Walker Beak Mason Limited
01604 771101 | hq@wbm.co.uk | www.wbm.co.uk

ACOUSTIC CONSULTANTS

Town and Country Planning Act 1990

Section 78 Appeal

Ref: APP / E1885 / W / 22 / 3310099

Land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster, Worcestershire

Appeal by NRS Aggregates Limited against the refusal of planning permission by Worcestershire County Council

Summary of Proof of Evidence of Rachel Canham with regard to Noise

Author	Rachel Canham BEng MSc CEng FIOA
Date	08 October 2024
Revision	Summary
WBM Ref	5342

ANC ACOUSTICS & NOISE CONSULTANTS

WBM ACOUSTIC CONSULTANTS

Contents

1 Introduction and Scope of the Evidence

1.1 My name is Rachel Canham. I am a Director of Walker Beak Mason Limited (WBM), which specialises in acoustic consultancy. I hold the degrees of Bachelor of Engineering in Electroacoustics from Salford University in 1993 and a Master of Science in Environmental Acoustics from London South Bank University in 1998. I became a Chartered Engineer in 2003 and a Fellow of the Institute of Acoustics in 2011. I have been practicing as an acoustic consultant since 1993 and joined WBM in 1999.

1.2 WBM has been involved with the consideration of noise for the proposed quarry at the Lea Castle site since 2018, which included undertaking baseline noise surveys, attendance at the public exhibition and preparation of the noise assessment for the environmental statement for the planning application.

1.3 My evidence deals with potential noise arising from quarrying, processing and restoration activities within the proposed quarry site at Lea Castle Farm. It addresses the noise related reasons for the refusal of the planning application for the proposed quarry, and the comments received from Worcestershire County Council (WCC) and the Rule 6 party (Stop the Quarry Campaign) with regard to noise as set out in their Statements of Case (SoC).

1.4 In summary, I have responded to the various comments on noise including the consideration of cumulative impact and shown that this does not affect the outcome of the original noise assessment.

2 The Appellants' Cases

2.1 Planning permission for the proposed quarry was refused on 27 May 2022. There are nine reasons for refusal listed. Noise was not specifically listed as a reason for refusal. However, noise is most relevant to reason for refusal 3 regarding impact on amenity.

2.2 In their Statement of Case, Worcestershire County Council (WCC) have confirmed that they intend to defend only one reason; reason for refusal 2 (unacceptable impact on openness of the Green Belt). WCC do not intend to defend reason for refusal 3 (unacceptable impact on residential amenity and local schools).

2.3 In the revised Statement of Common Ground, with regard to noise WCC agreed that Worcestershire Regulatory Services (the statutory consultees with regard to noise impacts) were satisfied with the noise assessment report prepared by WBM in 2019 for the proposed quarry, albeit in isolation.

2.4 With regard to cumulative impact and noise, in the Statement of Common Ground and also in WCC's Statement of Case, WCC confirm that the appellant has provided sufficient information to determine that the appeal proposals, in combination with other development, would not cause amenity harm with regard to noise to residential dwellings or Heathfield Knoll School and First Steps Nursery, subject to the implementation of proposed mitigation measures.

2.5 The Rule 6 Party, Stop the Quarry Campaign (STQC) also prepared a Statement of Case. They propose to defend all nine reasons for refusal. Their Statement of Case includes some general criticisms of the expert reports and technical work undertaken for the planning application.

3 Noise Assessments

Previous Noise Assessment, Original Scheme

3.1 The previous noise assessment for this site was completed by Dr Paul Cockcroft of WBM in September 2019. Dr Cockcroft retired in 2022 and is no longer working in acoustic consultancy.

3.2 The previous assessment determined baseline noise levels at the nearest noise receptors to the proposed quarry. The results of the baseline noise surveys undertaken in 2018 were used to set limits for site noise from normal operations based on guidance set out in Planning Practice Guidance for Minerals (PPGM). Site noise calculations were undertaken to each receptor for a reasonable worst case scenario. The calculated site noise levels were all at or below the PPGM site noise limits for normal, day to day operations. The calculated levels from temporary operations also complied with limits for such activities set out in PPGM. The noise assessment was undertaken for the nearest noise sensitive properties to the proposed quarry.

Updated Noise Assessment, Revised Scheme

3.3 WBM carried out a noise assessment of a revised scheme for the site in July 2024. The assessment was undertaken for the nearest residential properties to the site, as included in the previous assessment. The revised scheme includes reductions in noise output from the processing plant, use of quieter mobile plant and reductions in height to the majority of bunds. For Phase 1, mineral extraction will not take place at the same time as infilling and/or soils restoration works. For the other phases, there is to be simultaneous activities with infilling occurring in the preceding phase.

3.4 As for the previous noise assessment, the updated assessment for the revised scheme used the previous baseline noise survey results from 2018 to set limits for site noise from normal operations following the guidance in PPGM, despite generally higher baseline noise levels being measured in subsequent surveys.

3.5 Site noise calculations were undertaken to each receptor for a reasonable worst case scenario. The calculated site noise levels were all at or below the PPGM site noise limits for normal, day to day operations.

3.6 The calculated levels from temporary operations are unchanged from the previous noise assessment and comply with limit for such activities set out in PPGM. The noise assessment was undertaken for the nearest noise sensitive properties to the proposed quarry.

Updated Baseline Noise Levels

3.7 As included in the previous assessment, baseline noise measurements were undertaken in June and July 2018 at locations that were considered as being representative of the nearest existing properties to the proposed extraction / infilling area and processing plant.

3.8 Updated baseline noise surveys were undertaken by WBM in February 2023 and August 2024. At most locations, the updated baseline surveys in 2023 and 2024 demonstrated similar or higher baseline background noise levels to those measured in 2018. This confirms that the suggested site noise limits based on the 2018 baseline surveys are a robust approach.

4 Comment on the Potential for Noise Impact

4.1 I have undertaken calculations for additional permitted or allocated residential receptors, all of which are located no nearer the quarry than the receptors already assessed by WBM. The calculations were undertaken using the same noise models as used for the previous noise assessment for the original scheme, and the updated noise assessment for the revised scheme. All of the calculated site noise levels comply with the site noise limits for normal and temporary operations for these additional receptors, demonstrating that the proposed quarry at Lea Castle Farm would not cause any significant impact at existing, permitted or proposed residential developments.

4.2 With regard to cumulative impact from mineral sites, there are no other mineral sites or operations in the vicinity of the proposed quarry at Lea Castle Farm, so no cumulative assessment of such operations is necessary.

4.3 With regard to road traffic, the additional traffic generated by the allocated developments at the time were presented in the transport assessment prepared for the quarry application. The forecast traffic flow from the proposed quarry at Lea Castle Farm was included within the assessment of road traffic noise for Lea Castle Village as set out in the noise assessment report submitted with the application. Therefore the cumulative impact of additional traffic from the proposed quarry has already been considered in the noise assessment for the Lea Castle Farm site.

4.4 There are areas of employment use within the proposed development at the Former Lea Castle Centre and Lea Castle Village, however the noise levels from these are likely to be restricted in order not to cause impact on the immediately adjacent residential properties within the same development. As such the cumulative impact on other receptors from the employment use within these sites is expected to be negligible.

4.5 The noise from construction, in particular of the Lea Castle Village site, is likely to be the most significant noise source associated with other developments that may have an impact on the noise sensitive receptors. I have considered the cumulative impact with regard to construction activities on the permitted and proposed housing developments in general terms.

4.6 Construction noise is highly variable depending on the particular activity, location of the works, the plant items used, the duration of the works at each location and the mode of operation. The Health Impact Assessment Matrix submitted with the application for the Lea Castle Village site confirmed that any disruption from construction noise will be temporary and will generally be limited to the wider site and surrounding area, and are only likely to be in close proximity to any noise sensitive receptors for relatively short durations.

4.7 The only appropriate assumption that can be made is that it would be expected that construction noise would meet appropriate noise limits at the nearest noise sensitive receptors (dwellings) to the construction site. From BS 5228 and WRS guidelines, it appears that 65 dB $L_{Aeq,T}$ could be considered as a conservative daytime noise limit for construction noise.

4.8 The limit for construction noise is higher than the maximum daytime site noise limit for normal quarry operations (55 dB $L_{Aeq,1h}$). Quarry site noise levels at the nearest receptors to the Lea Castle Village development will be at least 10 dB(A) below the maximum potential noise from the construction activity on the housing developments. Site noise from the quarry is therefore likely to be inaudible compared to the construction noise. The inclusion of site noise from the quarry would not change the cumulative noise impact at these receptors, as the noise environment would be controlled by construction noise.

4.9 Construction noise will be variable and temporary and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. As such it is expected that the construction activity would only be up to the construction noise limit for a short period of time when works were near a particular receptor. Also, the calculated site noise level due to the quarry is a worst case with simultaneous extraction and infilling operations occurring at the nearest parts of the quarry to the receptor, which would not happen in practice.

4.10 Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any receptor. The consideration of cumulative impact does not alter the outcome of the original noise assessment for the quarry site.

4.11 Heathfield Knoll School and the Nursery are located approximately 1 kilometre from the Lea Castle Village site. At this distance, any construction noise from the Lea Castle site is highly unlikely to be significant at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

4.12 The guidance documents relating to noise generally require noise not to have unacceptable adverse impacts and to avoid significant adverse impact. The fact that sound may occasionally be heard does not result in significant adverse impact; occasional identifiable noise could occur for both "No Observed Adverse Effect Level" (NOAEL) and "Lowest Observed Adverse Effect Level" (LOAEL) scenarios, neither of which result in significant adverse impact.

5 Responses to Statements of Case

WCC

5.1 WCC considers that that application information provided demonstrates that the scheme would not cause amenity harm with regards to noise to residential buildings, the school or nursery, subject to the implementation of the proposed mitigation measures.

5.2 WCC have not raised any issues regarding noise in their Statement of Case that require responses.

Rule 6 Party

5.3 The Rule 6 party (Stop the Quarry Campaign) have raised concerns about noise but have not provided any details.

5.4 The noise assessments prepared by WBM for the original and revised schemes follow appropriate protocols, by determining the baseline noise levels at the nearest receptors using robust methods, including measurements on several days. The average background noise levels from 2018 were used to determine appropriate site noise limits following current Government policy and guidelines, i.e. the advice in PPGM. Subsequent noise surveys have generally resulted in higher baseline background noise levels, indicating that site noise limits based on the 2018 baseline noise survey data is a worst case approach.

5.5 Site noise calculations were undertaken, including the consideration of the mitigation required to ensure that appropriate noise levels were met for the reasonable worst case scenarios. The receptors considered included the nearest residential properties and also the Heathfield Knoll School and Nursery.

5.6 I have considered cumulative impact from noise in my proof and shown that this does not affect the outcome of the noise assessments for the original and revised schemes. This reasoning should also be sufficient to respond to the Rule 6 Party concerns regarding noise.

6 Summary and Conclusions

6.1 The proof of evidence regarding noise has addressed the reasons for the refusal relating to noise of the planning application for a proposed quarry at land at Lea Castle Farm, Wolverley Road, Broadwaters, Kidderminster, Worcestershire

6.2 The results of calculations for additional noise sensitive receptors (permitted or allocated developments), have been included in the proof. The calculations were undertaken using the same noise models as used for the previous noise assessment for the original scheme, and the updated noise assessment for the revised scheme. All of the calculated site noise levels comply with the suggested site noise limits for normal and temporary quarry work. Therefore, operations at the proposed quarry at Lea Castle Farm would not cause any significant adverse noise impact at the permitted and proposed residential developments.

6.3 Cumulative impact has been addressed, with noise from construction activities at the Lea Castle Village site considered to be the most significant noise source associated with other developments that may have an impact on the noise sensitive receptors.

6.4 If construction noise was at the possible maximum limit at a noise sensitive receptor, noise from the quarry would be insignificant compared to the potential construction noise from the housing development. As such, the addition of site noise from the quarry would not change the cumulative noise impact at this receptor, as the noise environment would be controlled by construction noise.

6.5 Construction noise will be variable and temporary, and only likely to be in close proximity to any noise sensitive receptors for relatively short durations. In addition, the calculated site noise levels due to the quarry are worst case, which would not happen in practice. Taking this into account, the cumulative impact from both normal site activities from the quarry and construction operations is unlikely to be significant at any receptor.

6.6 As such, the consideration of cumulative impact does not alter the outcome of the original noise assessment of the site.

6.7 Heathfield Knoll School and Nursery are located approximately 1 kilometre from the Lea Castle Village site. At this distance, any construction noise from the Lea Castle site would be insignificant and is likely to be inaudible at the school and nursery, and as such would not change the impact assessment of quarry noise affecting this receptor.

6.8 The consideration of cumulative impact does not affect the outcome of the original noise assessment for the original scheme, nor the updated noise assessment for the revised scheme.

Rachel Canham BEng MSc CEng FIOA