

2024.00373.000

George Hotel

Refurbishment (Planning & LBC)

Response - Acoustics

28.05.25

Shaping places that have
a positive impact

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Revision	Date	By
01	27.05.25	AHR Building Consultancy

Introduction

APPLICATION REFERENCE AND DOCUMENTS:

This mini-report seeks to record the matters pertaining to queries raised by the Statutory Consultee party during the advertising period of the planning application ref **2025/48/91147/W (Planning)** and **2025/65/91148/W (LBC)**.

This report pertains specifically to the Noise assessment only based on the submitted supplementary information report ref:

L054-AHR-XX-XX-RP-A-08801_P1 - Noise Impact Assessment

AIM OF THIS REPORT:

The aim of this report is to provide the Lead Planning Officer and relevant parties with a singular point of reference in respect of the submitted material, the Statutory Consultee's queries/ comments and a record of formal response by the applicant and/ or their appointed sub-consultants (Specialist).

SUPPLEMENTARY NOTE:

The statutory party has commented upon 3nr matters of different disciplines – for this report we shall focus on the Noise impact Assessment matter only as this is a distinct discipline with the other query matters (Contaminated Land and Air Quality) being addressed in other report responses.

Image of reference base information (upon which these matters have been raised):

Applicant: Kirklees Council
Building: George Hotel
L054-AHR-XX-XX-RP-A-08801
Noise Impact Assessment (With addendum)
Revision P1 (Planning and LBC)

April 2025



Consultee Response

Ref: Nil – See meeting minutes 15.05.25

Date: 15.05.25

From: KC Environment Team

Officer: Jillian Rann (on behalf of Environment Team)

The consultee has not formally posted comments upon the portal and has utilised the consultation mechanism with the Lead Planning Officer to raise the matter for response.

To this end the environment team have raised the following queries:

KC Environment Team:

The environment team note the applicant has resubmitted the following supporting documents with the application which were utilised in the previous application (approved) but note that there are no substantive changes to these ref:

- *L054-AHR-XX-XX-RP-A-08810_P1 - Air Quality Assessment*
- *L054-AHR-XX-XX-RP-A-08807.1_P1 - Phase 1 Cont'd Land_Part 1*
- *L054-AHR-XX-XX-RP-A-08807.2_P1 - Phase 1 Cont'd Land_Part 1*
- *L054-AHR-XX-XX-RP-A-08807.3_P1 - Phase 1 Cont'd Land_Part 1*
- *L054-AHR-XX-XX-RP-A-08801_P1 - Noise Impact Assessment*

Ctd'

We would like to query as to whether these reports are still an accurate reflection of the status of the relevant matters sufficient to form a baseline upon which designs can be measured against, specifically:

- 1. Air quality assessment – this is 2 years old, is this still accurate?*
- 2. Contaminated Land Assessment – 2 years old, any updates/ changes to declare?*
- 3. Noise assessment – 3 years old – is this still a fair reflection of site conditions?*

NOTE: it is reiterated by the applicant that this report covers only the response to Acoustic/ Noise Impact Matters due to specialist nature of this discipline.

Dialogue (Applicant)

The consultee has raised the matter in respect of the original Noise Assessment as prepared by Mott Macdonald prepared in November 2022 in support of the application ref 2023/65/90112/E.

As the consultee and planning officer may be aware, whilst the design for the internal accommodation layouts and façade treatments of the revised George Hotel design and subsequently this new Planning application, it is noted that the original Mott Macdonald NIA was a form of baselining. This is to ensure the subsequent application of the design in respect of compliance with the relevant standards (Legislative, British Standards, ACOPS) at later stages of design and construction (Building Control) are sufficiently captured at Planning stage to act as baseline information and relevant commitments to standards.

Whilst the design layout has led to what could be deemed significant change, the actual layout in principle, site boundary etc remains unchanged and to this end, the Applicant instructed the resubmission of the Mott Macdonald Noise Assessment unaltered as it was deemed the condition in respect of location and aspiration unchanged.

Following Receipt of Consultee Comments:

The question raised by the statutory consultee is deemed to be valid and to this end, the applicant has sought professional consideration from the appointed acoustic Consultant MZA Acoustics.

MZA Acoustics have performed a review of the Mott Macdonald report, comparison with their most recent testing, assessment of commitments in respect of undertakings and to this end they have prepared the report in Appendix A with the key matters recorded in bullet format within the summary.

We do however wish to raise the following key notes to the Statutory commenting party:

- The proposal does not constitute a change of use.
- The proposal is limited by boundary constraint and lies within a conservation area.
- The Proposal is largely utilising a Listed building (with inherent restrictions).
- Due to listing & conservation area position the principle of consequential improvements does not fully apply (aim rather than legislative duty).
- The current timber sash windows have been fully repaired and re-glazed with the highest performance vacuum glazing and seals available to the market.
- Further acoustic break in control via windows (such as secondary glazing) would be unlikely to achieve approval from Conservation parties.
- Any readings or design assessments should be cognisant of the current Network Rail works which represent a temporary and exceptional condition in respect of general night time sound and altered traffic movement.

Summary

Applicant Formal Response

The applicant wishes to iterate the following key matters raised in the dialogue section and the MZA Reporting:

- MZA Acoustics have been appointed to the new design team and have reviewed both the Baseline Noise Survey and Noise impact assessment prepared by Mott Macdonald.
- The Mott Macdonald reporting is prior to the window acoustic upgrades to Blocks A & B and the commencement of the network Rail Works and to this end are deemed the most accurate information upon which external acoustic baselining should be performed.
- MZA have undertaken additional acoustic assessment internally and externally to account for the Phase 2 installed glazing to Blocks A & B (but prior to commencement of the NR substantive works).
- The original Mott Macdonald report recommended consideration as to the use of Pilkington Optiphon system to John William Street which cannot be provided with the conservation limitations in respect of the original timber sash windows.
- MZA have performed additional and revised break-in calculations to determine the performance of the newly installed heritage vacuum glazing/ sash window seals to Blocks A & B.
- It is understood that the current design with the restored heritage windows would exceed the internal noise criteria by 3db to John William Street (Based on British Standard 8233:2014).

- There is no material solution available to the market at this time which would further improve this acoustic condition to John William St which would be acceptable within the conservation restrictions noting significant endeavours under Phase 2 works (complete) were undertaken to reach the highest performance condition acoustically and thermally available to the industry.
- It is possible that the internal noise levels may be slightly lower in the final scheme as enhancements to the sealing of the façade / small airgaps may be improved.
- Likewise when the final bedrooms are fitted out the additional absorption present may reduce internal noise levels by 1 to 2dBA
- The impact in respect of 3db derogation is limited to 2 bedrooms on each level overlooking John William Street (blue shaded being new build).

It is the Applicants position therefore that relevant qualified persons have sufficiently reviewed the baseline information and performed additional testing to demonstrate the current baselining and Noise Impact Assessments are accurate representations both of external noise status upon which to base assessment.

The applicant is satisfied the requirement to demonstrate professional endeavours in respect of consideration of site conditions have been accurately captured with areas of non compliance risk mitigated to acceptable compliant levels noting constraints in respect of material/ technological availability and conservation setting.

Appendix A

MZA Acoustics Design Note - AC01

1700941-DDN-AC-0001_A - External Noise Break-in

Shaping places that have
a positive impact

DESIGN DEVELOPMENT NOTE AC01

TO: Timothy Ordway (AHR), David McKeever (GMI)
FROM: Graham Hornby (MZA)
DATE: 27th May 2025
SUBJECT: DDN AC01 – Updated Baseline Noise Survey, George Hotel

Tim / David

Further to recent discussions please find below an overview of the key findings of the recent baseline noise survey undertaken at the George Hotel, Huddersfield and the implications to bedrooms served by the recently replaced windows.

Background

A previous baseline noise survey had been undertaken at the George Hotel by Mott McDonald, as part of their RIBA Stage 3 Acoustic Report for the previous design team, and a Noise Impact Assessment submitted with the previous planning application¹.

The previous Mott McDonald 'Noise Impact Assessment' has also been submitted as part of the latest planning application². However, MZA Acoustics have been appointed by the new design team to provide acoustic support on the new proposals, and have undertaken a further baseline noise survey.

At the time of the Mott McDonald baseline noise survey, the site was undergoing some repair work to the façade and windows of the George Hotel building. New timber sash window frames with modern thin double glazed window units have since been fitted to the older parts of the building due to be retained, and as such it was considered beneficial to undertake measurements simultaneously internally and externally, such that the benefit of the new glazing could be considered.

¹ Application number 2023/48/90024/W 'Partial demolition of Listed Building to facilitate refurbishment and extension of the George Hotel to form 90+ room C1 hotel with associated ancillary uses (including bar, restaurant, gym, conference room) (within a Conservation Area)'

² Application number 2025/48/91147/W 'Refurbishment and redevelopment of the George Hotel (including partial demolition, partial reconstruction and extension) to provide a 108-bedroom hotel with bar, restaurant, gym, conference facilities and ancillary facilities (Listed Building and within a Conservation Area)'

Mott McDonald Survey / Assessment

It is not the intent of this document to repeat and fully analyse the previous survey and assessment, but to summarise the pertinent points.

On the basis of the measured noise levels, Mott McDonald (MM) undertook a series of noise break-in calculations based on standard thermal double glazed windows (6mm glass, 16mm air cavity, 6mm glass) and a further set with an acoustically enhanced glazing system (6mm glass, 16mm argon filled cavity and 6.8mm acoustic laminated glass).

MM provided calculations for both daytime and night-time periods, but as the night-time is considered more relevant to a hotel use, and similar results existed for both scenarios, only the night-time summary table is presented (but can be viewed in the MM Noise Impact Assessment if required).

Table 5.6: Night-time internal noise break-in

Room	Free field noise level at façade $L_{Aeq,T}$ (dB)	IANL prediction with typical thermal glazing $L_{Aeq,8hr}$ (dB)	IANL prediction with acoustically enhanced glazing $L_{Aeq,8hr}$ (dB)	BS 8233:2014 IANL criteria for hotel bedrooms $L_{Aeq,T}$ (dB) – night-time
Bedroom 1.08	59	33	28	≤30
Bedroom 2.02	59	30	25	≤30
Bedroom 2.04	59	30	25	≤30
Bedroom 2.06	59	33	27	≤30
Bedroom 2.10	59	30	25	≤30

Source: Mott Macdonald

It can be seen that with typical thermal double glazing the recommended internal noise criterion of $L_{Aeq,T}$ 30dB is exceeded by up to 3dBA in a number of rooms. Where the acoustically enhanced glazing is used in their calculations the internal noise criterion is achieved in all rooms considered.

As noted there is a similar level of exceedance in some bedrooms during the daytime but the number of rooms affected does appear to be slightly lower based on the sample selected.

It is important to note that the assessment is based on the predicted internal noise levels in bedrooms based on assumed performance values for walls, windows and room sizes / finishes.

The MM assessment goes on to recommend that *'acoustically enhanced glazing with an equivalent sound insulation performance to the 6mm-16mm argon-6.8mm Pilkington Optiphon should be used for bedrooms along the eastern façade that have windows exposed onto the John William Street'*.

Note that whilst there is no condition on the Decision Notice directly relating to the above, the Noise Impact Assessment by MM is listed in the 'Plans and Specification Table' and Condition 2 requires that the development *'shall be carried out in complete accordance with the plans and specifications schedule listed in this decision notice'*.

MZA Acoustics Survey

The MZA Acoustics survey was based on actual measurements in a room fitted with the new heritage approved windows. Due to security and access reasons the MZA survey was undertaken on an upper floor, with one position overlooking John William Street and the other overlooking the train station entrance.

Firstly, a check was undertaken using the external noise measurement position and confirmed that the external noise levels present on the John William Street during both the MZA and MM³ surveys were similar.

The results of the MZA survey internally identified a marginal exceedance of the recommended internal noise criterion of $L_{Aeq,T}$ 30dB in the room on the upper floor overlooking John William Street. On the basis of the above and predictions undertaken for the lower floors, it is estimated that the level of exceedance of the recommended internal noise criterion of $L_{Aeq,T}$ 30dB is up to 3dBA in a number of rooms.

This is a similar scenario to that identified by MM when using data for standard thermal double glazed window units.

Noise levels on the railway elevation were slightly lower, and less exposed to noise such that it is expected that the recommended internal noise criteria will be achieved.

Discussion

The MM assessment identified a potential exceedance of the recommended internal noise criteria⁴ for hotel bedrooms at night of up to 3dBA on the John William Street elevation if standard thermal double-glazed units were used. On this basis they recommended an acoustically enhanced glazing was used instead, which meant the internal noise criteria was predicted to be achieved. As it was a recommendation within the report and the Decision Notice required the scheme to be in accordance with the listed documents, and the Noise Impact Assessment was in the list of documents, it is considered the expectation is that the recommendations be followed.

The MZA measurements indicate that a similar scenario exists based on the new windows that have been installed.

MZA understands that the windows installed are new timber framed sash windows with very expensive thin double glazed units designed to fit within the narrow openings in the window frames.

The typical solution to improve the sound insulation performance where existing windows are to be retained, would be to install secondary glazing with a 100mm + cavity between the existing and new secondary glazing system.

However, we understand that there is little appetite from the conservation officers nor AHR as Conservation Lead, to install secondary glazing solutions to the listed parts of the building.

³ The MM survey having a long term meter on the John William Street elevation only, the other locations being short-term 'spot' measurements.

⁴ Based on British Standard 8233:2014 "

Due to the significant cost of the new windows, it is not considered viable to replace the existing windows (noting that the expensive part is the glass and the frames would not accept a thicker glass unit).

On the basis of the above it is understood that the preference is to retain the newly installed windows with the acceptance that internal noise levels may marginally exceed recommended criteria and as set out in the Noise Impact Assessment presented in both the current and previous planning applications.

Important Notes

It is important to note the following;

1. This only affects the proposed bedrooms in the existing bedrooms overlooking John William Street. New areas of the build will have new windows with glass selected to meet the requirements.
2. It is possible that the internal noise levels may be slightly lower in the final scheme as enhancements to the sealing of the façade / small airgaps may be improved.
3. Likewise when the final bedrooms are fitted out the additional absorption present may reduce internal noise levels by 1 to 2dBA.

On the basis of the above the impact is limited to 2 bedrooms on each level overlooking John William Street (blue shaded being new build). Whilst rooms on the front elevation will have line of sight to parts of John William Street, it is anticipated that additional distance from the road and the more open nature will result in a reduction in noise levels immediately outside the windows on this elevation.

John William Street elevation



Please do not hesitate to contact us with any questions.

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