707-725 Lordship Lane, Wood Green, London

Planning Condition 28 – Acoustic Report

10643.6

29th September 2026

Revision A

ANC ACOUSTICS & NOISE CONSULTANTS

Institute of Acoustics sponsoring organisation

707-725 Lordship Lane, London

Planning Condition 28 – Acoustic Report

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1 Introduction

1.1 The proposed development is located at 707-725 Lordship Lane site in Wood Green. The proposed scheme is a mixed-use development comprising of four buildings consisting of ground floor commercial use, 623 student bedrooms with associated internal and external amenity spaces and 77 affordable residential homes of Shared Ownership and Social Rent tenures.

1.2 Building A to the north of the site is nine storey purpose-built student accommodation (PBSA) with a flexible ground floor space for commercial (Class E) use and shared student amenity spaces.

1.3 Blocks B and C are 6 storey residential buildings (with maisonettes and apartments) and Block D is two separate buildings of three storey houses.

1.4 The development includes shared amenity spaces for the students on the lower floors of Block A.

1.5 This report provides the necessary details to discharge planning condition 28, which related to the sound insulation provided by the façade of the Student Accommodation (Block A).

1.6 The report includes:

- details of the external noise levels;
- the glazing specifications; and
- details of the mechanical services.

1.7 The site location is shown in Figure 1.



Figure 1: Site location, showing the red line boundary and the location of residential Blocks A to D in blue

2 Planning Condition 28

2.1 The decision notice for the development is available on the planning portal[1]. And the acoustic related planning condition28 is reproduced below.

2.2 **Condition 28**

(a) The student accommodation hereby approved shall not be occupied until such times as full details of the glazing specification and mechanical ventilation for habitable rooms in all façades of the accommodation to which they relate have been submitted to and approved in writing by the Local Planning Authority.

(b) The above details shall be designed in accordance with BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' and meet the following noise levels;

• Daytime Noise 7am – 11pm - Student rooms - 35dB(A) ($L_{Aeq,16hour}$).

•Daytime Noise 7am – 11pm - living/kitchen/dining areas (LKD) - 40dB(A) ($L_{Aeq,16hour}$).

• Night Time Noise 11pm -7am - Student rooms 30dB(A) ($L_{Aeq,8hour}$).

With individual noise events not to exceed 45 dB LAmax (measured with F time weighting) more than 15 times in student rooms between 23:00hrs – 07:00hrs.

(c) The approved glazing specification and mechanical ventilation measures for the habitable rooms in all facades of the accommodation shall be installed and made operational prior to the occupation of any of the accommodation as specified in part (a) of this condition and shall be maintained thereafter.

2.3 Condition 28 requires the performance of the glazing and ventilation systems to be submitted for approval.

2.4 The condition only applies to the student accommodation (Block A) which exposed to the higher noise levels of road traffic.

2.5 This report provides the glazing specifications and mechanical ventilation details as required to partially discharge items (a) and (b) of the condition.

[1] Planning reference HGY/2024/0450

3 External Ambient Noise Levels

3.1 The noise level across the site have been determined using noise measurements undertaken by Apex Acoustics between Thursday 23rd to Monday 27th February 2023. Short-term measurements at positions 3, 4 and 5 were also carried out on Monday 27th February 2023.

3.2 The surveys details are included in the planning noise impact assessment[2] and are summarised in this report.

3.3 The noise monitoring locations are shown in Figure 2.

3.4 Measurements at positions 1 and 2 were made with the microphone located at 3.5 m above the ground. Short-term measurements at positions 3, 4 and 5 were measured with the microphone located at 1.5m above the ground. All positions were located away from other reflecting surfaces, such that the measurements are considered to be free-field.



Figure 2: Noise monitoring locations

[2] Apex Report ref: 10643.1B 707-725 Lordship Lane Noise impact assessment

3.5 The most significant and dominant noise source affecting the proposed development was from road traffic.

3.6 Other noise sources included pedestrians and birdsong during the early mornings.

3.7 The measured levels are summarised in Table 1.

Position	Start Time (hh:mm)	Duration (hh:mm)	$L_{Aeq,T}$ / dB	10th $L_{Amax,F}$ dB	Typical $L_{A90, 15min}$ dB
1 (Facing Lordship Lane)	Thursday 23rd February 18:41	04:18	69	-	56
	Thursday 23rd February 23:00	08:00	66	84	43
	Friday 24th February 07:00	16:00	69	-	57
	Friday 24th February 23:00	08:00	67	84	44
	Saturday 25th February 07:00	16:00	68	-	56
	Saturday 25th February 23:00	08:00	66	83	45
	Sunday 26th February 07:00	16:00	69	-	56
	Sunday 26th February 23:00	08:00	66	84	43
	Monday 27th February 07:00	06:05	68	-	-
2 (Redvers Road)	Thursday 23rd February 18:20	04:40	57	-	49
	Thursday 23rd February 23:00	08:00	52	72	44
	Friday 24th February 07:00	16:00	58	-	50
	Friday 24th February 23:00	08:00	54	76	44
	Saturday 25th February 07:00	16:00	57	-	50
	Saturday 25th February 23:00	08:00	53	74	46
	Sunday 26th February 07:00	16:00	57	-	49
	Sunday 26th February 23:00	08:00	56	73	45
	Monday 27th February 07:00	05:40	57	-	-
3	Monday 27th February 15:02	00:15	49	-	-
4	Monday 27th February 13:18	00:15	57	-	-
5	Monday 27th February 15:42	00:15	66	-	-

Table 1: Measured noise levels at measurement positions 1-2

3.8 The noise levels incident on the different facades and at different heights have been predicted using CadnaA noise modelling software and the output for the night-time noise levels at ground floor are shown in Figure 3.

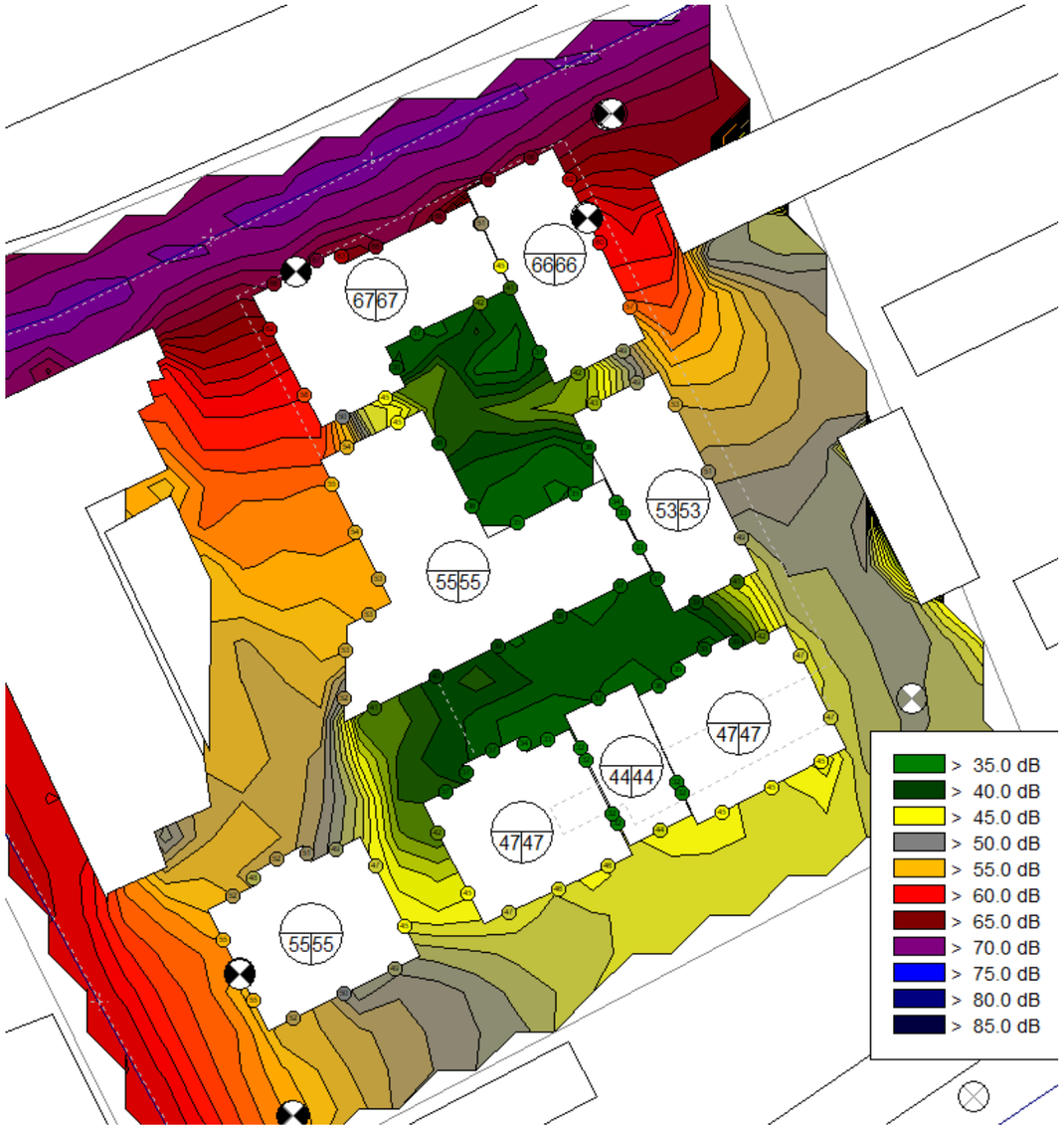


Figure 3: Ground floor night-time noise contours

4 Internal Ambient Noise Levels

4.1 **External Levels used for the ingress predictions**

4.2 The worst case free-field daytime and night-time noise levels used in the calculations are shown in Table 2.

Façade	Parameter	dB(A)	Octave band centre frequency, Hz				
			125	250	500	1k	2k
North GF to 4F (Requirement 3)	Daytime, $L_{Aeq,\ 16\ hr}$	**69**	51	56	59	65	64
	Night-time, $L_{Aeq,\ 8\ hr}$	**67**	46	51	56	64	63
	Night-time, $L_{AF,max}$	**84**	-	-	-	-	-
North 5F to 7F (Requirements 2)	Daytime, $L_{Aeq,\ 16\ hr}$	**63**	45	50	53	59	58
	Night-time, $L_{Aeq,\ 8\ hr}$	**61**	43	48	51	57	56
	Night-time, $L_{AF,max}$	**78**	-	-	-	-	-
All other facades (Requirement 1)	Daytime, $L_{Aeq,\ 16\ hr}$	**58**	42	46	50	53	52
	Night-time, $L_{Aeq,\ 8\ hr}$	**56**	40	44	49	51	50
	Night-time, $L_{AF,max}$	**75**	-	-	-	-	-

Table 2: Free-field noise levels used in the calculations

4.3 **Internal noise level requirements**

4.4 The planning condition requires the noise ingress to be controlled to meet the desirable internal ambient noise levels as defined in BS 8233:2014 and which are shown in Table 3.

Activity	Location	Guideline level, $L_{Aeq,\ T}$ / dB	
		07:00 to 23:00	23:00 to 07:00
Resting	Living rooms	35	-
Dining	Dining room/area	40	-
Sleeping (daytime resting)	Bedroom	35	30

Table 3: Guideline indoor ambient noise levels defined in BS 8233

4.5 Note 4 of the BS 8233:2014 Table states:

"Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values."

4.6 **WHO Guidelines**

4.7 Section 3.4 of the World Health Organisation (WHO) Guidelines for Community Noise states:

"For a good sleep, it is believed that indoor sound pressure levels should not exceed approximately 45 dB L_{Amax} more than 10 – 15 times per night."

4.8 This is inline with the planning condition requirements that the fifteen highest L_{AFmax} be 45 dB or less.

4.9 **Ventilation Strategy**

4.10 The ventilation strategy follows two approaches:

- MVHR systems for the rooms exposed to the highest noise levels. These rooms are fully mechanically ventilated, and the fresh air inlet is ducted to the façade louvres above the ceiling, so noise ingress via the façade vent is negligible
- MEV systems for the rooms exposed to lower noise levels. These rooms have extract fans which run continuously, but the fresh air is via a duct with is connected form the façade louvres to the ceiling of the rooms.

4.11 **Acoustic performance of the MEV air inlets**

4.12 A section through the air inlet duct is shown in Figure 4.

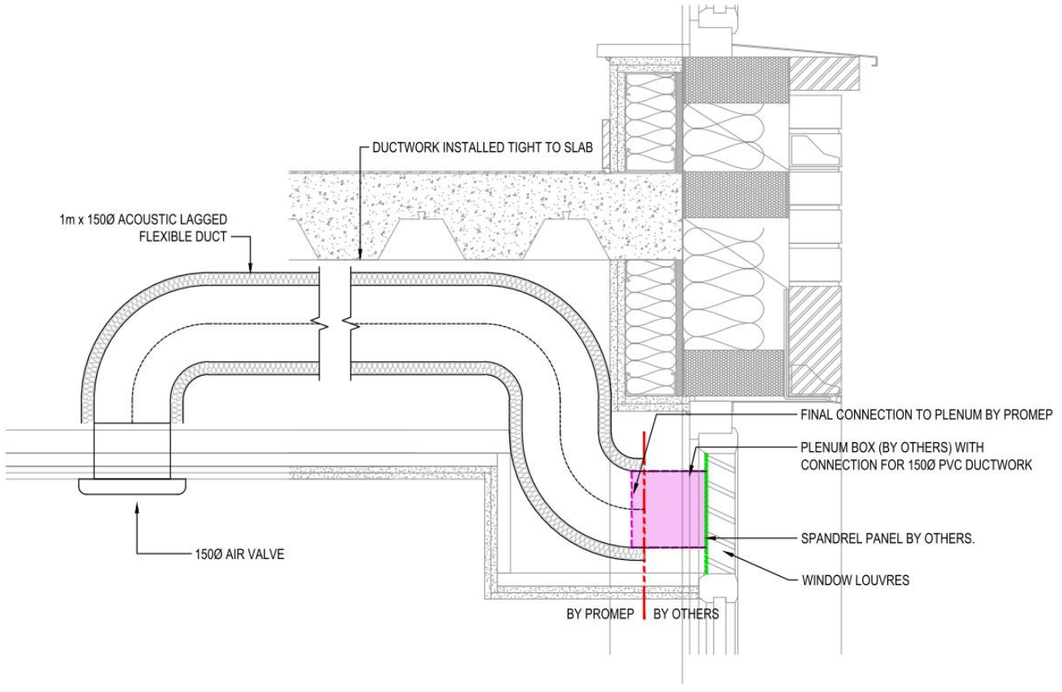


Figure 4: Section through air inlet duct

4.13 The reduction through the air inlet arrangement

Parameter	Octave band centre frequency, Hz				
	125	250	500	1k	2k
D_{ne} for 150mm dia opening	27	27	27	27	27
Reduction from 1m length 160mm diameter lined duct	8	12	29	28	27
Total D_{ne}	35	39	56	55	54

Table 4: Predicted internal noise levels

4.14 **Façade performance requirements**

4.15 Calculations have been undertaken following the method for façade sound insulation in accordance with BS 8233 and the principles of BS EN 12354-3.

4.16 BS8233 isn't explicitly clear whether the noise levels are for noise ingress alone or for a combination of ingress and mechanical services. The approach for this scheme is to specify the glazing and façade vets so that the ambient levels are at least 3dB below the required criteria to allow for the contribution from any internal mechanical services.

4.17 The acoustic performance requirements for glazing and facade ventilators to bedrooms are summarised in Table 5.

Requirement	Glazing performance	Façade ventilator performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	MVHR
3	≥ 34 dB $R_w + C_{tr}$	MVHR

Table 5: Glazing and façade ventilator acoustic requirements

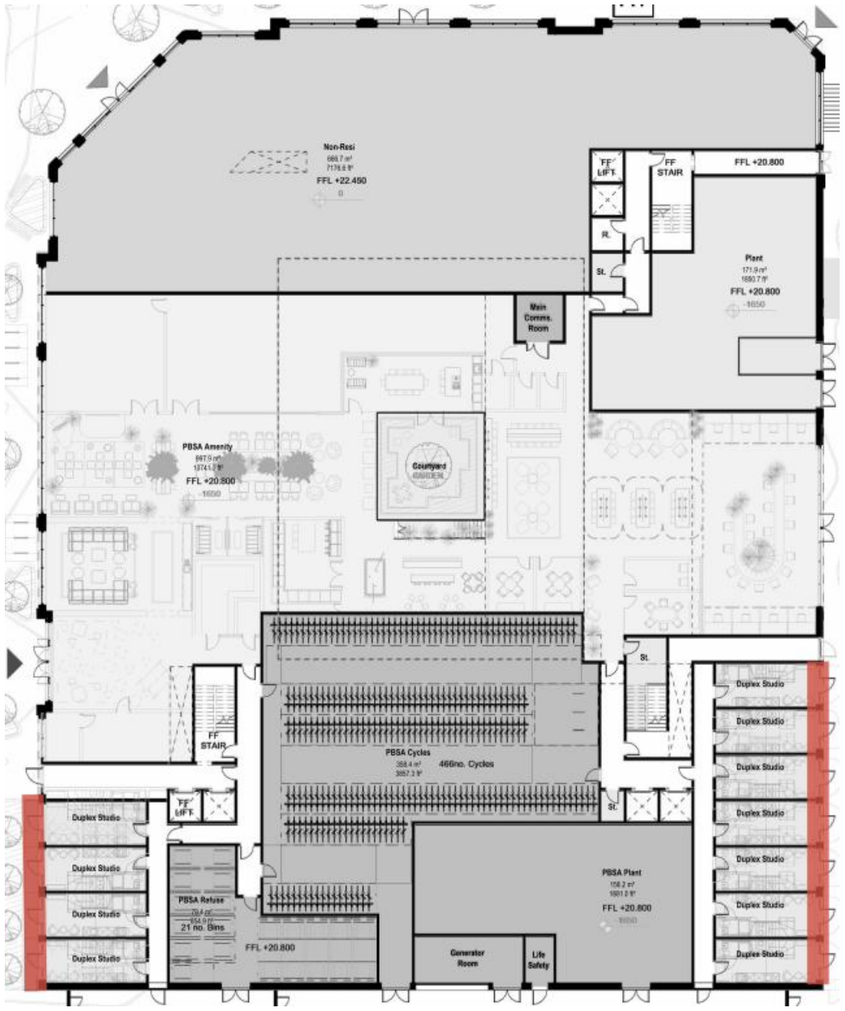
4.18 The predicted internal levels for each of the three specifications is shown in Table 6.

Façade	Daytime dB $L_{Aeq,16hr}$	Night-time dB $L_{Aeq,8hr}$	Night-time dB $L_{Aeq,8hr}$
Criteria	≤ 35 dB	≤ 30 dB	≤ 45 dB
North GF to 4F	29	26	43
North 5F to 7F	27	25	42
All other facades	27	25	44

Table 6: Predicted internal noise levels

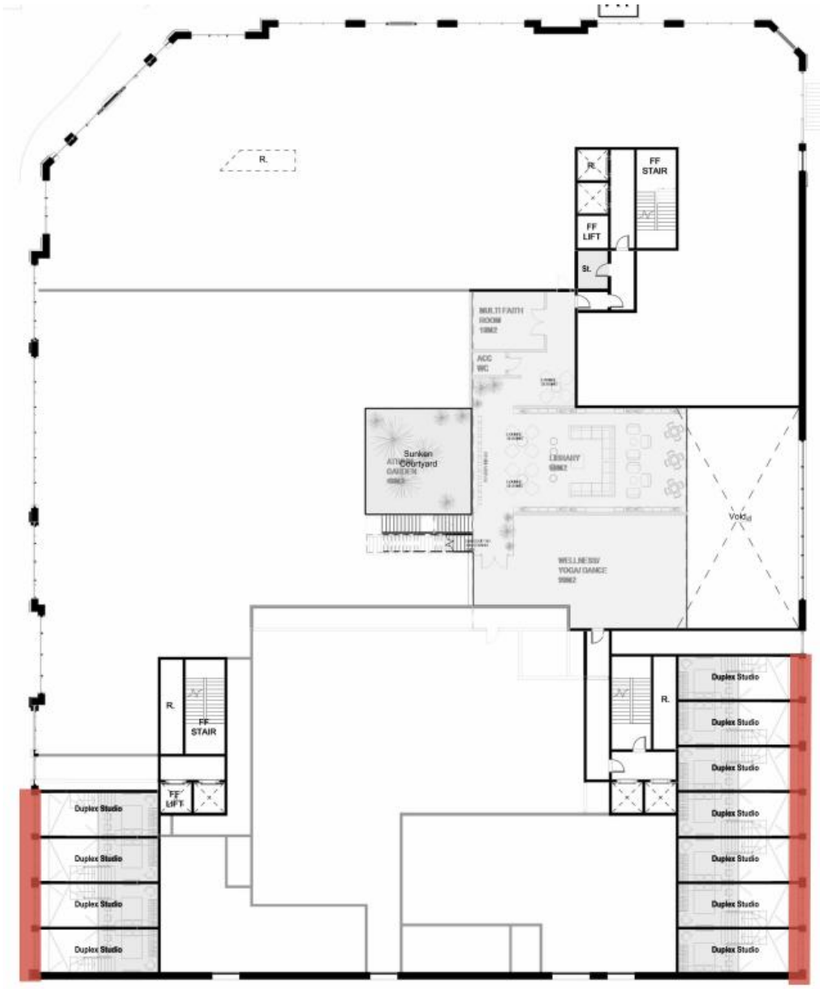
4.19 The ingress predictions are shown in Appendix A and have been undertaken for the student bedrooms only. If the criteria for the bedrooms are met the criteria for the KLDs will also be met.

4.20 The façade performance is shown in for the different floor levels for Blocks A in Figure 5 to Figure 10.



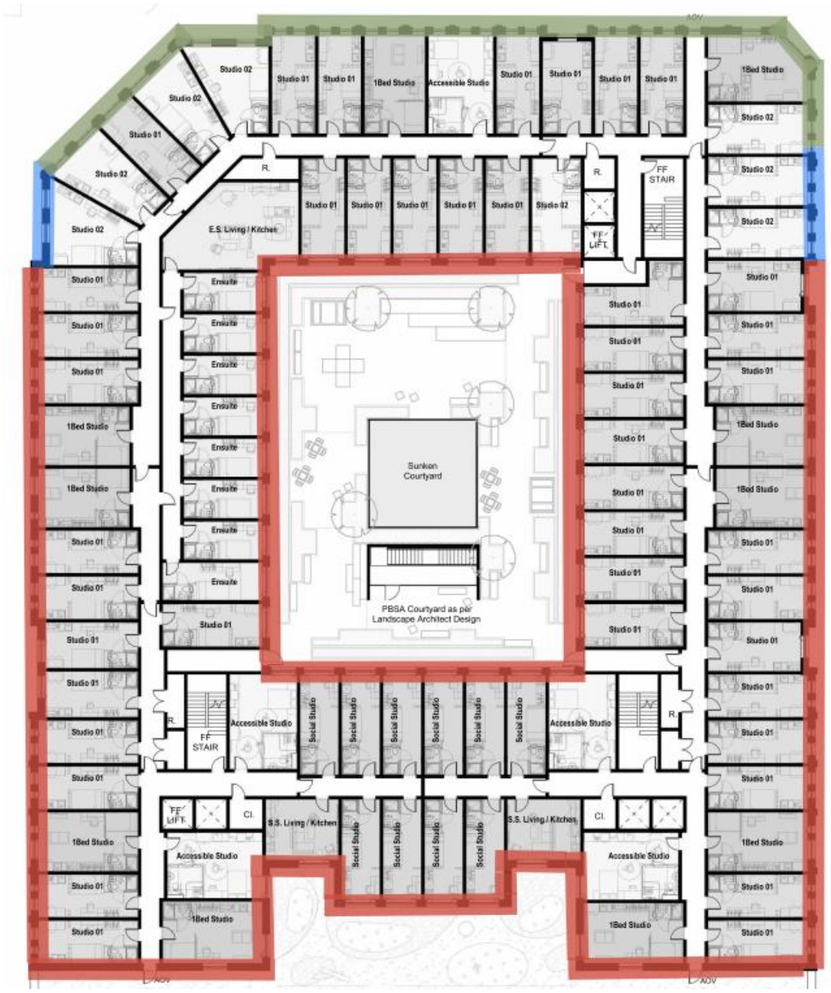
Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 5: Façade acoustic performance requirements – Block A Level 0



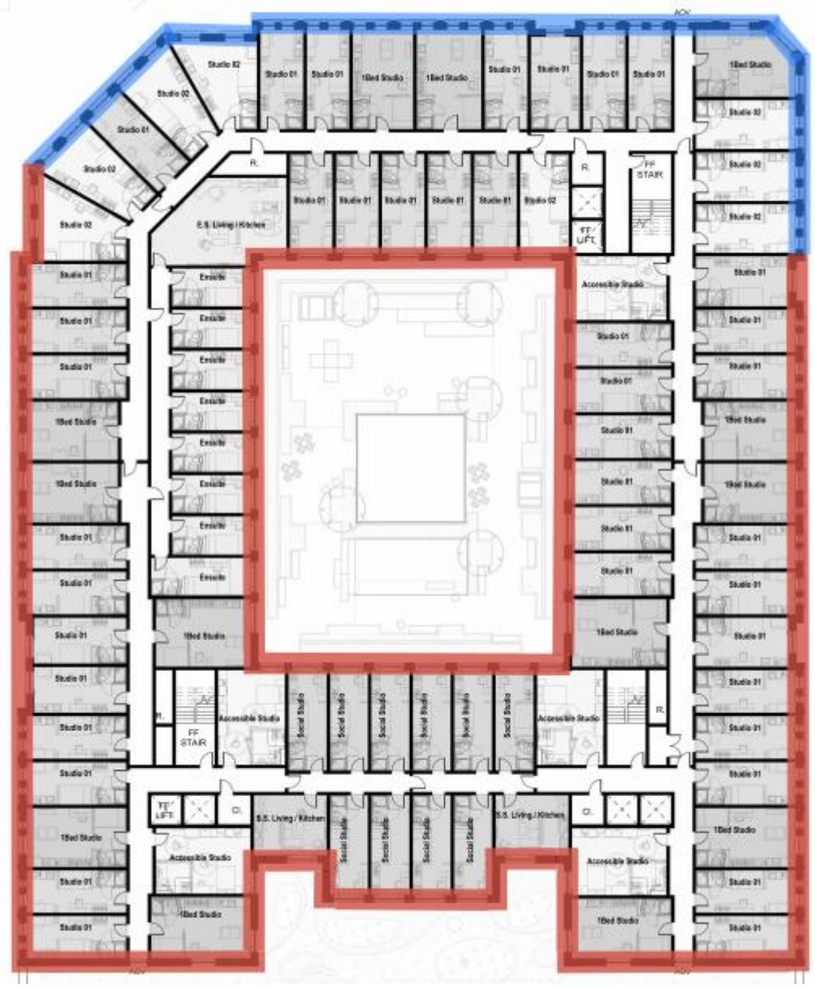
Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 6: Façade acoustic performance requirements – Block A Mezzanine



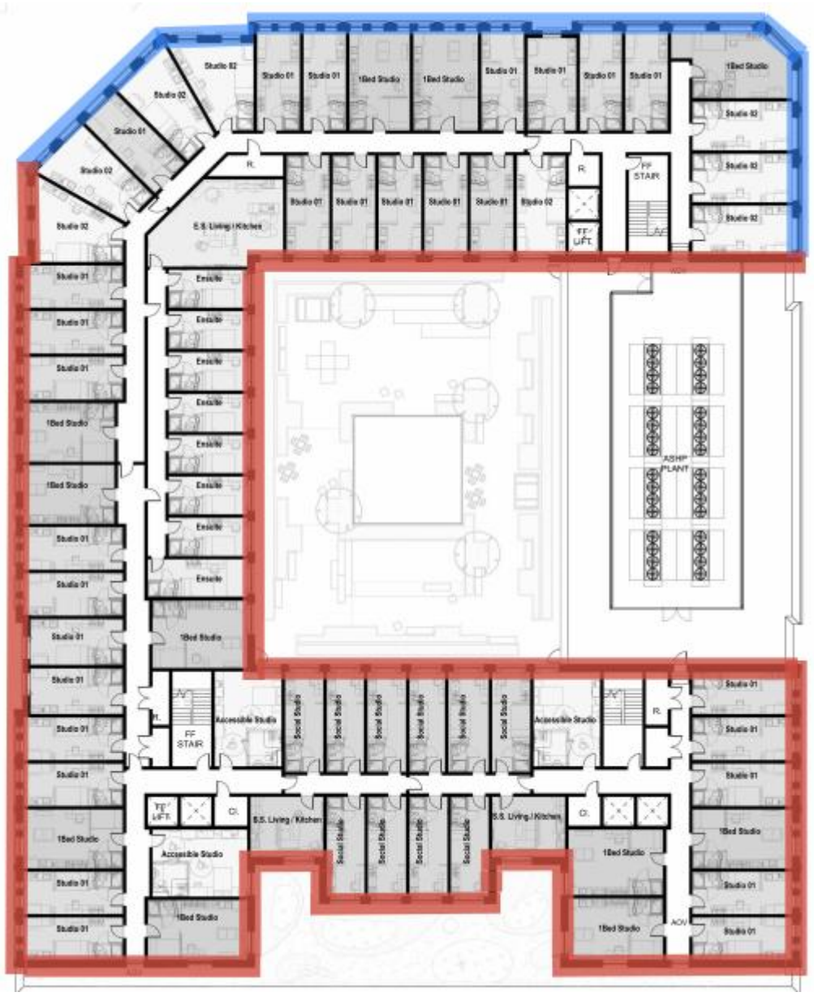
Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 7: Façade acoustic performance requirements – Block A Level 01 to 04



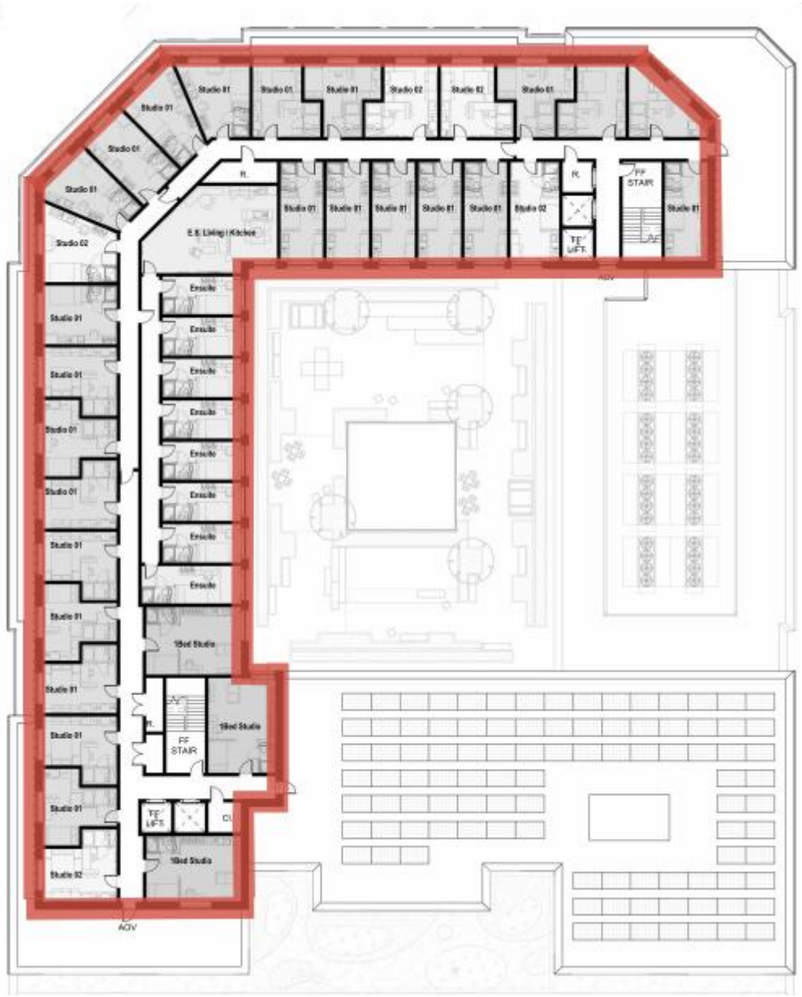
Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 8: Façade acoustic performance requirements – Block A Level 05 to 06



Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 9: Façade acoustic performance requirements – Block A Level 07



Requirement	Glazing performance	Façade vent performance
1	≥ 27 dB $R_w + C_{tr}$	≥ 31 dB $D_{ne,w} + C_{tr}$
2	≥ 31 dB $R_w + C_{tr}$	n/a
3	≥ 34 dB $R_w + C_{tr}$	n/a

Figure 10: Façade acoustic performance requirements – Block A Level 08

5 Conclusions

5.1 This report provides the necessary information to partially discharge planning condition 28, which relates to the noise ingress to the Student Accommodation from the nearby road traffic noise.

5.2 The report includes:

- details of the measured external noise levels;
- predicted noise levels at the new building facades;
- calculations of the noise ingress;
- specifications for the glazing for each façade; and
- details of the air inlet vent and their acoustic performance.

5.3 The predicted internal levels are all below the planning condition noise limits with the proposed glazing specifications and air inlet vents.

5.4 Items (a) and (b) of the condition can be discharged on the basis of the information provided in this report. Part (c) of the condition requires the proposed glazing and vents to be installed and retained.

Appendix A Noise Ingress Calculations

Requirement 1 - Bedroom	
Volume, V / m^3	25
Window area, S / m^2	2
Reverberation Time, T / s	0.5
Number of vents feasible	1

Daytime $L_{Aeq,\,T}$ (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**58**	42	46	50	53	52
27 dB Rw+Ctr Glazing		21	20	31	39	37
Equation 1, L_2(a)	**26**	19	24	17	12	13
31 dB Dnew + Ctr Vent		35	39	56	55	54
Equation 2, L_2(b)	**15**	12	11	-2	2	2
Total noise through all elements, L_2	**27**					

Night-time $L_{Aeq,\,T}$ (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**56**	40	44	49	51	50
27 dB Rw+Ctr Glazing		21	20	31	39	37
Equation 1, L_2(a)	**24**	17	22	16	10	11
31 dB Dnew + Ctr Vent		35	39	56	55	54
Equation 2, L_2(b)	**13**	10	9	-3	0	0
Total noise through all elements, L_2	**25**					

Night-time L_{AFmax} (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**75**	59	63	68	70	69
27 dB Rw+Ctr Glazing		21	20	31	39	37
Equation 1, L_2(a)	**43**	36	41	35	29	30
31 dB Dnew + Ctr Vent		35	39	56	55	54
Equation 2, L_2(b)	**32**	29	28	16	19	19
Total noise through all elements, L_2	**44**					

Requirment 2 - Bedroom	
Volume, V / m^3	25
Window area, S / m^2	2
Reverberation Time, T / s	0.5
Number of vents feasible	0

Daytime $L_{Aeq,\,T}$ (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**63**	45	50	53	59	58
31 dB Rw+Ctr Glazing		25	24	30	37	39
Equation 1, L_2(a)	**27**	17	23	21	20	17
MVHR						
Equation 2, L_2(b)	**0**	0	0	0	0	0
Total noise through all elements, L_2	**27**					

Night-time $L_{Aeq,\,T}$ (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**61**	43	48	51	57	56
31 dB Rw+Ctr Glazing		25	24	30	37	39
Equation 1, L_2(a)	**25**	15	21	19	18	15
MVHR						
Equation 2, L_2(b)	**0**	0	0	0	0	0
Total noise through all elements, L_2	**25**					

Night-time L_{AFmax} (dB)	dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz
External free-field noise, L_{1in}	**78**	60	65	68	74	73
31 dB Rw+Ctr Glazing		25	24	30	37	39
Equation 1, L_2(a)	**42**	32	38	36	35	32
MVHR						
Equation 2, L_2(b)	**0**	0	0	0	0	0
Total noise through all elements, L_2	**42**					

Requirment 3 - Bedroom	
Volume, V / m^3	25
Window area, S / m^2	2
Reverberation Time, T / s	0.5
Number of vents feasible	0

Daytime $L_{Aeq,T}$ (dB)	**dB(A)**	**125 Hz**	**250 Hz**	**500 Hz**	**1 kHz**	**2 kHz**
External free-field noise, L_{1in}	**69**	51	56	59	65	64
34 dB Rw+Ctr Glazing		27	29	36	41	42
Equation 1, $L_2(a)$	**29**	22	24	21	22	20
MVHR						
Equation 2, $L_2(b)$	**0**	0	0	0	0	0
Total noise through all elements, L_2	**29**					

Night-time $L_{Aeq,T}$ (dB)	**dB(A)**	**125 Hz**	**250 Hz**	**500 Hz**	**1 kHz**	**2 kHz**
External free-field noise, L_{1in}	**67**	46	51	56	64	63
34 dB Rw+Ctr Glazing		27	29	36	41	42
Equation 1, $L_2(a)$	**26**	17	20	18	21	19
MVHR						
Equation 2, $L_2(b)$	**0**	0	0	0	0	0
Total noise through all elements, L_2	**26**					

Night-time L_{AFmax} (dB)	**dB(A)**	**125 Hz**	**250 Hz**	**500 Hz**	**1 kHz**	**2 kHz**
External free-field noise, L_{1in}	**84**	63	68	73	81	80
34 dB Rw+Ctr Glazing		27	29	36	41	42
Equation 1, L2(a)	**43**	34	37	35	38	36
MVHR						
Equation 2, L2(b)	**0**	0	0	0	0	0
Total noise through all elements, L_2	**43**					