



Ref: MDR/J6064a

17th December 2025

Smart Move

19 York Road

Northampton

NN1 5QG

For the attention of Mr B Barcha Director

Dear Sirs

Re: 81 & 81a Whinbush Road, Hitchin, SG5 1PZ - Proposed Residential Conversion & 8No. Build Flats - Environmental Noise Assessment

Further to your recent instruction an environmental noise assessment was undertaken at the proposed residential development site; our report is as follows:-

Brief

The proposed residential conversion and new build flats will be impacted by road noise and possible commercial noise and an environmental noise assessment is required to address North Herts Council planning application 24/01761/FP, condition 4. The noise criteria applicable for these dwellings is BS8233:2014, with the enhancement of a nighttime bedroom L_{Amax} criteria applicable for locations with significant external L_{Amax} noise events expected with passing road traffic:-

- Day 07.00hrs-23.00hrs living rooms & bedrooms 35dB L_{Aeq} 16hr
- Night 23.00hrs-07.00hrs bedrooms 30dB L_{Aeq} 8hr & 45dB L_{Amax} 1hr

RandTech Consulting Ltd

3 Melbourne Lane Duston Village Northampton NN5 6HS





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Using the data from an environmental noise measurement survey at the site we will define the day and night period L_{Aeq} & L_{Amax} levels for comparison with the BS8233:2014 requirements and advise mitigation as may be appropriate for the habitable rooms.

Noise Survey Method

Measurements of L_{Aeq} , L_{A90} & L_{Amax} with 1 hour recording intervals, were outside a 1st floor window on the street façade of the block of flats. Please see attached site plans.

The instrumentation used for the noise measurement survey was a Rion NL-52 precision grade real time analyser/sound level meter, serial number 00810301. The RTA was calibration checked before and after the measurement period. A copy of the instrumentation certificate of calibration is attached.

Recorded Measurement

The noise measurements were undertaken from 11.00hrs 12/12/25 to 08.00hrs 15/12/25 to define the typical environmental noise levels for the day 07.00hrs-23.00hrs period and night 23.00hrs-07.00hrs period, under satisfactory weather conditions at the site location. The measurement include Friday and Saturday nights to capture any noise contribution from the operations of Club 85, located at 78 Whinbush Road, a live music venue. From the measured noise data, typical environment noise levels were as follows:-

- Saturday day L_{Aeq} 16hr level recorded was 52.2dB
- Saturday night L_{Aeq} 8hr level recorded was 41.3dB
- Saturday night average night L_{Amax} 1hr level recorded was 65.0dB

The environmental noise impacting the proposed site during daytime and night-time was from passing road traffic; there was no significant noise contribution from the nearby live music venue.

The day L_{Aeq} 16hr level and the night L_{Amax} 1hr levels, measured are high enough, from passing road traffic for mitigation to be required on all the habitable rooms of the proposed dwellings with line of sight to Whinbush Road. For all habitable room windows shielded from Whinbush Road mitigation is not required.





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Please see the attached graph for the survey period for L_{Aeq} , L_{A90} & L_{Amax} levels with 1 hour recording intervals.

Noise Mitigation

Given the levels of environmental noise day and night measured at the site location to safely achieve the good standard advised in BS8233:2014, all habitable rooms with line of sight to Whinbush Road will require a suitable specification double glazed windows that would be normally closed to achieve the room background noise criteria. The noise mitigation will be based on the environmental noise levels measured for the street facade of the buildings.

For all habitable room requiring noise mitigation, room ventilation would be achieved by alternative means to meet the requirements of Building Regulations Part F.

To illustrate the room noise levels that would be achieved by the advised mitigation we attach three design sheets that predict the background noise level for a typical bedroom room, representative of all proposed habitable rooms, with typically 6m² of cavity brick wall or the equivalent & 1.5m² of double-glazed window area, closed for the day & night periods, based on windows with 4/12/4mm glazing format, using the environmental noise values measured day and night from at the front of the site.

The calculated day room noise level is 14dB L_{Aeq} 16hr (criterion 35dB)

The calculated night room noise level is 0dB L_{Aeq} 8hr (criterion 30dB)

The calculated night room noise level is 25dB L_{Amax} 1hr (criterion 45dB)

Conclusion

The noise assessment undertaken demonstrates that for the proposed residential extension site there is sufficient environmental noise require mitigation on all the proposed habitable rooms with windows that have line of sight to Whinbush Road, so that habitable room background noise levels advised in BS8233:2014 can be safely achieved. The simple mitigation required is to have normally closed windows, with 4/12/4mm format double glazing, rated 31dB R_w , or a close equivalent. Room ventilation would be by alternative means to achieve the requirements of Building Regulations Part F. With the mitigation of windows normally closed to control background noise, the ventilation of the rooms can be efficiently achieved by using typically mechanical ventilation systems or passive



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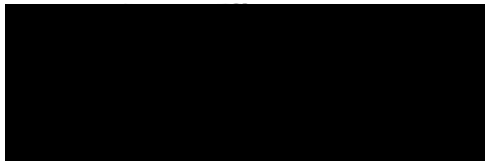
ventilation, to meet Part F requirements. If considering passive ventilation the typical “through the wall” acoustic ventilators should have a noise insulation performance of at least 20dB $D_{n,e,w}$.

Habitable rooms with windows shielded from Whinbush Road require no mitigation to safely achieve BS8233:2014 habitable room background noise criteria.

In addition, consideration should be given to the requirements of Building Regulations Part O, dealing with potential heat build-up within dwellings during periods of high ambient temperature.

We trust the report meets with your satisfaction, however, should you have any queries, please do not hesitate to contact us. Assuring you of our close co-operation at all times we remain

Yours faithfully



M D Randall BSc(Eng) CEng MCIBSE MIOA





CERTIFICATE OF CALIBRATION



0653

Date of Issue: 27 February 2025**Certificate Number: UCRT25/1350**

Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court

17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.ukWeb: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

Page 1 of 2 Pages
Approved Signatory
K. Mistry

Customer ANV Measurement Systems
Beaufort Court
17 Roebuck Way
Milton Keynes
MK5 8HL

Order No. ANV MS HIRE
Description Sound Level Meter / Pre-amp / Microphone / Associated Calibrator
Identification

Manufacturer	Instrument	Type	Serial No. / Version
Rion	Sound Level Meter	NL-52	00810301
Rion	Firmware		2.0
Rion	Pre Amplifier	NH-25	10295
Rion	Microphone	UC-59	02757
Rion	Calibrator	NC-75	34334830
	Calibrator adaptor type if applicable		NC-75-022

Performance Class 1
Test Procedure TP 2.SLM 61672-3 TPS-49
Procedures from IEC 61672-3:2006 were used to perform the periodic tests.
Type Approved to IEC 61672-1:2002 YES Approval Number 21.21 / 13.02
If YES above there is public evidence that the SLM has successfully completed the applicable pattern evaluation tests of IEC 61672-2:2003
Date Received 26 February 2025 ANV Job No. UKAS25/02177
Date Calibrated 27 February 2025

The sound level meter submitted for testing has successfully completed the class 1 periodic tests of IEC 61672-3:2006, for the environmental conditions under which the tests were performed. As public evidence was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with IEC 61672-2:2003, to demonstrate that the model of sound level meter fully conformed to the requirements in IEC 61672-1:2002, the sound level meter submitted for testing conforms to the class 1 requirements of IEC 61672-1:2002.

Previous Certificate	Dated	Certificate No.	Laboratory
	06 March 2024	UCRT24/1379	0653

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.



CERTIFICATE OF CALIBRATION

Certificate Number

UCRT25/1350

UKAS Accredited Calibration Laboratory No. 0653

Page 2 of 2 Pages

Sound Level Meter Instruction manual and data used to adjust the sound levels indicated.

SLM instruction manual title	Sound Level Meter	NL-42 / NL-52
SLM instruction manual ref / issue		11-03
SLM instruction manual source	Manufacturer	
Internet download date if applicable	N/A	
Case corrections available	Yes	
Uncertainties of case corrections	Yes	
Source of case data	Manufacturer	
Wind screen corrections available	Yes	
Uncertainties of wind screen corrections	Yes	
Source of wind screen data	Manufacturer	
Mic pressure to free field corrections	Yes	
Uncertainties of Mic to F.F. corrections	Yes	
Source of Mic to F.F. corrections	Manufacturer	
Total expanded uncertainties within the requirements of IEC 61672-1:2002	Yes	
Specified or equivalent Calibrator	Specified	
Customer or Lab Calibrator	Lab Calibrator	
Calibrator adaptor type if applicable	NC-75-022	
Calibrator cal. date	18 February 2025	
Calibrator cert. number	UCRT25/1273	
Calibrator cal cert issued by	0653	
Calibrator SPL @ STP	94.04	dB Calibration reference sound pressure level
Calibrator frequency	1000.00	Hz Calibration check frequency
Reference level range	25 - 130	dB

Accessories used or corrected for during calibration - Extension Cable & Wind Shield WS-15

Note - if a pre-amp extension cable is listed then it was used between the SLM and the pre-amp.

Environmental conditions during tests	Start	End	
Temperature	22.68	22.77	± 0.30 °C
Humidity	42.0	43.1	± 3.00 %RH
Ambient Pressure	100.98	100.99	± 0.03 kPa

Response to associated Calibrator at the environmental conditions above.

Initial indicated level	93.7	dB	Adjusted indicated level	94.0	dB
The uncertainty of the associated calibrator supplied with the sound level meter ±				0.10	dB

Self Generated Noise This test is currently not performed by this Lab.

Microphone installed (if requested by customer) = Less Than	N/A	dB	A Weighting
Uncertainty of the microphone installed self generated noise ±	N/A	dB	

Microphone replaced with electrical input device - UR = Under Range indicated

Weighting	A	C	Z
	12.0	15.7	21.5
	dB	dB	dB
	UR	UR	UR

Uncertainty of the electrical self generated noise ± 0.12 dB

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, providing a coverage probability of approximately 95%. The uncertainty evaluation has been carried out in accordance with UKAS requirements.

For the test of the frequency weightings as per paragraph 12. of IEC 61672-3:2006 the actual microphone free field response was used.

The acoustical frequency tests of a frequency weighting as per paragraph 11 of IEC 61672-3:2006 were carried out using an electrostatic actuator.

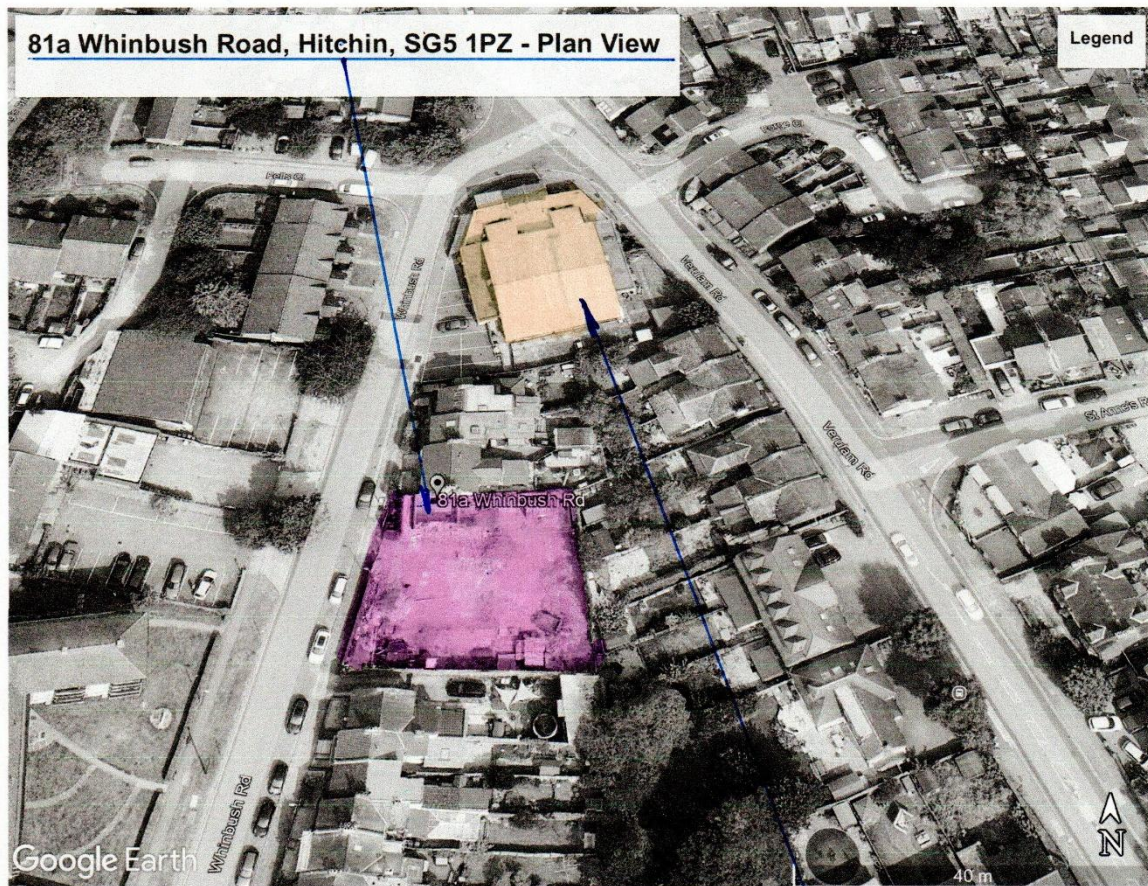
END

Calibrated by: K. Zablocki

R 1

Additional Comments The results on this certificate only relate to the items calibrated as identified above.

None

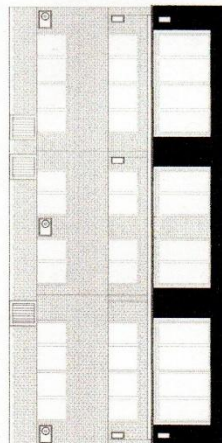


CLUB 85

Ref: 1101/16064



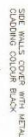
FRONT ELEVATION



REAR ELEVATION



SIDE ELEVATION

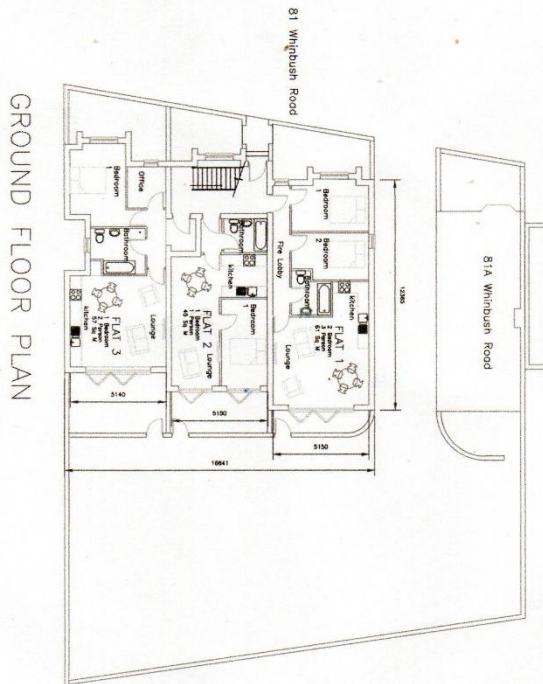


SIDE ELEVATION

[illegible]

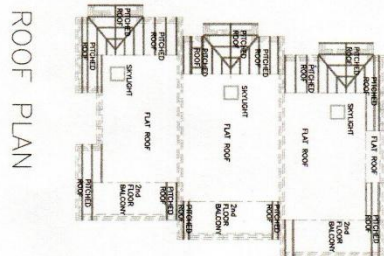
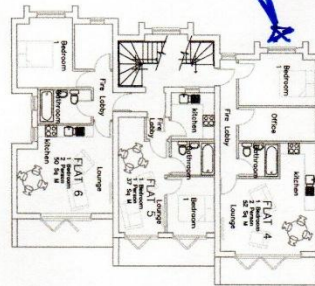
81 WHINBUSA ROAD - FRATS

Ref: MWZ/JG064



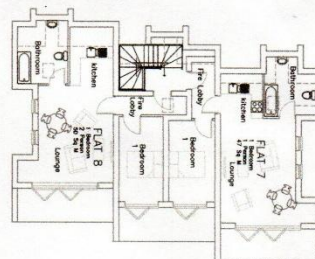
NOISE MEASUREMENT POSITION

FIRST FLOOR PLAN



ROOF PLAN

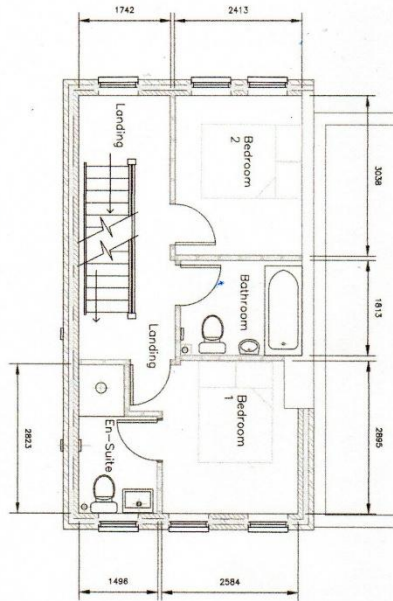
SECOND FLOOR PLAN



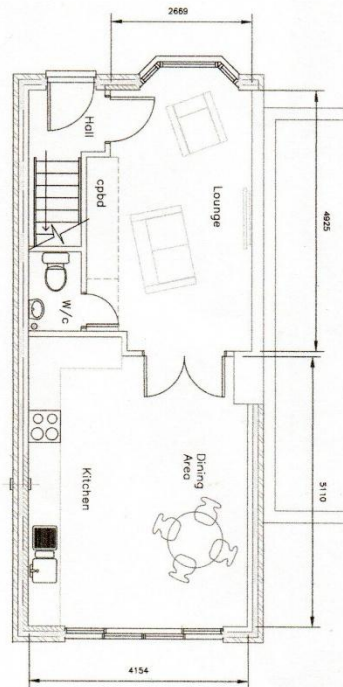
81 WHITBUSH ROAD - FLATS

REF: MDG/6062

NO.	DESCRIPTION	DATE
1	Initial site inspection by Planning	13-08-2004
2	Site visit to confirm layout	13-08-2004
3	Site visit to confirm layout	13-08-2004
4	Site visit to confirm layout	13-08-2004
5	Site visit to confirm layout	13-08-2004
6	Site visit to confirm layout	13-08-2004
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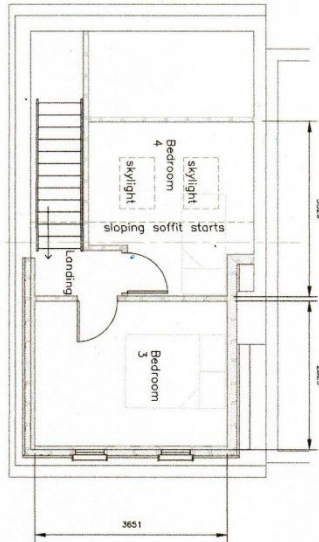


FIRST FLOOR PLAN



GROUND FLOOR PLAN

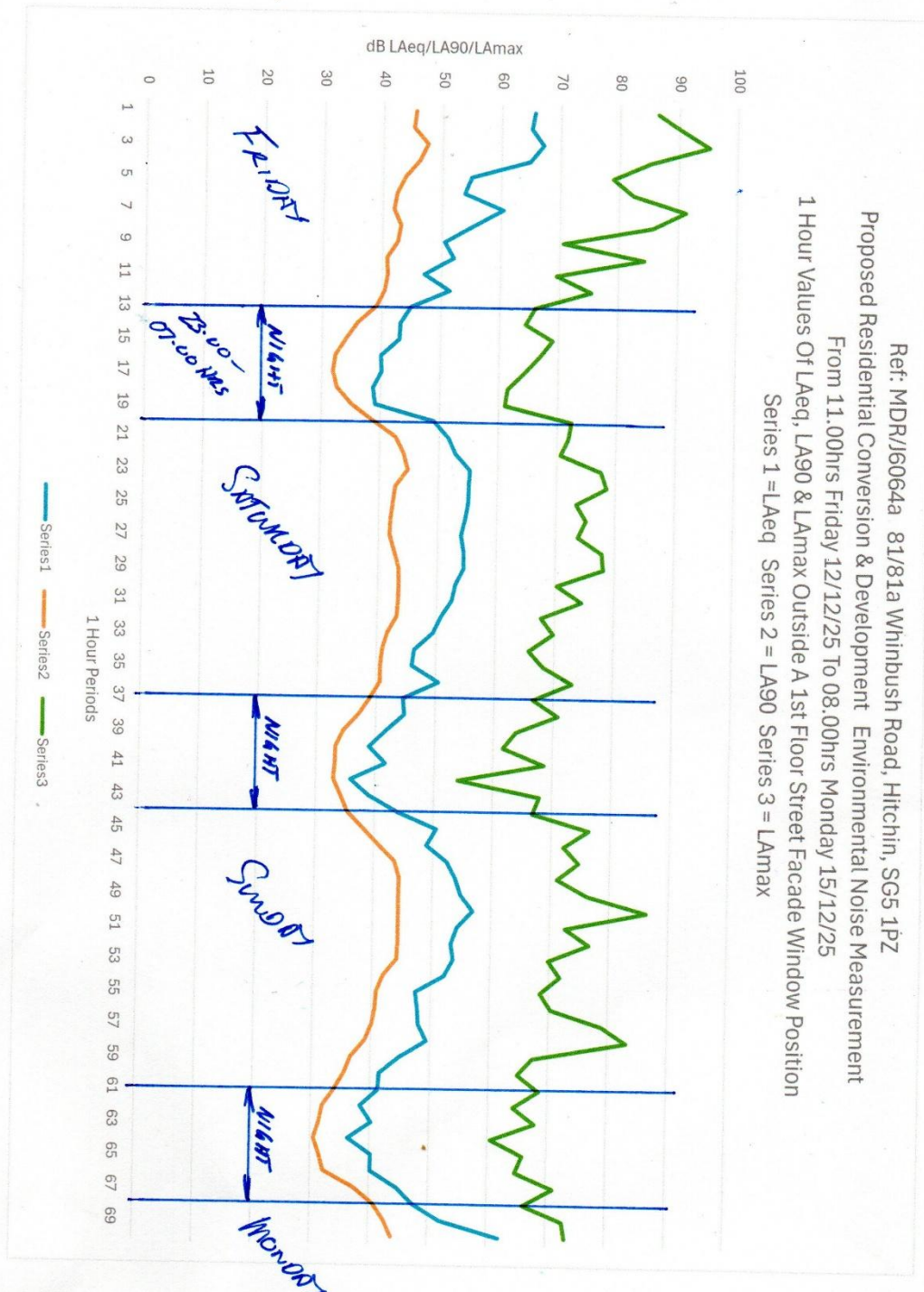
SECOND FLOOR PLAN



81A WHINBURGH ROAD

Lee: Mdr/B0064

Rev	Description	Date
1	0.5.0	1
2	1	2
3	2	3
4	3	4
5	4	5
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100	99	100





Design SNGS1

81/81A WHIMBUSH ROAD, HITCHIN - STREET FACING BEDROOM
OUTLAZY (WINDOWS CLOSED)

	L/A	63	125	250	500	1k	2k	4k	8k
L ₁ EXTERNAL NOISE 52dB	/	35	39	45	49	45	/	/	/
R ₁ CAVITY BRICKWORK 6m ²	/	34	36	40	56	73	/	/	/
R ₂ DOUBLE GLAZED WINDOW 1.5m ²	/	24	20	25	35	38	/	/	/
L ₁ /12/1mm FLOORING, 31dB RW	/	10	14	15	21	35	/	/	/
INSULATION DIFFERENCE	/	4	7	8	13	28	/	/	/
R ₃ LOSS OF INSULATION 61.5	/	30	27	32	43	45	/	/	/
R ₄ COMPOSITE (R ₁ -R ₃)	/	8	10	13	15	13	/	/	/
WALL AREA S = 6m ²	/								
ROOM ABSORPTION NEAR A	/								
Room Noise Level L ₂									
= L ₁ + 10 log S - R ₄ - 10 log A									
L ₁	/	35	39	45	49	45	/	/	/
+ 10 log S	/	8	8	8	8	8	/	/	/
- R ₄	/	30	27	32	43	45	/	/	/
- 10 log A	/	9	10	11	12	11	/	/	/
	/	4	10	10	2	0	/	/	/
			11		11	0			
			11		11				
* Room Resultant SPL _A					14dB				

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DESIGN SAGG (2)

81/81A WAMBURN ROAD, NITCHIN — STREET FACING BEDROOM
NIGHT LAG (WINDOWS CLOSED)

L EXTERNAL NOISE L₁₀BA / 23 27 34 38 35 //

(AS DESIGN SAGG (1))

Room Noise Level L₂
= L₁ + 10 log S - R₁ - 10 log A

L ₁	/	23	27	34	38	35	/
+ 10 log S	/	8	8	8	8	8	/
- R ₁	/	30	27	32	43	45	/
- 10 log A	/	9	10	11	12	11	/
	/	0	0	0	0	0	/
		0		0	0		
		0		0	0		

* Room Resonant SPLA

0dB

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DESIGN SHEET (3)

21/81A WINBURN ROAD, WITCHAM - STREET FACADE RESIDENCE
NIGHT L_{max} (Window Closed)

L₁ EXTERNAL NOISE 65dBA / 39 51 55 63 59 /

(As Design Sheet 1)

Room Noise Level L₂
= L₁ + 10 log S - R₂ - 10 log A

L ₁	39	51	55	63	59
+ 10 log S	8	8	8	8	8
- R ₂	30	27	32	43	45
- 10 log A	9	10	11	12	11
	8	22	20	16	11
		22		21	11
		22		21	

* Room Assessment SPL_A 25dBA *

Robt Moutfords



Table 2 – Pilkington **Insulight**™

Thirdoctaveband Centre Frequency (Hz)	Sound Insulation (dB) for Glass Thickness (mm)					
	4/12/4	6/12/6	6/12/6.4 PVB	10/12/4	10/12/6	10/12/6.4 PVB
100	25	17	19	23	27	27
125	24 24	26 20	24 21	28 25	27 26	28 27
160	23	22	21	26	24	26
200	21	18	19	19	24	26
250	21 20	18 19	19 20	23 22	29 27	30 29
315	19	24	24	26	31	32
400	22	27	28	31	33	34
500	25 25	29 29	32 31	33 33	34 34	36 36
630	30	33	34	36	37	40
800	33	37	38	39	39	41
1000	36 35	39 38	40 39	41 40	41 40	42 41
1250	38	39	40	41	41	41
1600	40	39	39	41	39	41
2000	41 38	34 36	35 37	45 43	37 38	42 42
2500	35	37	39	45	40	44
3150	31	42	44	42	43	49
4000	40 35	47 45	49 47	44 44	47 46	53 52
R _m (dB)	29	30	31	34	34	36
R _w (dB)	31	33	34	36	38	40
R _{TRA} (dBA)	26	26	27	29	32	34

DOUBLE GLAZING SPECIFICATION

Ref: MR/J6066