 16.3 provides an age demographic breakdown for the Dumfries and Galloway Council Area and for Scotland as a whole. Comparatively, there is a slightly higher proportion of 40-59 year olds in Dumfries and Galloway than there is in Scotland as a whole, which is indicative of an ageing population in the Dumfries and Galloway Council Area. The latest projections (Population Projections Scotland, 2010) show that the over 65s population in Dumfries and Galloway is likely to grow by 55.3% by 2033 (28.7% for those aged 65-74 and 87.5% for the over 75s). These changes are likely to result in greater demands on the social and healthcare systems and a reduced workforce in the Dumfries and Galloway area.

Table 16.3: Age Demographics of Dumfries and Galloway Population

Age Group	Dumfries and Galloway (no.)	Dumfries and Galloway (%)	Scotland (no.)	Scotland (%)
0-4	7,578	5.1	293,520	5.6
5-9	7,098	4.8	270,058	5.2
10-19	16,783	11.3	611,694	11.7
20-39	28,359	19.1	1,358,006	26.0
40-59	43,707	29.5	1,481,841	28.4
60-69	21,579	14.6	582,260	11.1
70-79	14,714	9.9	395,181	7.6
80-89	7,162	4.8	194,353	3.7
90 and over	1,210	0.8	35,187	0.7
Total	148,510	100	5,222,100	100

(Source: Mid-2010 Population Estimates Scotland, www.gro-scotland.gov.uk)

16.21 Based on information obtained from the Scottish Government Economic Briefing (March 2011), the unemployment rate in Dumfries and Galloway is 4.2% which, is lower than Scotland as a whole (4.9%); similarly, the employment rate in Dumfries and Galloway is 72%, higher than the Scotland average of 71%. In total, 76% of working age people in Dumfries and Galloway are economically active; this is marginally lower than the Scotland average of 76.9%.

16.22 There is a high concentration of jobs in the service industry, including tourism related employment. The proportion of jobs in manufacturing is higher in Dumfries and Galloway than it is in Scotland as a whole; levels of employment construction in Dumfries and Galloway is equivalent to national levels (see Table 16.4).

Table 16.4: Industry Employment, 2008

Employment by Industry	Dumfries and Galloway (%)	Scotland (%)
Manufacturing	12.4	8.7
Construction	5.4	5.9
Services	74.8	81.9
Distribution, hotels & restaurants	26.6	22.2

Transport & communications	4.8	5.1
Finance, IT, other business activities	7.8	19.1
Public admin, education & health	31.2	30
Other services	4.2	5.4
Tourism-related [†]	10.4	8.9

(Source: Office for National Statistics, Employee Jobs 2008) [†]Tourism consists of industries that are also part of the services industry

Recreation and Tourism

16.23 In Dumfries and Galloway, UK tourists made about 720,000 trips in Dumfries and Galloway in 2010, spending £122 million in the area. During the same period, approximately 38,000 visitors from overseas made trips to the area, spending £10 million. Tourism accounted for 2.7% of the workforce in Dumfries and Galloway during this time (*Visit Scotland, 2011*).

16.24 The Dumfries and Galloway Regional Tourism Strategy (2011-2016) recognises that seasonality is a major challenge for the industry in Dumfries & Galloway and identifies that one of its objectives is to “Increase the number of visitors to Dumfries and Galloway.” Within this objective, the Strategy stresses that increasing the number of visitors will involve extending the traditional seasonality of tourism in Dumfries and Galloway. The full list of the top ten tourist attractions are listed as follows:

- World Famous Old Blacksmith's Shop Centre, Gretna Green
- Mabie Forest, Dumfries
- Dalbeattie Forest, Dalbeattie
- Mabie Farm Park, Dumfries
- Cream o' Galloway, Castle Douglas
- Kirroughtree Visitor Centre, Newton Stewart
- Forest of Ae, Dumfries
- Threave Garden, Castle Douglas
- Clatteringshaws Visitor Centre, nr New Galloway
- Glentroll Visitor Centre, Newton Stewart

16.25 Of the tourist attractions mentioned above, Solwaybank Wind Farm will be visible from the car park at the World Famous Old Blacksmith's Shop (Old Smithy).

16.26 Further assessment of the visual effects which may be experienced from recreational and tourist destinations can be found in **Chapter 8: Landscape and Visual** and **Chapter 11: Cultural Heritage and Archaeology**.

16.27 On the site itself there are no Rights of Way or Core Paths and, to the developer's knowledge, the site is not commonly used for recreational activities such as cycling or horse riding.

16.28 Proposed Core Path #2686 passes through the north of the site and coincides with the proposed site access. RES has been informed that DGC has recently decided not to adopt this or the adjoining path #2685 as a core path as neither is well used by walkers. Neither path is a Right of Way under the Land Reform (Scotland) Act 2003.

Current Land Use

16.29 The proposed wind farm site itself comprises a large area of commercial forest made up of four separate land holdings to the north west and agricultural land used for rough grazing to the south east end of the site. The total site boundary exceeds 670 ha although the entire wind farm infrastructure will only take up approximately 8.1 ha of that area.

Future Baseline ('Do Nothing' Scenario)

16.30 If the proposed wind farm was not to proceed. Current land use activities are likely to remain unchanged.

16.31 Economic activity within Dumfries and Galloway is likely to continue in accordance with the trends as identified in paragraph **Error! Reference source not found.**

Wind Farm Layout Considerations

16.32 As described in **Chapter 3: Site Selection, Design Evolution and Alternatives**, the proposed wind farm has been designed with potential effects on the landscape and visual amenity in mind. The design aim has been to achieve reduced landscape and visual effects whilst achieving an appropriate landscape fit and avoiding areas constrained by other environmental considerations such as hydrology and ecology.

Potential Effects

Potential Construction and Decommissioning Effects

16.33 Potential effects that could arise during the construction and decommissioning of the proposed wind farm include the following:

- Positive economic effects on the local community as a result of direct employment;
- Positive economic effects on the local community as a result of indirect employment and increased spending ability;
- Disruption to the main commercial activities (cattle and sheep grazing) on the proposed wind farm site; and
- Given the inherently hazardous nature of construction sites public access will be temporary restricted in certain areas of the site.

Risks to public safety

16.34 Management of health and safety is discussed in **Chapter 17: Other Issues**.

Potential Operational Effects

16.35 Potential effects that could arise during the operation of the proposed wind farm include the following:

- Direct and indirect effects on recreation and tourism as a result of changes in the landscape, views to and from the proposed wind farm site and personal opinion relating to wind farm development;
- Direct and indirect effects on the perceived amenity value of the area depending on personal opinion relating to wind farm development;

- Although wind turbines are designed to operate at a high standard of safety, malfunctions or design faults can occur. As a result there is the potential for a small amount of risk to public safety;
- Direct economic effects for the landowner as a result of the new income stream provided by the operation of the proposed wind farm, and direct employment created during the operation of the proposed wind farm;
- Indirect economic effects on the local community as a result of increased spending ability.
- Direct effect on recreational use of the previously forested areas on the wind farm.

16.36 Once operational, existing land uses on the proposed wind farm site will continue to operate. It is RES's aim to ensure that the operation of the wind farm will not significantly disrupt the existing land use, and given evidence from other wind farms that occupy farming land, there is no reason to believe that coexistence is not possible.

16.37 RES accepts that economic benefits to the local community are largely indirect, whilst environmental benefits, in terms of combating climate change, can be perceived as somewhat intangible and of more regional or national consequence. Over time, RES has considered how to redress this, and has developed proposals for delivering more direct economic benefit to local communities. The issue has been discussed with local stakeholders at a range of actual and prospective wind farm sites.

16.38 The main option that has emerged from public consultation is to establish a community fund to enable local projects of general benefit. As the project progresses RES will continue to discuss the form of community benefit.

16.39 The wind farm could be a useful educational resource for the area, with most schools and colleges now having 'energy and the environment' on the curriculum. RES undertakes talks at schools and arranges site visits for school groups at its existing wind farms in the UK. Similar activities could be arranged at the proposed wind farm site if requested by local schools and other groups.

Recreation and Tourism

16.40 Landscape and visual effects during construction and operation are considered in **Chapter 8: Landscape and Visual**, and this assessment takes into consideration the receptors of landscape and visual effects. Viewpoints for the assessment were selected in consultation with DGC and SNH partly on the basis of accessibility and on the number of potential viewers. The 'type' of viewers (i.e. local residents, tourists, walkers etc.) has also been considered when making judgements on the sensitivity of these views to change.

16.41 Viewpoints of relevance to recreation and/or tourism, either as tourist attractions or potential stopping points along popular recreational walking or driving routes, are as follows:

- Viewpoint 6 - Kirkpatrick Flemming (tourist route)
- Viewpoint 7 - Corrie Common (tourist route, access to cycle trails at Whitecastles Hill)
- Viewpoint 8 - Malcolm Monument, Langholm (local summit, walking route)
- Viewpoint 9 - Burnswark (Roman Fort, local summit)
- Viewpoint 10 - Old Smithy, Gretna Green (tourist attraction)
- Viewpoint 11 - A75, Longtown (tourist route)
- Viewpoint 12 - Repentance Tower (tourist attraction)
- Viewpoint 13 - M6, Todhills (tourist route)
- Viewpoint 14 - Bowness-on-Solway (tourist attraction)
- Viewpoint 15 - Roan Fell (local summit, walking route)

- Viewpoint 16 - Caerlaverock Castle (tourist attraction)
 - Viewpoint 17 - Banks, Hadrian's Wall (walking route)
 - Viewpoint 18 - White Coomb (local summit)
- 16.42 The following viewpoints are not necessarily directly related to tourism, however they may be important for recreation locally, and are considered to add to the amenity value of the local area:
- Viewpoint 1 - High Stenries
 - Viewpoint 2 - Collin Burn
 - Viewpoint 3 - B7068 west of Fallford
 - Viewpoint 4 - Milltown
 - Viewpoint 5 - B725 between Middlebie and Waterbeck
- 16.43 The effect that the changes in views will have on tourism and recreation and amenity value will partly depend on the personal opinion of the viewer. This is purely subjective; some people may have an aversion to wind turbines, others may view them as complementary to the landscape. Similarly, some people regard them as representative of progress towards a cleaner industry and as mitigation against climate change.
- 16.44 Based on the experience RES has of developing other wind farm sites, the general public is often interested in visiting wind farms, particularly in holiday areas. Where provision is made, wind farms can prove to be tourist attractions that can bring positive financial benefits to local businesses. Examples of wind schemes having provided the basis for active tourism development include the Delabole Wind Farm Visitor Centre in Cornwall, the EcoTech Centre at Swaffam in Norfolk and the visitor centre at Whitelee wind farm near Glasgow, which was the first of its kind in Scotland when it was officially opened in September 2009.
- 16.45 MORI's 'Tourism Attitudes Towards Wind Farms' study (commissioned by BWEA/SRF 2002) surveyed tourists in Argyll where, at the time, there were three operational wind farms (more than 70 turbines). The survey concluded that:
- Tourists visited the area because of its high landscape value;
 - 40% of tourists were aware of the existence of wind farms within the area;
 - 43% of tourists thought the wind farm had a positive effect (split between 15% stating that it had a completely positive effect, and 28% that stated it had a generally positive effect);
 - 43% of tourists thought the wind farms made no difference to their overall impression of the area; and
 - 8% felt that it had a negative effect on their overall impression of the area.
- 16.46 In summary, the MORI poll indicated that approximately 86% of those surveyed, who were aware of the wind farms, either left the area with a more positive impression because of their presence, or felt that the wind farms made no difference to their overall impression of the area. Based on the findings of the above survey, it can also be concluded that tourists visiting the area may potentially leave with either a more positive impression of the area due to the presence of a wind farm or wind farms, or of the opinion that it has made no difference to their overall impression of the area. It was also noted that:
- 91% of those questioned stated that the presence of wind farms in Argyll & Bute made no difference to the likelihood of them visiting the area again in the future;
 - 80% of those questioned stated that they would be interested in visiting a wind farm if it was opened up to the public via the use of a visitor centre, whilst approximately one in five stated that they would not be interested in visiting such an attraction.
- 16.47 Conclusions from another study (System Three on behalf of Visit Scotland, 2002) included the following:
- Scenery is a key influence in decisions to visit an area (the study specifically set out to assess the attitudes of visitors who had come to the area for other reasons such as non-landscape dependent sports and for business did not form part of the core study group);
 - 29% of visitors mentioned wind farms as factors which detracted from their experience, whilst 18% felt it enhanced their experience;
 - 15% responded that if the number of wind farms increased, they would not return, and 10% responded that they would be less likely to return. In total, 70% responded that it would have no influence.
- 16.48 Further surveys have been undertaken for the Scottish Government (Glasgow Caledonian University et al. 2008) which concluded that if renewable energy targets are met through wind farm development, tourist revenues will be just 0.18% lower than if no turbines are built. The report also suggests that the effects of wind farm development are so small that meeting renewable energy targets will not significantly effect on meeting tourism targets.
- 16.49 In practice, the effect of a wind farm on tourism is likely to be determined by local factors, in particular:
- The value of the landscape locally as a tourist resource;
 - The role landscape plays in tourist activities;
 - The effect of the wind farm on the landscape which is a function of the landscape character, wind farm layout and turbine characteristics;
 - The extent of wind farm visibility;
 - Tourist activity in the areas of wind farm visibility; and
 - The extent of cumulative effects.
- 16.50 RES does not intend developing the proposed wind farm site as a tourist facility, although the wind farm could be considered an attraction for the established tourism industry.
- 16.51 Whilst it is difficult to provide a definitive judgement, in light of the discussion above, and adopting a precautionary approach, effects on tourism due to the operation of the wind farm are considered to be of minor significance and can be either positive or negative depending on personal opinions.

Mitigation

Mitigation during Construction and Decommissioning

Direct Employment

- 16.52 RES will seek to ensure positive benefits for the local area during construction of proposed wind farm by endeavouring to use local labour, manufacturers and suppliers where possible.

Land Use

- 16.53 During construction, areas undergoing construction work, specifically around the turbine foundations, would be fenced off to protect stock. The number of construction areas that would be 'live' simultaneously would be limited to two or three, which should help minimise the scale of disruption at any one time and help any necessary management of farming activities to accommodate the wind farm works. The phasing of the construction programme, both in terms of time and location, will be discussed and agreed with the land owners to minimise disruption to

planned agricultural activities. Mitigation measures will be identified in the Construction and Decommissioning Method Statement (CMS).

Mitigation during Operation

Public Access

- 16.54 Whilst access to the proposed wind farm site will not be restricted, given the current use of the land for grazing, access will not be actively promoted.
- 16.55 As it is likely that there will be some local and visitor interest in the wind farm, RES will consider making provision for a range of visitor information boards to be displayed appropriately on/near the proposed wind farm site. This would also need to be agreed in consultation with DGC and the landowner. Interpretation boards can usefully include information not only about the wind farm development itself, but about the surrounding landscape, cultural heritage, ecology and the Scottish outdoor access code.

Residual Effects

Residual Construction and Decommissioning Effects

Direct Employment

- 16.56 The major opportunity for direct employment lies during the construction phase when suitably qualified local firms are identified and invited to bid for a significant portion of the construction work, on tracks, foundations and buildings. Construction materials are normally sourced locally and local transport and plant hire companies used wherever possible.
- 16.57 In the case of Dun Law Wind Farm in the Scottish Borders, commissioned by RES in July 2000, approximately 20 local jobs were created for the period of construction. The main civil construction contract was awarded to a local firm, RJT Excavations Ltd of Jedburgh. Similarly, approximately 30 jobs were secured during the construction of Glens of Foudland wind farm in Aberdeenshire, with the main civil contract being awarded to RJ McLeod in Dingwall.
- 16.58 RES has had a presence in Scotland since 1993 when it opened a technical support office in Glasgow. Regional development in Scotland is managed from Glasgow by a growing team of over 50 staff. The background studies which inform this Environmental Statement, together with wider aspects of the project, have been almost exclusively carried out by Scottish-based staff and consultants, including the landscape and visual, cultural heritage, ecological and acoustic assessments as well as the wind farm design itself.
- 16.59 At the proposed wind farm, a temporary workforce, varying between 10 and 50 people and averaging 30 on site at any one time, would be utilised during the construction phase. It is anticipated that 80% of these construction jobs would be sourced within the local region. It is standard practice in economic appraisals to convert temporary employment levels into full-time equivalents (FTEs). Therefore, using a conversion factor of ten years of full time employment to one permanent FTE, the total direct employment generated through construction will be 2.25 FTEs. It is considered that this represents a temporary effect of minor positive significance to the local economy.

Indirect Employment

- 16.60 It is likely that there will be local employment generated as an indirect result of the construction of the proposed wind farm. Indirect employment could include supply chain benefits for local businesses, sub-contracted work relating to the transportation of labour and materials, and expenditure by construction employees in the local economy. A further benefit may arise in terms of wider 'up-skilling' of local people either directly or indirectly employed in relation to the wind farm.
- 16.61 The local effect of supply chain spin-offs and sub-contractor work will depend upon local capacity. In terms of local skills, it is considered feasible that during the construction process there will be opportunities for those employed to develop skills that will be of benefit to the local economy in the longer term, such as in project management and/or construction skills, and that are transferable to other potential wind farm developments.
- 16.62 Indirect employment will also be generated as a result of the expenditure of construction employees in the local economy (hotels, local shops, restaurants, other accommodation etc).
- 16.63 It is considered that indirect employment represents a temporary effect of minor positive significance to the local economy.

Land Use

- 16.64 There will be some disruption to the main commercial activities undertaken by the landowner on the proposed wind farm site i.e. cattle and sheep grazing, during the construction of the wind farm. However, with the proposed mitigation, this is assessed as a minor adverse effect that will be temporary in nature.

Public Access and Recreation

- 16.65 The proposed wind farm site itself is currently not subject to restricted public access. While there will be restrictions to public access during construction of the wind farm, once construction is complete, the access arrangements would be similar to existing arrangements. This is considered to be of negligible significance.

Residual Operational Effects

Amenity Value

- 16.66 Perceptions and attitudes towards wind farms have been the subject of several public opinion surveys over the past 15 years. The report of the Sustainable Development Commission *Wind Power in the UK (2005)* summarises the findings of 24 surveys conducted between 1992 and 2005, and reports that across these studies, an average of 80% of respondents support the development of wind energy technologies and there appears to be a correlation between opinions and knowledge about wind farms.
- 16.67 One of the most comprehensive surveys of the attitudes of the Scottish public towards wind energy is the 2003 MORI survey undertaken on behalf of the (then) Scottish Executive. In total, 1,810 adults aged over 18 and living within a 20 km zone of an operational wind farm were interviewed by telephone between 27 February and 18 March 2003. The survey obtained results that are representative of people living within three proximity zones: residents within a 5 km radius; residents between 5 km and 10 km of the wind farm; and residents between 10 and 20 km of the wind farm. This survey found that people were three times more likely to say they felt their

local wind farm had a positive effect on the area (20%) than as they were to say it had a negative effect (7%). Most people felt the wind farm had neither a positive nor a negative effect. People living within 5 km of the local wind farm held the most positive views with 45% saying they thought the overall effect had been positive and only 6% saying they thought it had been negative.

- 16.68 The survey also noted differences in attitudes before construction and once the wind farm was operational. The proportion of respondents who had anticipated problems prior to the development (46%) was far higher than the proportion that actually experienced 'problems' after the development (8%). For example, although 15% of respondents had expected to experience a problem with noise or disturbance during construction, only 4% said that construction caused noise or disturbance. There is also substantial support for the idea of enlarging existing wind farm sites among those who live close to them with a majority (54%) saying they would support an expansion and only 9% opposed.
- 16.69 **Chapter 7: Landscape and Visual** presents the assessment of the predicted visual effect of the wind farm on key settlements. **Chapter 13: Noise** considers the potential effects on local dwellings of disturbance caused by noise and **Chapter 14: EMI and Aviation** details the potential for interference to radio and television reception as a result of the wind farm development. **Chapter 15: Access, Traffic and Transportation** considers the effects of traffic movements generated during both construction and operation of the wind farm.
- 16.70 Given the above, and due to the scale of the proposed wind farm it is considered that the effect of the proposed wind farm on amenity value is of minor significance and can be either positive or negative depending on personal opinions.

Direct Economic Effects

- 16.71 In terms of job creation during the operational stage, due to their remote operational control and limited need for servicing, wind farms do not create large numbers of jobs. It is expected that one part time local job would be created by the development for the lifetime of the project (25 years). It is considered that this represents a negligible effect, albeit slightly positive.

Indirect Economic Effects

- 16.72 Based on the low level of employment likely to be generated from operation of the wind farm, the potential for indirect employment opportunities is limited. This is therefore considered to represent a negligible effect, albeit slightly positive.
- 16.73 The proposed wind farm will provide a form of rural diversification in the area through rental income from the turbines. Generally, the new income stream derived from wind farms helps sustain the economic viability of the estate or farm business on which they are situated. These new finances allow investment in other aspects of the estate/farm business, which in turn can have a spin off in terms of wider local economic benefit. It is considered that this represents a negligible effect, albeit slightly positive.

Public Access

- 16.74 Path 2685/2686 will return to normal use during operation. A section of the route consist of upgraded access track. It is considered that this represents a minor, positive effect.

Predicted Cumulative Effects

- 16.75 A map showing additional wind farm schemes in the area can be found in Figure 8.27. These schemes are considered to have the potential to give rise to cumulative socio-economic effects due to their proximity to the proposed wind farm;
- 16.76 If all are constructed there is likely to be a positive effect on the economy of the local area as a result of land rent, community benefit, employment and associated indirect effects. However, given the scale of effects predicted for the proposed wind farm it is not considered that there will be a significant cumulative effect on the local economy. The cumulative effect is considered to be negligible.
- 16.77 In addition there is the potential for cumulative effects on tourism and recreation and the amenity value of the local area as a result of the proposed wind farms. However, given the scale of the proposed wind farm in relation to the cumulative schemes it is not anticipated that the proposed wind farm contribution to any cumulative effects will be significant.

Summary

- 16.78 An assessment of the proposed wind farm on socio-economics has been undertaken, including effects on recreation and tourism, amenity value, land use, employment, the economy, public safety and public access during both the construction, decommissioning and operational phases of the proposed wind farm.
- 16.79 During the construction and decommissioning phases it is considered that a minor positive effect will arise as a result of direct and indirect employment. It is anticipated that a temporary workforce, varying between 10 and 50 people and averaging 30 on site at any one time (equivalent to 2.25 FTEs), would be utilised during the construction phase, of which approximately 80% could be sourced within the local region. Indirect employment as a result of supply chain benefits for local businesses, sub-contracted work relating to the transportation of labour and materials, and expenditure by construction employees in the local economy is considered to represent a minor positive effect. In order to ensure positive benefits for the local area during construction of the proposed wind farm RES will seek to use local labour, manufacturers and suppliers where possible.
- 16.80 Once the proposed wind farm is operational, the potential for adverse effects on tourism and recreation, and the amenity value of the local area have been identified. Perceptions and attitudes towards wind farms have been the subject of several public opinion surveys over the past 15 years. The results of the MORI's 'Tourism Attitudes Towards Wind Farms' study, indicates that approximately 86% of those surveyed, who were aware of the wind farms, either left the area with a more positive impression because of their presence, or felt that the wind farms made no difference to their overall impression of the area. In addition, the results of a 2003 MORI poll indicate that people living within 5 km of the local wind farm held the most positive views of wind farm development, with 45% saying they thought the overall effect had been positive and only 6% saying they thought it had been negative.
- 16.81 Whilst it is difficult to provide a definitive judgement, in light of the discussion above, and adopting a precautionary approach, effects on tourism, recreation and amenity value due to the operation of the wind farm are considered to be of minor significance and can be either positive or negative depending on personal opinions.

16.82 Direct and indirect economic effects during the operational phase of the proposed wind farm as a result of direct and indirect employment, land rents, and a community benefit fund have also been identified, however these are considered to be of negligible significance.

Table 16.5: Summary of Potential Effects of the proposed wind farm, Mitigation and Residual Effects

Likely Significant Effect	Mitigation Proposed	Means of Implementation	Outcome/Residual Effect
Construction and Decommissioning			
Direct employment	RES will seek to ensure positive benefits for the local area during construction of The proposed wind farm by endeavouring to use local labour, manufacturers and suppliers where possible.	RES internal procurement procedures	Minor, positive
Indirect employment	RES will seek to ensure positive benefits for the local area during construction of The proposed wind farm by using local labour, manufacturers and suppliers where possible.	RES internal procurement procedures	Minor, positive
Disturbance of commercial activities on site	Minimise disruption through appropriate construction phasing.	Include in Construction Method Statement (CMS)	Minor, adverse
Operation			
Recreation and Tourism	None required	None	Minor, positive or negative
Amenity	None required	None	Minor, positive or negative
Direct economic	None required	None	Negligible
Indirect economic - indirect employment and increased spending	None required	None	Negligible

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