# Stonestreet Green Solar

## Environmental Statement
## Volume 4: Appendices
## Chapter 14: Noise
## Appendix 14.1: Noise Legislation, Planning Policy and Guidance

PINS Ref: EN010135

Doc Ref. 5.4

Version 1

June 2024

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APFP Regulation 5(2)(a)

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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# 14 Appendix 14.1: Noise Legislation, Planning Policy and Guidance

## 14.1 Introduction

14.1.1 The following sections provide a summary of key legislation relating to noise legislation, planning policy and guidance for the Project including:

### Legislative Framework

14.1.2 The following legislation is relevant to the assessment of noise and is summarised in this Appendix:

- The Environmental Protection Act 1990[1] (as amended by the Noise and Statutory Nuisance Act 1993[2]) (particularly Section 79) ('EPA'); and
- The Control of Pollution Act 1974 (particularly Sections 60 and 61) ('CoPA')[3].

### Planning Policy

14.1.3 The following applicable planning policy is summarised in this Appendix:

- Overarching National Policy Statement for Energy[4] (EN-1) ('NPS EN-1') (November 2023);
- National Policy Statement for Renewable Energy Infrastructure[5] (EN-3) ('NPS EN-3') (November 2023);
- National Policy Statement for Electricity Networks Infrastructure[6] (EN-5) ('NPS EN-5');
- National Planning Policy Framework, 2023[7] ('NPPF');
- Noise Policy Statement for England, 2010[8] ('NPSE'); and
- Ashford Local Plan 2030, adopted 2019[9].

### Guidance

14.1.4 The following applicable guidance is summarised in this Appendix:

- Planning Practice Guidance – Noise, 2019[10] ('PPG-N');
- British Standard 5228 -1:2009+A1:2014 "Code of Practice for noise and vibration control on construction and open sites – Part 1: Noise" [11] ('BS 5228-1');
- British Standard 4142: 2014+A1:2019 Methods for rating and assessing industrial and commercial sound[12] ('BS 4142');
- ISO 9613:1996 Acoustics – Attenuation of sound during propagation outdoors: Part 2 General Method of Calculation (ISO 9613-2)[13];
- Department for Transport (1988) Calculation of Road Traffic Noise ('CRTN')14;
- Highways England (2018) Design Manual for Roads and Bridges: LA111 - Noise and Vibration ('DMRB')[15]; and
- British Standard 8233: 2014 Guidance on sound Insulation and noise reduction for buildings16 ('BS 8233').

## 14.2 Legislative Framework Summary

14.2.1 A summary of the legislative is given in **Table 14A.1**.

Table 14A. 1: Legislation relevant to the noise assessment

| *Legislation* | *Legislative Context* |
|---|---|
| The EPA (as amended by the Noise and Statutory Nuisance Act 1993) (particularly Section 79) | The EPA sets out: the definition of statutory nuisance due to noise; the duty on local authorities to investigate and abate nuisance; and the defence against abatement because "best practicable means" has 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.<br><br>The Noise and Statutory Nuisance Act 1993 sets out an extension of powers to abate noise nuisance to a wider range of sources than the EPA. |
| The Control of Pollution Act 1974 (particularly Sections 60 and 61) ('CoPA') | The CoPA sets out the 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 |

| *Legislation* | *Legislative Context* |
|---|---|
| | the local authority for consent and *"an application under this section shall contain particulars of –*<br><br>(a) the works, and method by which they are to be carried out; and<br><br>(b) the steps proposed to be taken to minimise noise resulting from the works." |

## 14.3 Planning Policy Summary

14.3.1 A summary of the national and local planning policies relevant to noise is given in **Table 14A.2**.

Table 14A. 2: Planning policy relevant to the noise assessment

| Policy | Policy Context |
|---|---|
| *National planning policy* | |
| NPS EN-1 | NPS EN-1 refers to the relevant British Standards for the assessment of operational noise and construction noise (where 'noise' is used as an umbrella term for noise and vibration) and refers to further information provided in the technology specific National Policy Statements e.g., EN-5.<br><br>Paragraph 5.12.14 sets out potential mitigation measures.<br><br>Paragraph 5.12.15 requires applicants to demonstrate good design through measures such as selection of the quietest or most acceptable cost-effective plant; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and the use of landscaping, bunds or noise barriers to reduce noise transmission.<br><br>Paragraph 5.12.17 states that 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:<br>▪ avoid significant adverse impacts on health and quality of life from noise;<br>▪ mitigate and minimise other adverse impacts on health and quality of life from noise; and<br>▪ where possible, contribute to improvements to health and quality of life through the effective management and control of noise. |
| NPS EN-3 | Section 2.5.2 states "*Proposals for renewable energy infrastructure should demonstrate good design, particularly in respect of landscape and visual amenity, opportunities for co-existence/co-location with other marine uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage".*<br><br>Section 2.7.40 states *"Applicants should include in the ES a noise assessment of the impacts on amenity in case of excessive noise from the project in line with guidance set out in Section 5.12 in EN-1[6]."* |
| NPPF | Paragraph 180 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.<br><br>Paragraph 191 states that planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely |

| Policy | Policy Context |
|---|---|
| | effects (including cumulative effects) of pollution. This involves, in particular, mitigating and reducing to a minimum potential adverse impacts resulting from noise from new development and 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.<br><br>Paragraph 193 states that planning policies and decisions should ensure that new development can be integrated effectively with existing business and community facilities. Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were 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 completed.<br><br>Paragraph 194 states that the focus of planning policies and decisions should be on whether proposed development is an acceptable use of land. |
| NPSE | Paragraph 1.6 sets out the long-term vision of Government noise policy, i.e. to *'Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.'*<br><br>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 where possible contributing to the improvement of health and quality of life.<br><br>Paragraph 2.20 states that to identify "significant adverse" and "adverse" impacts in line with the three aims of the NPSE, there are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organization:<br><br>*"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.*<br><br>*Lowest Observed Adverse Effect Level (LOAEL): This is the level above which adverse effects on health and quality of life can be detected.*<br><br>*Extending these concepts for the purpose of the NPSE leads to the concept of a significant observed adverse effect level:* |

| Policy | Policy Context |
|---|---|
| | *Significant Observed Adverse Effect Level (SOAEL). This is the level above which significant adverse effects on health and quality of life occur."*<br><br>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."*<br><br>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.'* |
| *Local planning policy* | |
| Ashford Local Plan | Policy ENV10 – Renewable and Low Carbon Energy<br><br>*'Planning applications for proposals to generate energy from renewable and low carbon sources will be permitted provided that:*<br><br>*… b) The development does not generate an unacceptable level of traffic or loss of amenity to nearby residents (visual impact, noise, disturbance, odour)'* |

## 14.4 Guidance

14.4.1 A summary of the guidance relevant to the noise assessment is given in **Table 14A.3**.

Table 14A. 3: Guidance relevant to the noise assessment

<table>
<tr><th>Technical Guidance Document</th><th>Context</th></tr>
<tr><td>PPG-N</td><td>The PPG-N provides guidance in the form of a noise exposure hierarchy as presented below, which details the levels of perception to noise exposure and the expected outcomes and required actions.
<table>
<tr><th>Response</th><th>Examples of outcomes</th><th>Increasing effect level</th><th>Action</th></tr>
<tr><td colspan="4">No Observed Effect Level</td></tr>
<tr><td>Not present</td><td>No Effect</td><td>No Observed Effect</td><td>No specific measures required</td></tr>
<tr><td colspan="4">No Observed Adverse Effect Level</td></tr>
<tr><td>Present and not intrusive</td><td>Noise can be heard, but does not cause any change in<br><br>behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a<br><br>change in the quality of life.</td><td>No Observed Adverse Effect</td><td>No specific measures required</td></tr>
<tr><td colspan="4">Lowest Observed Adverse Effect Level</td></tr>
</table>
</td></tr>
</table>

| | | | |
|---|---|---|---|
| Present and intrusive | Noise can be heard and causes small changes in behaviour, attitude or other physiological response,<br><br>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 |
| Significant Observed Adverse Effect Level | | | |
| Present and 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 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. | Unacceptable Adverse Effect | Prevent |

BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites. Noise (BS 5228-1)

Provides guidance on the assessment and control of noise from construction sites, along with suggestions for the derivation of guideline levels for impact assessment. Guidance on the prediction and assessment of noise from development sites is given in British Standard 5228 -1:2009 +A1:201411 “Code of Practice for noise and vibration control on construction and open Sites – Part 1: Noise” (BS5228-1), and BRE Controlling particles, vapour and noise pollution from construction Sites, Parts 1 to 5, 2003.

BS5228-1 provides guidance on significance criteria for assessing the potential noise impacts associated with the construction phase of large projects. For the purposes of this noise assessment, the noise likely to be generated by the earthworks and construction phase have been assessed against significance criteria established using the BS5228-1 ABC Method.

The ABC method for determining significance criteria requires the ambient noise levels at existing sensitive receptors to be determined. The ambient noise levels at each existing receptor location are then rounded to the nearest 5dB(A) to determine the appropriate threshold value in accordance with the category value A, B or C, as detailed in the following table.

| **Thresholds of Significant Impact from Construction Noise at Residential Receptors in accordance with the ABC Method of BS5228-1** | | | |
|---|---|---|---|
| **Assessment Category and Threshold Value Period (LAeq)** | Threshold Value, in decibels (dB) | | |
| | Category A *1 | Category B *2 | Category C *3 |

| | | | |
|---|---|---|---|
| **Daytime (0700 to 1900 hours) and**<br><br>Saturdays (0700 to 1300 hours) | 65 | 70 | 75 |
| *1 Category A: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than this value. | | | |
| *2 Category B: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as Category A values. | | | |
| *3 Category C: Threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than Category A values. | | | |

BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound[12]

BS 4142 is used to rate and assess sound of an industrial and/or commercial nature including:

- sound from industrial and manufacturing processes;
- sound from fixed installations which comprise mechanical and electrical plant and equipment;
- sound from the loading and unloading of goods and materials at industrial and/or
- commercial premises; and
- sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train or ship movements on or around an industrial and/or commercial site.

The standard is applicable to the determination of the following levels at outdoor locations:

- rating levels for sources of sound of an industrial and/or commercial nature; and
- ambient, background and residual sound levels, for the purposes of:

    1) Investigating complaints;

2) Assessing sound from proposed, new, modified or additional source(s) of sound of an industrial and/or commercial nature; and

3) Assessing sound at proposed new dwellings or premises used for residential purposes.

The purpose of the BS4142 assessment procedure is to assess the significance of sound of an industrial and/or commercial nature.

BS4142 refers to noise from the industrial source as the 'specific noise' and this is the term used in this report to refer to noise which is predicted to occur due to activities associated with the operational phase of the proposed development.

Certain acoustic features can increase the significance of impacts over that expected from a simple comparison between the specific noise level and the background noise level. In particular BS4142 identifies that the absolute level of sound, the character, and the residual sound and the sensitivity of receptor should all be taken into consideration. BS4142 includes allowances for a rating penalty to be added if it is found that the specific noise source contains a tone, impulse and/or other characteristic, or is expected to be present.

The specific noise level along with any applicable correction is referred to as the 'rating level'. The greater the increase between the rating level over the background noise level, the greater the magnitude of the impact. The assessment criteria given by BS4142 are as follows:

- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.

The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.

During the daytime, BS4142 requires that noise levels are assessed over 1-hour periods. However, during the night-time, noise levels are required to be assessed over 15-minute periods.

Where the initial estimate of the impact needs to be modified due to context, BS4142 states that all pertinent factors should be taken into consideration, including:

- The absolute level of sound;

| | |
|---|---|
| | ▪ The character and level of the residual sound compared to the character and level of the specific sound; and<br>▪ The sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions. |
| ISO 9613:1996 Acoustics – Attenuation of sound during propagation outdoors: Part 2 General Method of Calculation (ISO 9613-2) | Defines a method for calculating the attenuation of sound during propagation outdoors in order to predict the levels of environmental noise at distances from a source. |
| 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 - Noise and Vibration (DMRB) | 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. |
| British Standard 8233:2014 Guidance on sound insulation and noise reduction for buildings | BS 8233 suggests the following guideline noise levels and states that they are based on guidelines issued by the World Health Organisation:<br>▪ 35 dB LAeq (16 hour) during the day time in noise sensitive rooms;<br>▪ 30 dB LAeq (8 hour) during the night time in bedrooms;<br>▪ 45 dB LAmax,F during the night time in bedrooms;<br>▪ 50 dB LAeq (16 hour) desirable external noise levels for amenity space such as gardens and patios; and<br>▪ 55 dB LAeq (16 hour) upper guideline value which would be acceptable in noisier environments.<br>In addition, section 7.7.2 Note 7 for internal noise levels states:<br>*"Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the* |

*internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved."*

Furthermore, paragraph 7.7.3.2 with regard to external noise states:

*"However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited".*

## References


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