

ACOUSTIC DESIGN TECHNOLOGY
Noise and Vibration Consultants

ADT 3447

2 July 2025

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COLLYHURST VILLAGE, MANCHESTER

POST COMPLETION TESTING

ACOUSTIC CONSULTANCY REPORT ADT 3447/PCT2

Revision	Date	Issued By	Checked By	Revision Notes
-	2 July 2025	Jack Williamson	Chris Middleton	first issue

1.0 SUMMARY

Post completion testing has been undertaken to demonstrate compliance with condition 19 of planning permission 129393/VO/2021, which reads as follows:

19) (a) Notwithstanding the Noise and Vibration chapter of the ES (Chapter. 11), prepared by Sandy Brown, stamped as received by the City Council, as Local Planning Authority, on the 12 February 2021, prior to the first occupation of a phase of the development a scheme for acoustically insulating the proposed residential accommodation against noise from the local traffic network shall be submitted for approval in writing by the City Council, as Local Planning Authority. The approved noise insulation scheme shall be completed before the first occupation of the phase of the development.

Noise survey data must include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary. The following noise criteria will be required to be achieved:

Bedrooms (night time - 23.00 - 07.00) 30 dB L Aeq (individual noise events shall not exceed 45 dB L Amax,F by more than 15 times)

Living Rooms (daytime - 07.00 - 23.00) 35 dB L Aeq

Gardens and terraces (daytime) 55 dB L Aeq

(b) Prior to the first occupation of the development, a verification report will be required to validate that the work undertaken conforms to the recommendations and requirements approved as part of part (a) of this planning condition.

The verification report shall include post completion testing to confirm the noise criteria has been met. In instances of non-conformity, these shall be detailed along with mitigation measures required to ensure compliance with the noise criteria. A verification report and measures shall be agreed until such a time as the development complies with part (a) of this planning condition.

Any mitigation measures shall be implemented in accordance with a timescale to be agreed with the City Council, as Local Planning Authority, and thereafter retained and maintained in situ.

Reason: To secure a reduction in noise from traffic or other sources in order to protect future residents from noise disturbance pursuant to policies SP1, H1 and DM1 of the Core Strategy (2007) and saved policy DC26 of the Unitary Development Plan for the City of Manchester (1995).

The scheme of sound insulation measures for this development as indicated in part a) of the condition is described in the previously issued report ADT 3447/SSM dated 27 February 2023.

A post construction survey has been undertaken as required by part b) of the condition, in relation to the first phase of the development (Plots D2, D3 and D4). This is supplementary to the tests undertaken in February 2025, as set out in the previously issued report ADT 3447/PCT dated 14 May 2025.

Measurements have been taken over a 24 hour period in the houses marked on the attached site plan 3447/SP1 as described in the separately issued method statement ADT 3447/MS1 (Revision C) dated 18 June 2025. The results are all within the noise criteria in planning condition 19.

The test results therefore demonstrate compliance with planning condition 19, in relation to Plots D2, D3 and D4.

2.0 POST COMPLETION TESTING

2.1 Acoustic Design Criteria

The noise criteria are as follows:

Location	Noise criterion
Bedrooms (night)	30 dB $L_{Aeq,8hour}$ 45 dB L_{Amax} *
Living rooms (day)	≤ 35 dB $L_{Aeq,16hour}$
Gardens and terraces (day)	55 dB $L_{Aeq,16hour}$

* Note:- not normally to be exceeded more than 15 times over the night

Please note that the criterion for gardens and terraces is provided for information only and has not been tested, as there is ongoing construction taking place on the site and neighbouring sites during the day.

In any case, compliance or non-compliance with that requirement would be determined by the location and massing of the building, which were fixed when planning permission was granted.

2.2 Site Particulars

The development is located off the A664 Rochdale Road, Manchester.

At the time of testing the building envelope was complete and the test houses were structurally completed but with the exception of test house R1, these houses were not yet carpeted or furnished.

Construction works were ongoing between 07:30 hours and 17:00 hours daily and will continue up until occupation, and the tests have therefore by necessity been undertaken around the ongoing construction noise.

3.0 TEST PROCEDURE

3.1 Purpose of Tests

Noise measurements were undertaken in a number of sample rooms to check compliance with the applicable Manchester City Council indoor ambient noise criteria, towards discharge of planning condition 19 b).

3.2 Instrumentation

The instrumentation used, and the field calibration values before and after the survey are detailed in Appendix B of this report.

3.3 Procedure

The test room locations, the survey periods and the instrumentation used are set out in the following table. The locations are also illustrated on the attached site plan 3447/SP1.

Test House	Locations	Survey period	Instrument
R1	Living Room	19 June to 20 June 2025	Svantek 958
	1F Bedroom	24 June to 25 June 2025	
R2	Living Room and 1F Bedroom	24 June to 25 June 2025	Norsonic 140
R3	Living Room	19 June to 20 June 2025	Norsonic 140
	1F Bedroom	30 June to 1 July 2025	01dB Solo
R4	Living Room and 1F Bedroom	23 June to 24 June 2025	Norsonic 140

Compliance demonstrated at these houses should therefore indicate compliance at all properties on this phase of the development. More properties will be tested on the other phases of the development in due course.

At each position, the microphone was mounted on a tripod approximately 1.2 metres above the floor in the centre of the room and set to log over a 24 hour period.

The meter was set to log the 100ms L_{Aeq} and $L_{Amax(F)}$ for the duration of the survey period, for subsequent post processing.

4.0 RESULTS

4.1 Recorded Data

The calculated $L_{Aeq, 1 \text{ hour}}$ for the test rooms are listed in the attached tables 3447/T1 – 3447/T4, along with the calculated $L_{Aeq,T}$ for the portion of the day time period unaffected by site noise (i.e. 17:00 to 23:00 hours) and for the whole of the night time period (23:00 – 07:00).

The corresponding night time $L_{Amax,F}$ are shown on the attached graphs 3447/G1 – G8, at 1 minute resolution.

4.2 Discussion of Results

As site work was continuing throughout each survey period, the data from 07:00 hours to 17:00 hours was affected by site noise to varying degrees and is therefore not representative.

In the absence of site noise, observations and analysis of audio samples indicates that the noise levels were generally controlled by traffic noise, with the highest night time L_{Amax} controlled by cars, as is typical of many urban areas.

Reference to the attached tables 3447/T1 – 3447/T4 shows that the measured $L_{Aeq,T}$ over the surveyed portion of the day time period outside site opening hours, and over the whole night time period are within the required day time $L_{Aeq, 16 \text{ hour}} \leq 35 \text{ dB}$ and the night time $L_{Aeq, 8 \text{ hour}} \leq 30 \text{ dB}$.

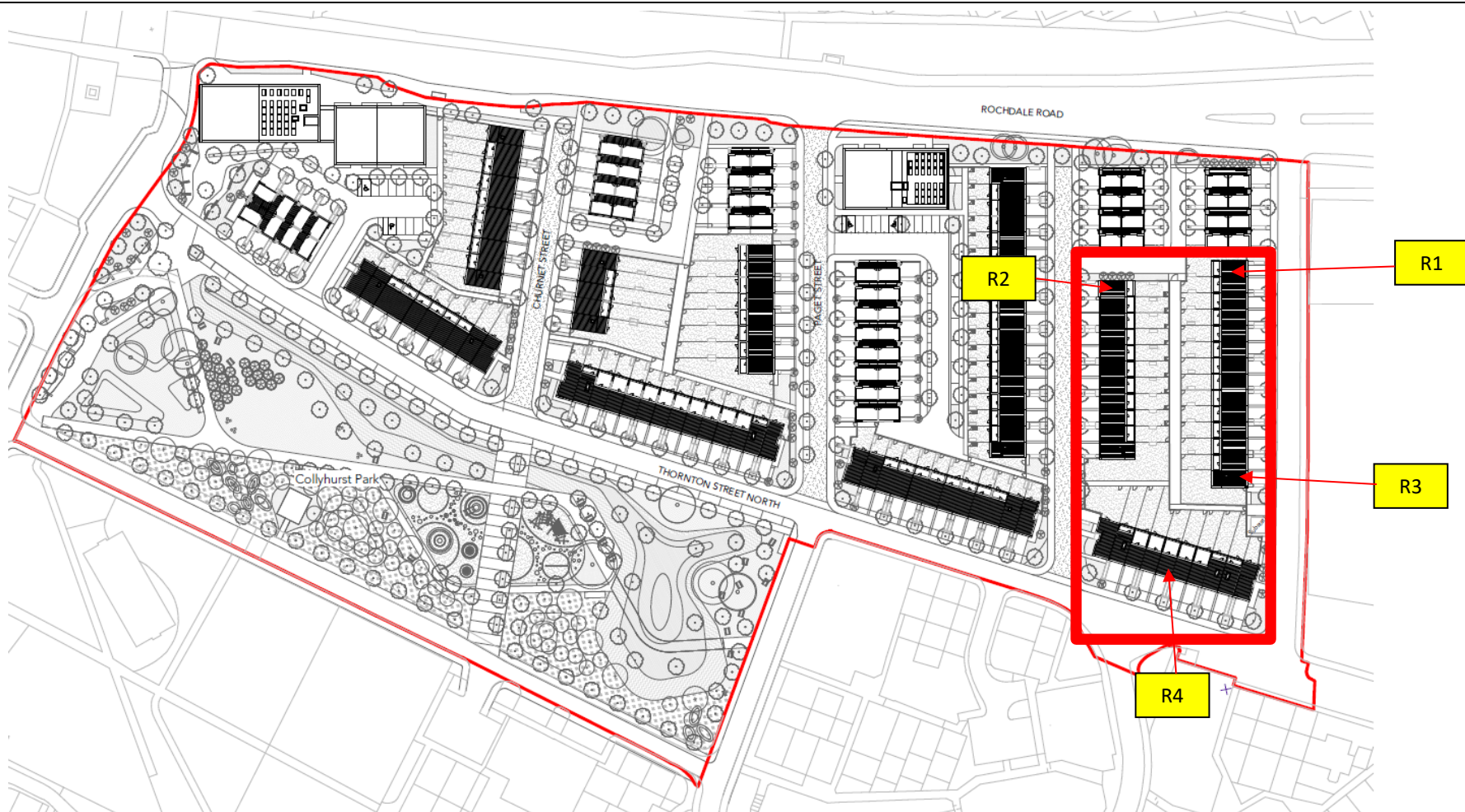
Reference to the attached L_{Amax} time history graphs reveals that the levels were generally less than the required limit of $L_{Amax,F} \leq 45 \text{ dB}$, and do not exceed that limit more than 15 times per night, as required by the planning condition. The excesses over 45 dB occurred at unpredictable times, and can therefore be considered untypical.

4.3 Conclusion

The conclusion of this report is that the measured levels of external noise intrusion are within the indoor ambient noise criteria in planning condition 19, in relation to Plots D2, D3 and D4.



FOR ACOUSTIC DESIGN TECHNOLOGY



Notes

The portion of the development as a whole that these tests relate to (Plots D2, D3 and D4) is marked in red.

Description

Site plan showing approximate location of test houses R1-R4

Project

Collyhurst Village, Manchester

Date

19 June 2025 – 1 July 2025

Drawing No.

3447/SP1



ACOUSTIC DESIGN TECHNOLOGY
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Test House R1 - Summary of L_{Aeq, 1 hour} dB

Start	Stop	L _{Aeq, 1 hour} dB		Comments
		GF Living Room	1F Bedroom	
12:00	13:00	29	29	Site noise during this period
13:00	14:00	29	28	Site noise during this period
14:00	15:00	28	29	Site noise during this period
15:00	16:00	28	28	Site noise during this period
16:00	17:00	28	28	Site noise during this period
17:00	18:00	31	28	
18:00	19:00	28	29	
19:00	20:00	27	28	
20:00	21:00	28	27	
21:00	22:00	28	27	
22:00	23:00	26	26	
23:00	00:00	27	26	
00:00	01:00	27	25	
01:00	02:00	26	25	
02:00	03:00	27	24	
03:00	04:00	27	24	
04:00	05:00	27	24	
05:00	06:00	26	26	
06:00	07:00	28	28	
07:00	08:00	28	28	Site noise during this period
08:00	09:00	27	29	Site noise during this period
09:00	10:00	29	29	Site noise during this period
10:00	11:00	29	46	Site noise during this period
11:00	12:00	28	30	Site noise during this period
12:00	13:00	28	30	Site noise during this period
Day L _{Aeq,T} dB*		28	28	
Night L _{Aeq,T} dB		27	25	

*Note:- averaged over the period unaffected by site noise (17:00 – 23:00).

TABLE 3447/T1

Test House R2 - Summary of L_{Aeq, 1 hour} dB

Start	Stop	L _{Aeq, 1 hour} dB		Comments
		GF Living Room	1F Bedroom	
13:00	14:00	36	41	Site noise during this period
14:00	15:00	50	63	Site noise during this period
15:00	16:00	58	64	Site noise during this period
16:00	17:00	35	32	Site noise during this period
17:00	18:00	35	32	
18:00	19:00	39	35	Site noise during this period
19:00	20:00	36	32	
20:00	21:00	35	32	
21:00	22:00	32	29	
22:00	23:00	33	30	
23:00	00:00	31	28	
00:00	01:00	29	26	
01:00	02:00	27	24	
02:00	03:00	25	23	
03:00	04:00	25	22	
04:00	05:00	27	24	
05:00	06:00	30	27	
06:00	07:00	33	30	
07:00	08:00	49	43	Site noise during this period
08:00	09:00	37	35	Site noise during this period
09:00	10:00	54	47	Site noise during this period
10:00	11:00	54	56	Site noise during this period
11:00	12:00	54	48	Site noise during this period
12:00	13:00	53	47	Site noise during this period
Day L _{Aeq,T} dB*		34	31	
Night L _{Aeq,T} dB		29	26	

*Note:- averaged over the period unaffected by site noise (17:00 – 23:00).

TABLE 3447/T2

Test House R3 - Summary of $L_{Aeq, 1 \text{ hour}}$ dB

Start	Stop	$L_{Aeq, 1 \text{ hour}}$ dB		Comments
		GF Living Room	1F Bedroom	
13:00	14:00	28	33	Site noise during this period
14:00	15:00	30	41	Site noise during this period
15:00	16:00	21	34	Site noise during this period
16:00	17:00	20	38	Site noise during this period
17:00	18:00	20	29	
18:00	19:00	20	29	
19:00	20:00	20	30	
20:00	21:00	20	29	
21:00	22:00	20	29	
22:00	23:00	20	28	
23:00	00:00	19	27	
00:00	01:00	19	26	
01:00	02:00	19	23	
02:00	03:00	19	21	
03:00	04:00	25	21	
04:00	05:00	19	23	
05:00	06:00	20	25	
06:00	07:00	20	28	
07:00	08:00	22	31	Site noise during this period
08:00	09:00	22	40	Site noise during this period
09:00	10:00	25	47	Site noise during this period
10:00	11:00	22	42	Site noise during this period
11:00	12:00	25	41	Site noise during this period
12:00	13:00	30	50	Site noise during this period
Day $L_{Aeq,T}$ dB*		20	29	
Night $L_{Aeq,T}$ dB		21	25	

*Note:- averaged over the period unaffected by site noise (17:00 – 23:00).

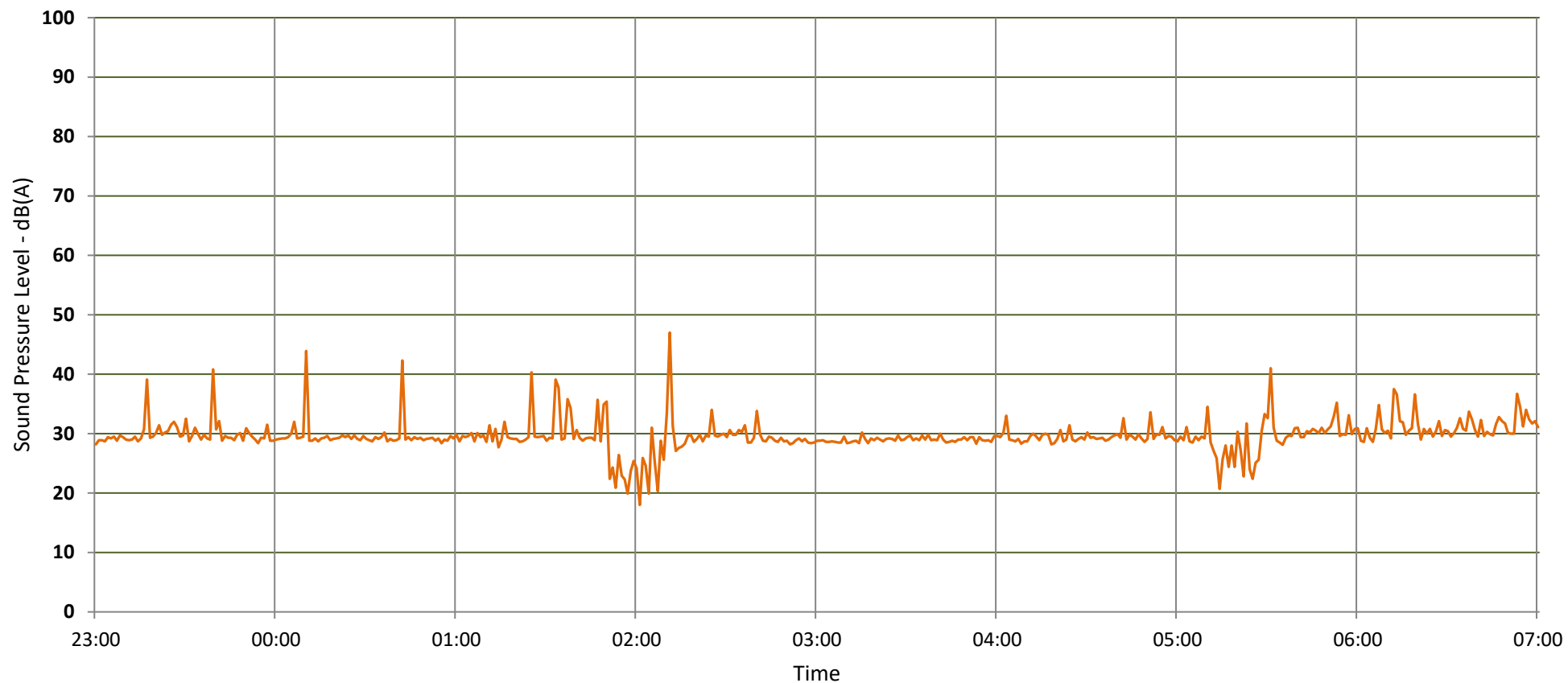
TABLE 3447/T3

Test House R4 - Summary of $L_{Aeq, 1 \text{ hour}}$ dB

Start	Stop	$L_{Aeq, 1 \text{ hour}}$ dB		Comments
		GF Living Room	1F Bedroom	
09:00	10:00	35	33	Site noise during this period
10:00	11:00	30	27	Site noise during this period
11:00	12:00	35	40	Site noise during this period
12:00	13:00	28	25	Site noise during this period
13:00	14:00	29	24	Site noise during this period
14:00	15:00	38	34	Site noise during this period
15:00	16:00	49	29	Site noise during this period
16:00	17:00	26	21	Site noise during this period
17:00	18:00	24	21	
18:00	19:00	23	20	
19:00	20:00	23	20	
20:00	21:00	22	21	
21:00	22:00	21	20	
22:00	23:00	21	21	
23:00	00:00	24	21	
00:00	01:00	20	20	
01:00	02:00	19	18	
02:00	03:00	18	18	
03:00	04:00	18	18	
04:00	05:00	20	18	
05:00	06:00	25	24	
06:00	07:00	25	22	
07:00	08:00	48	33	Site noise during this period
08:00	09:00	49	37	Site noise during this period
Day $L_{Aeq,T}$ dB*		22	21	
Night $L_{Aeq,T}$ dB		22	20	

*Note:- averaged over the period unaffected by site noise (17:00 – 23:00).

TABLE 3447/T4



Notes

$L_{Amax(F)}$ exceeded 45 dB once

Description

1 minute $L_{Amax(F)}$ in Test House R1 – Living Room

Project

Collyhurst Village, Manchester

Survey Date

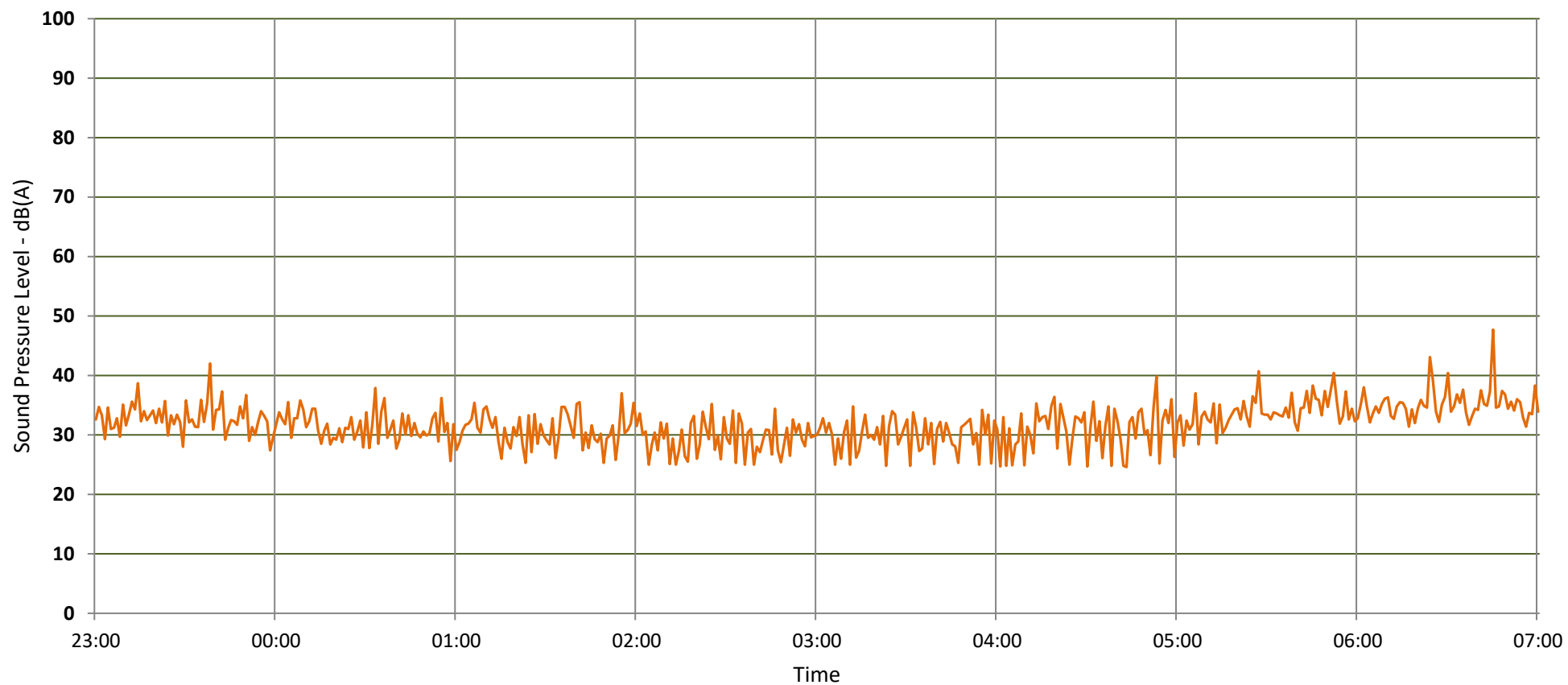
Thursday 19 June to Friday 20 June 2025

Drawing No.

3447/G1



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Notes

$L_{Amax(F)}$ exceeded 45 dB once

Description

1 minute $L_{Amax(F)}$ in Test Room R1 – 1F Bedroom

Project

Collyhurst Village, Manchester

Survey Date

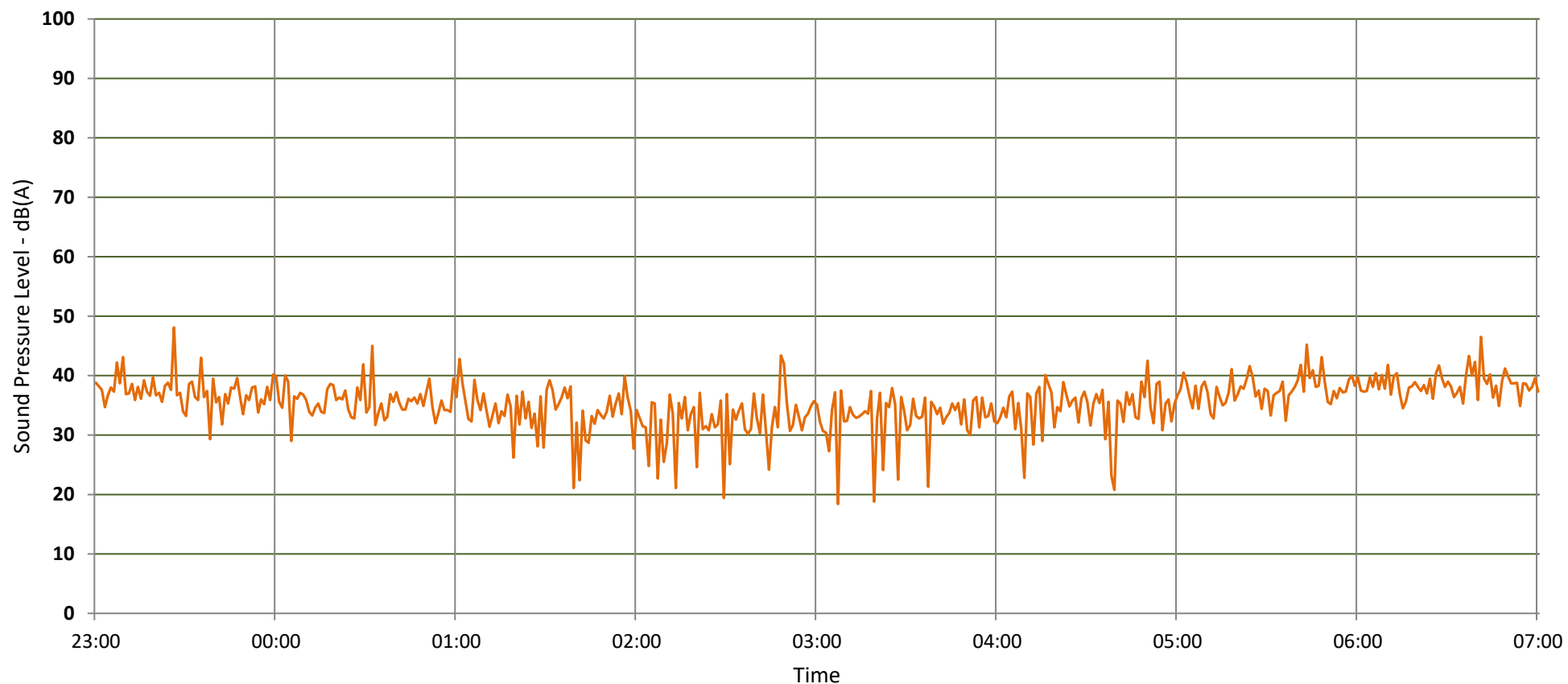
Tuesday 24 June to Wednesday 25 June 2025

Drawing No.

3447/G2



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Notes

$L_{Amax(F)}$ exceeded 45 dB 4 times

Description

1 minute $L_{Amax(F)}$ in Test Room R2 – Living Room

Project

Collyhurst Village, Manchester

Survey Date

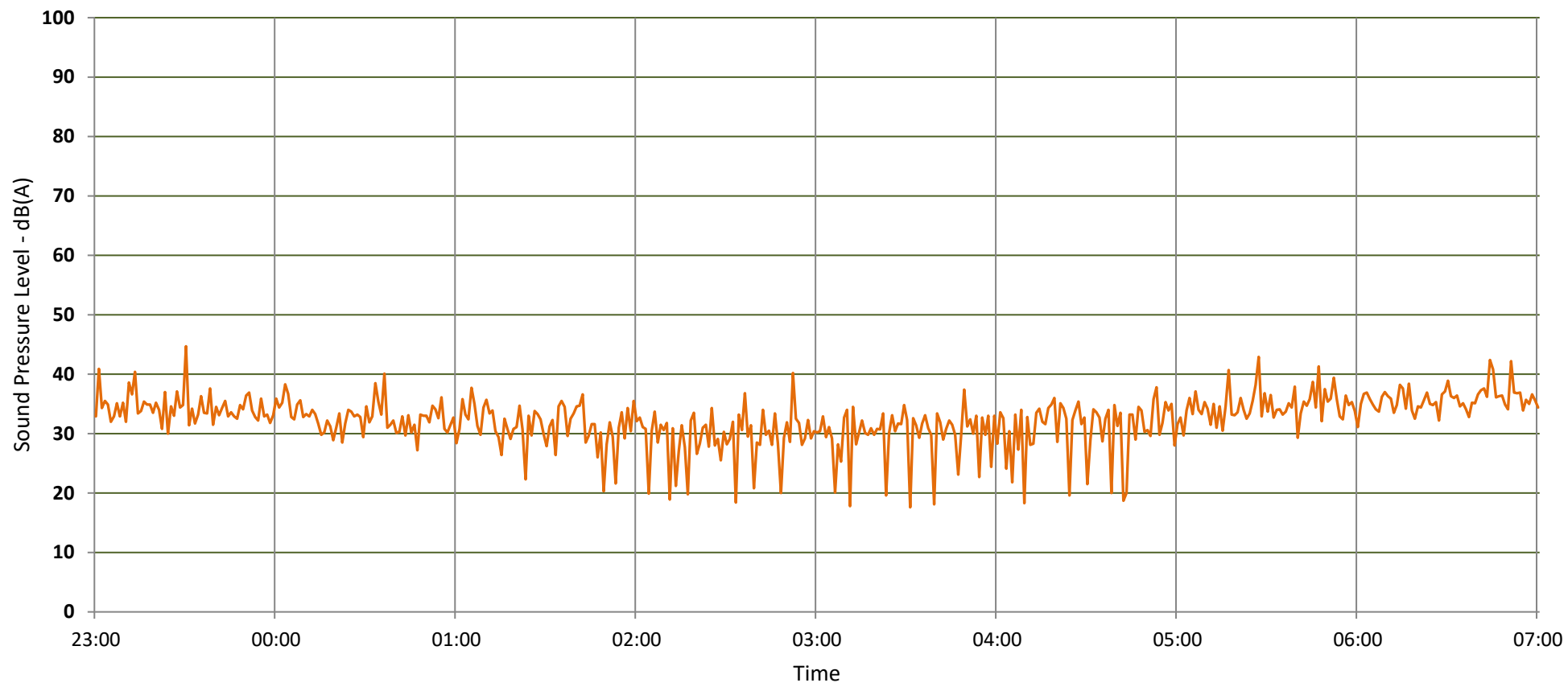
Tuesday 24 June to Wednesday 25 June 2025

Drawing No.

3447/G3



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Notes

$L_{Amax(F)}$ exceeded 45 dB once

Description

1 minute $L_{Amax(F)}$ in Test Room R2 – 1F Bedroom

Project

Collyhurst Village, Manchester

Survey Date

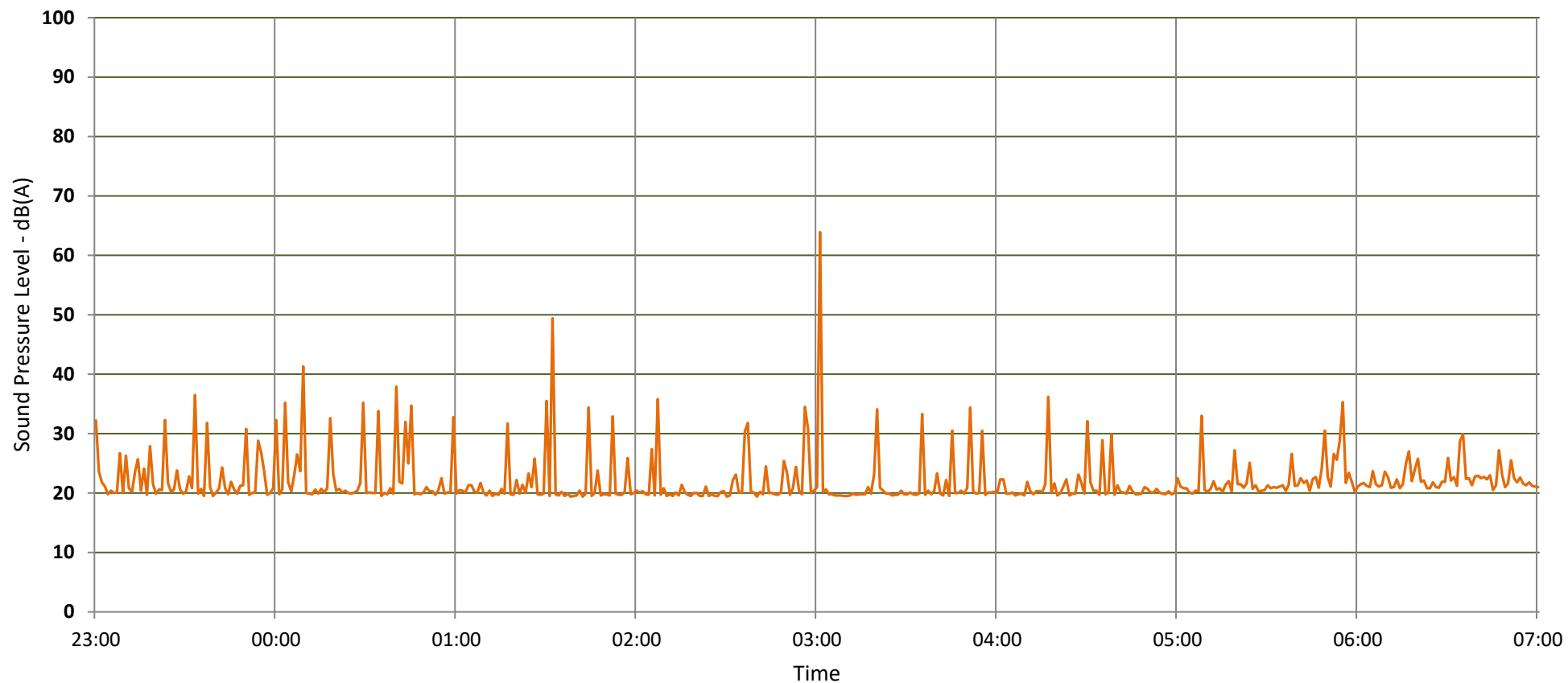
Tuesday 24 June to Wednesday 25 June 2025

Drawing No.

3447/G4



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Notes

$L_{Amax(F)}$ exceeded 45 dB 2 times

Description

1 minute $L_{Amax(F)}$ in Test Room R3 – Living Room

Project

Collyhurst Village, Manchester

Survey Date

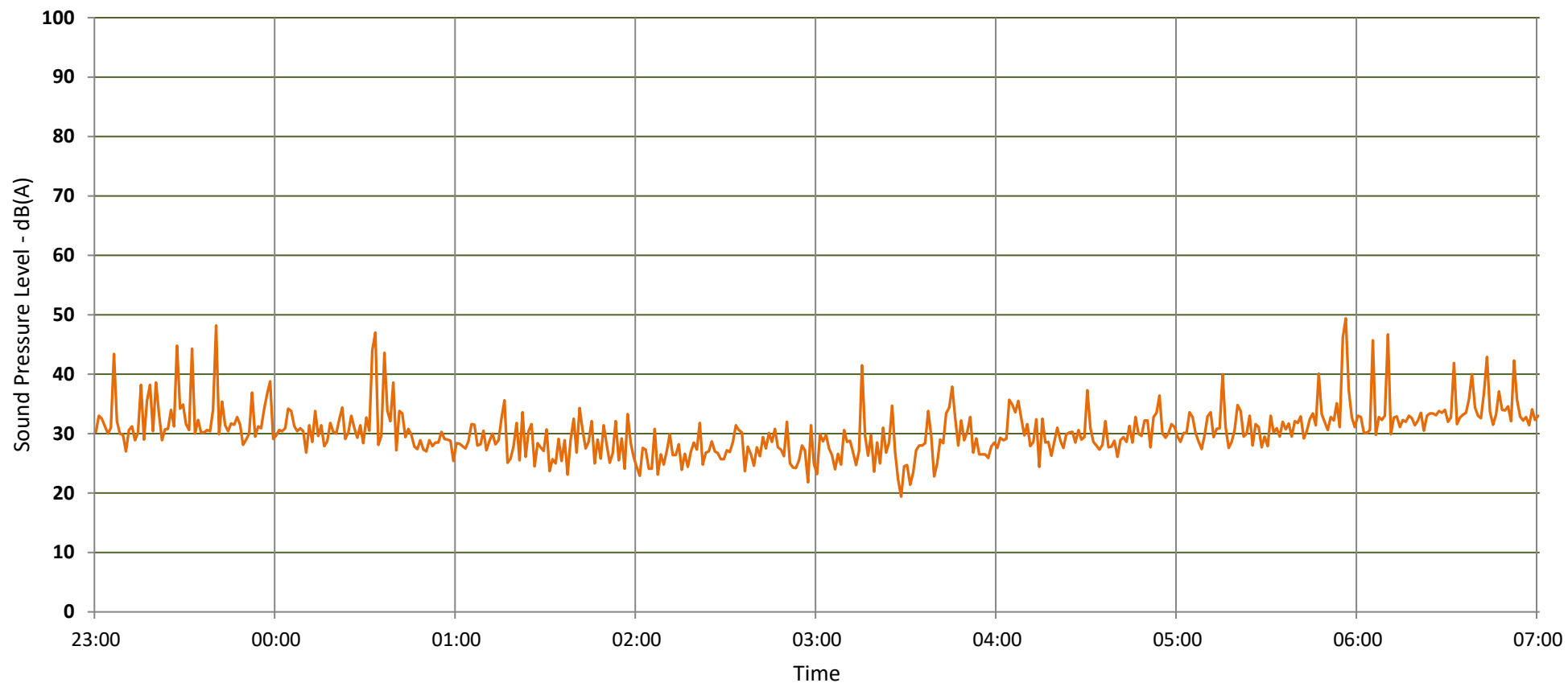
Thursday 19 June to Friday 20 June 2025

Drawing No.

3447/G5



ACOUSTIC DESIGN TECHNOLOGY
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Notes

$L_{Amax(F)}$ exceeded 45 dB 6 times

Description

1 minute $L_{Amax(F)}$ in Test Room R3 – 1F Bedroom

Project

Collyhurst Village, Manchester

Survey Date

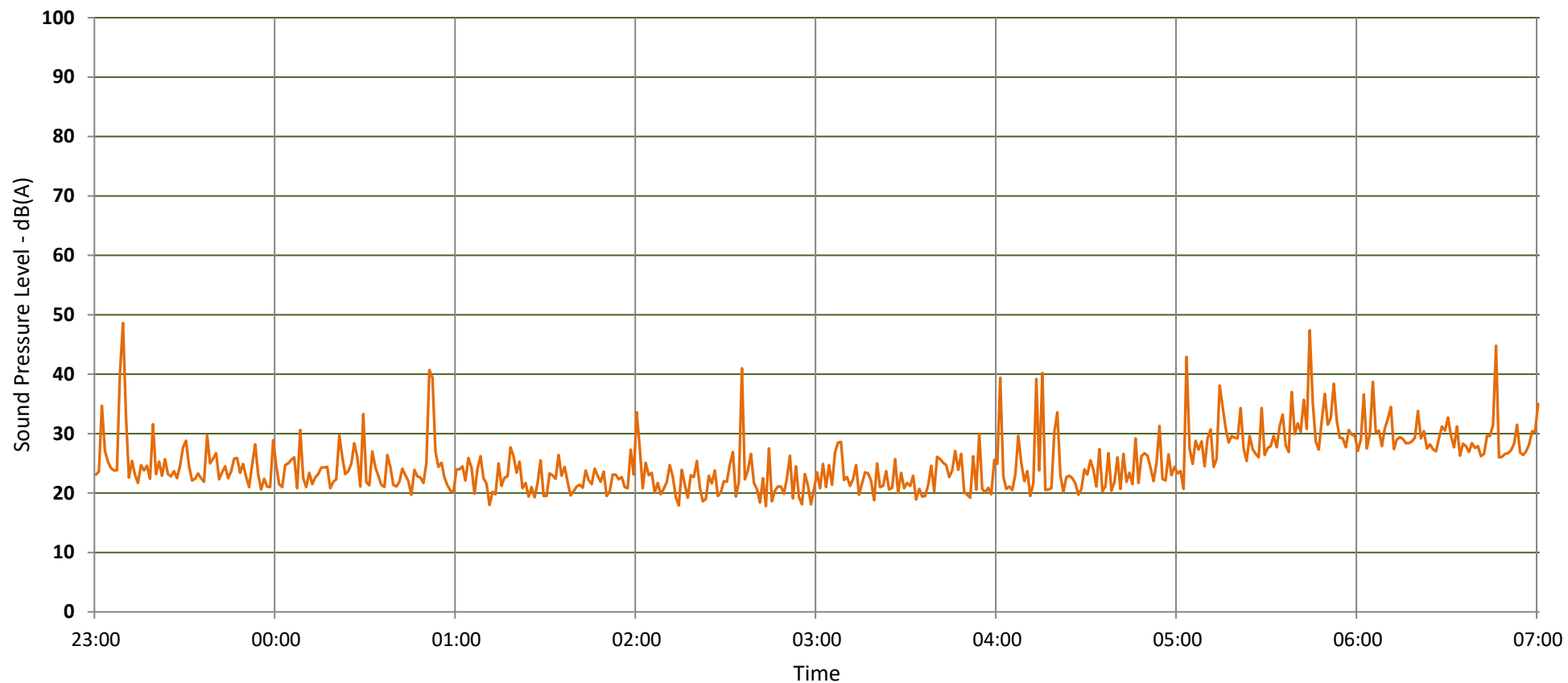
Monday 30 June to Tuesday 1 July 2025

Drawing No.

3447/G6



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Notes

$L_{Amax(F)}$ exceeded 45 dB 3 times

Description

1 minute $L_{Amax(F)}$ in Test Room R4 – Living Room

Project

Collyhurst Village, Manchester

Survey Date

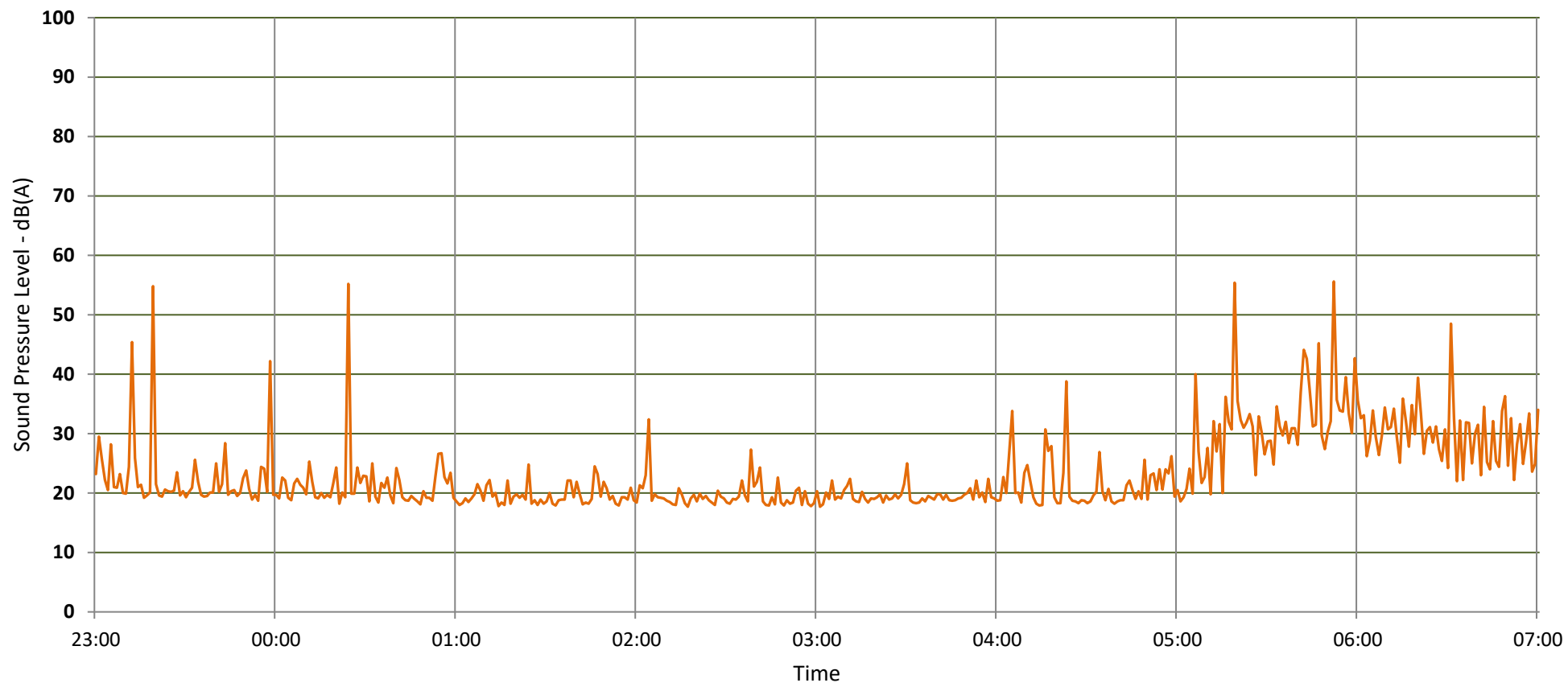
Monday 23 June to Tuesday 24 June 2025

Drawing No.

3447/G7



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Notes

$L_{Amax(F)}$ exceeded 45 dB 7 times

Description

1 minute $L_{Amax(F)}$ in Test Room R4 – 1F Bedroom

Project

Collyhurst Village, Manchester

Survey Date

Monday 23 June to Tuesday 24 June 2025

Drawing No.

3447/G8



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APPENDIX A
Instrumentation

Manufacturer	Type and / or Model	Serial Number	Last Laboratory Calibration	Calibrator Output (dB)	Free Field Correction (dB)	Initial reading (dB)	Final reading (dB)
Norsonic	Nor140 Class 1 Sound Level Meter (SLM10)	1407647	February 2025		-0.20	113.9	113.9
Norsonic	Nor1225 ½" Microphone	413060					
Norsonic	Nor1209 Preamplifier	22847					
Norsonic	Nor140 Class 1 Sound Level Meter (SLM6)	1404515	February 2024		-0.20	113.9	113.9
Norsonic	Nor1225 ½" Microphone	142527					
Norsonic	Nor1209 Preamplifier	13885					
Svantek	Svan 958 4 Channel Sound and Vibration Analyser	23430	March 2025		0.0	114.1	114.2
Microtech Gefell	MK 255 Microphone (Mic 4)	12328					
Svantek	SV12L Preamplifier	47684					
Norsonic	Nor1251 Calibrator (Cal 6)	35228	April 2025	114.06			
01dB	(Blue) Solo Class 1 Sound Level Meter	60320	March 2025		-0.10	114.0	114.1
01dB	PRE 21 S Pre-Amplifier	16866					
01dB	MCE 212 ½ inch Microphone	90549					