

Technical Note

Prepared by: **Dr Robert Storey** Date: **15 April 2026**
Project: **Bourbles Lane Quarry** Ref: **5573**
For: **John Barrett** Page: **1 of 5**
Subject: **Bourbles Lane Quarry – Phase 1 Initial Works**

Introduction

The Initial Works in Phase 1, i.e. the extraction of mineral below the footprint of the proposed bunding to the south of Woodlands, is the only remaining point not agreed between David Gray of Atkins and myself.

It is disappointing that the matter raised was not resolved prior to the inquiry commencing. On behalf of the Appellant, I had tried to resolve all outstanding matters and on Thursday 09 April during a telephone conversation with Mr Gray, it was agreed between us that this was the only outstanding point relating to noise.

At this stage, it was agreed that further conversation would take place following completion of a meeting Mr Gray was due to attend.

The intention was that further dialogue with regards to this issue over the following 24 hours would lead to agreement on the best way to address this issue. This dialogue would allow for both consultants to check the data used to their calculations and to come to a solution with a view to protecting the amenity of the dwelling during these initial works.

However, despite numerous attempts to contact Mr Gray over the course of Thursday 09 April and Friday 10 April, no further discussions took place.

Mr Gray did speak to my colleague, Rachel Canham, but informed her that he was not able to complete or agree the draft supplementary SoCG document that I had prepared and sent on Wednesday 08 April (email reproduced at the end of this Technical Note) as it required agreement with his client. He stated that he would not be able to provide his input on the document or proceed further with discussions unless instructed to by his client and he was restricted by that.

There was therefore no follow up call to discuss solutions even though it had previously been agreed that such a solution could be formulated and agreed upon.

Differences in Calculated Noise Levels

In the brief conversation on Thursday 09 April, Mr Gray indicated that his calculations were not achieving the same results as my own.

My suggestion was that this may relate to the specific heights and distances used rather than the methodology as our other calculations were very similar.

It was my intention to discuss working heights and distances on the follow up call (that never took place).

Reviewing Mr Gray's figures and mine, the apparent discrepancy appears to relate to the distances and working heights, as suggested.

I have used a minimum distance to the area to be excavated of 17.5m from the property (as in Mr Gray's document) and include a "stand-off" distance of up to 10 metres from the extraction boundary to account for the reach of the excavator (the main noise source being the engine) and including the fence with top at 10.1m AOD at a distance of 14m from the property (it is the red line boundary that is at 12m and the fence is inside that boundary).

In terms of working heights, I have taken the working height of 5m AOD for those extraction works to account for the removal of soils and overburden (covered as a temporary operation) and this appears to me to be the main reason for the discrepancy in the two sets of calculations. The point that seems to have been avoided in My Gray's calculation is that the soil stripping exercise is subject to the 70dB limit. Once that has been completed the depth will have been reduced by approximately 0.5m and therefore the effective height of the barrier increased by the same amount.

Based on the cross sections and taking into account the removal of the overburden as outlined above, the suggested site noise limit of 50 dB LAeq, 1 hour can be achieved.

However, due to the assumptions made to undertake calculations for mineral extraction to present a worst case scenario (that is actually not likely to occur in practice), there is an element of uncertainty that can result in these differences. These assumptions and the associated uncertainty also render the calculations and data to one decimal place as having an element of false specificity (this was discussed and agreed verbally as neither of us would normally specify below maybe a quarter of a metre for heights and maybe 5 metres for distances).

I remain confident that my calculations are robust. Nevertheless, in recognition of the element of uncertainty, there are a range of potential solutions if the difference between our assessments would require further consideration.

Potential Solution

There are other solutions readily and obviously available with a view to protecting the amenity of the residents at Woodlands.

An email sent to Mr Gray on Friday 10 April suggesting possible text relating to the issue to be included in a supplementary document to the SoCG is reproduced at the end of this Technical Note.

Firstly and most importantly (as stated in my draft supplementary SoCG document), conditions relating to a noise limit for these initial works (and other routine operations) of background levels plus 10dB(A) and the requirement for Noise Management Plan are essential. Such a Noise Management Plan would stipulate noise monitoring and procedures to ensure compliance with the stipulated site noise limits. As there is concern over the site noise levels from those works and the duration of the works is around 2 weeks at most (less whilst extracting at the highest working height), there is scope for an installed sound level meter continuously monitoring noise levels at Woodlands during this period.

“Live” monitoring for 2 to 3 weeks with a trigger level for each 15 minute period of 50 dB (the suggested site noise limit for Woodlands) could be set to trigger an alert to the site manager, with the Noise Management Plan requiring that works cease until the cause of that exceedance is addressed. “Live” monitoring on mineral sites is often impractical but based on the short term of those initial works plus the ambient noise levels in the area measured by Vibrock, this can be anticipated to work and would thereby proactively protect the residents and remove any uncertainty by condition.

In all likelihood, the site noise limits will not reach the predicted levels over the normal assessment period of one hour.

Secondly, In terms of working solutions to reduce noise levels specifying an excavator with a lower sound power level for the short-term initial works is a realistic and enforceable option. There are numerous excavators of this type on the market.

Thirdly, an additional suggestion would be to ensure that the Mineral is extracted from south to north resulting in the excavator noise source being at a lower height at the nearest point and therefore also benefitting from the working face of the excavation.

The main way to address the issue would be the conditioned site noise limits and the procedures and requirements of a Site Noise Management Plan that would be approved by LCC and their consultants prior to any works starting on site (as also required by condition).

Conclusions

The outstanding issue relating to noise was discussed by the two consultants and it was anticipated that further discussions would result in a solution to the sole remaining area of disagreement but there was no further contact from Mr Gray.

There are potential solutions to the issue even if one considers uncertainty due to the differences in the calculated noise levels in the two sets of calculations.

I have set out that the issue can be readily and easily be addressed by a range of readily applicable responses. Conditions relating to site noise limits and the requirement for a Site Noise Management Plan would ensure that the suggested site noise limits are not exceeded during the initial mineral extraction operations and site noise monitoring should be stipulated to ensure that this is the case and/or stipulating the plant working of a known lower sound power output and/or method of working.

Any one of these solutions would address the sole outstanding issue with regard to noise.

Dr Robert Storey

Senior Consultant

Email sent to Mr David Gray 08 April 2026

From: hq@wbm.co.uk hq@wbm.co.uk
Sent: Wednesday, April 08, 2026 17:26 pm
To: david.gray2@atkinsrealis.com david.gray2@atkinsrealis.com
Cc: Liam Toland liam@keddltd.co.uk
Subject: Bourbles Lane Appeal – Noise

Good afternoon David,

I am emailing as I was not able to get hold of you on the phone.

Following the Proofs being submitted and the ongoing work on rebuttals as well as comments from LCC regarding most issues relating to noise and dust being agreed (when seeking a round table as subsequently rejected by the Inspector), I have drafted a brief supplementary document to our Statement of Common Ground on noise.

The draft document (attached) follows the same format at the SoCG that you prepared in March and pushes as a final point the need for conditions relating to site noise limits and requiring a Noise Management Plan to protect the amenity of the local residents.

I thought I had best send it today as I am not working on Friday (and driving north on Monday) and it would be good to summarise everything before next week (and the 10 April extended deadline for submission of the rebuttals) and therefore I would appreciate your input and potentially, agreement.

Obviously, if we cannot agree on the document, it would need to be left out with just the existing SoCG, Proofs and Rebuttals in place.

I look forward to hearing from you.

Regards,
Robert

Dr Robert Storey

T: 01604 771101 E: hq@wbm.co.uk W: wbm.co.uk |

Email sent to Mr David Gray 10 April 2026

From: hq@wbm.co.uk <hq@wbm.co.uk>
Sent: Friday, April 10, 2026 3:11:22 pm
To: david.gray2@atkinsrealis.com <david.gray2@atkinsrealis.com>
Cc: Liam Toland <liam@keddltd.co.uk>
Subject: Bourbles Lane Appeal - Noise

Good afternoon David,

Rachel has updated me on your call and your efforts with regard to the Supplementary document to the SoCG.

From our discussions yesterday, it would seem clear that the main stumbling block would be the extraction of the mineral under the bund.

I thought I might try to suggest some text in relation to that point...

Although there is not 100% agreement on the compliance with the proposed site noise limit for Woodlands based on no more than 10 dB(A) more than background noise levels during the mineral extraction in the area located below the bund, this uncertainty can be addressed by enforcement of a conditioned site noise limit for those operations and enforcement of that limit.

To this end, a conditioned Site Noise Management Plan (NMP) will assist in ensuring that the amenity of the residents at the property are protected and during the 1 to 2 week period during which those mineral extraction operations will take place, it is suggested that the Condition relating to the NMP could stipulate that monitoring should be undertaken throughout this period of working.

I would suggest that an installed live system with a trigger sending alerts to the consultant who installed the meter as well as the site manager for a period of 2 weeks would satisfy this with the NMP covering what happens in the event of an exceedance.

I did consider information that we have been given by suppliers that suggest that AI could be used to identify the nature of any increased noise levels, but based on the ambient levels measured by Vibrock at Woodlands, I would suggest that a trigger point of 50 dB (maybe for a 15 minute LAeq) possibly with audio would be sufficient in these circumstances as that would eliminate most other short term local noises such as vehicles on the lane.

I hope this helps, but otherwise it may be that we can discuss this with others' input on Tuesday.

Regards,
Robert

Dr Robert Storey

T: [01604 771101](tel:01604771101) **E:** hq@wbm.co.uk **W:** wbm.co.uk |