

**Updates and Corrections for  
Strategic Environmental Assessment (SEA): Environmental Report for  
Shetland Islands Council Supplementary Guidance Onshore Wind Energy**

June 2018



**Shetland  
Islands Council**



**Table 3.3 Summary of Representative Plans, Programmes and Strategies (PPS) relevant to the Onshore Wind Energy SG**

Policy, Plan or Programme	Summary of Relevant Environmental Objectives and corresponding implications for the Onshore Wind Energy SG
<b>National</b>	
The Wildlife and Countryside Act (1981)	The Wildlife and Countryside Act 1981 is the principal legislation dealing with nature conservation in Britain. The SIC Construction and Design IPP should aim to promote the maintenance and enhancement of the UK's biodiversity.
Environmental Protection Act 1990	This Act relates to the control of pollution and protection of the natural environment
The Town and Country Planning (Scotland) Act 1997 (as amended)	Legislation to promote sustainable economic development, encourage regeneration and to maintain and enhance the quality of the natural heritage and built environment.
Water Environment and Water Services (Scotland) Act 2003	Ensures that all human activity that can have a harmful impact on water is controlled
Nature Conservation (Scotland) Act (2004) – “the 2004 Act”	This Act puts in place legal measures for the conservation of biodiversity. The Act places a “Biodiversity Duty” on Shetland Islands Council
<b>Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended)</b>	Requires authorisation over point source discharges, abstractions, impoundments and engineering activities
Climate Change Act 2008	Sets a statutory framework and targets for greenhouse gas emissions reductions for 2020 and 2050 and requires that annual targets be set and that regular reports on progress be made to UK Parliament; imposes climate change duties on public bodies; and other provisions related to adaptation, establishment of carbon budgeting, emissions trading, waste reduction, establishment of The Committee on Climate Change and related matters.  Provides a significant incentive for the development of renewable energy generation developments.
Climate Change (Scotland) Act 2009	Sets a statutory framework and targets for greenhouse gas emissions reductions for 2020 and 2050 and requires that annual targets be set and that regular reports on progress be made to Scottish Ministers; imposes climate change duties on Scottish public bodies; and other provisions related to adaptation, forestry, energy efficiency, waste reduction, public engagement and carbon assessment.  Provides a significant incentive for the development of renewable energy generation developments.
Wildlife and Natural Environment (Scotland) Act 2011	Provides for public bodies subject to the biodiversity duty under section 1 of the 2004 Act to prepare and publish reports on compliance with that duty
The Conservation (Natural Habitats etc.) Regulations 1994 (as amended)	The Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites

The air quality strategy for England, Scotland, Wales and Northern Ireland (26 March 2011)	<p>This Air Quality Strategy sets out air quality objectives and policy options to further improve air quality in the UK from today into the long term.</p> <p>As well as direct benefits to public health, these options are intended to provide important benefits to quality of life and help to protect our environment.</p>
Biodiversity: The UK Action Plan (1994)	The plan assesses the current status of the UK's habitats and species and sets out a strategy for their future conservation and enhancement
National Planning Framework for Scotland 3 (NPF3) (2014)	Sets the context for development planning in Scotland and provides a framework for the spatial development of Scotland as a whole
Scottish Planning Policy: October 2014	Sets out national planning policies which reflect Scottish Ministers' priorities for operation of the planning system and for the development <sup>1</sup> and use of land
Scottish Climate Change Delivery Plan (2009)	Sets out the high level measures required in each sector to meet Scotland's statutory climate change targets, to 2020 and in the long term
Scottish Biodiversity Strategy: Scotland's Biodiversity, It's in Your Hands (2004)	To conserve Scotland's biodiversity for future generations
2020 Challenge for Scotland's Biodiversity: A Strategy for the Conservation and Enhancement of Biodiversity in Scotland (2013)	The 2020 Challenge for Scotland's Biodiversity is Scotland's response to the Aichi Targets set by the United Nations Convention on Biological Diversity, and the European Union's Biodiversity Strategy for 2020. It is a supplement to the Scotland's Biodiversity: It's in Your Hands (2004). The two documents together comprise the Scottish Biodiversity Strategy.
PAN 60: Planning for Natural Heritage	How development and the planning system can contribute to the conservation, enhancement, enjoyment and understanding of Scotland's natural environment
Historic Environment Scotland Policy Statement (2016)	Directs planning authorities in their consideration of applications for conservation area consent, listed building consent and their consideration of planning applications affecting the historic environment and the setting of individual elements of the historic environment
Our Place in Time - The Historic Environment Strategy for Scotland (2014)	Seeks to ensure that the cultural, social, environmental and economic value of Scotland's historic environment continues to make a strong contribution to the wellbeing of the nation and its people
PAN 1/2010 Strategic Environmental Assessment of Development Plans	Provides advice on how the requirements of the Environmental Assessment (Scotland) Act 2005 can be met within the development planning process.
PAN 1/2011: Planning and Noise	How the planning system helps to prevent and limit the adverse effects of noise.
PAN 2/2011 Planning Advice Note Planning and Archaeology	Provides advice to planning authorities and developers on dealing with archaeological remains
Onshore wind turbines (2014)	Advice for planning authorities on planning issues to consider in relation to onshore wind turbines
Wind farm developments on peat land: planning advice (2013)	Guidance for planning authorities on planning issues relating to wind farm developments on peat land

<b>Local and Regional</b>	
Shetland Local Development Plan (2014)	Sets out a vision and spatial strategy for the development of land in the Shetland Islands. Supplementary Guidance is formally a part of the LDP in respect of the defined subject area.
Shetland Islands Marine Spatial Plan (2015)	The SIMSP provides an overarching policy framework to guide marine development and activity out to 12 nautical miles.
Shetland Island Council Corporate Plan (2016)	Outlines Shetland Islands Council's vision, priorities and outcomes covering the period to the period 2020
Shetland Community Plan (2013)	Sets out how the public, private and third sector organisations working together, and with communities, plan and deliver better services to make a real difference to people's lives.
Shetland Regional Transport Strategy (2008)	Sets out strategy for development of an efficient and reliable transport system for Shetland
Economic Development Policy Statement (2015)	Aims to improve the economic well-being of Shetland by promoting an environment in which newer industries develop alongside thriving traditional industries
Shetland Island Council Sustainable Development Implementation Plan (2012)	Seeks to embed sustainable development into existing community, corporate and service planning processes
Orkney and Shetland Area Waste Plan (2003)	Sets out a waste management strategy for Orkney and Shetland.

From Page 22: Revised text for *Ramsar Sites*

### *Ramsar Sites*

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. Under the Convention wetland is defined as:

*"areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres. [Wetlands] may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands"*

One site in Shetland - Ronas Hill, North Roe and Tingon -was designated as a Ramsar site in August 1997 principally for its blanket bog, which supports a typical peatland avifauna (including red-throated diver). The Arctic water flea *Eurycercus glacialis* is listed as a secondary interest together with otter and common seal. Full details of the site can be found at <http://jncc.defra.gov.uk/pdf/RIS/UK13054.pdf>.

From Page 44: additional identified area type in **bold - Wild Land**

## **Designated Areas**

### *National Scenic Areas (NSA)*

These are areas of exceptional scenic value and comprise some of the best examples of Scotland's landscapes. National Scenic Areas are regulated through the Town and Country Planning (Scotland) Acts. One NSA in Shetland covers seven of Shetland's finest sections of coastline. The locations of the seven zones are shown on Figure 4.5 and listed below:

- Hermaness (including Muckle Flugga and the western slopes of Saxa Vord);
- Fethaland (broad coastal strip from Uyea to Burravoe in Northmavine);
- Eshaness (including Hillswick Ness and the intervening coastline);
- Muckle Roe (western half of the island);
- Foula;
- Fair Isle; and
- South West Mainland (from Fitful Head to Weisdale Voe and Skeld and including Burra, Trondra and the islands to the north).

### ***Wild Land***

**Wild Land Areas are the most extensive areas of high wildness. They are identified as nationally important in Scottish Planning Policy, but are not a statutory designation. One area has been identified in Shetland, namely Ronas Hill and North Roe, an area of 4,110ha**

### *Tree Preservation Orders (TPO)*

Under the Town and Country Planning (Scotland) Acts, the SIC must be given prior notification of intended works to protected trees. It is an offence to chop down, top, lop or wilfully destroy trees protected by a TPO without consent. There are 5 TPOs in Shetland as follows:

- Helendale House, Lerwick
- Montfield Hospital, Lerwick
- Smiddy Closs, Scalloway
- Sycamore Avenue and Ingaville House, Scalloway

### *Local Landscape Areas (LLAs) (proposed)*

The purpose of the LLAs is to ensure sympathetic siting and design of new development within them. These areas are currently proposed in the Supplementary Guidance to the Shetland Local Development Plan, but have not yet been designated. The proposed Local Landscape Areas are as follows and are shown on Figure 4.5.

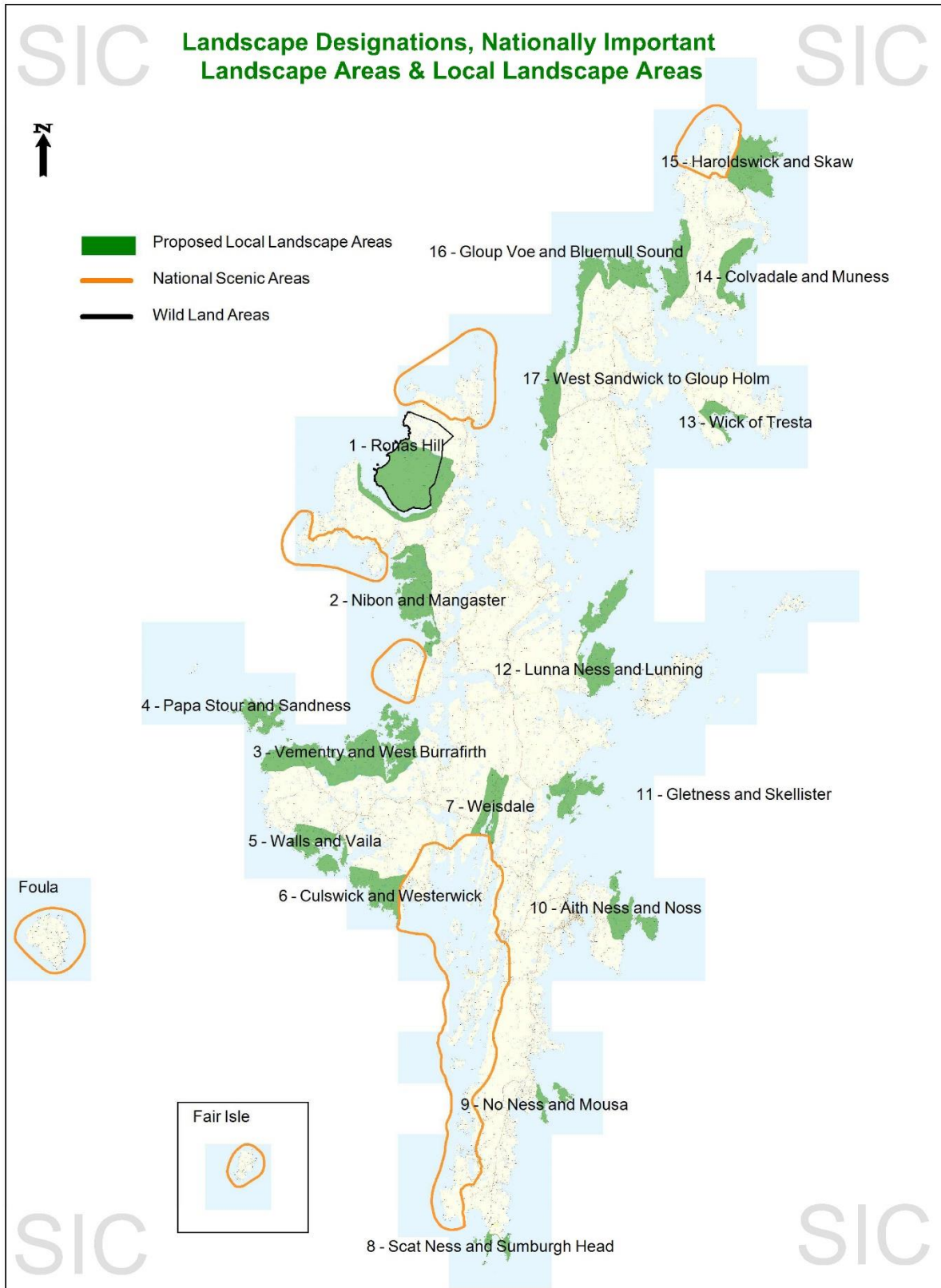
1. Ronas Hill
2. Nibon and Mangaster
3. Vementry and West Burrafirth
4. Papa Stour and Sandness
5. Walls and Vaila
6. Culswick and Westerwick
7. Weisdale
8. Scat Ness and Sumburgh Head
9. No Ness and Mousa
10. Aith Ness and Noss
11. Gletness and Skellister

12. Lunna Ness and Lunning
13. Wick of Tresta
14. Colvadale and Muness
15. Haroldswick and Skaw
16. Gloup Voe and Bluemull Sound
17. West Sandwick to Gloup Holm



From Page 46: Map corrected to include all landscape designations and areas

**Figure 4.5 National Scenic Areas, Wild Land and Proposed Local Landscape Areas**



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From Page 48: revised text shown in **bold**

*Onshore Wind Energy SG Context – Issues and Problems*

- The risk of direct and indirect impacts on designated sites (European, national and local), European Protected Species and nationally important species, caused by wind energy developments.
- Loss of habitat and species associated with land under consideration for wind farm development.
- A number of moorland breeding species occur in Shetland at much higher densities than elsewhere in Britain (these include golden plover and red-throated diver, both of which are on Annex 1 of the Birds directive, **whimbrel, of which Shetland holds 95% of the GB population** and great skua, of which Shetland has 43% of the GB population). The potential for wind energy developments to affect regional and national populations of these species adversely is likely to be a constraint on such developments.
- Changes in land use resulting in changes to habitat composition (as well as landscape change) caused by the wind farm and associated infrastructure.
- Habitat fragmentation and severance associated with new wind energy developments.
- Disturbance of species from construction works, operational works and traffic.
- Direct species loss.
- Potential for wind energy developments to have cumulative impacts beyond those commonly associated with the construction of turbines. Wind energy development may require further infrastructure in order to make it viable (particularly for larger developments, if the energy generated is to be exported to the Scottish mainland).

**Table 5.1 SEA Appraisal Summary of the Onshore Wind Energy SG**

SEA Topic	SEA Objectives	Summary Assessment of the 3 Spatial Policies and 9 Development Criteria
<p><b>Biodiversity, Flora and Fauna</b></p>	<p>1. To further the conservation of biodiversity</p>	<p>Summary Score: <b>0</b> for most but leading to <math>\sqrt</math> in some cases</p> <p>Wind Energy development and its associated infrastructure and access network could lead to a reduction in biodiversity (particularly for larger developments). The influence of the Shetland LDP (with the appropriate biodiversity protection policies) will be beneficial if policies are used vigorously not only to protect biodiversity but also to enhance it. The rigorous application of the policies that focus on protecting designated sites (such as NH1 and NH4) and those that enhance biodiversity (e.g. NH2 and NH3) would afford the necessary protection.</p> <p>The Onshore Wind Energy SG itself sets out clear aims of avoiding any significant environmental effects on biodiversity. The introductory text in Paragraphs 4.10 to 4.12 Development Criterion 3 Natural Heritage within the Onshore Wind Energy SG makes it quite clear that relevant protective nature conservation legislation must be met as well as recognising the importance of protected species such as the otter and the importance of protecting their habitats and surrounding environment.</p>
<p><b>Population</b></p>	<p>2. To improve the quality of life for people and communities across Shetland</p>	<p>Summary Score: <b>0</b> for most but leading to <math>\sqrt</math> in some cases</p> <p>Development Criterion 4 Impacts on communities sets out how onshore wind energy development should be assessed such that communities and the long term impacts on amenity including outdoor access, recreation and tourism opportunities are safeguarded. Such assessments should cover sensitive locations such as residential properties, schools and workplaces potentially sensitive to adverse impacts from wind turbines.</p>

<b>Human Health</b>	3.To improve the quality of health in Shetland	<p>Summary Score: <b>0</b> for most but leading to √ in some cases</p> <p>Development Criterion 4 covers a range of factors including visual amenity noise, shadow flicker, electromagnetic interference, designated sites, road safety and construction/ decommissioning logistics, impacts on access routes and recreation interests, phasing and any other identifiable significant effects which can all have significant effects on public health.</p>
<b>SEA Topic</b>	<b>SEA Objectives</b>	<b>Summary Assessment of the 3 Spatial Policies and 9 Development Criteria</b>
<b>Soils and Geology</b>	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	<p>Summary Score: Broadly √</p> <p><b>Soil and Peat</b> Existing LDP policy NH5 Soils refers to protection of soil resources and Minerals IPP policy (SPG MIN 4) protects peat against unsustainable commercial peat extraction, rather than the potential impacts of development (wind or otherwise) on the island peat resources.</p> <p>The Onshore Wind Energy SG Development Criterion 3 (Natural Heritage) states a clear requirement for wind energy development to avoid impacts on peat. In addition, carbon calculations must be completed that show the carbon impact of developments have been minimised</p> <p><b>Geodiversity</b> Existing LDP policy NH6 Geodiversity seeks to protect and/ or enhance important geological and geomorphological resources and sites and will be applied alongside the suite of policies within Minerals IPP, which provides a clear framework for the sustainable use of minerals and aggregates within the development context and the Natural Heritage SG. Geodiversity will therefore be protected at multiple levels of the planning process and so the impact of the Onshore Wind Energy SG on Geodiversity will be positive.</p>

SEA Topic	SEA Objectives	Summary Assessment of the 3 Spatial Policies and 9 Development Criteria
<b>Water</b>	5. To protect and enhance freshwater and marine water quality  6. To ensure that Shetland's water resources are used effectively and sustainably	<p>Summary Score: Broadly <b>0</b> leading to ✓ in a number of cases</p> <p>Existing LDP policy NH7 Water Environment seeks to protect the marine and freshwater natural environment of Shetland and there are policies that address pollution prevention (WD2 Waste Water).</p> <p>Application of the Onshore Wind Energy SG Development Criterion 5 Water Resources will provide the requirement for developers to put into place the necessary mitigation against adverse effects on water resources.</p>
<b>Air</b>	7. To protect Shetland's air quality	<p>Summary Score: <b>0</b> for most but leading to ✓ in some cases</p> <p>Shetland's climate tends to ensure a high standard of local air quality and energy production from renewable resources such as wind does not present a direct significant threat to local air quality. Because of the climatic conditions it is unlikely that additional traffic and transport created during the construction, operation and maintenance of wind energy developments will have a significantly adverse effect on air quality.</p> <p>Policies/criteria within the Onshore Wind Energy SG are likely to broadly support the maintenance of local air quality by facilitating the growth of renewable energy, over time reducing reliance on existing fossil fuel based energy production.</p>
<b>Climatic Factors</b>	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO <sub>2</sub> reduction target <b>(by 2050, established in the Climate Change (Scotland) Act 2009)</b>  9. <b>Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</b>  10. To adapt to the predicted effects of climate change <b>such as flood risk</b>  11. <b>To reduce or manage flood risk with and from any new developments</b>	<p>Summary Score: Broadly <b>0</b></p> <p><b>Carbon Emissions</b></p> <p>Wind energy development could carry a potential carbon cost relating to the following:</p> <ul style="list-style-type: none"> <li>• Embodied carbon within building materials (e.g. from steel and concrete);</li> <li>• Traffic and transport related carbon emissions during construction, operation and maintenance;</li> <li>• Carbon emitted as a result of peat disturbance during construction.</li> </ul> <p>However the support of wind energy development should help to reduce carbon emissions from energy generation in the longer term and will offset the greater amount of carbon emitted as a result of conventional fossil fuel powered energy production. Since the Onshore Wind Energy SG should help to facilitate the sustainable growth of renewable energy, its overall effect in contributing towards Scotland's 80% CO<sub>2</sub> reduction target should be strongly positive.</p> <p><b>Adapting to Climate Change and Flood Risk</b></p> <p>Depending on their location, wind farm sites could potentially be at risk from flooding or could cause or exacerbate localised flooding. Existing LDP Policy WD1 Flooding Avoidance seeks to ensure that developments do not create a flood risk to existing or proposed properties and/ or surrounding land or that appropriate acceptable mitigation measures can be undertaken to ensure no significant adverse impact on the natural and built environment as well as cultural heritage.</p>

SEA Topic	SEA Objectives	Summary Assessment of the 3 Spatial Policies and 9 Development Criteria
<b>Material Assets</b>	<p>12. To promote the sustainable use of Shetland's natural resources</p> <p>13. <b>To provide opportunities for sustainable waste management</b></p>	<p>Summary Score: Broadly <b>0</b> and ✓ in one or two cases</p> <p>Policy on the use of aggregates in development is set out in the Minerals IPP. Within that document, Policy SPG MIN 11 details which sites should be used as borrow pits, particularly those that might be needed to create access tracks for wind farm developments, and sets key environmental requirements that borrow pit excavation must meet including restoration. Policies within this document further define how mineral resources will be protected and used in a sustainable manner.</p> <p>Existing LDP Policy ED1 Support for Business and Industry and ED2 Commercial and Business Developments, supported by Business and Industry draft SG deal with the location of business and industry premises in existing rural settlements and in the open countryside and therefore give some steer on how development will be dealt with on greenfield sites and locational preferences. However, these policies may be difficult to apply directly to wind farm developments since wind energy has very specific locational requirements (since it will be dependent on exposure to, and availability of appropriate wind speeds). Also some land may be sensitive to such development for other reasons (such as proximity of housing and other sensitive receptors). Map 3 Group 1 and 2 areas with Local Safeguarding within the Onshore Wind Energy SG, shows those areas that are afforded substantial protection from development.</p> <p>With regard to the minimisation of waste, Existing LDP Policy W5 Waste Management Plans and facilities in all new developments will ensure that material recycling, reuse and recovery is maximised and that a site waste management plan (SWMP) be included in any wind energy construction. Any negative impacts on waste generation will therefore be mitigated by the LDP.</p>
<b>Cultural Heritage</b>	<p>14. To conserve and protect the historic environment <b>including buildings, archaeological sites and other culturally important features</b></p> <p>15. To <b>safeguard</b> distinctive cultural heritage <b>features and their settings through the responsible design and siting of development</b></p>	<p>Summary Score: Broadly <b>0</b></p> <p>Existing LDP Policy HE1 Historic Environment states that:</p> <p>The Council should presume in favour of the protection, conservation and enhancement of all elements of Shetland's historic environment, which includes buildings, monuments, landscapes and areas.</p> <p>Subsequent Historic Environment policies HE2-HE6 deal with specific aspects of the historic environment and set out in detail how they should be protected and any likely harm mitigated. The Onshore Wind Energy SG is supportive of this SEA objective and will therefore have an overall neutral impact on the historic environment.</p>

SEA Topic	SEA Objectives	Summary Assessment of the 3 Spatial Policies and 9 Development Criteria
<b>Landscape and Built Environment</b>	<p>16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes</p> <p>17. To improve those landscapes and seascapes that are degraded</p> <p>18. <b>To respect urban form, settlement pattern or identity</b></p> <p>19. <b>Improve the quality and design of the built environment</b></p>	<p>Summary Score: Broadly <b>0</b> leading to <math>\sqrt</math> in some cases</p> <p>The importance of Shetland's landscape and seascape is fully recognised in the Onshore Wind Energy SG. The SG establishes a number of protective measures against the degradation of the landscape including Development Criterion 1 Landscape and Visual Impact and 2 Cumulative Impacts, which set out requirements for wind energy development applications to be accompanied by full landscape and visual assessment including a cumulative assessment.</p> <p>Strong guidance is given in the Map 3 Group 1 and 2 areas with Local Safeguarding on the locations of high sensitivity landscapes, which would be a constraint to wind energy development.</p> <p><b>Onshore wind energy developments will generally be located such that they will have minimal direct impact on urban form, settlement pattern or identity, though the LDP via policies GP2, GP3, NH1 and NH4 and the SG via DC1 and DC4 that will enable impacts on settlement and their landscape settings to be taken fully into account in the decision making process, thereby minimising adverse impacts on these objectives</b></p>

**Table 5.2 Summary Assessment of the Possible Cumulative Effects of the Onshore Wind Energy SG Policies and Development Management Criteria**

SG Policy	SEA Objective																		
	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
LDP RE1 Renewable Energy	√	0	0	√	√	√	0	√	√	0	0	√	√	√	√	√	0	√	√
Spatial Framework	√	0	0	√	0	0	0	0	√	0	√	√	√	√	√	√	0	√	√
DC1 Landscape and Visual Impact	0	0	0	√	√	0	0	0	√	0	0	√	0	√	√	√	0	√	√
DC2 Cumulative Impacts	√	√	√	√	√	√	0	0	√	0	√	√	√	√	√	√	0	√	√
DC3 Natural Heritage	√√	0	0	√√	√	0	0	0	√	0	0	√√	0	0	0	√	0	√	√



SG Policy	SEA Objective																		
	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
DC4 Impacts on Communities	0	√√	√	0	0	0	0	0	√	0	√	0	√	0	√	√√	0	√	√
DC5 Water Resources	0	0	0	0	√√	√	0	0	√	0	√	√	0	0	0	0	0	0	0
DC6 Decommissioning	0	0	0	0	0	0	0	0	√	0	√	0	√	0	0	√0	0	√	√
DC7 Historic Environment	0	0	0	0	0	0	0	0	√	0	0	0	0	√√	√√	√	0	√	√
Summary	0	0	0	0	0	0	0	0	√	0	√	√	√	0	0	√	0	√	√

√ Overall effect likely to be positive and supportive  
 √√ Clear strong positive effects  
 X Overall effect likely to be negative  
 ?/X Uncertain possible negative effect  
 0 Neutral effect    0/√ Neutral or possible positive effect

?/√ Uncertain possible positive effect  
 ?/0 Uncertain possible neutral effect  
 ? Uncertain effect  
 0/X Neutral or possible negative effect

**Table 5.4 Key Indicators**

<b>SEA Topic</b>	<b>Objective</b>	<b>Example Indicators</b>
<b>Biodiversity (Flora and Fauna)</b>	1. To further the conservation of biodiversity	<ul style="list-style-type: none"> <li>Number of measures included in planning applications which would benefit biodiversity in short-term and on restoration</li> <li>Number of proposals that have the potential to significantly affect bird populations at a regional level.</li> </ul>
<b>Population</b>	2. To improve the quality of life for people and communities across Shetland	<ul style="list-style-type: none"> <li>Number of applications where visual intrusion, nuisance, community severance, etc. is an issue</li> </ul>
<b>Human Health</b>	3. To improve the quality of health in Shetland	<ul style="list-style-type: none"> <li>Number of complaints regarding traffic and/or dust and emissions from construction or specific developments</li> </ul>
<b>Soil</b>	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	<ul style="list-style-type: none"> <li>Number of applications in blanket bog, high quality heath or improved agricultural land</li> </ul>
<b>Water</b>	<p>5. To protect and enhance freshwater and marine water quality</p> <p>6. To ensure that Shetland's water resources are used effectively and sustainably</p>	<ul style="list-style-type: none"> <li>Number of surface water bodies affected by wind energy development applications</li> <li>Water quality (marine and fresh water)</li> </ul>
<b>Air</b>	7. To protect Shetland's air quality	<ul style="list-style-type: none"> <li>As objective 3</li> </ul>
<b>Climatic Factors</b>	<p>8. To reduce greenhouse gas emissions and to contribute to Scotland's 80% CO2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)</p> <p>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</p> <p>10. To adapt to the predicted effects of climate change such as flood risk</p> <p>11. To reduce or manage flood risk with and from any new developments</p>	<ul style="list-style-type: none"> <li>Distance travelled by vehicles accessing new wind farm developments</li> <li>Volume of construction/fabrication materials imported from outside Shetland</li> <li>Number of applications outwith areas of flood risk</li> </ul>
<b>Material Assets</b>	<p>12. To promote the sustainable use of Shetland's natural resources</p> <p>13. To provide opportunities for sustainable waste management</p>	<ul style="list-style-type: none"> <li>Percentage of recycled materials used in new wind farm developments</li> <li>Area of agricultural/crofting land lost to wind energy development</li> </ul>

<b>Cultural Heritage</b>	<p>14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features</p> <p>15. To safeguard distinctive cultural heritage features and their settings through the responsible design and siting of development</p>	<ul style="list-style-type: none"> <li>• Number of development applications affecting historic sites and scheduled monuments (directly and indirectly i.e. effects on setting)</li> <li>• Number of development sites consented which significantly impact on the setting of listed buildings, historic sites and scheduled monuments</li> <li>• Number of development sites refused which significantly impact on the setting of listed buildings, historic sites and scheduled monuments</li> </ul>
<b>Landscape</b>	<p>16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes</p> <p>17. To improve those landscapes and seascapes that are degraded</p> <p>18. To respect urban form, settlement pattern or identity</p> <p>19. Improve the quality and design of the built environment</p>	<ul style="list-style-type: none"> <li>• Number of applications affecting National Scenic Areas and/or areas of recognised local landscape value</li> <li>• Number of applications significantly affecting all landscapes, especially unique coastal landscape and seascape</li> <li>• Number of applications approved that incorporate measures to improve degraded landscapes</li> </ul>

**Table A2 SEA Appraisal Framework**

<b>SEA Topic</b>	<b>Objective</b>	<b>Example Indicators (to be)</b>
<b>Biodiversity (Flora and Fauna)</b>	1. To further the conservation of biodiversity	<ul style="list-style-type: none"> <li>• Does it impact on plants and animals?</li> <li>• Does it conserve and protect biodiversity?</li> <li>• Does it contribute to the aims of the Local Biodiversity Action Plan?</li> <li>• Does it contribute to public awareness and understanding about biodiversity?</li> </ul>
<b>Population</b>	2. To improve the quality of life for people and communities across Shetland	<ul style="list-style-type: none"> <li>• Does it contribute towards improving quality of life for people and communities across Shetland?</li> </ul>
<b>Human Health</b>	3. To improve the quality of health in Shetland	<ul style="list-style-type: none"> <li>• Does it contribute towards improving the quality of health associated with the environment (Air quality, water quality, noise and vibration)?</li> <li>• Does it contribute to the goal of creating active, healthy lifestyles for Shetland islanders?</li> <li>• Does it contribute towards improving access to health and care services for all Shetland islanders?</li> </ul>
<b>Soil</b>	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	<ul style="list-style-type: none"> <li>• Does it protect Shetland's peat, soils and geological resources?</li> <li>• Does it encourage the use of them only in a sustainable manner?</li> </ul>
<b>Water</b>	5. To protect and enhance freshwater and marine water quality  6. To ensure that Shetland's water resources are used effectively and sustainably	<ul style="list-style-type: none"> <li>• Does it protect and enhance freshwater and marine water quality?</li> <li>• Does it ensure that Shetland's water resources are used effectively and sustainably?</li> <li>• Does it protect the integrity of the physical aspect of the water environment?</li> <li>• Does it promote a sustainable drainage infrastructure?</li> </ul>
<b>Air</b>	7. To protect Shetland's air quality	<ul style="list-style-type: none"> <li>• Does it pose any risks to air quality?</li> <li>• Does it encourage activities that could contribute to lowering air quality?</li> </ul>

<b>Climatic Factors</b>	<p>8. To reduce greenhouse gas emissions and to contribute to Scotland's 80% CO<sub>2</sub> reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)</p> <p>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</p> <p>10. To adapt to the predicted effects of climate change such as flood risk</p> <p>11. To reduce or manage flood risk with and from any new developments</p>	<ul style="list-style-type: none"> <li>• Does it help in reducing greenhouse gas emissions?</li> <li>• Does it take account of the predicted effects of climate change, and adapt appropriately?</li> </ul>
<b>Material Assets</b>	<p>12. To promote the sustainable use of Shetland's natural resources</p> <p>13. To provide opportunities for sustainable waste management</p>	<ul style="list-style-type: none"> <li>• Does the plan or programme encourage the sustainable use of natural resources?</li> <li>• Will it lead to a reduction in the use of natural resources?</li> <li>• Does it encourage the use of local or imported materials?</li> <li>• Will it promote or enable greater use of recycling?</li> </ul>
<b>Cultural Heritage</b>	<p>14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features</p> <p>15. To safeguard distinctive cultural heritage features and their settings through the responsible design and siting of development</p>	<ul style="list-style-type: none"> <li>• Does it impact on the historic environment?</li> <li>• Does it conserve and protect the historic environment?</li> <li>• Does it help in raising public awareness and understanding of cultural heritage and how the public influence the continuing development of cultural heritage?</li> <li>• Does it conserve and enhance cherished aspects of local cultural heritage?</li> <li>• Does it contribute to local character, customs and traditions?</li> <li>• Will it affect the setting of any listed buildings, historic sites or culturally important sites?</li> </ul>
<b>Landscape</b>	<p>16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes</p> <p>17. To improve those landscapes and seascapes that are degraded</p> <p>18. To respect urban form, settlement pattern or identity</p> <p>19. Improve the quality and design of the built environment</p>	<ul style="list-style-type: none"> <li>• Does it consider all landscape and seascape implications?</li> <li>• Does it contribute to landscape and seascape protection?</li> <li>• Does it enhance degraded landscapes and seascapes?</li> </ul>

Table A3 SEA Appraisal of Onshore Wind Energy SG Policies

SG Policy	SEA Objective																		
LDP RE1 Renewable Energy	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO <sub>2</sub> reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	<b>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</b>	10. To adapt to the predicted effects of climate change such as flood risk	<b>11. To reduce or manage flood risk with and from any new developments</b>	12. To promote the sustainable use of Shetland's natural resources	<b>13. To provide opportunities for sustainable waste management</b>	<b>14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features</b>	<b>15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development</b>	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	<b>18. To respect urban form, settlement pattern or identity</b>	<b>19. Improve the quality and design of the built environment</b>
	<p>This policy and related guidance supports and facilitates the alternative generation of energy whilst contributing to the sustainable development of Shetland and safeguarding its unique natural and historic environment.</p> <p>Renewable energy developments can provide a sustainable opportunity for diversification within the Shetland economy but proposals must show no unacceptable impacts on people (benefits and disbenefits for communities and tourism and recreation interests) the natural and water environment, landscape, historic environment and the built environment and cultural heritage of Shetland.</p> <p>This policy states that development will also be considered against the Spatial Framework Development Criteria set out in the SG, so the success of this policy in mitigating the effects of onshore development rests on the success of the suite of policies together. However, it is broadly supportive or neutral in respect of the SEA Objectives</p>																		

SG Policy	SEA Objective																		
Onshore Wind Energy SG Spatial Framework  Group 1: Areas where wind farms will not be acceptable	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	<b>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</b>	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
0	0	0	√	0	0	0	0	√	0	0	√	0	0	0	√	0	0	0	
<p>This policy repeats Scottish Planning Policy, which states that wind farms are unacceptable within National Parks and National Scenic Areas. Map 1 identifies the National Scenic Area designation for Shetland. By doing this the policy asserts the strongest, most basic level of protection for those areas which are designated as such.</p> <p>This policy therefore has a broadly neutral effect on most SEA objectives except those concerned with protecting natural heritage and environmental assets, where it is broadly supportive.</p>																			

SG Policy	SEA Objective																		
Onshore Wind Energy SG Spatial Framework  Group 2: Areas of significant protection.	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	<b>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</b>	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
	√	0	0	√	0	0	0	0	√	0	0	√	0	0	0	√	0	0	0
<p>This policy repeats Scottish Planning Policy, which states that wind farms are unacceptable within National Parks and National Scenic Areas. Map 1 identifies the National Scenic Area designation for Shetland. By doing this the policy asserts the strongest, most basic level of protection for those areas which are designated as such.</p> <p>This policy therefore has a broadly neutral effect on most SEA objectives except those concerned with protecting natural heritage and environmental assets, where it is broadly supportive.</p>																			



SG Policy	SEA Objective																		
Onshore Wind Energy SG Spatial Framework  Group 3: Areas with potential for wind farm development	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	<b>9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction</b>	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
√	√	√	0	0	0	0	√	√	0	0	√	0	0	0	√	√	0	0	
<p>Areas out with groups 1 and 2 areas are considered to be capable, in principle, subject to compliance with local safeguarding of supporting large scale wind energy developments within Shetland. Proposals for wind energy developments within these areas must satisfy the development criteria set out in Section 2 of the SG. Any application for wind energy developments will be required to meet all applicable Local Development Plan policies and relevant National and International guidance.</p> <p>Robust policy supporting sustainable energy projects that will have broadly positive impacts on social and environmental topics. There is the possibility for negative landscape impact but application of the policy and Development Criteria will minimise these.</p>																			

SG Policy	SEA Objective																		
	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
DC1 Landscape and Visual Impact	√	√	√	0	0	0	0	√	√	0	0	√	0	0	0	√	√	0	0
	This criterion focuses on minimising landscape and visual impacts and will therefore have strong positive effects on the objectives relating to landscape. It will have broadly neutral effects on other objectives.																		
DC2 Cumulative Impact	√√	√√	√	√√	0	0	0	0	0	0	√	√	0	√√	√√	√√	0	√	√
	This criterion expects developers to demonstrate that proposals will not result in unacceptable cumulative impacts. In addition to DC1 Landscape and Visual Impact Assessment, developers will be asked to take into account a wide range of cumulative factors including the natural, historic and built environment, the visual amenity of residents and wider socio-economic impacts. It therefore has positive or strong positive effects on the associated criteria and broadly neutral effect on all others.																		
DC3 Natural Heritage	√√	0	0	√√	0	0	0	0	0	0	0	0	0	0	0	√	0	0	0
	This criterion will have broadly neutral effects on the majority of SEA objectives but will have strong positive effects for the conservation of biodiversity, soils, peat and geodiversity.																		

SG Policy	SEA Objective																		
	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
DC4 Impacts on communities	0	√	√	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<p>This criterion ensures that development proposals must, in combination with existing and consented wind energy developments, assess the likely impact on communities and the long term impacts on amenity including outdoor access, recreation and tourism opportunities. This includes an assessment of effects on visual amenity, noise, shadow flicker, electromagnetic interference, designated sites, road safety and construction/ decommissioning logistics, impacts on access routes and recreation interests, phasing and any other identifiable significant effects</p> <p>The policy will therefore support the population and health related SEA objectives and be broadly neutral for others though impacts in respect of adaptation to climate change effects are uncertain.</p>																		
DC5 Water Resources	0	0	0	0	0	0	0	0	0	√	√	0	0	0	0	0	0	0	0
	<p>This criterion will prevent wind energy developments from being sited where they would have a significantly adverse effect on groundwater, surface water and water supplies. It is broadly neutral in impact on most of the SEA objectives but is supportive of those that seek to protect and enhance Shetland's water environment and the sustainable use of water.</p> <p>The policy is broadly neutral in impact on most of the SEA objectives but is supportive of those that seek to protect and enhance Shetland's water environment and the sustainable use of water.</p>																		

SG Policy	SEA Objective																		
DC6 Decommissioning	1. To further the conservation of biodiversity	2. To improve the quality of life for people and communities across Shetland	3. To improve the quality of health in Shetland	4. To protect Shetland's peat, soils and geological resources and use them in a sustainable manner	5. To protect and enhance freshwater and marine water quality	6. To ensure that Shetland's water resources are used effectively and sustainably	7. To protect Shetland's air quality	8. To reduce greenhouse gas emissions in and to contribute to Scotland's 80% CO 2 reduction target (by 2050, established in the Climate Change (Scotland) Act 2009)	9. Facilitate the development and use of energy generated from renewable energy technologies and contribute to meeting climate change greenhouse gas reduction	10. To adapt to the predicted effects of climate change such as flood risk	11. To reduce or manage flood risk with and from any new developments	12. To promote the sustainable use of Shetland's natural resources	13. To provide opportunities for sustainable waste management	14. To conserve and protect the historic environment including buildings, archaeological sites and other culturally important features	15. To safeguard the distinctive cultural heritage features and their settings through the responsible design and siting of development	16. To protect the special qualities and characteristics of Shetland's landscapes and seascapes	17. To improve those landscapes and seascapes that are degraded	18. To respect urban form, settlement pattern or identity	19. Improve the quality and design of the built environment
DC7 Historic Environment	0	0	0	0	0	0	0	0	0	0	0	0	0	√	√	0	0	0	0
	This criterion will ensure proposals for onshore wind energy developments and associated infrastructure are accompanied by a decommissioning statement detailing the method of reinstatement of all land affected by the development to its original condition and the removal of all turbines, ancillary buildings and related plant. It is broadly neutral in effect on all the SEA objectives.																		
	The criterion has broadly neutral effects on the majority of the SEA objectives but has clear support for the historic environment and those objectives conserving and promoting the cultural heritage of Shetland.																		

From Annex B Page 99 (consultee comment, 5<sup>th</sup> row): Corrected Table C1. **Correction in Bold**

		<ul style="list-style-type: none"> <li>We would identify a further environmental issue with respect to birds; that a number moorland breeding species occur in Shetland at much higher densities than elsewhere in Britain. These include golden plover and red-throated diver, both of which are on Annex 1 of the Birds directive, <b>whimbrel, of which Shetland holds 95% of the GB population</b> and great skua, of which Shetland has 43% of the GB population. The potential for wind energy developments to adversely affect regional and national populations of these species is likely to be a constraint on such developments.</li> </ul>	<p>This point has been incorporated into the SEA as an environmental issue, as shown in section 4.3.1, and has been considered throughout the SEA appraisal</p>
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