ADT 3447

26 March 2025

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COLLYHURST VILLAGE, MANCHESTER

POST COMPLETION TESTING

ACOUSTIC CONSULTANCY REPORT ADT 3447/PCT

Revision	Date	Issued By	Checked By	Revision Notes
-	13 February 2025	Jack Williamson	Chris Middleton	first issue
A	26 March 2025	Jack Williamson	Chris Middleton	Revised following team comments

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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 andDM1 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 now been undertaken as required by part b) of the condition, in relation to the first phase of the development (Plot D).

Measurements have been taken over several days in the house nearest to the controlling noise source Rochdale Road, and the results are all within the noise criteria in planning condition 19. The results were obtained with no finishes such as carpets, and no fixed or loose furniture, both of which would provide further noise reduction.

The test results therefore demonstrate compliance with planning condition 19, in relation to Plot D.

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 house was structurally completed but not 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 sample room 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 location, the survey period and the instrumentation used are set out in the following table. The location is also illustrated on the attached site plan 3447/SP1.

Test room	Location	Survey period	Instrument
R1	2nd Floor Bedroom	31 January to 04 February 2025	01dB Fusion

This is the house nearest Rochdale Road, and in the room with the clearest view of the road traffic and therefore represents the worst case scenario. Compliance demonstrated at this house should therefore indicate compliance at all properties on this phase of the development.

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 five day 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 $L_{Aeq,\ 1\ hour}$ for the test room are listed in the attached table 3447/T1, 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 – G4, 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.

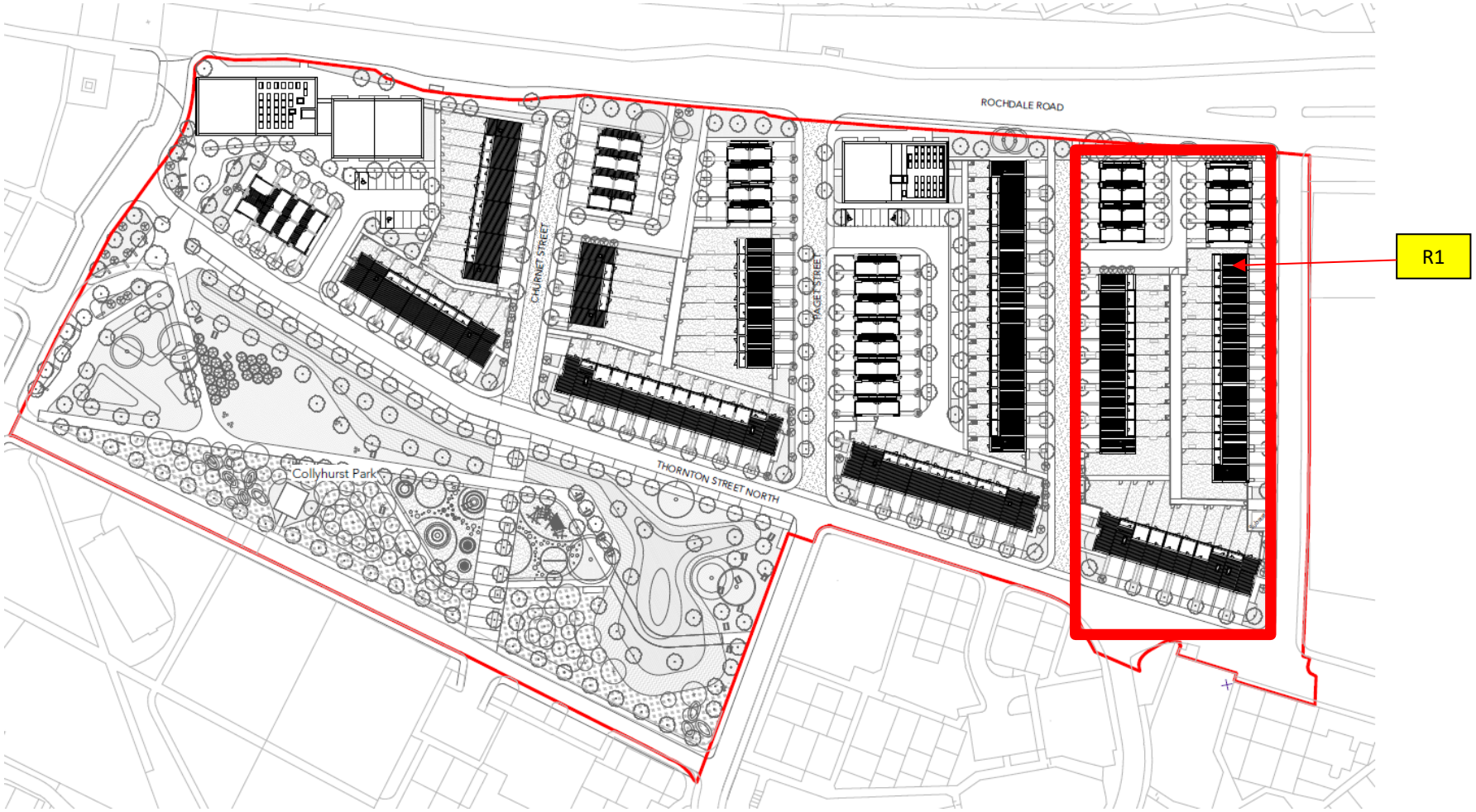
Reference to the attached table 3447/T1 shows that the measured $L_{Aeq,T}$ over the surveyed portion of the day time period outside site opening hours, and over the whole night time period are within the required day time $L_{Aeq,\ 16\ hour}$ <= 35 dB and the night time $L_{Aeq,\ 8\ hour}$ <= 30 dB.

Reference to the attached L_{Amax} time history graphs reveals that the levels were generally less than the required limit of $L_{Amax,F}$ <= 45 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 Plot D.

FOR ACOUSTIC DESIGN TECHNOLOGY



Notes	**Description**	
The portion of the development as a whole that these tests relate to (Plot D) is marked in red.	Site plan showing approximate location of test room R1	
	Project	
	Collyhurst Village, Manchester	
	Date	**Drawing No.**
	26 March 2025	3447/SP1

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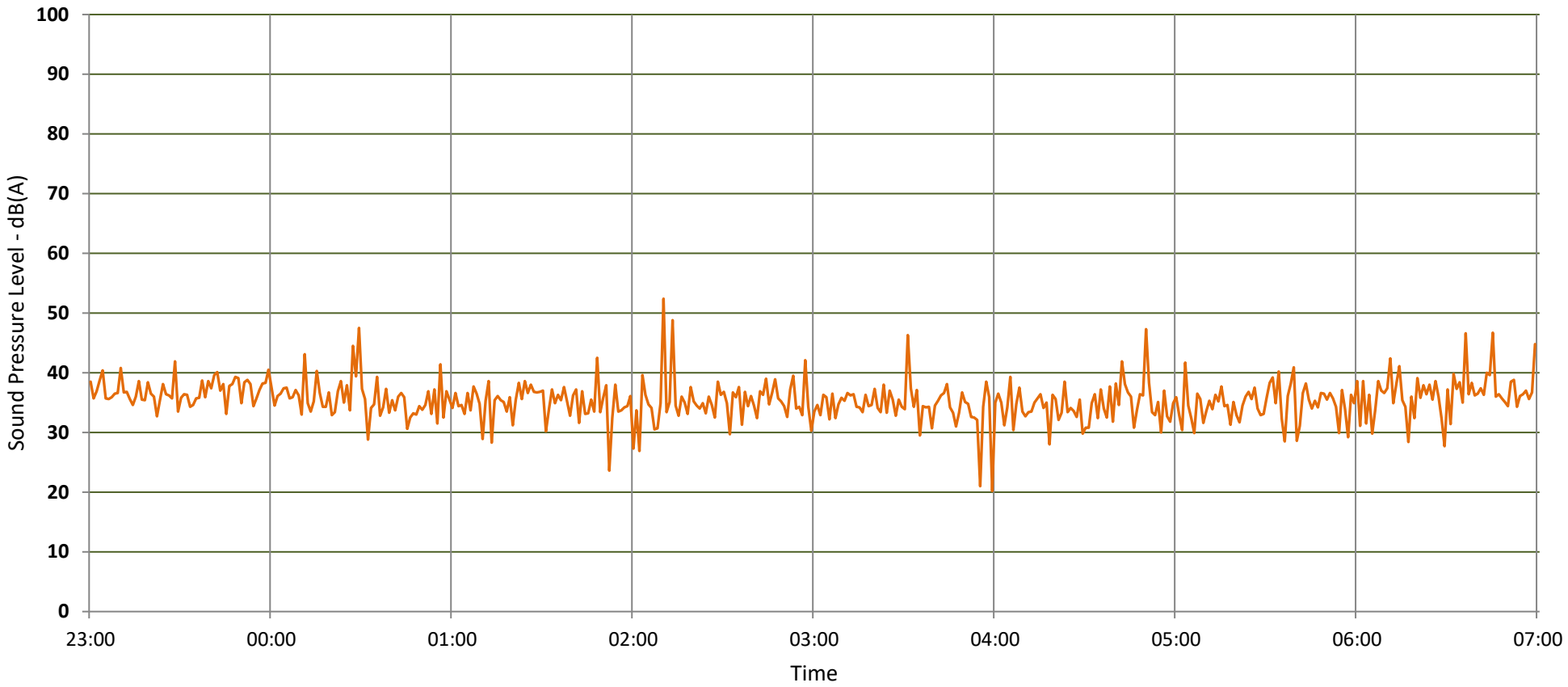
Summary of $L_{Aeq,\ 1\ hour}$ dB

Start	Stop	$L_{Aeq,\ 1\ hour}$ dB				Comments
		31/01 – 01/02	01/02-02/02	02/02-03/02	03/02 – 04/02	
15:00	16:00	34	32	31	62	Site noise during this period
16:00	17:00	33	32	32	32	Site noise during this period
17:00	18:00	33	31	31	34	
18:00	19:00	33	31	31	31	
19:00	20:00	33	33	30	30	
20:00	21:00	32	34	30	29	
21:00	22:00	32	30	29	29	
22:00	23:00	31	31	29	28	
23:00	00:00	30	29	27	27	
00:00	01:00	29	29	25	25	
01:00	02:00	28	28	24	23	
02:00	03:00	28	27	24	22	
03:00	04:00	26	26	24	23	
04:00	05:00	27	26	25	24	
05:00	06:00	27	26	28	28	
06:00	07:00	29	26	32	31	
07:00	08:00	29	27	34	31	Site noise during this period
08:00	09:00	30	28	33	57	Site noise during this period
09:00	10:00	31	30	43	37	Site noise during this period
10:00	11:00	32	30	43	37	Site noise during this period
11:00	12:00	32	32	32	89	Site noise during this period
12:00	13:00	33	32	35	-	Site noise during this period
13:00	14:00	33	31	37	-	Site noise during this period
14:00	15:00	32	32	39	-	Site noise during this period
Day $L_{Aeq,T}$ dB*		32	32	30	31	
Night $L_{Aeq,T}$ dB		28	27	27	26	

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

TABLE 3447/T1



Notes $L_{Amax(F)}$ exceeded 45 dB 7times	**Description** 1 minute $L_{Amax(F)}$ in Test Room R1	
	Project Collyhurst Village, Manchester	
	Survey Date Friday 31 January to Saturday 1 February 2025	**Drawing No.** 3447/G1

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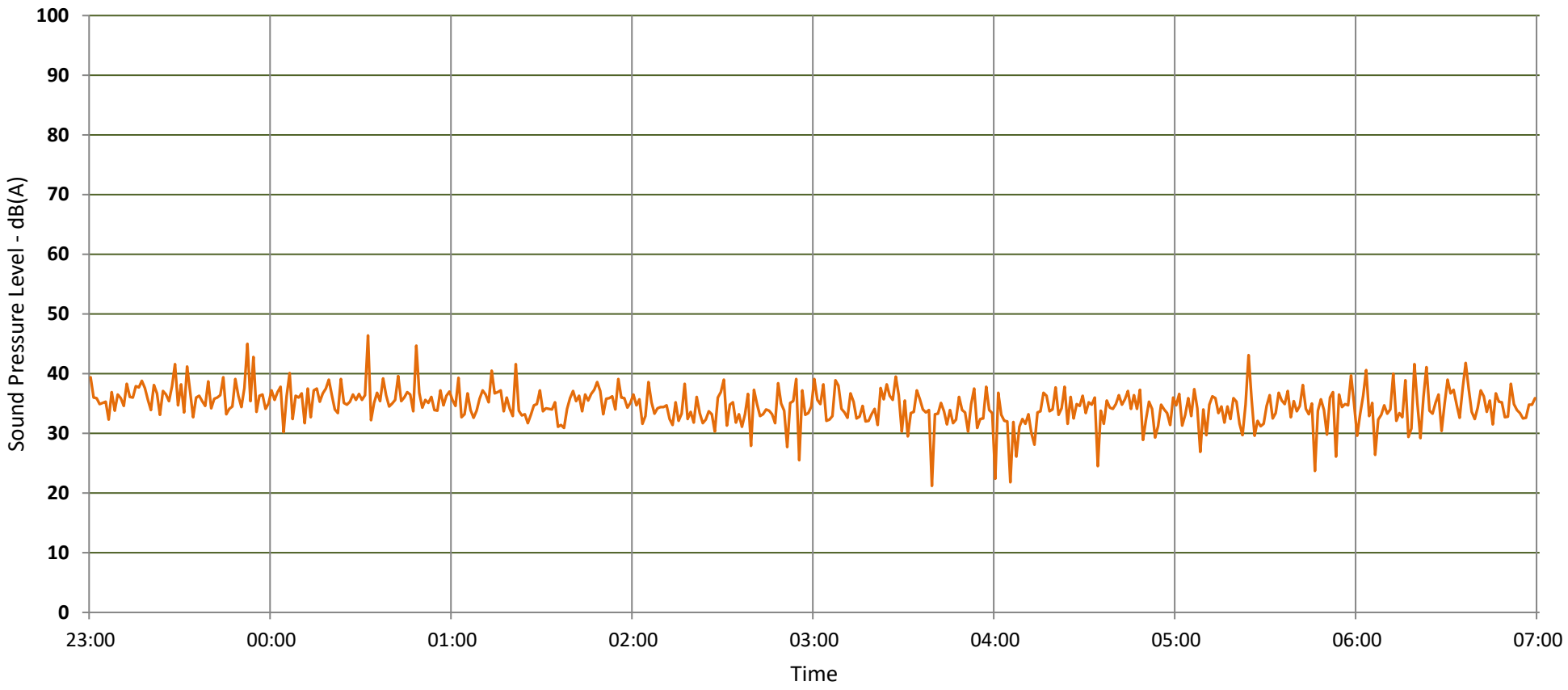

Notes $L_{Amax(F)}$ exceeded 45 dB once	**Description** 1 minute $L_{Amax(F)}$ in Test Room R1	
	Project Collyhurst Village, Manchester	
	Survey Date Saturday 1 February to Sunday 2 February 2025	**Drawing No.** 3447/G2

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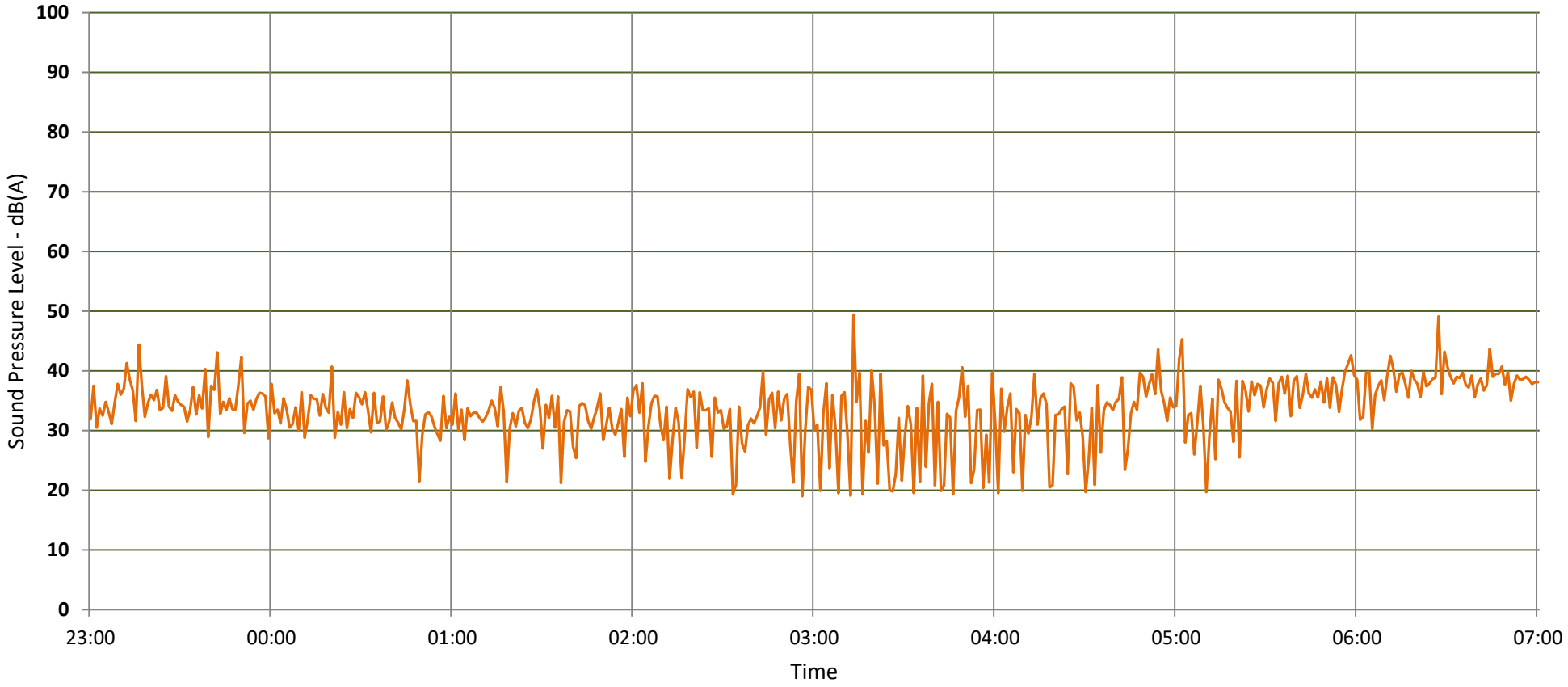

Notes $L_{Amax(F)}$ exceeded 45 dB twice	**Description** 1 minute $L_{Amax(F)}$ in Test Room R1	
	Project Collyhurst Village, Manchester	
	Survey Date Sunday 2 February to Monday 3 February 2025	**Drawing No.** 3447/G3

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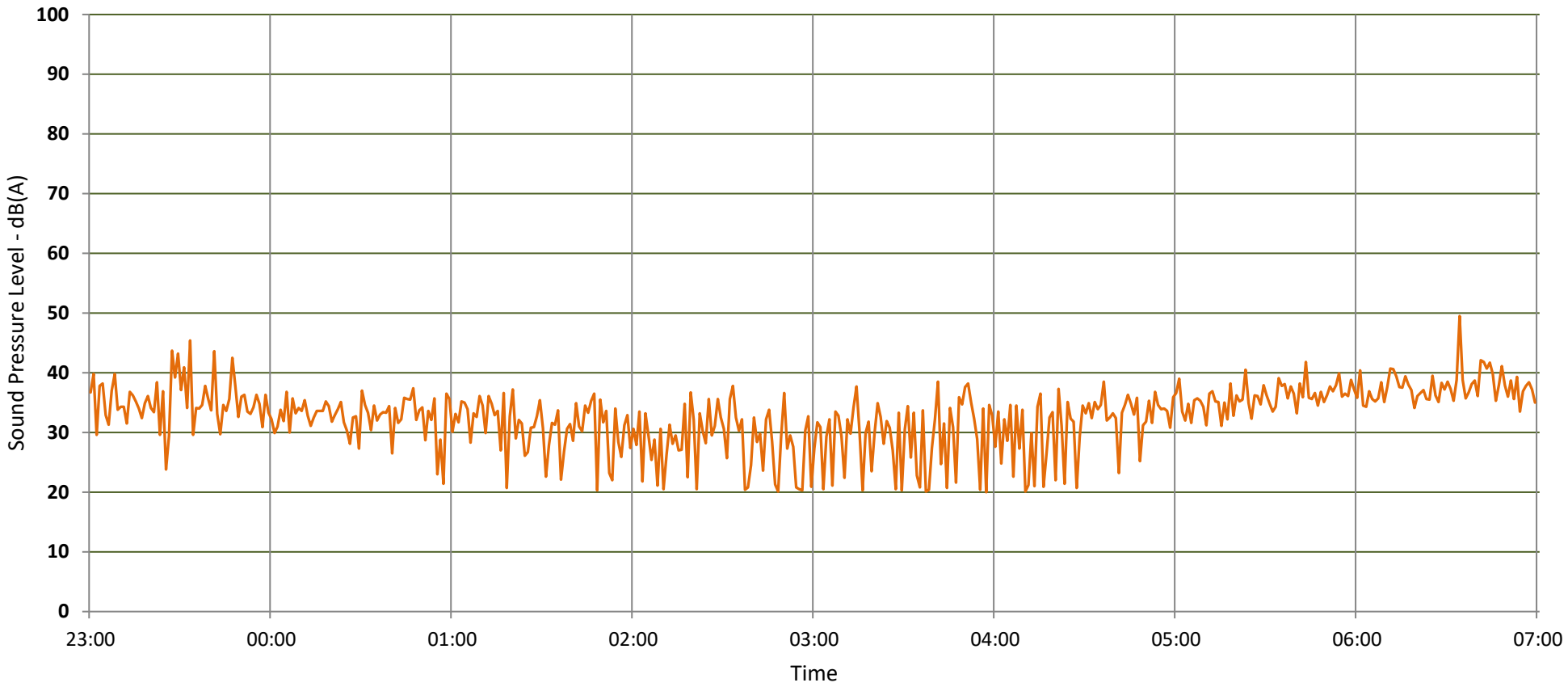

Notes $L_{Amax(F)}$ exceeded 45 dB once	**Description** 1 minute $L_{Amax(F)}$ in Test Room R1	
	Project Collyhurst Village, Manchester	
	Survey Date Monday 3 February to Tuesday 4 February 2025	**Drawing No.** 3447/G4

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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)
01dB	Fusion 1 Class 1 Sound Level Meter (SLM11)	15131	April 2023		-0.30	113.7	113.7
01dB	Fusion MCE3 Microphone	14038					
Norsonic	Nor1251 Calibrator (Cal 5)	34220	February 2024	113.98			