



# BEACON FEN

## ENERGY PARK

Planning Inspectorate Reference: EN010151

Appendix 10.1 – Policy Legislation and Guidance

Document Reference: 6.3.79 ES Appendix 10.1

April 2025



Quality information

Prepared by	Checked by	Verified by	Approved by
JR	PB		PB

Disclaimer

This report has been prepared by Wardell Armstrong LLP with all reasonable skill, care and diligence, within the terms of the Contract with the Client. The report is confidential to the Client and Wardell Armstrong LLP accepts no responsibility of whatever nature to third parties to whom this report may be made known. No part of this document may be reproduced without the prior written approval of Wardell Armstrong LLP.

## Appendix 10.1 Legislation

LEGISLATION RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
LEGISLATION	LEGISLATIVE DESCRIPTION
The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017	The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 set out the requirements for assessing the environmental impact of certain proposed development projects in the UK. These regulations require developers to submit an Environmental Impact Assessment (EIA) for projects that may have significant effects on the environment. The Regulations specify the process for screening, scoping, consulting on preliminary environmental information, and reviewing EIAs, outline the necessary information to be included in EIAs, and set deadlines for consultation and decision-making. The intention is to ensure that the environmental effects of developments are carefully considered before approval is granted.
The Environmental Protection Act 1990 (as amended by the Noise and Statutory Nuisance Act 1993) (particularly Section 79) (EPA)	The EPA sets out the definition of statutory nuisance as a result of noise; the duty on local authorities to investigate and abate nuisance; and the defence against abatement because “best practicable means” have been employed to minimise noise (including vibration) for business premises. The EPA sets out the means for a person affected by noise nuisance to seek abatement through the courts. The Noise and Statutory Nuisance Act 1993 sets out an extension of the powers to abate noise nuisance to a wider range of sources than the Environmental Protection Act 1990.
The Control of Pollution Act 1974 (particularly Sections 60 and 61) (CoPA)	The Act sets out the provisions for a Section 60 notice which a local authority can serve so as to impose requirements upon relevant construction activities with regard to the control of noise. Under Section 61 of the CoPA, the party that intends to carry out works to which Section 60 applies may apply to the local authority for consent and <i>“an application under this section shall contain particulars of – The works, and method by which they are to be carried out; and The steps proposed to be taken to minimise noise resulting from the works.”</i>
Planning Act 2008	The Planning Act 2008 simplifies the approval process for Nationally Significant Infrastructure Projects (NSIPs) through Development Consent Orders (DCOs). While it doesn't focus specifically on noise, it requires an Environmental Impact Assessment (EIA) that includes noise considerations. Noise impacts can be assessed in the DCO which determines any adverse effects and whether they are Significant or Not Significant.
Environmental Noise (England) Regulations 2006 (as amended)	The Environmental Noise (England) Regulations 2006 (as amended) require the assessment and management of noise from major sources like roads, railways, and airports. It requires the creation of noise maps and action plans to reduce harmful noise and protect public health.

## Appendix 10.1 Planning Policy

POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
Overarching National Policy Statement for Energy (EN-1) (November 2023 – designated in January 2024);	<b>NPS EN-1 (National Policy Statement for Energy)</b> provides the primary framework for the assessment of environmental impacts of energy infrastructure projects in the UK. It applies to

POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
	<p>major infrastructure projects related to energy generation.</p> <p>For <b>noise</b>, <b>NPS EN-1</b> sets out key principles for assessing and managing noise impacts during the planning and development stages:</p> <p><b>Noise Impact Assessment:</b></p> <ul style="list-style-type: none"> <li>• Where noise impacts are likely a noise impact assessment is required as part of the Environmental Impact Assessment (EIA) to identify and evaluate potential noise effects on sensitive receptors (such as residential properties, schools, hospitals, and nature reserves).</li> <li>• The assessment must consider the existing noise environment and any changes caused by the development, particularly during construction, operation, and decommissioning phases.</li> </ul> <p><b>Mitigation Measures:</b></p> <p>If the noise assessment identifies significant impacts, developers must take steps to mitigate these effects. Mitigation may involve:</p> <ul style="list-style-type: none"> <li>• <b>Design Measures:</b> Altering the layout of the development or including noise barriers to reduce sound levels.</li> <li>• <b>Operational Measures:</b> Implementing operational controls, such as limiting hours of operation, using quieter machinery, or employing noise-reducing technologies.</li> <li>• <b>Building Design:</b> Using soundproofing techniques, especially for sensitive buildings like dwellings or hospitals.</li> </ul> <p>The goal is to ensure that noise levels are kept within acceptable limits, as set out in policy and guidance.</p> <p><b>Cumulative Effects:</b></p> <p>The NPS EN-1 also requires consideration of cumulative noise impacts, particularly if the proposed development is in an area with other existing or planned developments that may contribute to overall noise levels. This ensures</p>

POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
	<p>that the cumulative sound level on affected communities is considered.</p> <p><b>Decision-Making:</b></p> <p>The Secretary of State should not grant development consent unless they are satisfied that the proposals will meet the following aims, through the effective management and control of noise:</p> <ul style="list-style-type: none"> <li>• avoid significant adverse impacts on health and quality of life from noise</li> <li>• mitigate and minimise other adverse impacts on health and quality of life from noise</li> <li>• where possible, contribute to improvements to health and quality of life through the effective management and control of noise</li> </ul> <p>When preparing the development consent order, the Secretary of State should consider including measurable requirements or specifying the mitigation measures to be put in place to ensure that noise levels do not exceed any limits specified in the development consent.</p>
National Policy Statement for Renewable Energy Infrastructure (EN-3) (November 2023 – designated in January 2024);	<p><b>NPS EN-3</b> provides guidance for the development of renewable energy projects. It provides the framework for assessing the suitability and sustainability of these projects while balancing the need for clean energy generation with the protection of communities and the environment. The NPS addresses noise in the following:</p> <p><b>Noise Impact Assessment</b></p> <ul style="list-style-type: none"> <li>• <b>NPS EN-3</b> requires developers to carry out a noise impact assessment as part of their planning application, for renewable energy projects that could generate significant noise.</li> <li>• The assessment must take into account the potential for both <b>construction</b> and <b>operational noise</b>, and the cumulative effects of noise from multiple projects in the area.</li> <li>• Developers must assess how the development will affect the existing noise environment, considering existing sources of noise and the proximity to sensitive locations.</li> </ul> <p><b>Mitigation Measures</b></p> <p>The Secretary of State should consider the noise and vibration impacts according to Section 5.12 in EN-1 and be satisfied that noise and vibration will be adequately mitigated through requirements attached to the consent.</p>



POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
	<p><b>Cumulative Effects</b>The NPS EN-1 also requires consideration of cumulative noise impacts, particularly if the proposed development is in an area with other existing or planned developments that may contribute to overall noise levels. This ensures that the cumulative sound level on affected communities is considered.</p> <p><b>Decision Making</b> The Secretary of State should not grant development consent unless it is satisfied that the proposals will meet the aims set out in 5.12 of EN-1.</p>
National Planning Policy Framework, 2024 (NPPF);	<p>Paragraph 187 states that the planning system should contribute to and enhance the natural and local environment by (amongst other considerations) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of noise pollution.</p> <p>Paragraph 198 states that planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution. This involves, in particular, mitigating and reducing to a minimum, potential adverse impacts resulting from noise; avoiding noise that gives rise to significant adverse impacts on health and the quality of life in addition, tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value should be identified and protected.</p> <p>Paragraph 200 states that planning policies and decisions should ensure that new development can be integrated effectively with existing business and community facilities, with existing businesses not having unreasonable restrictions placed on them as a result of new development permitted after the business was established. Where the operation of an existing business or community facility could have a significant adverse effect on a new development, the application should provide suitable mitigation before the development is complete. This should be taken into account when considering whether proposed development is an acceptable use of land.</p> <p>Paragraph 1.6 sets out the long-term vision of Government noise policy, i.e. to “<i>promote good health and a good quality of life through the effective management of noise within the</i></p>

POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
	<p><i>context of Government policy on sustainable development."</i></p> <p>Paragraph 1.7 states that the NPSE vision is supported by aims to effectively manage and control environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development by avoiding significant adverse impacts, mitigating and minimising adverse impacts and contributing to the improvement of health and quality of life.</p> <p>Paragraph 2.20 states that to identify "significant adverse" and "adverse" impact in line with the three aims of NPSE, there are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organization: No Observed Effect Level (NOEL): This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.</p> <p>Lowest Observed Adverse Effect Level (LOAEL): This is the level above which adverse effects on health and quality of life can be detected.</p> <p>Significant Observed Adverse Effect Level (SOAEL). This is the level above which significant adverse effects on health and quality of life occur.</p> <p>Paragraph 2.24 states that where an impact lies somewhere between LOAEL and SOAEL, all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.</p> <p>Paragraph 2.22 notes that <i>"it is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available."</i></p>

POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
National Policy Statement for Electricity Networks Infrastructure (EN-5) (November 2023 – designated in January 2024);	<p>The National Policy Statement for Electricity Networks Infrastructure (EN-5) outlines the UK government's approach to planning and developing electricity networks. It aims to support a low-carbon energy system, ensuring efficient and sustainable infrastructure while considering environmental and social impacts.</p> <p>Developers are required to assess potential noise impacts from electricity infrastructure projects. Including the assessment of construction and operational noise.</p> <p>Audible noise effects can also arise from substation equipment such as transformers, quadrature boosters and mechanically switched capacitors.</p> <p>For the assessment of noise from substations, standard methods of assessment and interpretation using the principles of the relevant British Standards are satisfactory.</p>
Noise Policy Statement for England, 2010 (NPSE)	<p>Paragraph 1.6 sets out the long-term vision of Government noise policy, i.e. to <i>“promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.”</i></p> <p>Paragraph 1.7 states that the NPSE vision is supported by aims to effectively manage and control environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development by avoiding significant adverse impacts, mitigating and minimising adverse impacts and contributing to the improvement of health and quality of life.</p> <p>Paragraph 2.20 states that to identify “significant adverse” and “adverse” impact in line with the three aims of NPSE, there are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organization:</p> <p>No Observed Effect Level (NOEL): This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.</p> <p>Lowest Observed Adverse Effect Level (LOAEL): This is the level above which adverse effects on health and quality of life can be detected.</p> <p>Significant Observed Adverse Effect Level (SOAEL). This is the level above which significant adverse effects on health and quality of life occur.</p> <p>Paragraph 2.24 states that where an impact lies somewhere between LOAEL and SOAEL, all</p>



POLICY RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
POLICY	POLICY DESCRIPTION
	<p>reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development (paragraph 1.8). This does not mean that such adverse effects cannot occur.</p> <p>Paragraph 2.22 notes that the NPSE states “it is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.”</p>
Central Lincolnshire Local Plan, adopted 2023 . Policy S14: Renewable Energy.	<p>Policy S14 states:  <i>“Proposals for renewable energy schemes, including ancillary development, will be supported where the direct, indirect, individual and cumulative impacts on the following considerations are, or will be made, acceptable. To determine whether it is acceptable, the following tests will have to be met: ...</i></p> <p><i>iii. The impacts are acceptable on the amenity of sensitive neighbouring uses (including local residents) by virtue of matters such as noise, dust, odour, shadow flicker, air quality and traffic;...</i></p> <p><i>...In order to test compliance with part (iii) above will require, for relevant proposals, the submission by the applicant of a robust assessment of the potential impact on such users, and the mitigation measures proposed to minimise any identified harm.</i></p> <p><i>For all matters in (i)-(iii), the applicable local planning authority may commission its own independent assessment of the proposals, to ensure it is satisfied what the degree of harm may be and whether reasonable mitigation opportunities are being taken...”</i></p>

#### Appendix 10.1 Guidance

GUIDANCE RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
GUIDANCE	GUIDANCE DESCRIPTION
Planning Practice Guidance – Noise, 2019 (NPPG);	The PPG-N provides guidance in the form of a noise exposure hierarchy, which details the levels of perception to noise exposure and the expected outcomes and required actions.

## GUIDANCE RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT

GUIDANCE	GUIDANCE DESCRIPTION			
	<b>Table 1 PPG Noise exposure Hierarchy</b>			
	<b>Perception</b>	<b>Examples of Outcomes</b>	<b>Increasing Effect Level</b>	<b>Action</b>
	Not Present	No Effect	No Observed Effect	No Specific Measures Required
	Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No Specific Measures Required
	<b>Lowest Observed adverse Effect Level (LOAEL)</b>			
	Present and not intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
	<b>Significant Observed adverse Effect Level (SOAEL)</b>			
	Present and not disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
	Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological	Unacceptable Adverse Effect	Prevent

GUIDANCE RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT				
GUIDANCE	GUIDANCE DESCRIPTION			
		response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.		
British Standard 4142: 2014+A1:2019 Methods for rating and assessing industrial and commercial sound (BS 4142);	BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound is used to rate and assess sound of an industrial nature including, but not limited to, assessing sound from proposed, new, modified, or additional sources of industrial sound, and sound at proposed new dwellings. It contains guidance on the monitoring and assessment of industrial and commercial sound sources (including fixed installations comprising mechanical and electrical plant and equipment) affecting sensitive receptors.			
British Standard 8233: 2014 Guidance on sound insulation and noise reduction for buildings (BS 8233);	BS8233:2014 presents design criteria for noise within habitable rooms in new residential developments to avoid adverse impacts on sustainability for the intended use. In summary, these are: <ul style="list-style-type: none"> <li>• Resting in Living Rooms: 35 dB LAeq,16h (daytime)</li> <li>• Dining in Dining Rooms / Areas: 40 dB LAeq,16h (daytime)</li> <li>• Sleeping or resting in Bedrooms: 35 dB LAeq,16h (daytime) / 30 dB LAeq,8h (night-time).</li> </ul>			
British Standard 5228 - 1:2009+A1:2014 "Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise" (BS 5228-1); and	Provides guidance on the assessment and control of noise from construction sites, along with suggestions for the derivation of guideline levels for impact assessment.			
British Standard 5228- 2:2009+A1:2014 "Code of Practice for noise and vibration control on construction and open sites – Part 2: Vibration" (BS 5228-2).	Provides guidance on the assessment and control of vibration from construction sites, along with suggestions for the derivation of guideline levels for impact assessment.			
Department for Transport (1988) Calculation of Road Traffic Noise (CRTN)	Describes procedures for calculating noise from road traffic.			
Highways England (2018) Design Manual for Roads and Bridges: LA111	Guidance document provides methodology for the assessment of noise from road traffic, particularly from new and altered roads. Also provides modifications to CRTN and a methodology for the assessment of noise and vibration from construction traffic.			

GUIDANCE RELEVANT TO THE NOISE AND VIBRATION ASSESSMENT	
GUIDANCE	GUIDANCE DESCRIPTION
- Noise and Vibration (DMRB)	
Institute of Environmental Management and Assessment (IEMA) (2014) Guidelines for Environmental Noise Impact Assessment	Presents guidelines on how the assessment of noise effects should be presented within the Environmental Impact Assessment (EIA) process. The IEMA guidelines cover aspects such as: scoping, baseline, prediction and example definitions of significance criteria.
British Standard 7445-1:2003 Description and measurements of environmental noise (BS 7445-1)	BS 7445-1: 2003 is a British Standard that provides guidance on the "Description and measurement of environmental noise". Specifically, BS 7445-1 focuses on the methodology for assessing environmental noise by defining basic terms and general principles involved in noise measurement. Key points within the standard are: <ul style="list-style-type: none"> <li>• Noise Parameters;</li> <li>• Measurement Locations;</li> <li>• Measurement Equipment;</li> <li>• Measurement Principles; and</li> <li>• Noise Indexes and Analysis.</li> </ul>
The Highways Agency Research Report No. 53 Ground Vibration caused by Civil Engineering Works (1986)	The Highways Agency Research Report No. 53: Ground Vibration Caused by Civil Engineering Works investigates the impact of ground vibrations generated by civil engineering activities, particularly focusing on their effects on the surrounding environment and structures. The report provides key insights into vibration sources, measurement techniques, and mitigation strategies. This provides guidance on sources of vibration, vibration measurement, impact on structures and mitigation strategies.
BS 6472:2008 Guide to Evaluation of human exposure to vibration in buildings. Part 1: Vibration sources other than blasting (BS 6472-1)	BS 6472:2008-1 provides guidance on evaluating human exposure to vibration within buildings caused by sources such as transportation, machinery, or construction activities (excluding blasting). The standard focuses on the effects of vibration on human comfort and well-being in residential, commercial, and industrial buildings.