

**APPEAL BY XX AGAINST
A REFUSAL OF PLANNING PERMISSION
BY LANCASHIRE COUNTY COUNCIL
FOR MINERAL EXTRACTION AND RESTORATION
ON LAND OFF BOURBLES LANE IN PREESALL, LANCASHIRE**

PINS APPEAL REF: XXX

Statement of Case with regard to Noise of Dr Robert Storey

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DRAFT

1 Introduction and Scope of Statement

- 1.1 My name is Robert Storey. I am a senior noise consultant employed by Walker Beak Mason Limited (WBM), which specialises in acoustic consultancy. I hold the degrees of Bachelor of Engineering in Mining Engineering and a PhD relating to “The acoustic response of structures to blast induced ground vibration” from the University of Leeds in 1993 and 1997 respectively. I am a Member of the Institute of Acoustics. I have been practicing as a noise consultant since 1998 and joined WBM in 2007.
- 1.2 I have been instructed to review the submitted documents relating to the noise impact of the proposals for mineral extraction and restoration on land off Bourbles Lane, Preesall, Lancashire (“the Site”) and prepare a statement providing a professional viewpoint on the noise assessment that accompanied the planning application for the proposals.
- 1.3 My statement deals with the noise assessment of the sound levels generated by the Site in relation to the background sound levels as prepared by Vibrock Limited in 2023 and updated in 2024. It considers the noise assessment documents and provides a review of those documents in the context of the application.
- 1.4 The initial March 2023 assessment was included as Appendix 9 of the Environmental Statement (ES) submitted to Lancashire County Council in 2023 (ref. LCC/2023/0030).
- 1.5 In response to consultation responses on the ES and other supporting information which accompanied the planning application, an updated noise assessment was prepared by Vibrock Limited in August 2024 and sought to address a Regulation 25 request issued by Lancashire County Council.
- 1.6 As the August 2024 assessment superseded the March 2023 assessment, the August 2024 version of the assessment is the focus of my review.

2 General Review of August 2024 Noise Assessment

Section 1

- 2.1 The assessment starts by providing an overview of the document and then gives details relating to the proposed quarry.

- 2.2 The next section relates to the local authority consultation and presents a very brief summary of the documents provided by the local authority.

Section 2

- 2.3 Noise Policy Guidance is summarised in Section 2 and covers the various relevant documents that are considered to be appropriate and comprehensive in the context of the application in my opinion:

- Noise Policy Statement for England (NPSE);
- National Planning Policy Framework (NPPF); and
- Planning Practice Guidance (PPG) including the section relating to 'Minerals',

- 2.4 Section 2 also references local planning policy including the following which are both relevant to the application:

- The Joint Lancashire Minerals and Waste Development Framework Core Strategy DPD Achieving Sustainable Minerals Production - POLICY CS5; and
- The Joint Lancashire Minerals and Waste Local Plan. Site Allocation and Development Management Policies - Part One
Policy DM2 - Development Management.

Section 3

- 2.5 Section 3 details the baseline noise surveys that were undertaken to establish representative background noise levels at the nearest dwellings to the Site.
- 2.6 The baseline noise survey comprised attended sample measurements at 7 locations in 2021 and 8 locations in 2024. An additional location was added for the second set of measurements following the consultation responses to include a separate location at Little Tongues Lane.
- 2.7 The 8 noise survey locations used in 2024 were selected by Vibrock Limited to represent noise sensitive premises closest to the Site. Eight locations were used for the survey, but the assessment uses 12 main assessment locations in the site noise calculations.

- 2.8 From a review of the survey and assessment locations, I would consider that it is unlikely that there would significant variation in the background noise levels between the properties for which a single survey location was used.
- 2.9 It is noted that following the Regulation 25 request for more information the updated noise assessment included a separate survey location for Little Tongues Lane, as stated above.
- 2.10 There were 5 separate measurements taken at each survey location over the two days in 2024, apart from at Little Tongues Lane where 4 separate measurements were taken.
- 2.11 The assessment details the Class 1 sound level meter and calibrator used for the baseline noise surveys and outlines the main settings and methodology as well as the weather conditions during the surveys. This complies with the general provisions of BS4142:2014 + A1: 2019 (or equivalent) for the selection of instrumentation, calibration and measurement location and the weather conditions are suitable for environmental noise monitoring.
- 2.12 The measurements in 2021 were undertaken on a single day, whereas the updated baseline survey in 2024 included measurements on two consecutive days. The 2024 survey included measurements on a Saturday morning to cover potential working at that time and to address the comments in the consultation responses.
- 2.13 The similarity between measured 15 minute and 1 hour background (L_{A90}) noise levels can be demonstrated by WBM using data from sites where the existing noise environment is similar, i.e. controlled by distant and local road traffic, along with occasional aircraft movements and birdsong as is the case in most semi-rural areas in the United Kingdom.
- 2.14 This similarity was demonstrated in the Institute of Acoustics (IOA) Diploma Project *"Investigating the effect of measurement duration on measured L_{A90} background noise levels"* by Jayan Mistry, BSc AMIOA, University of Derby dated 14 October 2024.
- 2.15 Each sample measurement was of 15 minutes duration. In my experience of measuring baseline noise levels (particularly with regard to the measurement of background L_{A90} noise levels), there is very little variation between the values for a 15 minute period and a one hour period.

- 2.16 As the 15 minute sample measurements are all undertaken during separate hours, the five different samples at each location obtained in 2024 represent 5 separate hours over the course of three separate days including Saturday. Note that there were only 4 measurements for Little Tongues Lane.
- 2.17 As such, it is my opinion that the data acquired provides a good representation of the background noise levels at the nearest noise sensitive receptors to the proposed Site over a range of days, times and conditions.
- 2.18 The data presented includes a comparison between the average weekday background noise levels and those on a Saturday morning during the hours when they Site would be operating. There is a difference of 1-2 dB(A) between those levels, with those on the Saturday morning being the lower.
- 2.19 The relatively low level of variation in the measured background noise levels also indicates that the presented average levels are a fair representation of the background noise levels at the nearest dwellings to the site.
- 2.20 It is also noted that the average background noise levels in 2024 are no more than 1dB(A) different from the average background noise levels from 2021 and therefore this is another indication that the background noise levels used are representative of typical levels in the locality.
- 2.21 The table of background noise levels for each of the assessment locations used includes properties at which baseline noise survey measurements were not specifically taken, but are reasonably considered to be similar to those at nearby properties at which measurements were made. I would consider this to be standard practice when establishing baseline background noise levels when there are a number of properties in close proximity for which calculated site noise levels may vary due to factors such as distance and barriers, but the existing general noise environment would be expected to be similar.
- 2.22 The table does have some error with regard to the weekday levels presented, although these are no more than 1 dB(A) in magnitude. Specifically the average levels for Woodlands/Red Lea, Crossing Cottage, Mytax/New England Cottage, Hillfield House/Pointer Farm/The Beeches all present the average background noise levels for all days (both weekdays and Saturday) whereas the value for Ourome is that for Saturdays.

- 2.23 All these presented average background noise levels are 1 dB(A) below the average for weekdays and therefore the error would result in lower background noise levels and therefore is a conservative value that would potentially result in lower site noise limits and greater protection for the amenity of the residents.
- 2.24 A summary of correct average background sound levels is presented in the table below:

Location	Average dB L _{A90,15 min}			
	2024 All Days	2024 Mon-Fri	2024 Sat	2021
Old Nickson's Cottage	42	42	43	40(*)
Whinmore Fold	42	42	43	40(*)
Woodlands	40	41	39	40
Red Lea	40	41	39	40
Bourbles Farm	40	40	39	40
Crossing Cottage	38	39	37	38
Greenacres	47	47	46	47
Lyndale Farm	47	47	46	47
Mytax/New England Cottage	43	44	42	43
Hillfield House/Pointer Farm	43	44	43	42
The Beeches	43	44	43	42
Ourome	38	38	37	37

(*) Based on the combined measurement for Woodlands/Red Lea/Little Tongues Lane

- 2.25 The data in the table above would suggest that site noise limits for routine operations would lie in the range of between 48 and 55 dB L_{Aeq, 1 hour free field} based on the advice in Planning Practice Guidance (Minerals).

Section 4

- 2.26 Section 4 relates to "Potential Noise Emissions" and correctly lists the factors that may control the level of the noise emissions from a site that are incident on the nearest receptors.
- 2.27 The methodology used for the site noise calculations is then described and it is said that the methods outlined in Annex F of BS 5228 1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open sites. Part 1: Noise', which "*details methods to estimate noise from 'open sites' which can include quarries, waste disposal sites and long-term construction projects*" have been used. This is an appropriate methodology to use to calculate the propagation of external noise.

- 2.28 The assessment then highlights the potential conservative estimates of barrier attenuation due to the assumption of 5dB(A) attenuation when the top of the source is just visible and 10dB(A) attenuation when the plant is not visible. This accurately describes this aspect of the methodology.
- 2.29 The text then describes the application of soft ground attenuation and states that either barrier or soft ground attenuation is applied, not both. This is appropriate in order to present a reasonable worst case scenario.
- 2.30 The following text is then included:
- “All noise level predictions have been calculated with the combinations of plant working at the closest point to the assessment location. The predictions are therefore worst-case scenarios which may be of relatively short duration, however, they indicate the potential highest LAeq,1h noise level to which a particular property or group of properties may be exposed during the working of the site. This worst-case situation may occur intermittently over the lifetime of the site, but the longer-term noise levels perceived outside of the site boundary would normally be significantly less.”*
- 2.31 This approach is how I undertake noise assessments for mineral sites and is the best and clearest method for ensuring that site noise levels at the dwellings can comply with appropriate noise levels. It also allows for any mitigation to be designed to address the worst case scenario and therefore results in the assessment being as robust as possible for the protection of the amenity of the residences.
- 2.32 The sound power levels and on-times for all the noise sources included in the calculations are presented in Table 5 based on measurements made on similar sites by Vibrock. Based on my experience on sites and undertaking noise assessments of those sites, the sound power levels are appropriate for each of the sources presented and are similar to those which I would expect. The on-times used are also reasonable.
- 2.33 As a worst case, one might increase the on-times for the use of the mobile crusher to 100%, but for this site, it would make minimal difference to the overall calculated site noise levels at the assessment locations.

Section 5

- 2.34 Section 5 presents the calculated site noise levels due to both temporary and routine operations for comparison with the proposed site noise limits, in that order.

- 2.35 Table 6 shows that the site noise levels due to temporary operations comply with the site noise limit for those operations of 70 dB $L_{Aeq, 1 \text{ hour free field}}$ with the majority being well below that level.
- 2.36 As is normally the case on mineral sites, those operations that are unable to comply with the site noise limits for routine operations will be subject to that higher site noise limit, but this would only apply for up to 8 weeks per calendar year.
- 2.37 Table 7 presents the calculated site noise levels at the assessment locations due to routine operations in each phase of the proposed quarry and compares those levels to the background noise level and the nominal upper site noise limit recommended in Planning Practice Guidance (Minerals) for routine operations of 55 dB $L_{Aeq, 1 \text{ hour free field}}$.
- 2.38 The table indicates that a site noise limit of 55 dB $L_{Aeq, 1 \text{ hour free field}}$ will be complied with at all the assessment locations when routine operations are taking place in any of the phases of the development.
- 2.39 However, in response to the question “*What are the appropriate noise standards for mineral operators for normal operations?*”, Planning Practice Guidance (Minerals) states in Paragraph 021:
- “Mineral planning authorities should aim to establish a noise limit, through a planning condition, at the noise-sensitive property that does not exceed the background noise level ($LA_{90,1h}$) by more than 10dB(A) during normal working hours (0700-1900). Where it will be difficult not to exceed the background level by more than 10dB(A) without imposing unreasonable burdens on the mineral operator, the limit set should be as near that level as practicable. In any event, the total noise from the operations should not exceed 55dB(A) $L_{Aeq, 1h}$ (free field). For operations during the evening (1900-2200) the noise limits should not exceed the background noise level ($LA_{90,1h}$) by more than 10dB(A) and should not exceed 55dB(A) $L_{Aeq, 1h}$ (free field). For any operations during the period 22.00 – 07.00 noise limits should be set to reduce to a minimum any adverse impacts, without imposing unreasonable burdens on the mineral operator. In any event the noise limit should not exceed 42dB(A) $L_{Aeq, 1h}$ (free field) at a noise sensitive property.”*
- 2.40 Site noise limits for routine operations would therefore normally be presented based on the representative background noise levels plus 10 dB(A). This feeds into the column in Table 7 that compares the calculated site noise levels with the background noise levels.

- 2.41 The table shows that Planning Practice Guidance (Minerals) based site noise limits would be exceeded at some locations during certain phases of the development. This is limited to the following phases/locations:
- Woodland during Phase 1 - exceedance of 3 dB(A);
 - Red Lea during Phase 1 - exceedance of 2 dB(A);
 - Bourbles Farm during Phase 4 - exceedance of 3 dB(A); and
 - Greenacres during Phase A - exceedance of 1 dB(A).
- 2.42 These exceedances are noted in the following paragraphs of the assessment and the following statement is made:
- “The worst-case approach to the calculation of noise levels from the proposed development should be noted and in reality site activities likely to generate noise levels that are in excess of 10 dB above the background noise levels will be infrequent and short lived.”*
- 2.43 This statement is reasonable and in my experience, this is invariably the case. In practice, site noise levels are normally below those presented in appropriately conducted noise assessments due to the non-constant nature of most operations in the extraction areas (which are normally those closest to the nearest dwellings to the site).
- 2.44 However, one might consider that some aspect of the variability of the operations is taken into account in the recommended site noise limits suggested in Planning Practice Guidance (Minerals).
- 2.45 My normal approach to this situation would be to investigate potential mitigation measures to demonstrate compliance with the Planning Practice Guidance (Minerals) noise limits such as bunding, acoustic fencing, temporary barriers such as straw bales or restrictions on plant in terms of size or operational use.
- 2.46 Where such measures are impractical or place an excessive burden on the operator and the exceedances are for a short term (as in this instance), it is reasonable to suggest the upper Planning Practice Guidance (Minerals) site noise limit of 55 dB $L_{Aeq, 1 \text{ hour free field}}$ for the period of works in those isolated areas. As the assessment states, the mineral extraction would take place during limited campaign operations and therefore the approach to those exceedances could be considered to be appropriate. There are a number of sites in similar areas of the United Kingdom in which this is the case.

2.47 Should this approach be taken, regular site noise monitoring surveys should be conditioned and undertaken to ensure that site noise operations are not exceeding the site noise limits at any of the assessment locations.

2.48 The statement that:

"...potential impacts are considered to be at or below the 'Lowest Observed Adverse Effect Level' (LOAEL) at the majority of noise-sensitive premises with the potential for effects marginally above the LOAEL but significantly below the 'Significant Observed Adverse Effect Level' (SOAEL) at Woodlands, Red Lea and Bourbles Farm."

is correct and supports the application appropriately.

2.49 The concluding statement in this section:

"Taking all of the above into consideration along with the additional implementation of a range of best-practice control measures during the working of the quarry site, the overall noise impacts are unlikely to be significant."

can also be considered to be correct and reasonable.

2.50 Road traffic noise is then considered and correctly states that HGV movements within the site are included in the calculated site noise levels addressed in the previous part of the assessment.

2.51 Off-site HGV movements are considered in the context of existing and development traffic flows on the local road network based on the information contained with the Transport Statement for the application.

2.52 Based on the figures/data presented, the final paragraph that states:

"Such changes in traffic flow and HGV composition are likely to result in noise level increases of significantly less than 1 dB, a magnitude of change that can be classified as 'negligible' and therefore not considered to be significant with no requirement for further detailed assessment."

is correct and sufficiently addresses the potential off-site road traffic noise levels.

2.53 The Design Manual for Roads and Bridges (DMRB) LA 111 (Highways England et al, 2020) suggests that a change of less than 1 dB(A) is considered '*negligible*' in both the short term and the long term.

2.54 It is also commonly accepted that a change in road traffic noise of 1 dB $L_{A10, 18h}$ in the short term is the smallest that is considered perceptible.

Section 6

- 2.55 Section 6 of the assessment provides recommendations including suggesting site noise limits.
- 2.56 Site noise limits for routine operations are presented in a table in paragraph 6.1.2 as follows:

Location	Site Noise Limit dB L_{Aeq}, 1h (free-field)
Old Nickson's Cottage	52
Whinmore Fold	52
Woodlands	55
Red Lea	55
Bourbles Farm	55
Crossing Cottage	48
Greenacres	55
Lyndale Farm	55
Mytax/New England Cottage	53
Hillfield House/Pointer Farm	53
The Beeches	53
Ourome	47

- 2.57 It is noted that the overall average for Monday to Friday and Saturday morning for Ourome would result in a site noise limit for routine operations of 48 dB L_{Aeq}, 1 hour free field, but the lower level presented covers the lower background noise level on a Saturday morning and therefore can be considered appropriate and conservative.
- 2.58 The suggested site noise limit of 55 dB L_{Aeq}, 1 hour free field for Woodlands, Red Lea and Bourbles Farm is above the background level plus 10 dB(A) during which exceedances were found in Phases 1 and 4 (see earlier).
- 2.59 My recommendation would be that a site noise limit at these three locations for routine operations should be 50 dB L_{Aeq}, 1 hour free field apart from during the works in Phase 1 close to Woodlands and Red Lea and during Phase 4 during works close to Bourbles Farm.
- 2.60 Calculations can be undertaken to check the distance from the properties in which works would necessitate the higher site noise limit.

- 2.61 A site noise limit for temporary operations limited to no more than 8 weeks in any calendar year is then suggested in the assessment in line with Planning Practice Guidance (Minerals) paragraph 022.
- 2.62 This section also recommends that site noise monitoring is included with any planning conditions and should be conducted in accordance with a noise monitoring scheme submitted to and approved by the Mineral Planning Authority. This is normal practice and is recommended by WBM on all mineral sites at which the company undertakes noise assessments.
- 2.63 The recommendations also suggest various noise control measures which are appropriate and comprehensive for such a site as well as the requirement for a site noise management plan prior to operations starting on the site as would normally be conditioned on a mineral site. The noise monitoring scheme and complaints procedures can be conditioned to be incorporated into such a noise management plan.
- 2.64 The assessment is then summarised as follows:
- “The results of the assessment demonstrate that the proposed development can be implemented by the Operator whilst adhering to the noise standards contained within current Planning Practice Guidance for mineral sites.*
- It is therefore considered unlikely that the proposed development would result in significant or unacceptable adverse impacts at noise-sensitive premises in the vicinity of the site. A range of recommendations have been made to minimise potential noise emissions associated with the operation of the site.*
- The overall noise impact of the proposed development is therefore considered to be in line with current national and local planning policy which seeks to prevent and avoid any significant or unacceptable adverse impacts and, where necessary, mitigate and reduce to a minimum other adverse impacts.*
- 2.65 This is a reasonable conclusion and summary of the findings of the assessment as it indicates that the site can be worked whilst keeping site noise emissions at the nearest dwellings to environmentally acceptable levels.

3 Reasons for Refusal

- 3.1 In the Refusal of Planning Permission dated 03 August 2023 (Application No. LCC/2023/0030) the second reason for refusal is:

- "2. The development by reason of proximity to residential properties would have unacceptable noise and dust impacts that could not be satisfactorily mitigated contrary to Paragraph 198 of the National Planning Policy Framework, Policy DM2 of the Joint Lancashire Minerals and Waste Local Plan and Policy CDMP1 of the Wyre Local Plan."

3.2 Paragraph 198 of the NPPF states that :

- "198. 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 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:
- a) 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;
 - b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."

3.3 Policy DM2 of the Joint Lancashire Minerals and Waste Local Plan and Policy CDMP1 of the Wyre Local Plan is as follows:

"Development for minerals or waste management operations will be supported where it can be demonstrated to the satisfaction of the mineral and waste planning authority, by the provision of appropriate information, that all material, social, economic or environmental impacts that would cause demonstrable harm can be eliminated or reduced to acceptable levels. In assessing proposals account will be taken of the proposal's setting, baseline environmental conditions and neighbouring land uses, together with the extent to which its impacts can be controlled in accordance with current best practice and recognised standards.

In accordance with Policy CS5 and CS9 of the Core Strategy developments will be supported for minerals or waste developments where it can be demonstrated to the satisfaction of the mineral and waste planning authority, by the provision of appropriate information, that the proposals will, where appropriate, make a positive contribution to the:

- Local and wider economy
- Historic environment
- Biodiversity, geodiversity and landscape character
- Residential amenity of those living nearby
- Reduction of carbon emissions
- Reduction in the length and number of journeys made. This will be achieved through for example:
 - The quality of design, layout, form, scale and appearance of buildings
 - The control of emissions from the proposal including dust, noise, light and water
 - Restoration within agreed time limits, to a beneficial afteruse and the management of landscaping and tree planting
- The control of the numbers, frequency, timing and routing of transport related to the development."

- 3.4 Based on the proposed development's compliance with the requirements of the latest Government guidance in relation to noise from mineral sites, it has been clearly demonstrated that the noise emissions from the Site do comply with the requirements of Paragraph 198 of the NPPF in avoiding noise giving rise to significant adverse impacts on health and quality of life.
- 3.5 Paragraph 198 of the NPPF also requires that any development should "*mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development*" and mitigation is included in the assessment in the form of stand-off distances and bunding as part of the site plan designs.
- 3.6 The recommendations for noise control measures to be reproduced in a noise management plan for the site also provides mitigation with a view to minimising potential noise impacts at the nearest dwellings.
- 3.7 Additional mitigation measures/bunding beyond those mentioned above are not included in the assessment as the author considers that the assessment demonstrates that the noise impact is minimised due to the measures outlined above.
- 3.8 Any further mitigation such as increased bunding/stand-offs would need to consider the available space and material as well as the costs incurred when weighed against the potential benefits.
- 3.9 The areas in which this might have been considered are the limited areas in which the operations result in site noise levels at some of the nearest dwellings that are more than 10 dB(A) above the representative background noise levels, but below 55 dB $L_{Aeq, 1 \text{ hour free field}}$.
- 3.10 As stated earlier, the extent of those areas in which the site noise levels are more than 10 dB(A) above the representative background noise levels can be established and it is reasonable to use a short term noise limit of 55 dB $L_{Aeq, 1 \text{ hour free field}}$ during those limited periods. Alternatively, a restriction on some operations in those areas may allow the site noise levels to comply with background noise levels plus 10 dB(A).
- 3.11 This approach is a possible option, but I would not consider it to be essential.

- 3.12 The absence of such additional measures or investigation into the areas in which the site noise levels are more than 10 dB(A) above the representative background noise levels does not have to be a defining factor in determining the validity of the conclusions of the noise assessment or the assessment's adherence to Paragraph 198 of the NPPF.
- 3.13 The assessment also demonstrates that the operator will control noise emissions from the site to within levels acceptable in the context of current Government guidance and therefore also complies with Policy DM2 of the Joint Lancashire Minerals and Waste Local Plan and Policy CDMP1 of the Wyre Local Plan.
- 3.14 It should be noted that Paragraphs 223 and 224 of the NPPF are as follows:
- “223. *Planning policies should ...*
(e) safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material;
(f) set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality;
(g) when developing noise limits, recognise that some noisy short-term activities, which may otherwise be regarded as unacceptable, are unavoidable to facilitate minerals extraction...”
- “224. *When determining planning applications, great weight should be given to the benefits of mineral extraction, including to the economy. In considering proposals for mineral extraction, minerals planning authorities should...*
(c) ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source, and establish appropriate noise limits for extraction in proximity to noise sensitive properties...”
- 3.15 These paragraphs emphasise the importance of mineral extraction to the economy and infrastructure of the country/area and refers to “unavoidable” noise and establishing appropriate site noise limits. Such limits are those recommended in Planning Practice Guidance (Minerals), the web-document that replaced the original “Technical Guidance to the NPPF” document that was issued to accompany the NPPF in 2012 and contained the same guidance.

4 Other Aspects

Footpaths/Bridleways

- 4.1 It is noted in the other documents recommending refusal and the comments from other bodies that concerns were also raised over the noise impact on public bridleways with a specific reference to horses.
- 4.2 The submitted assessment does not specifically address noise on bridleways and footpaths, but these and other rights of way are not covered by the noise guidance set out in Planning Practice Guidance (Minerals).
- 4.3 There is little guidance on specific or relative noise levels that are appropriate for these types of receptors mainly as the users are transient and the highest site noise levels experienced by those on the public rights of way would be only for a brief period of time when the user is at the closest possible approach to the site operations. As the user travels along the right of way, the site noise level should reduce as the distance from the site operations increases.
- 4.4 If considered as receptors, locations on public rights of way are considered to have “medium” sensitivity and as users will not be exposed to site noise for long periods, any adverse noise effects are normally considered not significant in the context of transitory use.
- 4.5 The British Horse Society (BHS) advice for Access and Rights of Way document (November 2022) gives some guidance on a horse’s response to noise, including the following:

“Considering how similar a noise may be to a natural predator is a useful guide to whether a horse will be troubled by it. A quiet rustling is likely to have greater impact than a high speed train because the former could easily be associated with a predatory animal moving into position to attack whereas a train is a continuous steady loud noise which is not clearly a predator; it can be heard from far away and the majority of horses these days have been exposed to and accepted commonly occurring mechanical noises from their birth. There are many situations of horses unperturbed by trains or motor traffic, even for the first time, in fields or on bridleways alongside a railway or motorway. Because a human hears a sound, it is often assumed that this is what is troubling a horse, but the horse may have heard that sound long before and already dismissed it as not a threat, but could be reacting to a sound or movement that a human has not seen, possibly even behind it.”

- 4.6 Note that as the plant site and to some extent, the mineral extraction/infilling operations are a relatively constant noise source, there would be no sudden loud aspect of the noise that might be expected to startle the horses or other animals on the footpath.

Ecological Receptors

- 4.7 It is also noted that Natural England suggested the provision of *“predicted average and maximum noise levels with a noise contour map provided to show how noise would affect adjacent land used by bird species at each phase of the site”*.
- 4.8 Maximum noise levels at the receptors in the vicinity of a sand and gravel site are normally controlled by activity close to the receptor rather than from operations on the site.
- 4.9 The site noise levels presented in the assessment are for a worst case scenario rather than an “average” level and are therefore more able to be considered a robust approximation of the worst noise levels that would be experienced at the receptors close to the operations.
- 4.10 Noise contour plots can be produced for the proposals, but this is often not the best means of demonstrating site noise from mineral operations due to the mobile nature of the operations. The calculated site noise levels at the receptors that surround the site are all in compliance with 55 dB $L_{Aeq, 1 \text{ hour free field}}$ and are closer and less shielded than the ecological areas beyond the dwellings, the site noise levels on those ecological areas will be no more than those levels.
- 4.11 In my experience of mineral sites in rural areas, most ecological consultants will recommend a site noise limit of no less than 55 dB $L_{Aeq, 1 \text{ hour free field}}$ at ecological receptors. As the dwellings are subject to routine site noise levels no more than that and the site noise levels at the more distant and shielded ecological receptors, this would not be exceeded in the areas of concern to Natural England.
- 4.12 There is not a substantial amount of research into the noise impact on birds of various species, but a report prepared for the Institute of Estuarine and Coastal Studies (IECS) and the University of Hull (Cutts et al, 2009) is one of the limited number of in depth studies into bird responses to noise and indicates that As a general rule, noise levels of 70 dB L_{Amax} were considered to be above the level that would indicate a behavioural response and below the level that initiates flight responses in most cases.

5 Conclusions

- 5.1 In my opinion, the Vibrock Limited noise assessment report submitted with the application does demonstrate that the site can be worked whilst keeping noise to within environmentally acceptable levels in compliance with Paragraph 198 of the NPPF and Policy DM2 of the Joint Lancashire Minerals and Waste Local Plan and Policy CDMP1 of the Wyre Local Plan.
- 5.2 The submitted assessment also provides appropriate recommendations to ensure compliance with the latest Government advice in Planning Practice Guidance (Minerals) is maintained and that the amenity of the nearest noise sensitive dwellings is protected

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