

TECHNICAL APPENDIX 4.1: LEGISLATION, PLANNING POLICY AND GUIDANCE

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1.0 Introduction

This Technical Appendix provides a summary of specific relevant legislation, planning policy and guidance for each technical discipline considered in the Environmental Impact Assessment (EIA) Report, as follows:

- EIA;
- Landscape and Visual Amenity;
- Ecology;
- Ornithology;
- Hydrology, Hydrogeology, Geology and Soils;
- Archaeology and Cultural Heritage;
- Access, Traffic and Transport;
- Noise;
- Land Use and Socio-Economics; and
- Other Environmental Issues.

The planning policy and legislation is covered in Chapter 4: Renewable Energy and Planning Policy of the EIA Report and is not repeated here.

2.0 EIA

2.1 Legislation

The relevant EIA legislation is set out in Chapter 5: Environmental Impact Assessment of the EIA Report and is not repeated here.

2.2 Guidance

This assessment is carried out in accordance with the principles contained within the following documents:

- Scottish Government Web Based Guidance Onshore wind turbines (First published in February 2011 and last updated in May 2014);
- Planning Advice Note (PAN) 1/2013 Environmental Impact Assessment (2013);
- Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment; and
- Scottish Natural Heritage (SNH) (2013) A Handbook on Environmental Impact Assessment: Guidance for Competent Authorities, Consultees and other involved in the Environmental Impact Assessment Process in Scotland (4th Edition).

3.0 Landscape and Visual Amenity

3.1 Legislation

This assessment is carried out in accordance with:

- The Electricity Act 1981.

The Electricity Act 1981 requires that development proposals “do what reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.” In accordance with this, the landscape and visual assessment, has influenced the design of the proposed Development, and has therefore sought to mitigate effects on the ‘natural beauty of the countryside’.

3.2 Policy

3.2.1 European Landscape Convention (ELC)

The ELC is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.

The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:

- *‘To recognise landscapes in law as an essential component of people’s surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;*
- *To establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;*
- *To establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned in the bullet above; and*
- *To integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.’*

The ELC provides a framework for Scottish Natural Heritages (SNH) work for Scotland's landscapes based on the following five guiding principles:

- *‘Our landscape - people, from all cultures and communities, lie at the heart of efforts for landscape, as we all share an interest in, and responsibility for, its well-being;*
- *All landscapes - the landscape is important everywhere, not just in special places and whether beautiful or degraded;*
- *Changing landscapes - landscapes will continue to evolve in response to our needs, but this change needs to be managed;*
- *Understanding landscapes - better awareness and understanding of our landscapes and the benefits they provide is required; and*
- *Tomorrow's landscapes - an inclusive, integrated and forward-looking approach to managing the landscapes we have inherited, and in shaping new ones, is required.’*

Given the UK’s adoption of the ELC and its aims, the ELC gives an appropriate basis for the importance placed on the Scottish landscape.

3.2.2 National Planning Framework 3 (NPF3)

Scotland’s third National Planning Framework (NPF3) was published by the Scottish Government in June 2014. NPF3 is a long-term strategy for Scotland and is the spatial expression of the Government’s Economic Strategy and plans for development and investment in infrastructure.

3.2.3 Scottish Planning Policy (SPP) (2014)

The key national policy document in relation to land use planning is Scottish Planning Policy (SPP) 2014. As part of Scotland’s commitment to sustainable economic growth it is recognised in Paragraph 2 that the planning system should “...take a positive approach to enabling high-quality development and making efficient use of land to deliver long-term benefits for the public while protecting and enhancing natural and cultural resources”.

Spatial Framework

In Table 1: Spatial Framework, SPP sets out the basis for a spatial framework in relation to wind farm development in which a hierarchy of protection is defined. Group 1 areas are based on National Parks and National Scenic Areas and are defined as ‘Areas where wind farms will not be acceptable’.

Group 2 areas are defined as ‘Areas of Significant Protection’. Group 2 areas are based on the following criteria: a range of national designations, other nationally important environmental interests (such as wild land or carbon rich soils, deep peat and priority peatland habitat), and community separation (2 km from cities, towns and villages identified on the Local Development Plan). The site is not subject to any of the group 2 criteria listed in Table 1: Spatial Frameworks (noted above) and it is therefore considered that the proposed Development lies within a Group 3 area.

Group 3 areas are defined as ‘Areas with potential for wind farm development’ and described as follows: “Beyond groups 1 and 2, wind farms are likely to be acceptable, subject to detailed consideration against identified policy criteria”. Policy criteria are contained in the Local Development Plan as described in the following section.

National Scenic Areas

Paragraph 212 of SPP sets out the following policy in respect of National Scenic Areas (NSAs):

‘Development that affects a National Park, National Scenic Area, Site of Special Scientific Interest or a National Nature Reserve should only be permitted where:

- *the objectives of designation and the overall integrity of the area will not be compromised; or*
- *any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by social, environmental or economic benefits of national importance’.*

NSAs have been scoped out of the LVIA as they lie in the outer regions of the 45 km study area and do not have potential for significant effects resulting from the proposed Development.

Gardens and Designed Landscapes

In Paragraph 148 of SPP protection is given to Gardens and Designed Landscapes: *‘Planning authorities should protect and, where appropriate, seek to enhance gardens and designed landscapes included in the Inventory of Gardens and Designed Landscapes and designed landscapes of regional and local importance’.*

Wild Land

Paragraph 200 of SPP states the importance of Wild Land: *“Wild land character is displayed in some of Scotland’s remoter upland, mountain and coastal areas, which are very sensitive to any form of intrusive human activity and have little or no capacity to accept new development. Plans should identify and safeguard the character of areas of wild land as identified on the 2014 SNH map of wild land areas.”* Paragraph 215 further explores the ability of Wild

Land to accommodate development: *“In areas of wild land (see paragraph 200), development may be appropriate in some circumstances. Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation.”*

3.2.4 South Ayrshire Local Development Plan

The South Ayrshire Local Development Plan was adopted in September 2014 (the SALDP). Preparation of a new Local Development Plan (SALDP2) is underway with the proposed plan due to be published in the summer of 2019 and a period of consultation to follow. It is expected that SALDP2 will be adopted in 2020. The SALDP is therefore considered to be a relevant and currently up to date Local Development Plan. The Wind Energy Policy is considered to be the most relevant SALDP Policy to the proposed Development. The SALDP Wind Energy Policy states that proposals will be supported if:

- “a) they are capable of being accommodated in the landscape in a manner which respects its main features and character (as identified in the South Ayrshire Landscape Wind Capacity Study or in any subsequent updates to that study), and which keeps their effect on the landscape and the wider area to a minimum (through a careful choice of Site, layout and overall design);*
- b) they do not have a significant detrimental visual impact, taking into account views experienced from surrounding residential properties and settlements, public roads and paths, significant public viewpoints, and important recreational assets and tourist attractions;*
- c) they do not have any other significant detrimental effect on the amenity of nearby residents, including from noise and shadow flicker;*
- d) they do not have a significant detrimental effect on natural heritage features, including protected habitats and species, and taking into account the criteria in LDP policy: natural heritage;*
- e) they do not have a significant detrimental effect on the historic environment, taking into account the criteria in LDP policy: historic environment and LDP policy: archaeology;*
- f) they do not adversely affect aviation, defence interests and broadcasting installations; and*
- g) their cumulative impact in combination with other existing and approved wind energy developments, and those for which applications for approval have already been submitted, is acceptable.”*

Key landscape and visual related policies are listed below, the assessment against these policies is considered in detail in the Planning Statement.

LDP Policy: Landscape Quality

The ‘Landscape Quality’ Policy states the following:

“We will maintain and improve the quality of South Ayrshire’s landscape and its distinctive local characteristics. Proposals for development must conserve features that contribute to local distinctiveness, including:

- a. community settings, including the approaches to settlements, and buildings within the landscape;*
- b. patterns of woodland, fields, hedgerow and tree features;*
- c. special qualities of rivers, estuaries and coasts;*
- d. historic landscapes; and*
- e. skylines and hill features, including prominent views.”*

LDP Policy: Protecting the Landscape

The ‘Protecting the Landscape’ Policy states the following:

“We will consider proposals within or next to Scenic Areas (as defined on the LDP environment map) against the following conditions.

- a. The significance of impacts and cumulative impacts on the environment, particularly landscape and visual effects as informed by the Ayrshire Landscape Character Assessment (SNH 1998)."*
- b. How far they would benefit the economy.*

c. Whether they can be justified in a rural location.”

LDP policy: dark skies

‘We will support the Galloway Forest Dark Sky Park, and will presume against development proposals within the boundaries of the park that would produce levels of lighting that would adversely affect its ‘dark sky’ status. The boundaries of the Dark Sky Park [and of the buffer zone] are shown on the map on page 40. Development will have to be in line with the supplementary guidance on lighting within the Galloway Forest Dark Sky Park, which we will produce jointly with the adjoining planning authorities and Forestry Commission Scotland. This will also provide guidance for proposed developments within the buffer zone which may have a lighting impact on the Dark Sky Park. [The supplementary guidance will define the geographical extent of the buffer zone.]’

3.3 Guidance

3.3.1 LDP Supplementary Guidance: Wind Energy (2015)

The Supplementary Guidance: Wind Energy (2015) document outlines the Spatial Framework for wind energy development within South Ayrshire. This Spatial Framework identifies areas which have potential for windfarm development and those which do not, or those which require significant protection. In addition to this the Supplementary Guidance refers to the South Ayrshire Landscape Wind Capacity Study (2013) which provides advice on landscape sensitivities, thresholds and cumulative issues amongst other things. It assesses the landscape sensitivity, the capacity of landscape units to accommodate change and provides advice on how the scale, siting and design of development should be informed by local landscape character.

3.3.2 South Ayrshire Landscape Wind Capacity Study (2018)

The 2013 Wind Capacity Study was updated by SAC in August 2018. In brief, the updated South Ayrshire Landscape Wind Capacity Study of August 2018 (SALWCS) places the Site within Character Type 18C: Plateau Moorlands with Forestry and Wind Farms. The main findings of the document note that this landscape character type *“presents the only landscape in South Ayrshire where some scope for very large turbines > 130m were identified as being able to be accommodated....as either additional new developments or ‘repowered’ schemes for existing well -sited wind farms”*.

The 2018 SALWCS further notes that *“turbines would need to be set well back from the sensitive outer edges of this landscape to minimise effects on adjacent smaller scale settled valleys and landscapes with a strong sense of wildness. The presence of the Dark Skies Park is a major constraint to turbines > 150m which may require lighting”*. Section 21 in the SALWCS 2018 identifies that the Plateau Moorlands with Forestry and Wind Farm landscape character type has an *“expansive scale”, “simple landform and pattern”, is “very sparsely settled” with “wind farm development and forestry being key characteristics”*. Its overall sensitivity to the Very Large typology (turbines > 130m) is assessed in the SALWCS as *“High-medium”*. The document sets out a series of constraints and opportunities and concludes in respect of Guidance for development that *“there is some limited scope for the Very Large typology to be accommodated within this landscape”*.

Considered reference has been made to SALWCS throughout Chapter 7.

3.3.3 Other LVIA Guidance

The methodology for the LVIA also considers the following best practice guidance

- The Landscape Institute with the Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3). Routledge;
- Scottish Natural Heritage (SNH) (March 2012) Assessing the Cumulative Impact of Onshore Wind Energy Proposed Developments;
- Scottish Natural Heritage (2017) Siting and Designing Windfarms in the Landscape Version 3;

- Carys Swanwick Department of Landscape University of Sheffield and Land Use Consultants for The Countryside Agency and Scottish Natural Heritage (2002). Landscape Character Assessment Guidance for England and Scotland;
- Countryside Agency and Scottish Natural Heritage (2004) Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity;
- Landscape Institute (2011). Advice Note 01/11, Photography and photomontage in landscape and visual impact assessment;
- Scottish Natural Heritage (2017). Visual Representation of Windfarms, Version 2.2; and
- Scottish Natural Heritage - Assessing the Impacts on Wild Land Areas – Technical Guidance, Consultation Draft (2017).

4.0 Ecology

4.1 Legislation

This assessment is carried out in accordance with the principles contained within the following European legislation:

- European Union Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora;
- European Union Council Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy (“Water Framework Directive”); and
- Environmental Impact Assessment Directive 2014/52/EU.

The following national legislation has been considered as part of the assessment:

- The Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992 (as amended);
- The Water Environment and Water Services (Scotland) Act 2003 (as amended) (WEWS);
- The Nature Conservation (Scotland) Act 2004 (as amended);
- The Wildlife and Natural Environment (Scotland) Act 2011;
- The Conservation (Natural Habitats &c.) Regulations 1994 (as amended) (“The Habitats Regulations”);
- The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended); and
- The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017.

4.2 Policy

The following planning policy documents that are of particular relevance to this Chapter are:

- Ayrshire Local Biodiversity Action Plan (LBAP);
- Scottish Biodiversity Strategy: It’s in Your Hands (2004)/2020 Challenge for Scotland’s Biodiversity (2013);
- Scottish Executive (1999). Policy Advice Note 1/2013-Environmental Impact Assessment; and
- UK Post-2010 Biodiversity Framework (2012).

4.3 Guidance

This assessment is carried out in accordance with the principles contained within the following documents:

- CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (3rd Edition);
- Collins, J. (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). Bat Conservation Trust;
- European Commission (27 October 2010) Natura 2000 Guidance Document ‘Wind Energy Developments and Natura 2000’. European Commission, Brussels;
- European Commission (2011). Wind Energy Developments and Natura 2000.

- Hundt, L. (2012) Bat Surveys: Good Practice Guidelines (2nd edition). Bat Conservation Trust;
- Joint Nature Conservation Committee (2013) Guidelines for selection of biological Sites of Special Scientific Interest (SSSI);
- Natural England (2014) Natural England Technical Information Note TIN 051. Bats and Onshore Wind turbines – Interim Guidance (3rd Edition);
- Rodrigues L., Bach L., Dubourg-Savage M.J., Karapandza B., Kovac D., Kervyn T., Dekker J., Kepel A., Bach P., Collins J., Harbusch C., Park K., Micevski B., Minderman J. (2014) Guidelines for consideration of bats in windfarm projects. Revision 2014. EUROBATs Publication Series No. 6;
- Scottish Biodiversity Strategy: It's in Your Hands (2004)/2020 Challenge for Scotland's Biodiversity (2013);
- Scottish Executive (2017) Planning Circular 1/2017: Guidance on The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017;
- Scottish Executive (2000) Nature conservation: implementation in Scotland of EC Directives on the conservation of natural habitats and of wild flora and fauna and the conservation of wild birds ('The Habitats and Birds Directives'). Revised guidance updating Scottish Office Circular no. 6/1995;
- Scottish Executive (2004) The Scottish Biodiversity Strategy: It's in Your Hands;
- Scottish Executive (2006) The Scottish Forestry Strategy (SFS);
- Scottish Government (2001) European Protected Species, Development Sites and the Planning Systems: Interim guidance for local authorities on licensing arrangements;
- Scottish Government (2010) Management of Carbon-Rich Soils;
- Scottish Government (2013) 2020 Challenge for Scotland's Biodiversity;
- Scottish Government (2016) Draft Peatland and Energy Policy Statement;
- Scottish Government (2017) Planning Advice Note 1/2013 - Environmental Impact Assessment, Revision 1.0;
- Scottish Government (2017) Draft Climate Change Plan - the draft Third Report on Policies and Proposals 2017-2032;
- Scottish Government, SNH and SEPA (2017) Peatland Survey - Guidance on Developments on Peatland;
- Scottish Renewables, SNH, SEPA, Forestry Commission (Scotland), Historic Scotland (2015) Good Practice During Windfarm Construction (3rd Edition).
- SEPA (2017a) Land Use Planning System Guidance Note 4 - Planning guidance on on-shore windfarm developments;
- SEPA (2017b) Land Use Planning System Guidance Note 31 - Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems;
- SERAD (Scottish Executive Rural Affairs Department) (2000). Habitats and Birds Directives, Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds ('The Habitats and Birds Directives'). Revised Guidance Updating Scottish Office Circular No 6/1995;
- SNH (2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments;
- SNH (2013) Planning for Development: What to consider and include in Habitat Management Plans;
- SNH (2015) Scotland's National Peatland Plan;
- SNH (2018) Environmental Impact Assessment Handbook – Version 5: Guidance for competent authorities, consultation bodies, and others involved in the Environmental Impact Assessment process in Scotland; and
- SNH, Natural England, Natural Resources Wales, Renewable UK, ScottishPower Renewables, Ecotricity Ltd, the University of Exeter & Bat Conservation Trust (BCT) (2019) Bats and Onshore Wind Turbines: Survey Assessment and Mitigation.

5.0 Ornithology

5.1 Legislation

The following legislation has been taken into account when undertaking this assessment:

- Environmental Impact Assessment Directive 2014/52/EU;
- The Wildlife and Countryside Act (as amended) (WCA);
- The Conservation (Natural Habitats, &c) Regulations 1994 (as amended) ('The Habitats Regulations');
- The Nature Conservation (Scotland) Act 2004 (as amended);
- The Council Directive on the Conservation of Wild Birds 2009/147/EC ('The EU 'Birds Directive'); and
- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011.

5.2 Guidance

The following guidance has been consulted while undertaking this assessment:

- SNH Guidance: Recommended bird survey methods to inform impact assessment of onshore wind farms (SNH, 2014);
- SNH Guidance: Assessing Significance of Impacts from Onshore Windfarms on Birds outwith Designated Areas (2014, updated in 2018) (SNH, 2018);
- SNH Guidance: Assessing Connectivity with Special Protection Areas (SPAs) (SNH, 2016); and
- SNH Guidance: use of avoidance rates in the SNH wind farm collision risk model (SNH, 2017).

6.0 Hydrology, Hydrogeology, Geology and Soils

6.1 Legislation

This assessment is carried out in accordance with the principles contained within the following legislation:

- The Water Environment (Controlled Activities) (Scotland) Amendment Regulations, 2018 (Controlled Activities Regulations (CAR));
- EU Water Framework Directive (2000/60/EC);
- EU Drinking Water Directive (98/83/EC);
- The Environment Act 1995;
- Environmental Protection Act 1990;
- The Public Water Supplies (Scotland) Regulations 2014;
- The Flood Risk Management (Scotland) Act 2009;
- Surface Waters (Fishlife) (Classification) (Scotland) Amendment Regulations 2003;
- Forestry Act 1967 (Part II) as amended by the Trees Act 1970 and the Forestry Acts 1979 and 1986;
- Water Environment and Water Services (Scotland) Act 2003 (WEWS Act); and
- The Water Intended for Human Consumption (Private Supplies) (Scotland) Regulations 2017.
- the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017;
- the Private Water Supplies (Scotland) Regulations 2006; and
- Electricity Act 1989.

6.2 Policy

This assessment is carried out in accordance with the policies contained within the following documents:

- Scottish Environment Protection Agency Policy No. 19, Groundwater protection policy for Scotland;

6.3 Guidance

This assessment is carried out in accordance with the principles contained within the following documents:

- C532 Control of Water Pollution From Construction Sites (2001);
- C648 Control of Water Pollution from Linear Construction Projects – Technical Guidance (2006);
- C741 Environmental Good Practice on Site (2015); and
- C753 The SUDS Manual (2015).
- Engineering in the Water Environment: Good Practice Guide – River Crossings (2010);
- Engineering in the Water Environment: Good Practice Guide – Sediment Management (2010);
- Land Use Planning System SEPA Guidance Note 4, Issue 9 (September 2017);
- Land Use Planning System SEPA Guidance Note 31, Version 3 (September 2017);
- SEPA Position Statement – Culverting of Watercourses (2015); and
- Regulatory Position Statement – Developments on Peat (2010).

- Department of Environment, Food and Rural Affairs (DEFRA) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites (2011);
- DEFRA Good Practice Guide for Handling Soils (Ministry of Agriculture, Fisheries and Food (MAFF) 2000);
- Scottish Natural Heritage (SNH), 2nd Edition June 2013, Updated September 2015 - Constructed Tracks in Scottish Uplands;
- Good Practice during Windfarm Construction, Version 3, a joint publication by Scottish Renewables, SNH, SEPA, Forestry Commission Scotland (FCS) and Historic Environment Scotland (HES) (2015);
- The UK Forestry Standard, The Government's Approach to Sustainable Forestry, Fourth Edition, Forestry Commission Scotland, 2017; and
- Scottish Renewables and SEPA - Developments on Peatland: Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and the Minimisation of Waste (2012).
- CIRIA Report C649, Control of water pollution from linear construction sites: Site guide;
- Forestry Commission (2011) Forests & water guidelines, 5th Edition;
- Scottish Executive (2012) River crossings & migratory fish: Design guidance;
- Scottish Executive (2006) Peat landslide hazard and risk assessments: Best practice guide for proposed electricity generation developments;
- Scottish Natural Heritage (2014) Siting and designing wind farms in the landscape;
- Scottish Natural Heritage (2014) A handbook on environmental impact assessment;
- Scottish Natural Heritage (2001) Guidelines on the environmental impacts of windfarms and small scale hydroelectric schemes;
- Scottish Natural Heritage and Forestry Commission (2010) Floating roads on peat;
- Scottish Environment Protection Agency (Controlled Activities) (Scotland) Regulations 2011 (as amended) A Practical Guide;
- Scottish Environment Protection Agency WAT-SG-25, Good practice guide - river crossings;
- Scottish Environment Protection Agency WAT-SG-31, Special requirements for civil engineering contracts for the prevention of pollution;
- GPP13 Vehicle washing and cleaning (April 2017);
- PPG18 Managing fire water and major spillages (June 2000);
- GPP21 Pollution incident response planning (July 2017);
- GPP22 Dealing with spills; (October 2018); and
- PPG26 Safe storage – drums and intermediate bulk containers (March 2011).

The following Scottish Environment Protection Agency (SEPA) (jointly with the Environment Agency and the Northern Ireland Environment Agency) Pollution Prevention Guidelines have also been considered:

- PPG1 Understanding your environmental responsibilities – good environmental practices (July 2013);
- GPP2 Above ground oil storage tanks (January 2018);
- PPG3 Use and design of oil separators in surface water drainage systems (April 2006);
- GPP4 Treatment and disposal of wastewater where there is no connection to the public foul sewer (November 2017);
- GPP5 Works and maintenance in or near water (January 2017);
- PPG6 Working at construction and demolition sites (2012);
- PPG7 Safe storage – the safe operation of refuelling facilities (July 2011);
- GPP8 Safe storage and disposal of used oils (July 2017);

7.0 Cultural Heritage and Archaeology

7.1 Legislation

The principal relevant legislation comprises:

- the Ancient Monuments and Archaeological Areas Act 1979;
- the Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997;
- the Historic Environment (Amendment) (Scotland) Act 2011; and
- the Historic Environment Scotland Act 2014.

7.2 Policy

The Scottish Government and Historic Environment Scotland (HES) have issued a number of statements of policy with respect to dealing with the historic environment in the planning system:

- Our Place in Time (2014 Historic Environment Scotland)
- Statutory Instrument No 102 Town and Country Planning (EIA Scotland) Regulations 2017;
- Planning Advice Note (PAN) 2/2011: Planning and Archaeology;
- Historic Environment Circular 1 May; and
- HES Policy Statement June 2016.

7.3 Guidance

Three relevant pieces of guidance have been published by HES and the professional archaeological body, the Chartered Institute for Archaeologists. These publications are:

- Managing Change in the Historic Environment: Setting 2016 Historic Environment Scotland;
- Environmental Impact Assessment Handbook, Historic Environment Scotland and Scottish Natural Heritage 2018; and
- Standards and Guidance for Historic Environment Desk Based Assessment 2014 Chartered Institute for Archaeologists.

8.0 Noise and Vibration

8.1 Legislation

- the Control of Pollution Act (CoPA) 1974 provides two means of controlling construction noise and vibration. Section 60 provides the Local Authority with the power to impose at any time operating conditions on the development site. Section 61 allows the applicant to negotiate a prior consent for a set of operating procedures with the Local Authority before commencement of site works.

8.2 Policy

- Scottish Planning Policy (SPP) provides advice on how the planning system should manage the process of encouraging, approving and implementing renewable energy proposals including onshore wind farms. Whilst SPP suggests noise impacts are one of the aspects that will need to be considered it provides no specific advice.
- Planning Advice Note PAN1/2011 provides general advice on the role of the planning system in preventing and limiting the adverse effects of noise without prejudicing investment in enterprise, development and transport. PAN1/2011 provides general advice on a range of noise related planning matters, including references to noise associated with both construction activities and operational wind farms. In relation to operational noise from wind farms, Paragraph 29 states that:
“There are two sources of noise from wind turbines - the mechanical noise from the turbines and the aerodynamic noise from the blades. Mechanical noise is related to engineering design. Aerodynamic noise varies with rotor design and wind speed, and is generally greatest at low speeds. Good acoustical design and siting of turbines is essential to minimise the potential to generate noise. Web based planning advice on renewable technologies for Onshore wind turbines provides advice on ‘The Assessment and Rating of Noise from Wind Farms’ (ETSU-R-97) published by the former Department of Trade and Industry [DTI] and the findings of the Salford University report into Aerodynamic Modulation of Wind Turbine Noise.”
- The Scottish Government’s Online Renewables Planning Advice, Onshore Wind Turbines (last updated 28 May 2014) provides further advice on noise, and confirms that the recommendations of ‘The Assessment and Rating of Noise from Wind Farms’ (ETSU-R-97) *“should be followed by applicants and consultees, and used by planning authorities to assess and rate noise from wind energy developments”*.
- guidance on good practice on the application of ETSU-R-97 has been provided by the Institute of Acoustics (IOA Good Practice Guide or GPG). This was subsequently endorsed by the Scottish Government which advised ‘Onshore Wind Turbines’ that the GPG *“should be used by all IOA members and those undertaking assessments to ETSU-R-97”*.
- PAN1/2011 and the Technical Advice Note accompanying PAN1/2011 note that construction noise control can be achieved through planning conditions that limit noise from temporary construction sites, or by means of the Control of Pollution Act (CoPA).

8.3 Guidance

- ‘The Assessment and Rating of Noise from Wind Farms’ (ETSU-R-97) states that it:
“describes a framework for the measurement of wind farm noise and gives indicative noise levels thought to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to the costs and administrative burdens on wind farm developers or Local Authorities. The suggested noise limits and their reasonableness have been evaluated with regard to regulating the development of wind energy

in the public interest. They have been presented in a manner that makes them a suitable basis for noise-related planning conditions or covenants within an agreement between a developer of a wind farm and the Local Authority.” The recommendations contained in ETSU-R-97 provide a robust basis for assessing the noise implications of a wind farm. ETSU-R-97 has become the accepted standard for such developments within the UK.

- for detailed guidance on construction noise and its control, the Technical Advice Note refers to British Standard BS 5228 ‘Noise control on construction and open sites’, Parts 1 to 4 but confirms that the updated version of this standard, published in January 2009 is relevant when used within the planning process. The 2009 version consolidates all previous parts of the standard into BS 5228 1: 2009 (amended 2014) (BS 5228-1) for airborne noise and BS 5228-2: 2009 (amended 2014) (BS 5228-2) for ground borne vibration.
- BS 5228-1 provides guidance on a range of considerations relating to construction noise including the legislative framework, general control measures, example methods for estimating construction noise levels and example criteria which may be considered when assessing effect significance. Similarly, BS 5228-2 provides general guidance on legislation, prediction, control and assessment criteria for construction vibration.
- Planning Advice Note PAN50 ‘Controlling the Environmental Effects of Surface Mineral Workings’ gives guidance on the environmental effects of mineral working. The main document summarises the key issues with regard to various environmental effects relating to surface mineral extraction and processing such as road traffic, blasting, noise, dust, visual intrusion etc. In addition, several annexes to the main document have been published which consider specific aspects in more detail: Annex A, ‘The Control of Noise at Surface Mineral Workings’ and Annex D ‘The Control of Blasting at Surface Mineral Workings’. BS 5228-1 and BS 5228-2 also provide guidance relating to surface mineral extraction including the assessment of noise and vibration effects associated with quarry blasting. BS 6472-2 2008 gives similar guidance on assessing vibration from blasting associated with mineral extraction.
- South Ayrshire Council (SAC) have published a Planning Submission Guidance Note (PSGN) on Wind Turbine Development which sets out information required for the assessment of the noise impacts for wind turbine developments as well as specific guidance. This guidance was also taken into account in the preparation of this Chapter.

9.0 Site Access, Traffic and Transport

9.1 Legislation

- Road Vehicles (Authorisation of Special Types) (General) Order 2003; and
- The Roads (Scotland) Act 1984.

9.2 Policy

9.2.1 Scottish Planning Policy (SPP)

Relevant to impacts from road traffic, SPP states:

“Proposals for energy infrastructure developments should always take account of spatial frameworks for wind farms and heat maps where these are relevant. Considerations will vary relative to the scale of the proposal and area characteristics but are likely to include:

- impacts on road traffic;
- impacts on adjacent trunk roads; and
- cumulative impacts”

It is also noted that:

“Where a new development or a change of use is likely to generate a significant increase in the number of trips, a transport assessment should be carried out. This should identify any potential cumulative effects which need to be addressed.”

9.2.2 Planning Advice Note (PAN) 75 – Planning for Transport

PAN 75 refers to SPP for the requirement to prepare a Transport Assessment for significant travel generative developments. It also notes that:

“Development applications will therefore be assessed by relevant parties at levels of detail corresponding to their potential impact.”

The Note seeks to influence travel behaviour of new developments to more sustainable modes, although there are only very limited opportunities to consider sustainable travel modes to the proposed development, given its remote location. It is noted that:

“The Transport Assessment process should then establish ways to accommodate or mitigate the impacts of less sustainable transport modes in order to meet the mode share targets.”

Therefore, Chapter 12: Site Access, Traffic and Transport of the EIA Report confirms that construction staff, operational service staff and raw materials for construction would be sourced as locally as possible to reduce overall travel distances as far as practicable. Car sharing is also considered to be a viable solution for reducing overall vehicle trips from the proposed development during construction.

The turbine delivery route has been discussed and agreed with South Ayrshire Council and TS. Details of off-site road improvements and the site access proposals, required to facilitate the delivery of abnormal loads and construction traffic, are presented in the Chapter.

9.3 Guidance

- Transport Assessment and Implementation: A Guide published by the Development Department of the Scottish Executive in 2005
- Institute of Environmental Management and Assessment (IEMA) Guidelines for the Environmental Assessment of Road Traffic (IEMA, 1993)
- Design Manual for Roads and Bridges (DMRB)
- Guidelines for the Environmental Assessment of Road Traffic (EART);
- Scottish Planning Policy (SPP) (2014);
- Planning Advice Note 75: Transport and Planning (2005)
- Road Vehicles (Authorisation of Special Types) (General) Order 2003;
- the Roads (Scotland) Act 1984; and
- National Road Traffic Forecasts (Great Britain) 1997.

10.0 Land Use and Socio-Economics

10.1 National Policy and Guidance

10.1.1 Scottish Planning Policy (2014) (SPP)

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

SPP Paragraph 169 requires that the planning system supports the transformational change to a low carbon economy, consistent with national objectives and targets. Considerations in respect of proposals for onshore wind that are relevant to this assessment include:

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

Paragraph 79 also requires that the planning system promotes economic activity and diversification including, where appropriate, sustainable development linked to farm diversification and renewable energy developments.

10.1.2 National Planning Framework 3 (2014) (NPF3)

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

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

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

10.1.3 Scottish Natural Heritage (2013) Handbook on Environmental Impact Assessment

The SNH handbook on Environmental Impact Assessment states (at E.2.4) that “*the Environmental Statement may set out material considerations which could outweigh the [relevant planning] policies - such as economic benefits or benefits to other aspects of the environment that may be enhanced rather than harmed.*”

10.1.4 Scottish Government Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments (updated version 2015)

The Good Practice Principles explain how “*the local benefits arising from renewable energy developments can include:*”

1. Benefits derived from undertakings directly related to the development such as improved infrastructure;
2. Wider socio-economic community benefits in terms of job creation;
3. Benefits derived from community ownership in the development, referred to in this document as 'community investment';
4. Voluntary monetary payments to the community that are not related to anticipated impacts of the planning application usually provided via an annual cash sum, often referred to as a community benefit fund;
5. Other voluntary benefits which the developer provides to the community, (i.e. direct funding of projects, one-off funding, local energy discount scheme or any other site-specific benefits)".

The document goes on to state that Scottish Government is very keen to see communities get the chance to invest in local developments so that they have a direct stake in the energy being generated locally.

10.1.5 Scottish Government Good Practice Principles for Shared Ownership of Onshore Renewable Energy Developments (2015, currently under review)

This guidance was issued in 2015 and has been followed by a manifesto commitment from the Scottish National Party in 2016 to set a goal of at least half of newly consented projects having an element of shared ownership by 2020. Net economic benefit arising as a result of the shared ownership offer (SPP paragraph 29) can be a material planning consideration. The guidance states that where a community group is involved in the project from an early stage, and will receive long term socio-economic benefits over the lifetime of the project, the developer may wish to include the expected net economic benefits in a planning application.

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

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

10.1.7 SNH (2015) Good Practice During Wind Farm Construction

SNH Good Practice Guidance on wind farms contains advice on management measures to provide for continuing public access to core paths and rights of way. The Guidance advises that management measures should be flexible enough to take reasonable account of public access requirements. The Guidance emphasises the importance of effective communication.

10.1.8 Tourism Scotland 2020 and Yearly Review 2017

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

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

The document sets an aspiration to increase annual visitor spend in Scotland by £1 billion by 2020 from the baseline in 2011 (at 2011 prices). It identifies the need to develop market opportunities associated with the assets set out in paragraph 14.16.

The 2017 review shows an increase in total tourism turnover and tourism related jobs between 2011 and 2015 during which time the number of wind farms in Scotland has increased.

10.2 Local Policy and Guidance

10.2.1 Development Plan

The current Development Plan comprises the South Ayrshire Local Development Plan (LDP) which was adopted on 23 September 2014 and Supplementary Guidance (SG).

Local Development Plan 2014

South Ayrshire Council (SAC) is currently working on a draft Local Development Plan (LDP2) which will eventually supersede the 2014 Plan. A Main Issues consultation has been undertaken, closing on 31 January 2019, but the Proposed Plan document is not expected to be published until Summer 2019. The current Plan, approved in 2014, is therefore considered to be a relevant and up to date Development Plan to which significant weight should be attached in the decision making process even if the application were to be submitted under S36 of the Electricity Act.

The key LDP policy for windfarm development is:

LDP Policy: Wind Energy

This policy states that windfarm proposals will be supported if they comply with a number of criteria, including if:

"they do not have a significant detrimental visual impact, taking into account views experienced from surrounding residential properties and settlements, public roads and paths, significant public viewpoints, and important recreational assets and tourist attractions".

Tourism is identified as being 'very important' to the South Ayrshire economy, employing around 11 % of the population.

The following policies are also considered to be relevant to land use, recreation and tourism in respect of the proposed windfarm:

LDP Policy: Woodland and Forestry

"We will support proposals for woodland and forestry that are:

- a. consistent with the objectives and main actions of the Ayrshire and Arran Woodland Strategy; and
- b. sympathetic to the environmental, nature and wildlife interests of the area, and, wherever appropriate, provide recreational opportunities for the public".

LDP Policy: Central Scotland Green Network

"To contribute to the vision and goals of the network, we will use development opportunities, including through master planning, to make sure that pathways, cycle routes, golf courses, harbours, woodlands, open spaces, river valleys, parklands, wildlife settings, wind farm areas and transport routes, are, as far as possible, connected through a network of green links. Where we allow development within or next to a green link or next to an area of open space as defined on the proposals map, we will, as far as we can:

- a. protect and improve natural features of importance and wildlife habitats;
- b. carry out new planting using native species;
- c. improve public access; and

d. improve and extend the Central Scotland Green Network where appropriate.

All development proposals must keep to the green network supplementary guidance and the Woodlands In and Around Towns Strategy. A working group from the Ayrshire Joint Planning Unit, the other Ayrshire councils and other relevant agencies will prepare this guidance”.

LDP Policy: Outdoor Public Access and Core Paths

“We will aim to improve and protect all core paths and other significant access routes - including recognised rights of way, disused railway lines, riverside walkways, wind farm access tracks and cycleways and cycle parking facilities.

We will only support proposals which would have a negative effect on a core path or other significant access route if we are satisfied that they provide a suitable alternative route.

Development or redevelopment sites should include appropriate facilities for active travel, particularly walking and cycling.

Development that is next to or near the core paths network should provide suitable links to the network, where appropriate and practical.

Development proposals will not be permitted where they would adversely affect the integrity of the Glen App and Galloway Moors Special Protection Areas”.

Wind Energy Supplementary Guidance Dec 2015

The Wind Energy SG sets out more detailed guidance in respect of land use, recreation and tourism:

Active Travel Access Routes and Recreation

“Core paths and other access routes provide an important network which give people confidence to move freely about the countryside and encourage enjoyment of outdoors for recreation. Wind farm developments can cover significant areas of countryside and can offer opportunities for active travel and recreation. The Council wish to improve and protect core paths and significant access routes and will therefore encourage developers to demonstrate how links to the wider active travel network can be made and how safe attractive facilities particularly those for walking, cycling and horse riding can be incorporated within their development.

Proposals which will have a negative effect on a core path or other significant access routes will only be supported if it can be demonstrated that a suitable alternative route can be provided.

In the interests of safety and amenity the Council will request that all turbines are set back a minimum 180m (or 1.5 turbine height, whichever is the greater) from rail, road routes and active travel routes”.

10.2.2 Community Benefit

“It is recognised that renewable energy can present an opportunity for communities to share in the benefits of their local energy resources. Community benefits are often offered by developers to communities on a voluntary basis and where a proposal is acceptable in land use terms, and consent is being granted, there is an opportunity to secure benefit which is in line with the Scottish Government Good Practice Principles for community benefits from onshore renewable energy developments.

As the above guidance outlines community benefits packages are not just limited to annual monetary payments derived from energy generation but can also include various forms of support such as funding for job creation initiatives, support funding for apprenticeships, providing local discounted energy schemes and direct investment in community amenities and visitor/recreation attractions.

National schemes such as the Community and Renewable Energy Scheme (CARES) and the Renewable Energy Investment Fund (REIF) have also been established to encourage local and community ownership of renewable energy across Scotland and can provide supportive advice and funding for communities to develop their own generation schemes.

Key principles of national guidance are the promotion of a national rate for onshore wind community benefits packages equivalent to at least £5,000 per MW per year, index linked for the operational lifetime of the development, together with the consideration by developers of the scope for community investment. This protocol applies to all energy projects over 50kW.

The Council would, where schemes are acceptable in planning terms, wish to ensure that local communities share in the mutual benefits that can be derived from locally generated renewable energy. Draft advice on good practice principles for shared ownership of onshore renewable energy developments has recently been published by the Government”.

11.0 Other Environmental Issues

11.1 Guidance

11.1.1 Scottish Government Guidance

The Scottish Government's online information on onshore wind turbines, states that *"under certain conditions of geographical position, time of day and time of year, the sun may pass behind the rotor and cast a shadow on neighbouring properties. When the blades rotate, the shadow flicks on and off, the effect is known as "shadow flicker". It occurs only within buildings where the flicker appears through a narrow window opening. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the potential site."*

The Scottish Government's advice states that where shadow flicker could be a problem, *"developers should provide calculations to quantify the effect. In most cases however, where separation is provided between wind turbines and nearby dwellings (as a general rule 10 rotor diameters) "shadow flicker" should not be a problem. However, there is scope to vary layout/reduce the height of turbines in extreme cases"*.

11.1.2 Planning and Best Practice Guidance

Planning guidance in the UK requires developers to investigate the impact of shadow flicker. This guidance does not specify how to assess the impact, or how to assess the significance of the impact. In Scotland current guidance is available in the Scottish Government Specific Renewables Advice Sheet on "Onshore Wind Turbines" (last updated May 2014) which replaced Planning Advice Note (PAN) 45, which is now revoked.

Onshore Wind Turbines (2014), states that:

"Under certain combinations of geographical position, time of day and time of year, the sun may pass behind the rotor and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the effect is known as "shadow flicker". It occurs only within buildings where the flicker appears through a narrow window opening. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the potential site.

Where this could be a problem, developers should provide calculations to quantify the effect. In most cases however, where separation is provided between wind turbines and nearby dwellings (as a general rule 10 rotor diameters), "shadow flicker" should not be a problem. However, there is scope to vary layout / reduce the height of turbines in extreme cases".

In England, the National Planning Policy Framework (NPPF), Planning Practice Guidance identifies that: *"Only properties within 130 degrees either side of north, relative to the turbines can be affected at these latitudes in the UK – turbines do not cast long shadows on their southern side."*

Guidance from Northern Ireland in Best Practice Guidance to PPS18: Renewable Energy (Department for the Environment, 2009) states that:

"At distance, the blades do not cover the sun but only partly mask it, substantially weakening the shadow. This effect occurs first with the shadow from the blade tip, the tips being thinner in section than the rest of the blade. The shadows from the tips extend the furthest and so only a very weak effect is observed at distance from the turbines.

Problems caused by shadow flicker are rare. At distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the site. Where shadow flicker could be a problem, developers should provide calculations to quantify the effect and where appropriate take measures to prevent or ameliorate the potential effect, such as by turning off a particular turbine at certain times.

It is recommended that shadow flicker at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day".

The above criteria are widely accepted in shadow flicker analysis for wind farms. Additionally, the 10 rotor diameter rule has been widely accepted across different European countries, and is deemed to be an appropriate assessment area, although there is potentially a need to take into consideration areas at different latitudes.

11.1.3 Scottish Government Onshore Wind Policy Statement

The Scottish Government published its Onshore Wind Policy Statement in December 2017.

It refers to a two-year study published by ClimateXChange (CXC) on 1 July 2015 which it commissioned to look at residential amenity impacts including shadow flicker. The study aimed to determine whether documentation submitted with planning applications and as assessed by competent authorities, is consistent with the impacts actually experienced once the wind farm is operational through case studies and surveys of residents. In the residents' survey some people recorded that they experienced shadow flicker even though they live in properties beyond the distance at which the current method for assessing potential shadow flicker predicts it to occur.

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