

SOUND INSULATION ASSESSMENT

On behalf of

Carlton Park Construction Ltd

For the site at:

21 Mengham Road, Hayling Island, PO11 9BG

REPORT DATE: 19th November 2025

REPORT REF: AA/25/11/CPC/21MR/SI



CLIENT: Carlton Park Construction

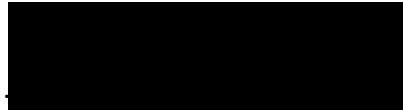
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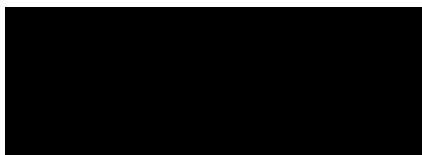
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1. EXECUTIVE SUMMARY

A sound insulation assessment has been carried out in relation to the proposed party floor construction between the proposed dwellings at first floor and the commercial premises at ground floor level at an approved residential development at 21 Mengham Road, Hayling Island, PO11 9BG.

The approved development is for the change of use from Commercial, Business and Services (Use Class E) to 3No. 1 bed Dwellinghouses (Use Class C3).

The application for prior approval was granted by Havant Borough Council (application ref: APP/24/00618) on 28th February 2025 and Planning Condition 3 was set in respect of sound insulation between the proposed dwellings and the ground floor premises.

The assessment has shown that the development should achieve the requirements of ADE and Planning Condition 3, subject to a high quality of workmanship.

It is important to note that, as with any construction project, the ability to meet the specification will rely upon the quality of the built structure.

As such the works should be carried out to a high standard of workmanship to ensure that any sound insulation measures are not breached, for example by installing a rigid connection across an isolated connection (such as resilient bars or a resilient mat). Additionally, any joints between different walls and the party wall and the ceiling/floor should be carefully filled with non-hardening acoustic mastic.



2. ASSESSMENT CRITERIA

2.1. Local Authority Requirements

The application for prior approval was granted by Havant Borough Council (application ref: APP/24/00618) on 28th February 2025 and Planning Condition 3 was set in respect of sound insulation between the proposed dwellings and the ground floor premises, which is reproduced below:

3 Prior to the commencement of development hereby approved, a scheme detailing sound transmission reduction measures to be installed between the ground floor and the first floor flats shall be submitted to and approved in writing by the Local Planning Authority. The scheme shall be designed to provide a minimum value of 50 dB DnTw+Ctr for airborne sound insulation, and a maximum value of 64 dB L'nTw for impact sound insulation. Thereafter the development shall be carried out in full accordance with the approved details.

Reason: To protect the amenity and quality of life of occupants of the hereby approved flats from undue noise disturbance, having regard to policy CS16 of the Havant Borough Local Plan (Core Strategy) 2011 and policy DM18 of the Havant Borough Local Plan (Allocations) 2014, and the National Planning Policy Framework.

2.2. Assessment Criteria

The assessment criteria adopted for this scheme, to achieve the requirements of Planning Condition 3 are set out in Table 2.2.

Partition Type	Airborne sound insulation $D_{nT,w} + C_{tr}$ dB(Minimum values)	Impact sound insulation $L'_{nT,w}$ dB(Maximum values)
Floors	50	64

Table 2.2: Assessment Sound Insulation Criteria

2.3. Floor Specification

The proposed party floor construction utilises HD1030:Hush System LP and is shown in Figure 2.1 below.

This is part of a range of systems as manufactured by Hush Acoustics, that have been developed and tested to meet a range of acoustic ratings. Further details can be found at www.hushacoustics.co.uk. and the full specification for this particular system can be seen at Appendix B of this report.

The sound insulation properties of the proposed floor build up have been specified and tested by the manufacturer to ensure that the specification meets the target acoustic rating.

2.4. Workmanship

It is important to note that, as with any construction project, the ability to meet the specification will rely upon the quality of the final built structure. As such the works should be carried out to a high standard to ensure that any sound insulation measures are not breached, for example by installing a rigid connection across an isolated connection (such as resilient bars or a resilient mat). Additionally, any joints between different walls and the party wall and the ceiling/floor should be carefully filled with non-hardening- acoustic mastic.



2.5. Party Floor Specification

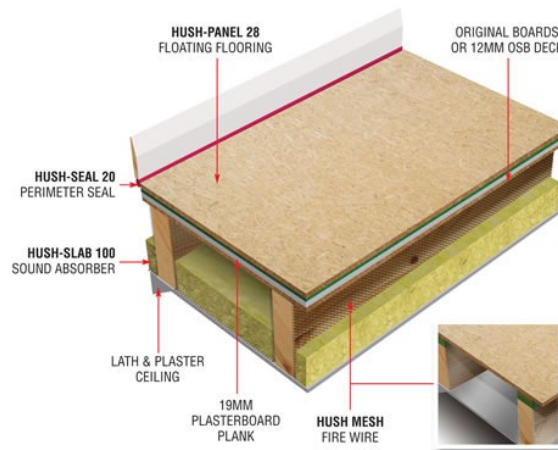


Figure 2.1 -Party Floor Build up

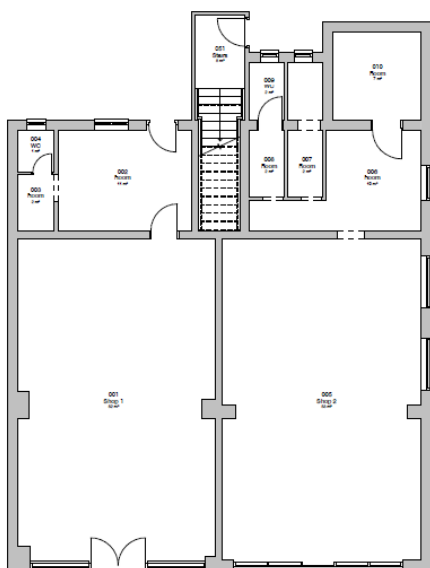
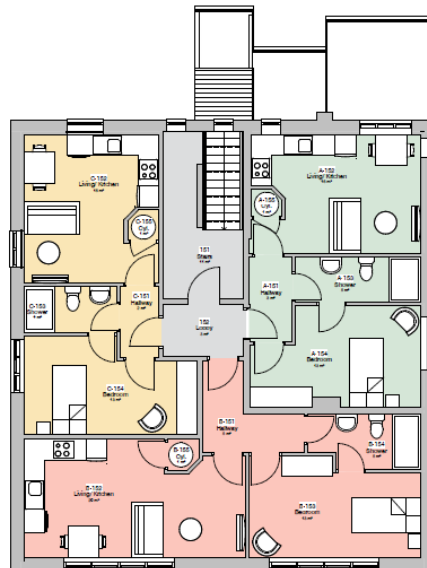
- Hush-Panel 28
- 19mm plasterboard plank laid over existing floorboards.
- Hush-Seal 20 perimeter seal for all floor edges.
- Hush-Mesh Firewire trays dressed down sides of joists and across back of ceiling.
- Hush-Slab 100 acoustic insulation fitted between joists, supported on firewire trays.
- 54 dB L'nTw
- 50 dB DnTw+Ctr

3. SOUND INSULATION ASSESSMENT

The predicted sound insulation values have been calculated between example rooms across the proposed development are presented in Table 3.1. The predicted sound insulation values are also compared against the assessment criteria provided in Section 3.

Source Room	Receiving Room	Element	Predicted $D_{nT,w} + C_{tr}$ (dB)	Achievement of Identified Criteria (Minimum 50 dB $D_{nT,w} + C_{tr}$)	Predicted $L_{nT,w}$ (dB)	Achievement of Identified Criteria (Maximum 64 dB $L_{nT,w}$)
Shop 1	Flat B – Living/Kitchen Flat C – Living/ Kitchen and Bedroom	Floor	50	✓	54	✓
Shop 2	Flat B – Bedroom Flat A – Living/ Kitchen and Bedroom	Floor	50	✓	54	✓

Table 3.1: Sound Insulation Assessment



It can be identified from Table 3.1 that the proposed constructions should achieve the requirements of ADE and the Local Authority.

4. CONDITION 4

As part of the prior approval decision being granted, Condition 4 was also set which is reproduced below.

No development shall commence until full details have been submitted to and approved in writing by the Local Planning Authority, demonstrating how noise will be controlled from any fixed building services plant. Noise emitted from any fixed building services plant and equipment shall be controlled to at least 5 dB(A) below the lowest representative existing background sound level, when assessed in accordance with BS 4142:2014+A1:2019, at a position 1 metre outside any habitable window of any residential or other noise-sensitive property. This criterion applies to the total contribution of noise from all plant and equipment associated with the development operating during any given period.

The scheme shall be fully implemented in accordance with the approved details prior to first occupation of the hereby approved flats, and thereafter retained and maintained for its designated purpose.

The baseline noise survey must cover a period sufficient to faithfully represent the prevailing noise climate at the nearest noise-sensitive premises during the plant's operating hours. In most cases this will cover survey during the weekday and weekend period. The typical minimum background sound level should be defined as the 10th percentile value for the daytime (07:00-23:00) and night-time (23:00-07:00) when the plant may operate. The assessment must include valid predictions and valid assessment of any acoustic features.

Reason: To protect future residents from existing noise climate and the amenity and quality of life of local residents from undue noise disturbance, having regard to policy CS16 of the Havant Borough Local Plan (Core Strategy) 2011 and policy DM18 of the Havant Borough Local Plan (Allocations) 2014, and the National Planning Policy Framework.

Following correspondence with Craig Milligan, Environmental Health Officer at Havant Borough Council (28/10/25) it was clarified that as the plant on the rear of the building was being removed, and no further building services plant will be installed, then that would satisfy the requirements of this condition.

A written statement from the applicant is appended to this application confirming as such.



5. CONCLUSION

A sound insulation assessment has been carried out in relation to the proposed party floor construction between the proposed dwellings at first floor and the commercial premises at ground floor level at an approved residential development at 21 Mengham Road, Hayling Island, PO11 9BG.

The approved development is for the change of use from Commercial, Business and Services (Use Class E) to 3No. 1 bed Dwellinghouses (Use Class C3).

The application for prior approval was granted by Havant Borough Council (application ref: APP/24/00618) on 28th February 2025 and Planning Condition 3 was set in respect of sound insulation between the proposed dwellings and the ground floor premises.

The assessment has shown that the development should achieve the requirements of ADE and Planning Condition 3, subject to a high quality of workmanship and following the manufacturers installation instructions.



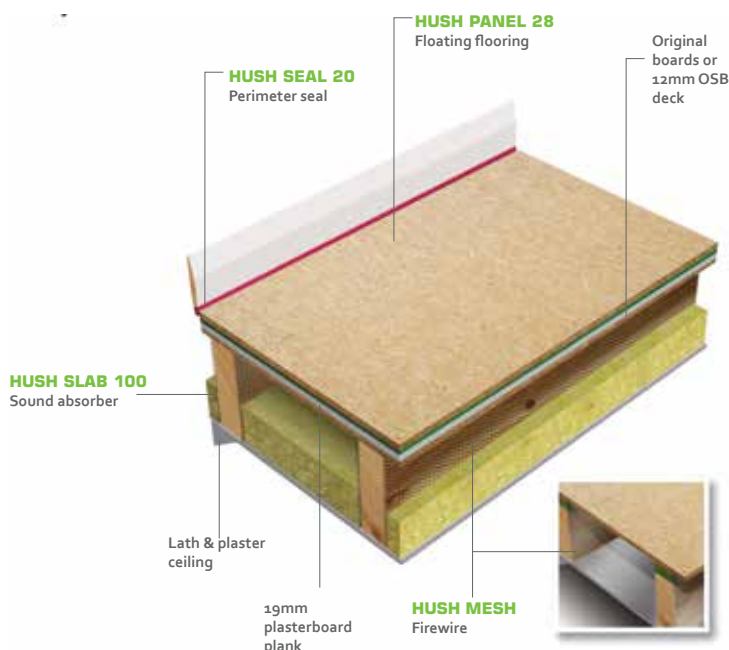
6. APPENDIX A: GLOSSARY OF ACOUSTIC TERMINOLOGY

Term	Description
‘A’-Weighting	This is the main way of adjusting measured sound pressure levels to take into account human hearing, and our uneven frequency response.
Decibel (dB)	This is a tenth (deci) of a bel. The decibel can be a measure of the magnitude of sound, changes in sound level and a measure of sound insulation. Decibels are not an absolute unit of measurement but are an expression of ratio between two quantities expressed in logarithmic form.
Frequency	Frequency is related to sound pitch; frequency equals the ratio between velocity of sound and wavelength.
$L_{Aeq,T}$	The equivalent steady sound level in dB containing the same acoustic energy as the actual fluctuating sound level over the given period, T. T may be as short as 1 second when used to describe a single event, or as long as 24 hours when used to describe the noise climate at a specified location. $L_{Aeq,T}$ can be measured directly with an integrating sound level meter.
L_{Amax}	The ‘A’-weighted maximum sound pressure level measured over a measurement period.
R_w	Weighted sound reduction index, a single number quantity for the airborne sound insulation in buildings and of building elements such as wall, doors and windows. The quantity is intended for rating the airborne sound insulation and for simplifying the formulation of acoustical requirements in building codes, when measured in the presence of flanking sound transmission, denoted $R'w$.
D	Arithmetic difference of the SPL between two spaces, for example room (a) and room (b)
$D_{nT,w}$	Weighted value of D, standardised to a constant reverberation time.
C_{tr}	The correction to a sound insulation quantity (such as $D_{nT,w}$) to take account of a specific sound spectra.
$D_{nT,w} + C_{tr}$	A single number quantity which characterises the airborne sound insulation between rooms using noise spectra No.2 as defined in BS EN ISO 717-1:1997
L	Average SPL measured in the receiver room when the floor under test is subject to a standardised impact sound source.
$L'_{nT,w}$	Weighted value of L, standardised to a constant reverberation time.





7. APPENDIX B – Hush Acoustics Data Sheet



SPECIFICATION

- Hush-Panel 28, all teegee joints glued using Hush-Bond, laid over 19mm plasterboard plank, laid over existing floorboards / OSB deck, with all perimeters sealed using Hush-Seal 20.
- Hush-Mesh Firewire dressed down the sides of the joists and across the back of the ceiling in the form of trays.
- Hush-Slab 100 fitted between the joists resting on the firewire tray.

FEATURES

- ✓ Complies with UK Building Regulations Approved Document E (England & Wales), Part G (Northern Ireland) and Section 5 (Scotland).
- ✓ Refurbishment/Conversion projects with timber structures incorporating lath and plaster ceilings
- ✓ Achieves building regulations in conversion development without the need of a separate ceiling.

ACOUSTIC PERFORMANCE

Impact $L'_{nT,w}$ dB	Airborne $D_{nT,w}$ dB	Airborne $D_{nT,w} + C_{tr}$ dB
54	58	50

Results based on the Hush System HD1030 and a minimum of 200mm deep joists and a full lath and plaster ceiling in good condition.

BUILDING REGULATIONS STATEMENT

- Approved Document E (England & Wales) incorporates a unit of measurement to determine low frequency airborne sound transmission. Due to proven intrinsic difficulties of measuring low frequency sound, in domestic sized rooms, it must be expected that there could be significant deviations in the accuracy of these measurements.
- There will be variations in measurements from site to site in all UK Building Regulations whether it be Document E (England & Wales), Section 5 (Scotland) or Part G (Northern Ireland). These variations are caused by structural differences in buildings, general site conditions and workmanship.
- All these factors can influence the repeatability of both impact and airborne acoustic test results. Therefore, any test results must be considered as an indication only and no warranty can be given or implied as to the actual acoustic performance in any particular situation.

HUSH ACOUSTICS

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Offices also based in London and Yorkshire



HUSH ACOUSTICS

8. APPENDIX C – Statement re Building Services Plant



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Planning Department
Havant Borough Council
The Plaza, Civic Centre Road
Havant PO9 2AX

For the attention of: Development Control

26/11/2025

Dear Sir/Madam

Re: Compliance with Condition 4 – building services plant and equipment at 21 Mengham Road

Site Address:
21 Mengham Road,
Hayling Island, PO11 9BG
Planning Reference: APP/24/00618

In accordance with Condition 4 of the above Prior Approval decision
I am able to confirm that the existing plant will be removed and that no other building services plant (including, but not limited to, air source heat pumps or mechanical ventilation systems) will be installed by the developer.

Yours faithfully

A handwritten signature in blue ink that reads 'KMP'.

KMP Solutions