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## **Preliminary Commentary and Critique of: Acoustics Design Specification**

Planning Application SMD/2024/0055 Staffordshire Moorlands District Council

### **Proposed New Battery Storage Site Rownall Road, Withystakes, Cheddleton Staffordshire ST9 0BP**

Ver 1.6 Final - 25 July 2024

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Issue 1.6  
25 July 2024

Client:

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| The Play Barn<br>Rownall Road<br>Wetley Rocks<br>Cheddleton |  |
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## 1.0 INTRODUCTION

- 1.1 This preliminary technical commentary and critique has been prepared on instruction from of The Play Barn, Rownall Road, Wetley Rocks, Cheddleton in regard to Planning Application Ref. No. SMD/2024/0055 submitted to Staffordshire Moorlands District Council. It addresses the suitability of an Acoustic Design Specification and associated factors prepared by messrs Ian Sharland Ltd.
- 1.2 The Planning Application has been submitted by Mr J Stentiford of Surface Planning, on behalf of S & C Energy Ltd. The development intended comprises a remotely operated Flexible Energy Facility (Battery Storage Site) on agricultural land south of Cellarhead Substation and west of Rownall Road, Wetley Rocks, Cheddleton, Staffordshire ST9 0DP.
- 1.3 It is understood that an Environmental Statement has not been submitted on behalf of the applicant. Staffordshire Moorlands District Council have carried out an Environmental Impact Assessment (EIA) Screening Opinion and determined that the development would likely have significant effects on the environment. It therefore comprises EIA development, for which an Environmental Statement is now required.
- 1.4 It is assumed throughout that the reader is conversant with the terminology, expressions and subjects used in this report, along with any standards, guidance, criteria and policies referred to. Detailed explanations of technical terms, methodologies and glossary *inter alia* are therefore omitted.

## 2.0 OVERVIEW

- 2.1 The Acoustic Design Specification amounts to a noise impact appraisal for the proposed energy storage facility incorporating noise mitigation. The preparation has been subject to determination of ambient sound (noise) levels that are stated to have been carried out at representative locations close to residential properties; calculations of noise emissions from the intended facility; and an appraisal of likely impacts in regard to daytime and night-time, using standards and criteria. It concludes that there would be no significant adverse impact on neighbouring properties, and that the development is compliant with planning policy.
- 2.2 The Planning Statement accompanying the (planning) application comments that the proposal will not result in any unacceptable impacts on residential amenity, and is compliant with local Planning Policy DC1 to the extent that it is suitably designed in order to protect the amenity of the area in regard to noise.
- 2.3 As a point of clarification. The terms ‘sound’ and ‘noise’ as referred to in this report have different meanings, though are commonly used as interchangeable descriptors in acoustics reports. ‘Noise’ comprises ‘sounds’, though ‘noise’ implies, and is related to, a human response and can be described as unwanted sound(s), or sound(s) considered to be undesirable or disruptive.

### 3.0 USE AND APPLICATION OF BS 4142

- 3.1 The proposed development in general falls within the remit of British Standard BS 4142: 2014 (as amended) *'Methods for rating and assessing industrial and commercial sound'*. Nevertheless, BS 4142 is not intended to be applied to sources falling within the scopes of other standards or guidance. Arguably this may in part be applicable to certain aspects in this case, given that BS 4142 states that *"it is not applicable to the assessment of low frequency noise"*.
- 3.2 On review of the Acoustic Design Specification, in applying BS 4142 to rating the significance of noise impacts there a number of matters that cause concern and are considered not properly dealt with, or otherwise not suitably clarified and addressed. These are detailed as follows.

#### Survey of Ambient Noise (Sound) Levels

- 3.3 Over the course of a five day period (15 to 19 September 2023) reported prevailing wind directions vary on each day. Given the extent of variations, this warrants further qualification, noting that, so far as practicable, it is normal practice to conduct environmental sound measurements under relatively stable conditions, and preferably with prevailing wind directions from noise source to receptor (receiver) positions. This is subject to certain limitations on wind speeds in order that measurements are not unduly prejudiced by wind-generated noise.
- 3.4 Average wind speeds on each day are presented. On three out of five days the cited averages exceed 5 m/s. British Standard BS 4142 comments: *"Exercise caution when making measurements in poor weather conditions such as wind speeds greater than 5 m/s."* The purpose of this is explained, in that: *"Weather conditions can affect sound levels by influencing sound propagation or generating sound which can be pertinent to the assessment"*, and *"It might be appropriate to make more than one assessment to account for varying weather conditions."*

#### Background Sound (Noise) Levels, $L_{A90,T}$

- 3.5 In terms of establishing representative Back Sound (Noise) Levels, the assessment adopts  $L_{A90}$  35 dB daytime and  $L_{A90}$  27 dB night-time.
- 3.6 No consideration is presented on differentials in Background Sound Levels for the start and end of the night-time periods, relative to the middle of the night-time. BS 4142 notes this can have

relevance in terms of importance for sleep purposes.

- 3.7 Background Sound Levels are quoted for daytime (07.00 to 23.00) and night-time (23.00 to 07.00) in respect of each measurement day, with the acknowledgment that Friday 15 September comprised partial measurements. Five minute sample periods are aggregated to formulate a range of values based on descriptive statistical parameters. Raw data does not appear to be presented other than pictorially as combined temporal graphs (sound level versus time, with differing axes) for measurements metrics, depicting overall measurement time-frames across c. 5 days.
- 3.8 From the temporal graphs it is evident that Background Sound Levels fall notably below values that are taken to be representative, which numerically can have a bearing on noise impact assessments (i.e. presenting greater severity of impacts). It is acknowledged that the objective is not merely to ascertain lowest values, but rather to quantify what is typical during particular time periods. As is apparent from the forms of statistical analyses presented, Background Sound Levels also vary according to the form of analysis, and between measurement positions. The Background Sound Levels that are used in the assessment, however, appear as an amalgam of results without proper explanation, whereas these should be considered on a site-by-site basis.
- 3.9 The resolution of graphical data, along with combined presentation of several metrics, renders visual examination of sound levels difficult. This said, and having reference to tabulated data for daytime and night-time periods, the data nonetheless merits further consideration with respect to certain periods of the day (for example the shoulder periods to daytime and night-time).

### **Acoustics Feature Corrections**

- 3.10 A tonal penalty of + 2 dB has been applied, without inclusion and assessment of narrow-band spectral analyses. The octave band plant sound power data is too coarse to permit examination of this, and there is no rationale stated for the application of +2 dB. Application of one-third octave-band assessment to manufacturer's sound power level data is insufficient to identify the prominence of tone.
- 3.11 Penalties applied in BS 1442 for tonality range from between 0 dB and +6 dB, which subjectively are converted: to +2 dB for a tone which is just perceptible; +4 dB where the tone is clearly perceptible; and +6 dB where a tone is highly perceptible. Taking a precautionary approach, and in

the absence of field measurement data for the installation or more detailed information on behalf of plant manufacturers (detailed spectral analyses), it is contended a maximum penalty would therefore be a prudent default as it is known that the BS 4142 one-third octave informative method is not always sufficient to identify audibility of tones.

- 3.12 No penalty has been applied for intermittency. This tends to infer that the installation operates continuously with little or no variation in plant noise emissions, as may be occasioned due to load/duty demand, and/or the need to maintain optimum operational temperatures throughout all seasons.
- 3.13 The complement of noise-producing plant encompasses cooling systems, electrical inverters, electrical transformers/sub-stations, which are known to have a capability to generate distinctive acoustic signatures.
- 3.14 Where fans are employed (e.g. for cooling needs), these can produce tones based on their inherent design and blade passing frequencies. Where multiple fan sets are employed they may produce a phenomena of ‘beats’ (an interference pattern between two sounds of marginally different frequencies), which can be particularly disturbing. Fan sizing and operational parameters are relevant to the extent of this phenomenon.
- 3.15 Transformers/sub-stations often produce a notable tones and harmonic components, often referred to as ‘hums’ and buzzing’ as a function of magnetostriction when energised. Frequency components of this nature can be intrusive and disturbing even at very low sound pressure levels, the severity of which cannot simply be determined by use of broad-band measurements in the form of dB(A). The prominence of these features can be further enhanced due to the excitation of room modes within buildings that are noise-sensitive (existing/proposed residencies and certain commercial premises e.g. The Play Barn).

### **Reporting Requirements**

- 3.16 To fulfil the needs of using and applying BS 4142 the standard stipulates information to be reported, as appropriate. There are a number of aspects where this has not been, or not fully, adhered to:
- i. Statement of qualifications, competency, professional memberships and experience

directly relevant to the application of this British Standard of all personnel contributing to the assessment.

- ii. Description of the main sound sources and of the specific sound;
- iii. Hours of operation;
- iv. Mode(s) of operation;
- v. Statement of operational rates of the main sound sources;
- vi. Dominance or audibility of the specific sound;
- vii. Main sources contributing to the residual sound;
- viii. The existing context including an assessment of the sensitivity of the receptor;
- ix. Sound measuring systems, including calibrator or pistonphone used (type and/or model; manufacturer; serial number; and details of the latest verification test including dates);
- x. Operational tests of measuring instrumentation (reference levels of calibrator, multi-function calibrator or pistonphone; sound level meter reading(s) before and after measurements with calibrator, multi-function calibrator or pistonphone applied);
- xi. Weather conditions throughout the course of measurements (including wind speeds and directions; cloud cover; precipitation; temperatures; wet ground inter alia);
- xii. Reasons for presuming Background sound levels to be equivalent.

### **Uncertainty**

- 3.17 A brief statement of uncertainty is included along with a table providing comments on considerations of uncertainty. This does not meet the depth of requirements set out in BS 4142 which addresses measured values and calculations, and steps to reduce the level of uncertainty. The requirements of BS 4142 are set out in below:

#### Uncertainty of measured values -

- i. The complexity of the sound source and the level of variability in sound emission from the source;
- ii. The complexity and level of variability of the residual acoustic environment;
- iii. The level of residual sound in the presence of the specific sound at the measurement location;
- iv. The location(s) selected for taking the measurements;
- v. The distance between sources of sound and the measurement location and intervening ground conditions;

- vi. The number of measurements taken;
- vii. The measurement time intervals;
- viii. The range of times when the measurements have been taken;
- ix. The range of suitable weather conditions during which measurements have been taken;
- x. The measurement method and variability between different practitioners in the way the method is applied;
- xi. The level of rounding of each measurement recorded; and
- xii. The instrumentation used.

Uncertainty in calculations -

- xiii. Uncertainty in any measured sound levels used in the calculations;
- xiv. Uncertainty in the operation or sound emission characteristics of the specific sound source and any assumed sound power levels;
- xv. Uncertainty in the calculation method;
- xvi. Simplifying the real situation to "fit" the model (user influence on modelling); and
- xvii. Error in the calculation process.

3.18 Where sound power level is used for calculating sound pressure levels, it should be representative of the source and the conditions under which the source is expected to operate. There is no comment on this.

3.19 No check on the implementation of the calculation method for errors is reported. (It is simply commented that calculations have been completed using an industry standard noise mapping software)

3.20 Overall the report states that the assessment will be accurate to a level of  $\pm 3$  dB. This is offered without confirmation of sound power testing, without full technical details of acoustic attenuation measures – for which detailed engineering is to be determined - and in light of the paucity in reporting etc. listed herein.

## 4.0 RELEVANCE OF BS 8233

- 4.1 British Standard BS 8233: 2014 ‘*Guidance on sound insulation and noise reduction for buildings*’ is introduced, using sound level criteria equated to desirable internal standards. In this sense, BS 8233 standards/criteria have effectively been adapted to external targets immediately outside of buildings by allowing for a partly/slightly open window in accordance with World Health Organisation (WHO) guidelines on which they are in part based. The derivation of extrapolated external criteria has not been carried out in accordance with the WHO method for consideration of open windows.
- 4.2 The report notes that BS 8233 was prepared on the basis of designing new buildings to protect occupants from existing noise sources. It is commented that this does not necessarily infer that the acceptability of an occupant to an absolute noise level within a building will be different if the introduction of the noise source post-dates the construction of the building.
- 4.3 It is important to consider the manner in which BS 8233 is required to be applied given its stated scope:  
*“This British Standard provides guidance for the control of noise in and around buildings. It is applicable to the design of new buildings, or refurbished buildings undergoing a change of use, but **does not provide guidance on assessing the effects of changes in the external noise levels to occupants of an existing building**”* (added inflection).
- 4.4 Additionally:  
*“Noise levels generally apply to steady sources, such as those due to road traffic, mechanical services or continuously running plant, and should be the noise level in the space during normal hours of occupation, but excluding any noise produced by the occupants and their activities”.*
- 4.5 At the outset BS 8233 offers *“As a guide, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification or a code of practice and claims of compliance cannot be made to it”.*
- 4.6 The criteria set out in BS 8233 are very general, based on annual average data using broad-band sound levels without correction for acoustic features (tonality, impulsivity, intermittency and other characteristics). As a consequence, and in line with WHO guidelines for internal and

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external environments, they are derived from steady-state sound sources, most notably road traffic.

- 4.7 As a principle it is incorrect to apply BS 8233 as a rating tool for the introduction of new noise sources and it cannot offer a full appraisal of the impacts of the development. In this way, if adopting the internal criteria this can provide a means that allows for numerically higher internal threshold of acceptability for existing development comparative to what may already exist, and so allow for a degradation in acoustic amenity.

## 5.0 World Health Organisation (WHO) Guidelines

- 5.1 The WHO Guideline criteria are introduced for both external amenity areas and sleeping conditions, as are featured in the 1999 publication '*Guidelines for Community Noise*'.
- 5.2 The Guidelines state that sleep disturbance is a major effect of environmental noise. It may cause primary effects during sleep, and secondary effects that can be assessed the day after night-time noise exposure. Uninterrupted sleep is confirmed as a prerequisite for good physiological and mental functioning.
- 5.3 It is further commented that special attention should also be given to noise sources in an environment with low background sound levels and to noise sources with low-frequency components, in that it is not enough to characterise the noise environment in terms of noise measures or indices based only on  $L_{Aeq}$ .
- 5.4 Notwithstanding the quoted criteria, WHO provide additional recommendations to the extent that, for noise with a large proportion of low-frequency sound, a more stringent (i.e. lower) guideline value is recommended. On this basis it is pointed out that lower noise levels may be disturbing depending on the nature of the noise source, and disturbances may occur even though the sound pressure level during exposure is below 30 dB(A).
- 5.5 According to the WHO, evidence on low-frequency noise is sufficiently strong to warrant immediate concern as this may increase the adverse effects considerably. Health effects due to low-frequency components in noise are estimated to be more severe than for community noises in general, and since A-weighting underestimates the sound pressure level of noise with low-frequency components, a better assessment of health effects would be to use C-weighting.
- 5.6 The above points have not been suitably addressed or factored into the noise impact assessment.

## 6.0 PREDICTION OF FACILITY NOISE

6.1 The planning proposal considers the following components:

- 248 no. Battery Storage Containers
- 124 no. Inverters
- 62 no. Transformers
- 4 no. Substations

6.2 Information used for the purposes of assessing noise impacts has been taken from manufacturer's sound power data. There is no verification provided of this from in-situ UK installations, neither is there confirmation that sound powered levels per item of plant have been multiplied to account for the numbers of items to be installed.

6.3 Distances from noise sources to nearest residential (noise-sensitive) receptors have not been verified at this time for the purposes of this commentary and critique.

6.4 Predictive modelling has been carried out using proprietary software applying the methodology set out in British Standard BS EN ISO 9613: 2007 '*Acoustics – Description, measurement and assessment of environmental noise – Part 2: Determination of environmental noise levels*'. This standard is incorrectly stated which should be referenced ISO 9613-2 First Edition '*Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation*'. This standard has e been withdrawn and superseded in February 2024 by BS ISO 9613-2: 2024 Second Edition '*Acoustics – Attenuation of sound during propagation outdoors - Part 2: Engineering method for the prediction of sound pressure levels outdoors*'. Any predictive modelling of sound emissions should fulfil the latter.

6.5 Predictions of sound (noise) are provided for nine receptor positions at ground floor and first floor levels. Precise model parameters are not stated. These should include, but not limited to:

- Directionality characteristics of sound (noise) sources (for geometrical divergence)
- Application of atmospheric absorption (as relevant)
- Prominence of tones

6.6 There is no indication whether acoustics emissions are treated as point sources, an area source or a

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combination of these characteristics.

- 6.7 The BS ISO method for predicting outdoor sound levels applies to meteorological conditions favourable to propagation from (sound) sources of known sound emission, namely downwind propagation. Downwind propagation conditions for the method basically requires wind direction to be within an angle of  $45^{\circ}$  of the direction of the dominant sound source to the specified receiver region, the wind blowing from source to receptor at speeds approximately 1 m/s to 5 m/s at a height 3 m to 11 m above ground.

## 7.0 LOCAL AUTHORITY COMMENTS

- 7.1 Staffordshire Moorlands District Council have issued a statement regarding the assessment of noise. This effectively offers that the rating level of sound (from plant etc. associated with the development) shall not exceed the Background Sound Levels by more than 5 dB(A) during daytime, and not at all during night-time, using BS 4142 methodologies (Clause 6.1.3 of the report).
- 7.2 This appears to be framed as a proposed planning condition. If this interpretation is correct, it fails to meet the required tests of the National Planning Policy Framework (clause 56 ‘six tests’) and neither is it sufficient to safeguard against low frequency noise
- 7.3 Use of Background Sound Levels as part of a numerical means to setting planning conditions was discussed by BSI Committee EH/1/3 prior to the publication of the revised standard in 2014, and has been raised again in April 2024. The committee specifically considered how BS 4142 was mis-applied, and in particular noted that it should not be used to frame sound level conditions (‘noise limits’) having reference to Background Sound level.
- 7.4 This is a wholly correct approach. Firstly, a fundamental flaw rests with the fact that there is no single, definitive Background Sound Level; it is an infinitely variable construct that can change hour to hour, day to day, week to week and so forth. It consequently lacks precision, is unreasonable and can be rendered unenforceable.
- 7.5 The recipient of a condition based on Background Sound Levels obviously has no control over third-party interventions that can serve to reduce or elevate Background Sound Levels. To illustrate this: i) if industrial or commercial noise-producing premises cease to operate; or ii) a local road system changes (a new road is constructed; speed limits are reduced or increased; traffic management is introduced); or iii) permitted development rights are extinguished and an activity is prohibited; or iv) a near-by railway line becomes less or more intensive in its use; or v) aircraft flight-paths are changed; these are factors whereby Background Sound Levels can markedly alter. A position of apparent compliance could thus change to one of non-compliance through no variation in the development that is subject sought to condition. This is consequently unreasonable in planning terms.

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- 7.6 There is also the technical aspect to consider of using a broad-band metric to rate and assess noise which may feature low-frequency components. It is well accepted that dB(A) is insufficient in this regard. Even when ambient sound levels are not exceeded on the introduction of new noise sources, inaudibility cannot be assured let alone safeguards offered against distinct low-frequency tones.
- 7.6 Finally there is the matter of enforcement. Given that the condition lacks precision and different Background Sound Levels present from one day, week, month, or year to another, how can compliance or otherwise be properly determined or sustained.

## 8.0 PLANNING POLICY & ACCEPTABILITY CRITERIA

- 8.1. It is recognised that planning practice guidance states noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted, but not yet commenced). Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset. Pertinent policy and practice considerations that are referenced in the planning application are re-iterated below.
- 8.2 Noise impacts can override other planning concerns where justified. It is important to consider noise in the context of the wider characteristics of a development proposal and its surroundings, which can have an important effect on whether noise is likely to pose a concern.
- 8.3 Decision making needs to 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.
- 8.4 The observed effect levels are:
- Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
  - Lowest observed adverse effect level: this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
  - No observed effect level: this is the level of noise exposure below which no effect at all on health or quality of life can be detected.
- 8.5 In line with the Noise Policy Statement for England (NPSE), this includes 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 for the given situation, or whether it falls below a no observed effect level. Although the term ‘level’ is applied, this does not mean that the effects can only be defined in terms of a single value of noise exposure.

8.6 Adverse effects are defined in terms of a combination of more than one factor such as noise exposure, the number of occurrences of noise in a given time period, the duration of noise and the time of day noise occurs.

8.7 The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation.

8.8 Factors to consider include:

- the source and absolute level of the noise, together with the time of day it occurs. Some types and level of noise will cause a greater adverse effect at night than if they occurred during the day. Adverse effect can also be greater simply because there is less background noise at night;
- for a new noise making source, how the noise from it relates to the existing sound environment;
- for non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise;
- the spectral content of the noise (i.e. whether or not the noise contains particular high or low frequency content) and the general character of the noise (i.e. whether or not the noise contains particular tonal characteristics or other particular features), and;
- the local arrangement of buildings, surfaces and green infrastructure, and the extent to which it reflects or absorbs noise.

8.9 In this case more specific factors to consider when relevant include:

- the cumulative impacts of more than one source of noise;
- whether any adverse internal effects can be completely removed by closing windows;
- whether proposed mitigation relies on windows being kept closed most of the time (and the effect this may have on living conditions);

### **National Planning Policy Framework (NPPF)**

8.10 The NPPF has an over-arching environmental objective to minimise pollution; by definition, this includes noise. Planning decisions play an active role in guiding development towards sustainable

solutions, but in doing so should take local circumstances into account, to reflect the character and needs of each area, aim to achieve healthy places and promote health and well-being.

- 8.11 The policies in NPPF are material considerations to be taken into account in dealing with planning applications.
- 8.12 The decision making process should promote an effective use of land and take opportunities to achieve net environmental gains. Local planning authorities should refuse applications which they consider fail to make efficient use of land, taking into account the policies in the NPPF.
- 8.13 Local planning authorities should approach decisions and secure developments that will improve the environmental conditions of an area. The right information is crucial to good decision-making, particularly where formal assessments are required. Local planning authorities should also consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations.
- 8.14 Planning conditions are to be imposed only where they are necessary, relevant to planning and to the development to be permitted, enforceable, precise and reasonable in all other respects.
- 8.15 Planning 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 the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development and avoid noise giving rise to significant adverse impacts on health and the quality of life. It is hence necessary that decisions should ensure that new development can effectively integrate with the their locality.
- 8.16 The focus of decisions should be on whether proposed development is an acceptable use of land.

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## 9.0 DISCUSSION & CONCLUSIONS

- 9.1. Impacts of the proposed new battery storage have not been sufficiently assessed in terms of noise. The assessment relies on manufacturer's data and no validation is evident of predicted noise impacts on extant, neighbouring noise-sensitive development. There are short-comings and tangible concerns in regard to: ambient surveys; determination of Background Sound Levels; application of acoustic character corrections (penalties); reporting requirements; parameters use in modelling and uncertainties.
- 9.2. Criteria that have been used in the assessment of noise are general, and insufficient details are provided on the noise characteristics of the development to offer certainty in their application. Certain criteria are mis-applied.
- 9.3. In respect to noise, it is not established that the proposed development is an acceptable use of land and appropriate for the intended location. The Acoustic Design Specification is not presently sufficient to hold out a conclusion that the installation would not have a significant impact on the neighbouring properties, or whether or not it would present as a new, audible feature. No account is made of prevailing sound levels within existing noise-sensitive development.
- 9.4. The local planning authority's statement regarding the assessment of noise does not accord with the requirements of the NPPF, and is not considered sufficient in principle to safeguard the amenity of noise-sensitive receptors.

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## GENERAL DISCLAIMER & LIMITATIONS

- i. This assessment has been prepared on behalf of The Play Barn, Round Meadows Farm, Wetley Rocks, in regard to Planning Application Ref. No. SMD/2024/0055 submitted to Staffordshire Moorlands District Council.
- ii. **It is assumed throughout that persons using or interpreting this report for professional and/or other requirements are suitably conversant with terminology, metrics, indices, expressions and content herein, and any associated references, texts and other documentation.**
- iii. Comprehensive technical explanations, interpretation and acoustic terminology may therefore be specifically omitted and the reader is directed to: relevant standards; publications; policy and guidance; and technical materials by default, for further information as and where stated, indicated, referenced, or as appropriate. For brevity, glossaries and explanations of terms used might be excluded and are otherwise available on request.
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- v. The findings and opinions expressed are relevant to any date(s) of site work(s) and/or assessments as befitting, together with information available and/or provided up to the time of its completion. Findings and opinions should not be relied upon to represent conditions or circumstances at later dates or under changed circumstances.
- vi. Opinions and statements are subject to information either gathered during attendance at site; and/or measurements undertaken; and/or information supplied by, or on behalf of, any person(s) commissioning the report; and/or exchanges between other parties; and/or published works; and/or professional knowledge, experience and research. If additional information or knowledge becomes available which affects any reported comments, opinions, conclusions or recommendations, Acoustics

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Environment Ltd. reserve the right to revise the content of this report accordingly.

- vii. Throughout this report there may be reference to 'noise'. Considered as both an acoustic and legal construct, noise is related to human response and is routinely described as 'unwanted sound', or sound that is considered undesirable or disruptive (by the recipient). For the purposes of this report any reference to noise where used is treated within this context, unless it forms part of published material and is applied in regard to the same.