A47 Blofield to North Burlingham Dualling

Scheme Number: TR010040

Volume 6
6.2 Environmental Statement Appendices
Appendix 11.2 – Legislation and Policy Framework

APFP Regulation 5(2)(a)

Planning Act 2008

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

December 2020

Infrastructure Planning

Planning Act 2008

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

A47 Blofield to North Burlingham Development Consent Order 202[x]

ENVIRONMENTAL STATEMENT APPENDICES
Appendix 11.2 Legislation and Policy Framework

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11.1. National Legislation

Control of Pollution Act 1974

11.2.1. The Control of Pollution Act 1974 offers protection against disturbance to residents that might be affected by construction activity.

11.2.2. Section 60 of the Act enables a local authority to serve a notice specifying its noise control requirements covering plant or machinery hours of working, and levels of noise that can be emitted.

11.2.3. Section 61 relates to prior consent in which the contractor consults with the local authority and provides an application prior to construction works commencing to obtain approval for the methods to be used and the steps proposed to minimise noise resulting from the works. If the local authority considers that the application contains sufficient information and that "best practicable means" of noise control are being implemented, and if works are being carried out in accordance with the applications, it would not serve a notice under Section 60.

Noise Insulation Regulations 1975 (amended 1988)

11.2.4. The Noise Insulation Regulations 1975 (amended 1988) were made under Part 2 of the Land Compensation Act 1973 for the obligatory and discretionary provision of noise mitigation measures for dwellings adjacent to new highways. Among the criteria for a property to qualify for insulation in living rooms and bedrooms is that the façade noise level is at least 68dB $L_{A10,18h}$ and that noise from the new or altered highways causes the total level to increase by at least 1dB.

11.2. National Policy

National Networks National Policy Statement

11.2.5. The National Networks National Policy Statement (NNNSP) sets out the Government's vision and policy for the future development of the Nationally Significant Infrastructure Projects (NSIP) on the national road and rail networks in England. The NNNSP provides guidance for promoters of NSIP and also provides the basis for examination by Planning Inspectorate and decision-making by the Secretary of State for Transport.

11.2.6. Paragraph 5.193 of the N NSP states "Due regard must have been given to the relevant sections of the Noise Policy Statement for England, National Policy Framework and the Government's associated planning guidance on noise".

11.2.7. Paragraph 5.200 states "Applicants should consider opportunities to address the noise issues associated with the Important Areas as identified through the noise action planning process".

11.2.8. Paragraph 5.198 states "Mitigation measures for the projects should be proportionate and reasonable and may include one or more of the following:

- Engineering: containment of noise generated.
- Materials: use of materials that reduce noise (for example low noise road surfacing).
- Lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural or purpose-built barriers.
- Administration: specifying acceptable noise limits or times of use (for example in the case of railway station PA systems)."

National Planning Policy Framework 2018

11.2.9. The revised National Planning Policy Framework (NPPF) published in July 2018 and updated on 19 February 2019 sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for house and other developments can be produced".

11.2.10. Paragraph 170 of the NPPF states "Planning policies and decisions should contribute to and enhance the natural and local environment by: … preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water, or noise pollution or land instability."

11.2.11. Paragraph 180 states "Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and natural environment, as well as potential sensitivity of the site or wider area to impacts that could arise from the development. In doing so they should:

- mitigate and reduce to a minimum potential adverse impacts results from noise from new development – and avoid noise giving rise to significant adverse impacts on health and quality of life; (and)
- identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason"

Noise Policy Statement for England

11.2.12. The Noise Policy Statement for England (NPSE) was published in March 2010 to "Promote good health and good quality of life through effective management of noise with the context of Government policy on sustainable development".

11.2.13. The aims of the NPSE in paragraph 1.7 state "Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life; and
- where possible contribute to the improvement of health and quality of life".

11.2.14. As part of these aims there are several key phrases that lead to additional concepts now considered in the assessment of noise impact. They are:

- 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 noise.
- Lowest Observed Adverse Effect Level (LOAEL)
  This is the level above which adverse effects on health and quality of can be detected.
- Significant Observed Adverse Effect Level (SOAEL)
  This is the level above which significant adverse effects on health and quality of life occur.

11.2.15. The NPSE states that "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 difference receptors and at different times."

11.2.16. As such, levels for LOAEL and SOAEL have been defined for this assessment in line with DMRB LA111.

Planning Practice Guidance

11.2.17. Planning Practice Guidance (PPG), last updated in last updated 22 July 2019, is a Government web-based resource which provides guidance on how the policy set out NPPF may be interpreted in practice for a range of issues. Under the title "How to determine the noise impact" PPG states:

11.2.18. "Local planning authorities' plan-making and decision taking should take account of the acoustic environment and in doing so consider:

- whether or not a significant adverse effect is occurring or likely to occur;
- whether or not an adverse effect is occurring or likely to occur; and
- whether or not a good standard of amenity can be achieved.

11.2.19. In line with the Explanatory note of the noise policy statement for England, this would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase wherever applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level."

11.2.20. Table 11-1 summarises the noise exposure hierarchy given in PPG based on the likely average response.

Table 11-1: Noise exposure hierarchy

Perception	Examples of outcomes	Increasing effect level	Perception
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, 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 perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, 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
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

Source: Planning Practice Guidance

Noise Action Plans

11.2.21. Noise Actions Plans, which have been published by Department for Environment, Food, and Rural Affairs (DEFRA), are required by the Environmental Noise Directive (Directive 2002/49/EC). Specifically, paragraph 1.5 of the Noise Action Plan: Roads (including Major Roads) states "the END (Environmental Noise Directive) requires, on a 5 year cycle:

- The determination, through noise mapping, of exposure to environmental noise from major sources of road, rail and aircraft noise and in urban areas (known as agglomerations).
- Provision of information to the public on environmental noise and its effects.
- Adoption of Action Plans, based upon the noise mapping results, which are designed to manage environmental noise and its effects, including noise reduction if necessary.
- Preservation of environmental noise quality where it is good, particularly in urban areas."

11.2.22. Paragraph 8.1 states "The Regulations require that this Action Plan should apply in particular to the most important areas as established by the strategic noise maps."

11.2.23. Paragraph 8.5 states "It has, therefore, been decided that the Important Areas with respect to noise from major roads will be where the 1% of the population that are affected by the highest noise levels from major roads are located according to the results of the strategic noise mapping."

Highways England policy

11.2.24. Part of the Road Investment Strategy 2 (RIS2) for 2020-2025 includes noise as a Key Performance Indicator (KPI) for Highways England. The KPI requires mitigation to be installed at 7,500 households in Noise Important Areas to be mitigated through a combination of offering noise insulation for affected households, constructing noise barriers, and the use of quieter road surfaces. It also describes the factors which have influenced the Highways Agency Investment Plan and states "All new and improved roads now use low noise road surfaces to help reduce the noise made by vehicles".

11.3. Local Policy

The Broadland District Council Development Management DPD (2015)

11.2.25. On 3 August 2015, Broadland District Council adopted The Development Management Development Plan Document (DPD). The document refers to

adverse effects due to noise and makes references to the requirements of NPPF.

11.2.26. Paragraph 2.21 of The Development Management DPD (2015) states (with reference to the NPPF) "Development will therefore not be permitted which would result in any significant unacceptable impact upon the environment, health, or amenity. In particular, the degree of overlooking, over shadowing and over massing should be taken into account in considering the impact of new development upon neighbouring properties. Also, the potential impact associated with light, noise, odour, dust and other atmospheric pollutants arising from any new development should be considered."

11.4. Guidance

WHO Night Noise Guidelines for Europe 2009

11.2.27. The WHO Night Noise Guidelines (NNG) for Europe 2009 was published for "the development of future legislation and policy action in the area of assessment and control of night noise exposure".

11.2.28. The document states "There is no sufficient evidence that the biological effects observed at the level below 40dB $L_{night,outside}$ are harmful to health. However, adverse health effects are observed at the level above 40dB $L_{night,outside}$, such as self-reported sleep disturbance, environmental insomnia, and increased use of somnifacient drugs or sedatives."

11.2.29. Further to this "An interim target (IT) of 55dB $L_{night,outside}$ is recommended in the situations where the achievement of NNG is not feasible in the short run for various reasons. It should be emphasized that the IT is not a health-based limit value by itself. Vulnerable groups cannot be protected at this level. Therefore, the IT should be considered only as a feasibility-based intermediate target which can be temporarily considered by policy-makers for exceptional local situations."

WHO Environmental Noise Guidelines for the European Region 2018

11.2.30. The main purpose of these guidelines is to provide recommendations for protecting human health from exposure to environmental noise originating from various sources: transportation (road traffic, railway and aircraft) noise, wind turbine noise and leisure noise. The current guidelines complement the Night Noise Guidelines from 2009.

11.2.31. The guidelines set out to define recommended exposure levels for environmental noise in order to protect population health. Specific recommendations formulated for road traffic noise include the following.

- For average noise exposure, it strongly recommends reducing noise levels produced by road traffic below 53 decibels (dB) L_{den}, as road traffic noise above this level is associated with adverse health effects.
- For night noise exposure, it strongly recommends reducing noise levels produced by road traffic during night-time below 45 dB L_{night}, as night-time road traffc noise above this level is associated with adverse effects on sleep.
- To reduce health effects, it strongly recommends that policy-makers implement suitable measures to reduce noise exposure from road traffic in the population exposed to levels above the guideline values for average and night noise exposure. For specific interventions, it recommends reducing noise both at the source and on the route between the source and the affected population by changes in infrastructure.

British Standard (BS) 5228-1:2009+A1:2014

11.2.32. BS5228-1 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise* provides a methodology for predicting and assessing noise levels generated by fixed and mobile plant used for a range of typical construction operations. The standard includes a database of noise levels at a reference distance of 10m from the source and a simple noise propagation model that can be used to make allowance for effects such as source-receiver distances, ground properties, and utilisation time.

11.2.33. Annex E, section E.3.2 of the standard also sets criteria to assess the potential significant effect of construction noise at dwellings (example method 1 – The ABC method)

British Standard (BS) 5228-2:2009+A1:2014

11.2.34. BS5228-2 *Code of practice for noise and vibration control on construction and open sites – Part 2: Vibration* provides guidance on the effect of vibration and the likelihood it will cause complaint and cosmetic damage to buildings and gives recommendations for methods of vibration control. Vibration levels are predicted in term of Peak Particle Velocity (PPV).

11.2.35. Annex B, of the standard sets criteria to assess the potential significance of vibration effects. Section B.2 refers to human response to vibration while section B.3 refers to structural response to vibration.

The Design Manual for Roads and Bridges (DMRB) – LA 111 Noise and vibration Revision 2, May 2020

11.2.36. DMRB LA 111 Revision 2, dated May 2020, (which supersedes HD 213/11 and the accompanying IAN 185/15) sets out the requirements for noise and vibration assessments from road projects, applying a proportionate and

consistent approach using best practice and ensuring compliance with relevant legislation.

11.2.37. It requires that environmental assessments of noise and vibration emissions shall include likely significant effects from construction noise, construction vibration and operational noise. Operational vibration is scoped out of the assessment methodology as a maintained road surface will not have the potential to lead to significant adverse effects.

11.2.38. DMRB LA 111 details the assessment methodology for scoping, study areas and baseline. It also sets the criteria to determine the significance of impacts, which are summarised below.

Significance of construction noise impact

11.2.39. Table 11-2 sets out the determination of the LOAEL and SOAEL for construction noise.

Table 11-2: Construction time period – LOAEL and SOAEL

Time Period	LOAEL	SOAEL
Day (07:00 – 19:00 weekday and 07:00 – 13:00 Saturdays)	Baseline noise levels $L_{Aeq,T}$	Threshold level determined as per BS 5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014
Night (23:00 – 07:00)	Baseline noise levels $L_{Aeq,T}$	Threshold level determined as per BS 5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014
Evening and weekends (time periods not covered above)	Baseline noise levels $L_{Aeq,T}$	Threshold level determined as per BS 5228-1:2009+A1:2014 Section E3.2 and Table E.1 BS 5228-1:2009+A1:2014

11.2.40. The magnitude of impact of construction noise is determined in accordance with the following criteria in Table 11-3

Table 11-3: Magnitude of impact for construction noise

Magnitude of Impact	Construction Noise Level
Major	Above or equal to SOAEL +5dB
Moderate	Above or equal to SOAEL and below SOAEL +5dB
Minor	Above or equal to LOAEL and below SOAEL
Negligible	Below LOAEL

11.2.41. For construction traffic, the magnitude of impact is determined in accordance with the following criteria in Table 11-4.

Table 11-4: Magnitude of impact for construction traffic

Magnitude of Impact	Increase in Road Traffic Noise due to construction traffic (dB)
Major	Greater than or equal to 5.0
Moderate	Greater than or equal to 3.0 and less than 5.0
Minor	Greater than or equal to 1.0 and less than 3.0
Negligible	Less than 1.0

11.2.42. Construction noise and construction traffic noise may then constitute a significant effect where it is determined that a major or moderate magnitude of impact would occur for a duration exceeding:

- 10 or more days or nights in any 15 consecutive days or nights; or
- A total number of days or nights exceeding 40 in any 6 consecutive months

Significance of construction vibration impact

11.2.43. Table 11-5 sets the LOAEL and SOAEL for construction vibration.

Table 11-5: Construction vibration LOAELs and SOAELs for all receptors

Time period	LOAEL	SOAEL
All time periods	0.3mm/s	1.0mm/s

11.2.44. The magnitude of impact is then determined by the following criteria in Table 11-6

Table 11-6: Vibration level – magnitude of impact

Magnitude	Vibration level
Major	Above or equal to 10mm/s PPV
Moderate	Above or equal to SOAEL and below 10mm/s PPV
Minor	Above or equal to LOAEL and below SOAEL
Negligible	Below LOAEL

11.2.45. Construction vibration may then constitute a significant effect where it is determined that a major or moderate magnitude of impact would occur for a duration exceeding:

- 10 or more days or nights in any 15 consecutive days or nights; or,
- A total number of days or nights exceeding 40 in any 6 consecutive months

Significance of operational noise impact

11.2.46. Table 11-7 sets the operational noise LOAELs and SOAELs for all receptors.

Table 11-7: Operational noise LOAELs and SOAELs for all receptors

Time period	LOAEL	SOAEL
Day (06:00-24:00)	55dB $L_{A10,18hr}$ facade	68dB $L_{A10,18hr}$ facade
Night (23:00-07:00)	40dB $L_{night,outside}$ (free-field)	55dB $L_{night,outside}$ (free-field)

11.2.47. The magnitude of noise change in the short-term is define as in Table 11-8.

Table 11-8: Magnitude of change - short-term

Short-term magnitude	Short-term noise change (dB $L_{A10,18hr}$ or L_{night})
Major	Greater than or equal to 5.0
Moderate	3.0 to 4.9
Minor	1.0 to 2.9
Negligible	less than 1.0

11.2.48. In the long-term the magnitude of noise change is defined as in Table 11-9.

Table 11-9: Magnitude of change - long-term

Long-term magnitude	Long-term noise change (dB $L_{A10,18hr}$ or L_{night})
Major	Greater than or equal to 10.0
Moderate	5.0 to 9.9
Minor	3.0 to 4.9
Negligible	less than 3.0

11.2.49. The initial assessment of likely significant effect on noise sensitive buildings shall be determined using the criteria in Table 11-10.

Table 11-10: Initial assessment of operational noise significance

Significance	Short-term noise change
Significant	Major
Significant	Moderate
Not significant	Minor
Not significant	Negligible

11.2.50. Where the magnitude of change in the short-term is negligible at noise sensitive buildings, it shall be concluded that the noise change will not give rise to a likely significant effect.

11.2.51. For noise sensitive receptors where the magnitude of change in the short-term is minor, moderate or major, further assessment using Table 11-10 above and Table 11-11 below is required to determine the final operational significance on noise sensitive buildings.

Table 11-11: Determining final operational significance on noise sensitive buildings

Local Circumstance	Influence of Significance Judgement
Noise level change (is the magnitude of change close to the minor/moderate boundary?)	1) Noise level changes within 1dB of the top of the 'minor' range can indicate that it is more appropriate to determine a likely significant effect. Noise level changes within 1dB of the bottom of a 'moderate; range can indicate that it is more appropriate to consider a change is not a likely significant effect.
Differing magnitude of impact in the long-term and/or future year to magnitude of impact in the short-term	1) Where the long term impact is predicted to be greater than the short term impact, it can be appropriate to conclude that a minor change in the short term is a likely significant effect. Where the long term impact is predicted to be less than the short term it can be appropriate to conclude that a moderate or major change in the short term is not significant. 2) A similar change in the long-term and non-project noise change can indicate that the change is not due to the project and not an indication of a likely significant effect.
Absolute noise level with reference to LOAEL and SOAEL (by design this includes sensitivity of receptor)	1) A noise change where all do-something absolute noise levels are below SOAEL requires no modification of the initial assessment. 2) Where any do-something absolute noise levels are above the SOAEL, a noise change in the short-term of 1.0dB or over results in a likely significant effect.
Location of noise sensitive parts of a receptor	1) If the sensitive parts of a receptor are protected from the noise source, it can be appropriate to conclude a moderate or major magnitude of change in the short-term and/or long-term is not a likely significant effect. 2) Conversely, if the sensitive parts of the receptor are exposed to the noise source, it can be more appropriate to conclude a minor change in the short-term and/or long term is a likely significant effect. 3) It is only necessary to look in detail at individual receptors in terms of this circumstance where the decision on whether the noise change gives rise to a significant environmental effect is marginal.
Acoustic context	1) If a project changes the acoustic character of an area, it can be appropriate to conclude a minor magnitude of change in the short-term and/or long-term is a likely significant effect.
Likely perception of change by residents	1) If the project results in obvious changes to the landscape or setting of a receptor, it is likely that noise level changes will be more acutely perceived by the noise sensitive receptors. In these cases, it can be appropriate to conclude that a minor change in the short-term and/or long-term is a likely significant effect. 2) Conversely, if the project results in no obvious changes for the landscape, particularly if the road is not visible from the receptor, it can be appropriate to conclude that a moderate change in the short-term and/or long-term is not a likely significant effect.

NOTE 1 In relation to the location of sensitive parts of the receptor, an example of a situation where sensitive parts of a receptor would be protected from the noise source would include a house with no, or very few, windows of sensitive rooms facing the road, and its outdoor spaces protected from the road by buildings.

NOTE 2 In relation to the location of sensitive parts of the receptor, an example of a situation where sensitive parts of a receptor would be exposed to the noise source would include a house with most windows of sensitive rooms facing the road, and/or outdoor spaces facing the road.

DMRB LD 119 Roadside environmental mitigation and enhancement, Revision 0, 2020

11.2.52. DMRB LD 119 'Roadside environmental mitigation and Enhancement' (LD 119 replaces LA 119 which superseded HA65/94 and HA66/95) sets out the requirements for the design of road side environmental mitigation and enhancement on highway projects, such as noise barriers and earth bunds.

11.2.53. LD 119 shall be used to specify roadside environmental mitigation and enhancement measures, which are measures installed between the nearside carriageway edge and the boundary of land controlled, or planned to be controlled, by the Overseeing Organisation to reduce the impact of the highway on the surrounding environment in terms of, among others, noise.

11.2.54. These mitigation measures may include earth bunds constructed to mitigate noise and/or noise barriers.

Earth bund design

11.2.55. The locations, heights and lengths of earth bunds required for environmental mitigation shall be determined from environmental statements or environmental assessment reports.

Noise barrier design

11.2.56. The locations, heights and lengths of noise barriers shall be determined from the environmental statement.

11.2.57. Alternative locations, heights and lengths of noise barrier, or an alternative noise mitigation or enhancement measures, may be used where it is possible to achieve the same or better noise reduction than a barrier determined using information from environmental statements or environmental assessment reports.

11.2.58. The required sound insulation category specified by BS EN 1793-2[1] shall be determined by the addition of 15 dB(A) to the maximum insertion loss specified for the barrier in the environmental statement or environmental assessment report. For example, if the insertion loss for a barrier was determined as 3 dB(A), the required sound insulation is to be 18dB(A), requiring a class B2 barrier.

[1] BS EN 1793-2 'Road traffic noise reducing devices – Test method for determining the acoustic performance. Part 2. Intrinsic characteristics of airborne sound insulation'

11.2.59. Where the environmental statement states that an absorptive barrier is required, the sound absorption shall be determined by BS EN1793-1[2], and:

- Where the barrier is determined as a single barrier, a minimum performance of class A1; or,
- Where the barrier is determined as a parallel barrier, a minimum performance of class A3.

11.2.60. A generic product shall be selected to be used as the basis for design assumptions. The generic product shall:

- Have an acoustic durability of a maximum of 0.25 dB loss per year;
- Have a non-acoustic durability of at least 20 years;
- Meet the requirements in this section for earth bunds used as noise barriers, specifying the sound insulation category, and sound absorption for required absorptive barriers.

11.2.61. LD 119 also provides non-acoustic barrier specifications in Appendix B.

Calculation of Road Traffic Noise, CRTN, HMSO, 1988

11.2.62. Calculation of Road Traffic Noise (CRTN) provides procedures for predicting noise levels for a given flow of road traffic at sensitive receptors. These methodologies are used in the determination of entitlement under the Noise Insulation Regulations and for traffic noise change assessments undertaken in accordance with the DMRB guidance noted above.

The Institute of Environmental Management and Assessment Guidelines for Environmental Noise Impact Assessment

11.2.63. The Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment provide guidance on noise assessment in the Environmental Impact Assessment (EIA) context. These define key methodologies used within the noise impact assessment process and provide advice on their limitations. They apply to both minor and major projects.

11.2.64. The IEMA Guidelines provide a table for the generic relationship between noise impact (magnitude) and noise effect (magnitude and sensitivity) including the evaluation of significance. An extract from the table is show in Table 11-12

[2] BS EN 1793-1,'Road traffic noise reducing devices – Test method for determining the acoustic performance. Part 1. Intrinsic characteristics of sound absorption'

Table 11-12: Extract from IEMA table showing generic relationship between noise impact, effect, and significance

Magnitude (nature of impact)	Description of effect (on a specific sensitive receptor)	Significance
Negligible	No discernible effect on receptor	Not significant
Slight	Receptor perception = non-intrusive Noise impact can be heard but does not cause any change in behaviour or attitude, for example turning up the volume of the television, speaking more loudly, closing windows. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Less likely to be significant (greater justification needed based on impact magnitude and receptor sensitivity to justify a significant effect)  More likely to be significant (greater justification needed – based on impact magnitude and receptor sensitivity to justify a non-significant effect)
Moderate	Receptor perception = intrusive Noise impact can be heard and causes small changes in behaviour and / or attitude, for example turning up volume of television; speaking more loudly, closing windows. Potential for non-awakening sleep disturbance. Affects the character of the area such that there is a perceived change in the quality of life.	
Substantial	Receptor perception = disruptive Causes a material change in behaviour and / or attitude for example avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting back to sleep. Quality of life diminished due to change in character of the area.	