

Acoustic South East



Change of Use Planning Application (Class MA)

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Date: 22/07/2026

Project: J4232

Issue 1

Site: **5 Envision House, Horsham, RH12 1XQ**

Client: **GDB Developments Limited**

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1 Introduction and Executive Summary

Acoustic South East have been appointed to undertake an acoustic assessment to support a planning application for new residential premises.

Specifically, a change of use is proposed at the first and second floors from office accommodation to residential accommodation. The changes are proposed via the expedited prior approval process (MA Application) and importantly, such an application may only consider how commercial sound sources might impact the application site.

Standards and guidance referenced for this assessment include:

- BS8233 (Sound insulation and noise reduction for buildings) 2014
- National Planning Policy Framework (NPPF), 2024
- ProPG2017 - Professional Practice Guidance on Planning & Noise
- Building Regulations – Approved Document E – Resistance to the Passage of Sound
- Planning Noise Advice Document Sussex, November 2023

As a class MA approval, noise impacts may only be considered from commercial premises with the potential to impact the application site.

At the application site, there is currently a commercial ground floor comprised of two adjacent estate agents. These will remain in situ and flats are proposed at first and second floors.

The proposed flats looking South onto Carfax, overlook a public house called the Red Deer. Therefore, a sound level meter was protruded from a first-floor window to measure the site soundscape between 24th to 29th June 2026, which deliberately included a weekend.

The two commercial sound sources considered are the ground floor estate agents through the party floor and the Red Deer Public House on Carfax.

An airborne sound insulation test was carried out between the ground floor and first floor proposed residential spaces. This provided a sound insulation test of 53dB $D_{nTw}+C_{tr}$. This comfortably achieves the requirements of Building Regulations Approved Document E.

The measured data was assessed against a worst-case hour (daytime and night time, see Figure 5) to ensure that future occupants remain protected against adverse external noise levels. ProPG2017 was used to ensure that L_{Amax} events do not exceed 10 per night within a bedroom setting.

It is advised that secondary glazing is added to the existing double glazing on the Southern façade (4\12\4) to maximise the glazing performance and protect future occupants. To avoid wall penetrations, mechanical ventilation and heat recovery systems have been assessed within the reporting.

Based on the information assessed, the application should not be withheld on noise grounds.

2 Context, Noise Criteria & Noise Assessment Methodology

2.1 Context

A change of use planning application is being made to Horsham District Council. It is relevant to note that the application is made through the prior approval process which for the avoidance of doubt considers only how commercial noise impacts the application site. This is referred to as a class MA application.

The proposal is a change of use from offices to residential spaces at first and second floors only. The commercial ground floor space remains in situ.

The current office windows are double glazed.

2.2 Site Location

The application site is detailed in red in Figure 1.

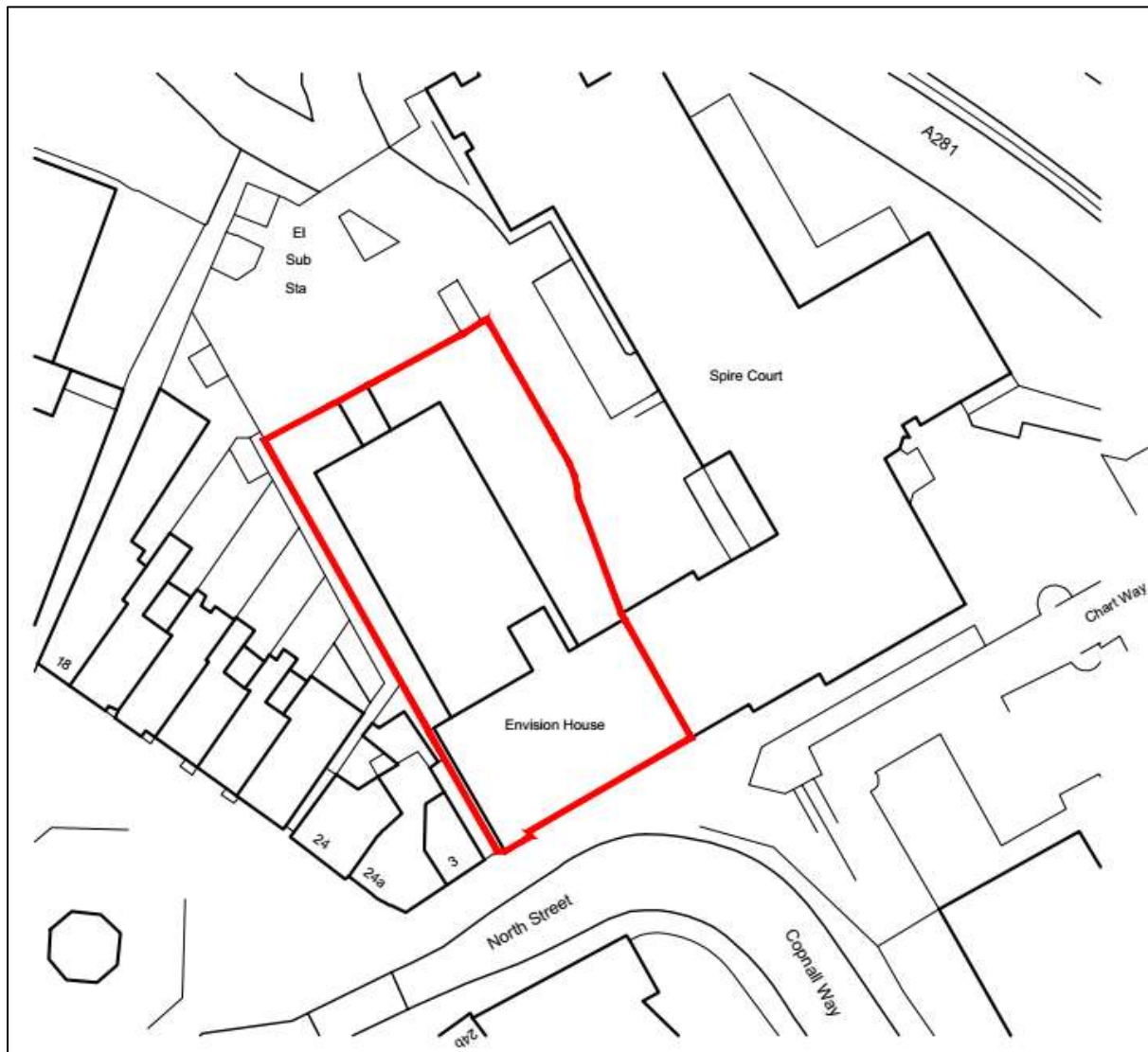


Figure 1. Site Location

2.3 Soundscape

The soundscape noted from visits to the site was of passing traffic on Carfax.

2.4 Commercial Setting and Relevant Sound Sources

The relevant sound sources for consideration in this assessment will be the ground floor offices (estate agents) as well as the nearby Red Deer Public House.

2.4.1 Martins Estate Agents

These open from 09:00 to 18:00 hours Monday to Saturday and are closed on Sundays.

2.4.2 The Red Deer Public House

The public house website lists the opening hours as follows:

- Monday to Friday – 12:00-23:00 hours
- Saturday – 11:30 to 23:00 hours
- Sunday 11:30-22:00 hours

3 Relevant Standards

3.1 National Planning Policy Framework, December 2024

The National Planning Policy Framework (Dec 2024) defines the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so.

The following paragraphs are relevant within NPPF Section 15 (Conserving and enhancing the natural environment) states the following:

Paragraph 187(e) - Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability, and

Paragraph 198 - Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- a) mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and

Paragraph 200– Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

3.2 BS8233:2014 - Guidance on Sound Insulation and Noise Reduction for Buildings

Table 4 of BS8233:2014 provides the following guideline values:

Activity	Location	Time period of day	
		07:00-23:00	23:00-07:00
Resting	Living Rooms	35dB $L_{Aeq,16hour}$	-
Dining	Dining Room/Area	40dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35dB $L_{Aeq,16hour}$	30dB $L_{Aeq,8hour}$

Table 1. BS8233:2014 Criteria

3.3 ProPG2017- Professional Practice Guidance on Planning & Noise

Planning guidance (ProPG2017) relates to new residential development and airborne transportation noise, which includes exposure to road traffic, railway and aviation noise. Whilst ProPG, 2017 generally mirrors the requirements of BS8233:2014 and the World Health Organisation Guidelines, 1999, it goes further in setting a limit for inside bedrooms for L_{Amax} events and specifically, no more than 10 L_{Amax} events per night time period above 45dB(A).

The internal bedroom L_{Amax} values will be used in accordance with ProPG2017.

3.4 Planning Noise Advice Document Sussex, November 2023

A planning noise advice document which all Sussex local authorities have contributed to and signed up to (including Horsham District) remains relevant. The guidance document has been followed in respect of measurement parameters and report presentation of data.

3.5 Building Regulations – Approved Document E

It is noted that within Approved Document E, there is a provision (0.8) which states that whilst Approved Document E relates to normal dwelling houses, “a higher standard of sound insulation may be required between spaces used for normal domestic purposes and communal or non-domestic purposes. In these situations. the appropriate level of sound insulation will depend on the noise generated in the communal or non-domestic space.

Specialist advice may be needed to establish if a higher standard of sound insulation is required and, if so, to determine the appropriate level”. Accordingly, it is typical for Horsham District Councils Environmental Health department to consider a higher standard, typically at least 5dB(A) above building regulations requirements.

3.6 Building Regulations – Approved Document O

With regards to the Acoustics, Ventilation and Overheating Guidance (AVOG) (Jan 2020), as well as the newly implemented Building Regulations Approved Document O (ADO), attention is drawn to the fact that these relate to new build developments and not conversions. For the AVOG, 2020, this is found in paras 1.4 and 1.13 and for the ADO, see para 0.3.

The ADO Frequently Asked Questions (FAQ) also referenced that an overheating assessment for a change of use is not applicable- [Approved Document O: Overheating, frequently asked questions - GOV.UK \(www.gov.uk\)](#)

4 Methodology

A site visit was made on Monday 15th June 2026 to carry out a vertical airborne sound insulation test from the ground floor to the first floor to determine the performance of the shared party ceiling/floor.

A class 1 sound level meter was installed at the site from 24th to 29th June 2026 to measure the site soundscape from a first-floor window to overlook the roadside/The Red Deer premises located at 24D Carfax, Horsham RH12 1EE. This can be seen in Figure 2 below. Attended measurements were also made to ensure that any difference in the site soundscape was understood.

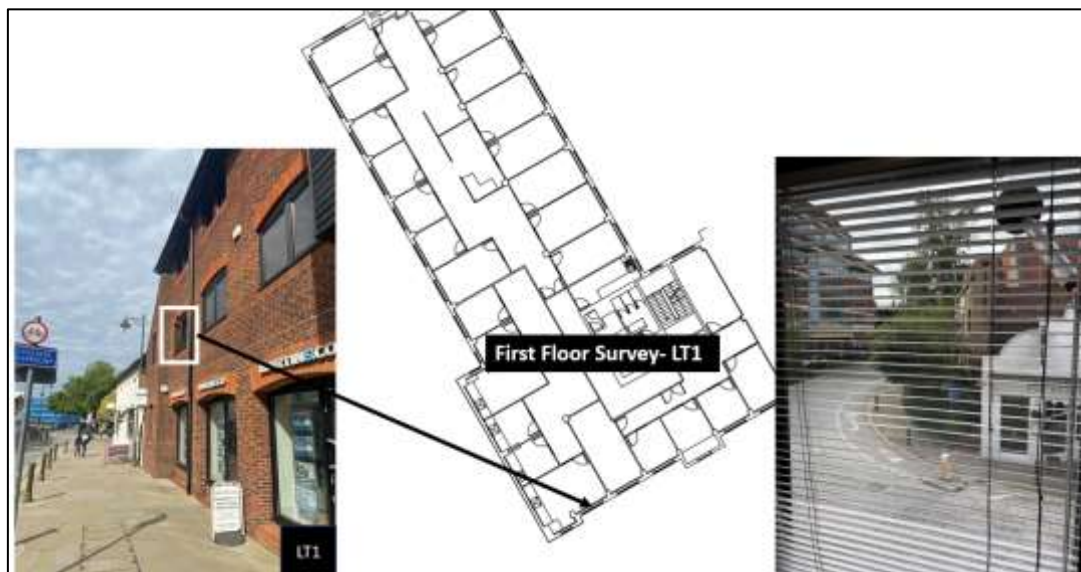


Figure 2. Survey Location

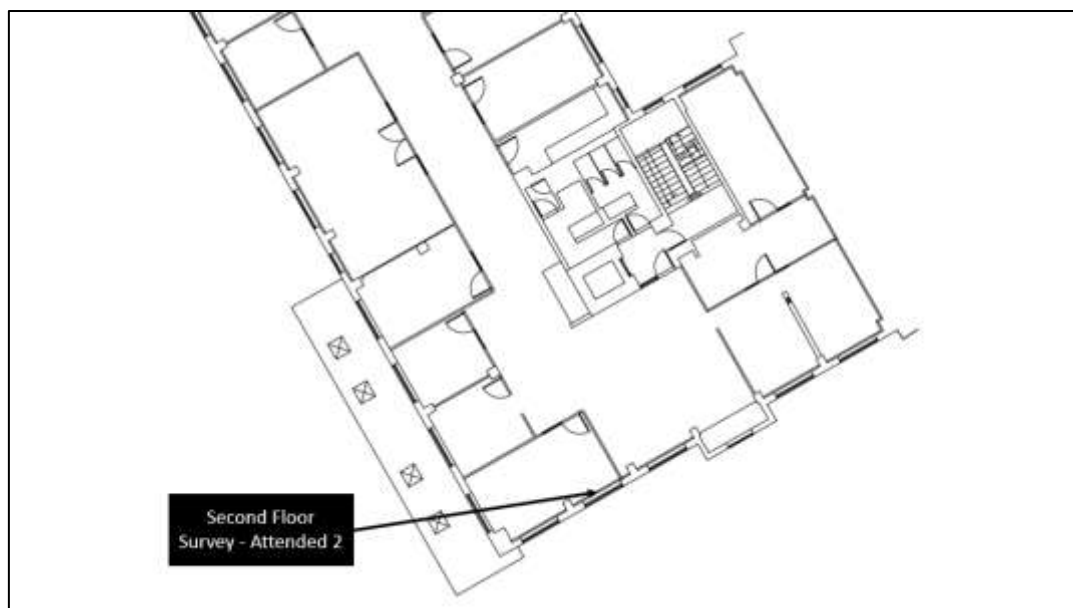


Figure 3. Attended Measurements (External)

Survey(s) carried out by	Harvey Bennett BSc (Hons)
Equipment Used	1 x Norsonic 118 Class 1 Sound Level Meter (Attended 1)
Equipment Used	1 x Norsonic 118 Class 1 Sound Level Meter (Attended 2)
Equipment Used	1 x Svantek 971 Class 1 Sound Level Meter (LT1)
Equipment Used	Castle Acoustic Calibrator – Serial No. 041173
Location	Both external survey measurements protruded from the window in façade conditions. LT1 – WhatThreeWords:duke.shells.cats. 5.8m above ground level. Attended 2 – Second floor.
Duration	24 th to 29 th June 2026 (LT1) 29 th June 2026 (Attended)

Table 2. Survey Details

5 Measured Data

5.1 Measured Sound Insulation Performance of Party Floor

As an MA prior approval, it is relevant to consider the impact of commercial sound sources and how these might impact the proposed first and second floor properties. A vertical airborne sound insulation test was therefore carried out between Martins Estate Agents and the rooms above, consistent with the methodology and requirements of BS EN ISO 140-4 Acoustics - Measurement of sound insulation in buildings and of building elements - Part 4: Field measurements of airborne sound insulation between rooms 1998.

The results identified a sound insulation performance of 53dB $D_{nTw}+C_{tr}$.

To place this in context, as a conversion, the sound insulation performance required by Part E is 43dB $D_{nTw}+C_{tr}$. However, it is recognised, as per section 3.5 above that when considering a mixed demise, there may be a requirement to consider improved sound insulation performance.

With this in mind, it is typical across Sussex to seek to achieve at least 5dB better than approved document E, which would mean 48dB $D_{nTw}+C_{tr}$. The test result comfortably exceeds this requirement. It is argued also that as an estate agent, the noise generation potential within the ground floor office is low, as this is limited to conversational noise between colleagues and answering telephones.

The test results graph can be seen in Appendix A.

No additional mitigation measures would therefore be required in respect of the separating party floor.

5.2 Measured External Survey Data – First Floor

The results of the unattended first floor survey are seen in Figure 4 below are all A weighted, Fast and freefield measurements. The survey equipment was calibrated at the beginning and end of the survey without any significant drift occurring.

LT1- Freefield Survey									
Day	Date	L _{Aeq} 16/8Hr		11th L _{Amax}		Sound Reduction Index Required			
		Day	Night	1 min	2min	Day 16Hr	Night 8 Hr	L _{Amax} 1min	L _{Amax} 2min
Wed	24/06		53.4	76.13	75.96		23	31	31
Thu	25/06	60.5	54.2	76.74	76.53	25	24	32	32
Fri	26/06	65.3	53.4	77.32	77.25	30	23	32	32
Sat	27/06	60.6	60.2	78.11	78.06	26	30	33	33
Sun	28/06	59.1	55.4	76.81	76.48	24	25	32	31
AVERAGE:		61	55	77	77	26	25	32	32

Figure 4. Measured Freefield External Data - First Floor Carfax

5.3 Worst Case Hour

Given the agent of change principle, with residential dwellings being introduced, it is sensible to apply a worst-case hour approach. It is relevant to note that the survey will not be able to distinguish between commercial and road traffic noise impacts at the measurement position. At the numerous times of visiting the site, patrons were not seen outside of the pub/restaurant.

When reviewing the data, the worst-case hour for the daytime was 73dB L_{Aeq, 1 hour}, freefield. For the night time, this was measured as 65dB L_{Aeq, 1 hour}, freefield.

5.4 Short Term Attended Measurements

A number of simultaneous measurements were made whilst present on site. These allowed a determination of the current façade performance as well as what, if any, difference there is for the proposed second floor property.

5.4.1 Façade Performance

A long-term class 1 sound level meter was protruded from the first-floor conference room space. A 5-minute attended reading was taken in the adjacent compartmentalised office with doors and windows closed. A comparison of the two measured sound pressure levels identified a façade performance of 26dB from external to internal.

5.4.2 Noise Exposure Difference Between First and Second Floors

To identify any difference between first and second floor measured values, an additional 5 minute simultaneous reading was taken at second floor, above the long-term (LT1) meter position. This identified a comparable sound level measurement with only a 0.6dB difference. The data measured at the first floor is therefore capable of being applied to the second floor.

6 Discussion

It is noted that for the two potential commercial sound sources, for the ground floor commercial estate agents, these are not likely to present an issue with significant sound proofing of the party floor between the demises. For the external soundscape, this is considered below.

6.1 Sound Reduction Index

An evaluation of the options for the Sound Reduction Index (SRI) can be seen below in Figure 5. The bottom row for the worst-case hour presents the most protection for future occupants. The L_{Amax} events are calculated on the basis of no more than 10 events per night, consistent with the requirements of ProPG2017 for a bedroom environment.

Scenario	Measured $L_{Aeq,T}$ and L_{Amax}			Resulting Sound Reduction Index (SRI)		
	Daytime	Night Time	L_{Amax} (overnight)	Daytime	Night Time	L_{Amax}
Worst Case Day	65	60	N/A	30	30	N/A
Average Day/Night	61	55	77	26	25	32
Worst Case Hour	73	65	78	38	35	33

Figure 5. SRI Options

It should be noted that the SRI being discussed relates only to proposed flats 7,8 and 9 at first floor and plots 15,17 and 18 at second floor which overlook commercial elements. The remainder of the site is not considered to require any further assessment relating to commercial impact upon future occupiers.

6.2 Rigorous Calculations

Rigorous calculations were assessed with 73dB used for the outside daytime sound pressure level and the SRI's considered as per Figure 5 above. The results are presented below in Figure 6 and indicate that secondary glazing is required to protect future occupants from external noise intrusion. Note that the calculations are based on mechanical ventilation and heat recovery being provided without any façade penetrations.

Outcomes of the Rigorous Calculations							
Plot	Rooms	External SPL	SRI Required	Window	Vent	Internal SPL	SRI Achieved
Plot 7	Bedroom 1	73	38	4\12\4-150-4	None	31	42
Plot 7	Bedroom 2	73	38	4\12\4-150-4	None	32	42
Plot 7	LDR	73	38	4\12\4-150-4	None	32	41
Plot 8	LDR	73	38	4\12\4-150-4	None	32	41
Plot 8	Bed 1	73	38	4\12\4-150-4	None	32	42
Plot 9	LDR	73	38	4\12\4-150-4	None	35	38
Plot 15	Bed 1	73	38	4\12\4-150-4	None	35	38
Plot 15	KDLR	73	38	4\12\4-150-4	None	33	40
Plot 17	KLD	73	38	4\12\4-150-4	None	29	44
Plot 17	Bed 1	73	38	4\12\4-150-4	None	28	45
Plot 18	KDLR	73	38	4\12\4-150-4	None	30	43

Figure 6. Outcome of the Rigorous Calculations.

7 Recommendations

The reporting has identified that no works are required to the separating floor between the ground floor commercial premises and the first floor proposed residential demise.

For residential properties at first and second floors, these will require secondary glazing being applied to the reveal of the window depth. This utilised a reveal of 150mm and the addition of a 4mm glazed (room side) pane. It will be helpful if absorbent material is provided within the reveal depth to help provide suitable absorption. This secondary glazing strategy takes advantage of the already existing double glazing at the site. It is relevant to note that the secondary glazing requirements apply only for proposed flats 7,8 and 9 at first floor and plots 15,17 and 18 at second floor.

It is advised that mechanical ventilation and heat recovery (MVHR) is applied to both first and second floor flats as previously discussed for the Southern façade overlooking the Carfax.

In considering MVHR, the client should be aware of design criteria listed in the Acoustics, Ventilation and Overheating Guide dated Jan 2020 in 3.3.1:

“Evidence [20] indicates that “a more prudent limit for mechanical services noise around 24 – 26 dB(A) is likely to be required to prevent an adverse reaction from most occupants while falling asleep”. The selection of MVHR units should therefore be as quiet as possible when placed into the residential demise.

8 Conclusion

As a class MA approval, noise impacts may only be considered from commercial premises with the potential to impact the application site.

At the application site, there is currently a commercial ground floor comprised of two adjacent estate agents. These will remain in situ and flats are proposed at first and second floors.

The proposed flats looking South onto Carfax, overlook a public house called the Red Deer. Therefore, a sound level meter was protruded from a first-floor window to measure the site soundscape between 24th to 29th June 2026, which deliberately included a weekend.

The two commercial sound sources considered are the ground floor estate agents through the party floor and the Red Deer Public House on Carfax.

An airborne sound insulation test was carried out between the ground floor and first floor proposed residential spaces. This provided a sound insulation test of 53dB $D_{nTw}+C_{tr}$. This comfortably achieves the requirements of Building Regulations Approved Document E.

The measured data was assessed against a worst-case hour (daytime and night time, see Figure 5) to ensure that future occupants remain protected against adverse external noise levels. ProPG2017 was used to ensure that L_{Amax} events do not exceed 10 per night within a bedroom setting.

It is advised that secondary glazing is added to the existing double glazing on the Southern façade (4\12\4) to maximise the glazing performance and protect future occupants. To avoid wall penetrations, mechanical ventilation and heat recovery systems have been assessed within the reporting.

Based on the information assessed, the application should not be withheld on noise grounds.

9 Appendix A – Sound Insulation Test of Ground/First Floor

