ACOUSTIC DESIGN TECHNOLOGY
Noise and Vibration Consultants

ADT 3447

07 April 2026

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COLLYHURST VILLAGE – SOUTH SITE

POST COMPLETION TESTING

ACOUSTIC CONSULTANCY REPORT ADT 3447/PCT4

Revision	Date	Issued By	Checked by	Revision Notes
-	7 April 2026	Chris Middleton	-	first issue

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1.0 SUMMARY

Post completion testing has been undertaken to demonstrate compliance with condition 16 of planning permission 130514/VO/2021, which reads as follows:

> *16) (a) Notwithstanding the Noise and Vibration Survey prepared by Sandy Brown stamped as received by the City Council, as Local Planning Authority 21 May 2021, prior to the first occupation 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 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/SSM2 dated 13 March 2023.

Measurements have been taken over a 24 hour period in the houses marked on the attached site plan 3447/SP1 according to the same method previously used when testing Plot D of the main Collyhurst Village site. The results are all within the noise criteria in planning condition 16.

The test results therefore demonstrate compliance with planning condition 16.

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 Whitley Road, Manchester. There are 14 houses, and Manchester City Council require at least 10% of those houses to be tested i.e. 2 houses.

At the time of testing the building envelope of each house was complete and the test houses were structurally complete internally but not yet carpeted or furnished.

Construction works were ongoing daily and will continue up until occupation, and the tests have therefore by necessity been undertaken around the ongoing construction noise. In any case, compliance with the Manchester City Council noise criteria is normally determined by the more stringent night time levels.

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 16 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 Plot 14	Living Room (south-east)	27/03/2026 to 28/03/2026	Fusion 1
	1F Bedroom (south-east)	27/03/2026 to 28/03/2026	Fusion 2
R2 Plot 6	Living Room (north-west)	27/03/2026 to 28/03/2026	Svantek 958 ch1
	1F Bedroom (north-west)	27/03/2026 to 28/03/2026	Svantek 958 ch2

Compliance demonstrated in these houses should therefore indicate compliance at all properties on this phase of the development.

In each test room 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 $L_{Aeq,\ 1\ hour}$ for the test rooms are listed in the attached tables 3447/T1 – 3447/T2, along with the calculated $L_{Aeq,T}$ for the portion of the day time period unaffected by site noise, 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

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} generally controlled by cars, as is typical of many urban areas.

Reference to the attached tables 3447/T1 – 3447/T2 shows that the measured $L_{Aeq,T}$ over the surveyed portion of the day time period unaffected by site noise, 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 irregular 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 16.

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Notes	**Description** Site plan showing approximate locations of test houses	
	Project Collyhurst Village – South site	
	Date 07/04/2026	**Drawing No.** 3447/SP1

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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	
10:00	11:00	30	33	construction noise
11:00	12:00	38	36	construction noise
12:00	13:00	43	32	construction noise
13:00	14:00	53	37	construction noise
14:00	15:00	55	41	construction noise
15:00	16:00	25	28	
16:00	17:00	24	26	
17:00	18:00	23	26	
18:00	19:00	23	26	
19:00	20:00	22	25	
20:00	21:00	24	28	
21:00	22:00	22	26	
22:00	23:00	21	24	
23:00	00:00	23	26	
00:00	01:00	19	20	
01:00	02:00	18	16	
02:00	03:00	20	20	
03:00	04:00	18	17	
04:00	05:00	22	22	
05:00	06:00	18	16	
06:00	07:00	19	17	
07:00	08:00	19	18	
08:00	09:00	32	33	construction noise
09:00	10:00	28	30	
Day $L_{Aeq,T}$ dB*		24	27	
Night $L_{Aeq,T}$ dB		20	21	

*Note:- averaged over the period unaffected by site noise

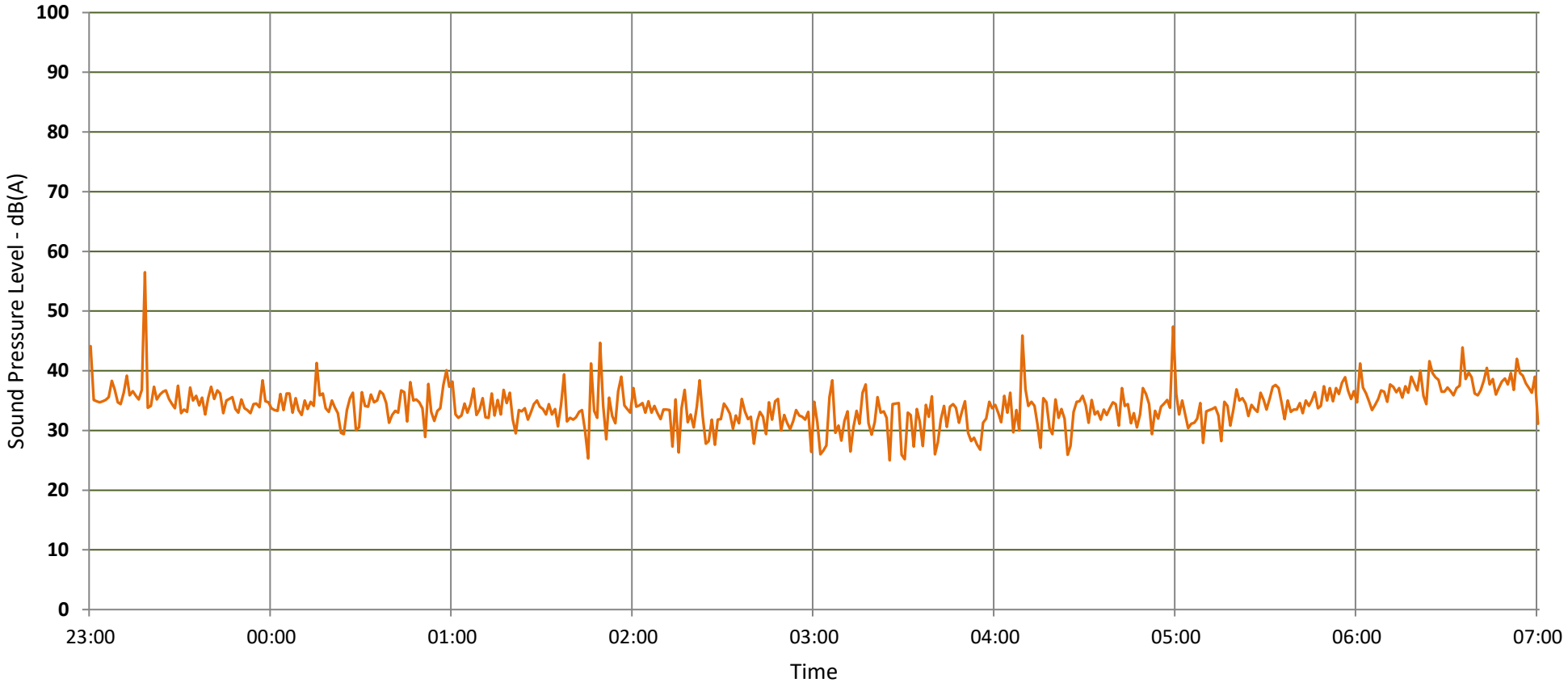
TABLE 3447/T1

Test House R2 – Summary of $L_{Aeq,\ 1\ hour}$ dB

Start	Stop	$L_{Aeq,\ 1\ hour}$ dB		Comments
		GF Living Room	1F Bedroom	
12:00	13:00	26	32	construction noise
13:00	14:00	25	36	construction noise
14:00	15:00	24	38	construction noise
15:00	16:00	16	29	
16:00	17:00	15	28	
17:00	18:00	15	27	
18:00	19:00	15	28	
19:00	20:00	15	25	
20:00	21:00	15	25	
21:00	22:00	15	26	
22:00	23:00	14	25	
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02:00	03:00	14	23	
03:00	04:00	14	22	
04:00	05:00	14	23	
05:00	06:00	14	22	
06:00	07:00	14	24	
07:00	08:00	14	25	
08:00	09:00	16	27	construction noise
09:00	10:00	17	29	
10:00	11:00	17	29	
11:00	12:00	17	31	
Day $L_{Aeq,T}$ dB*		16	28	
Night $L_{Aeq,T}$ dB		14	23	

*Note:- averaged over the period unaffected by site noise.

TABLE 3447/T2



Notes

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

Description

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

Project

Collyhurst Village – South site

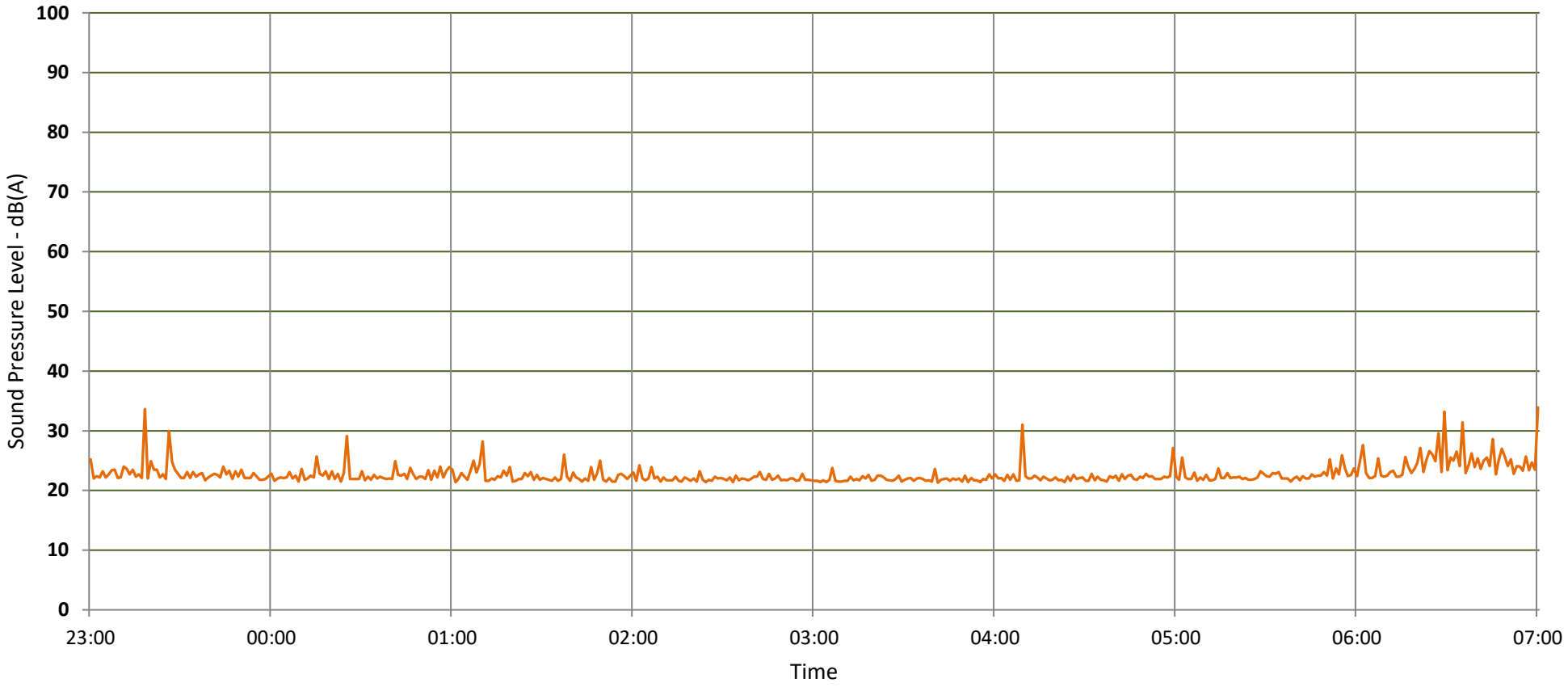
Date

07 April 2026

Drawing No.

3447/G1

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Notes

No $L_{Amax(F)}$ in excess of 45 dB

Description

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

Project

Collyhurst Village – South site

Survey Date

07 April 2026

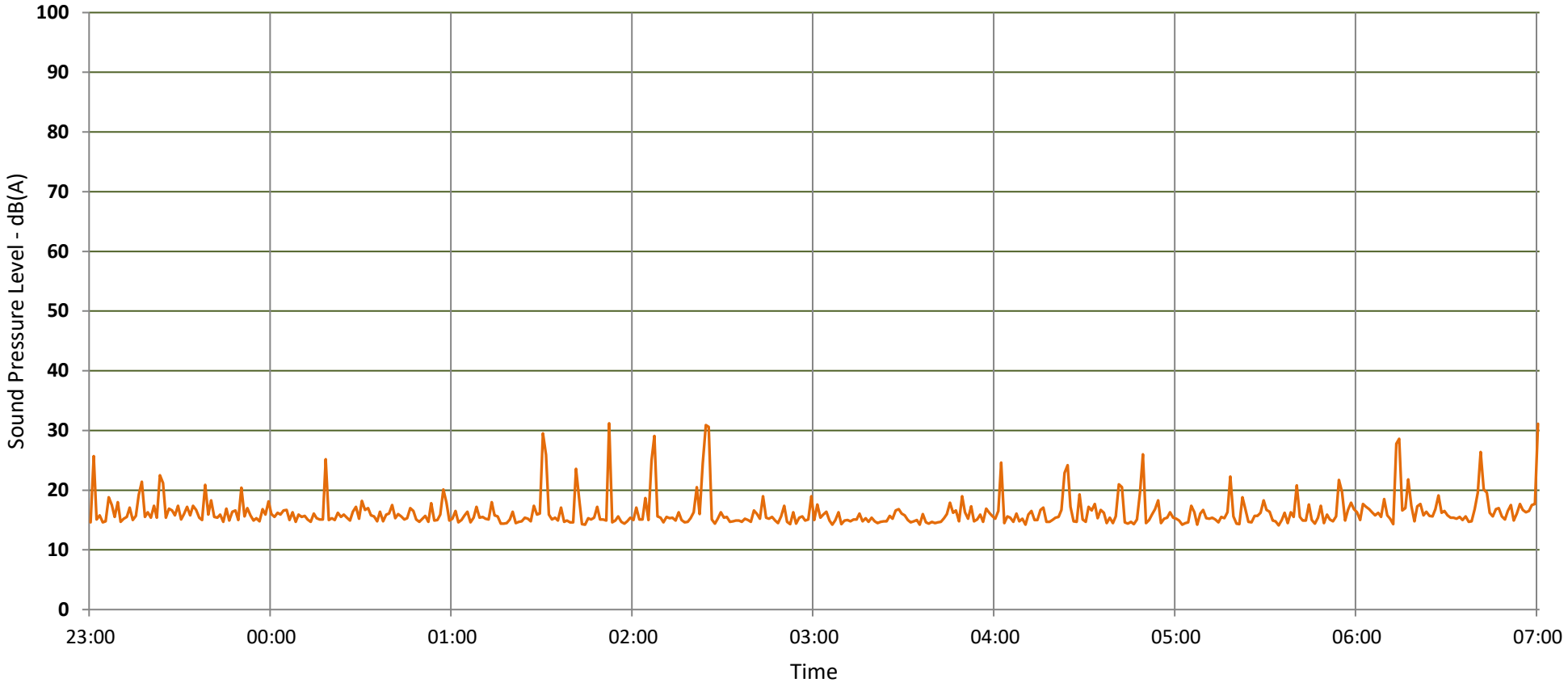
Drawing No.

3447/G2

ADT

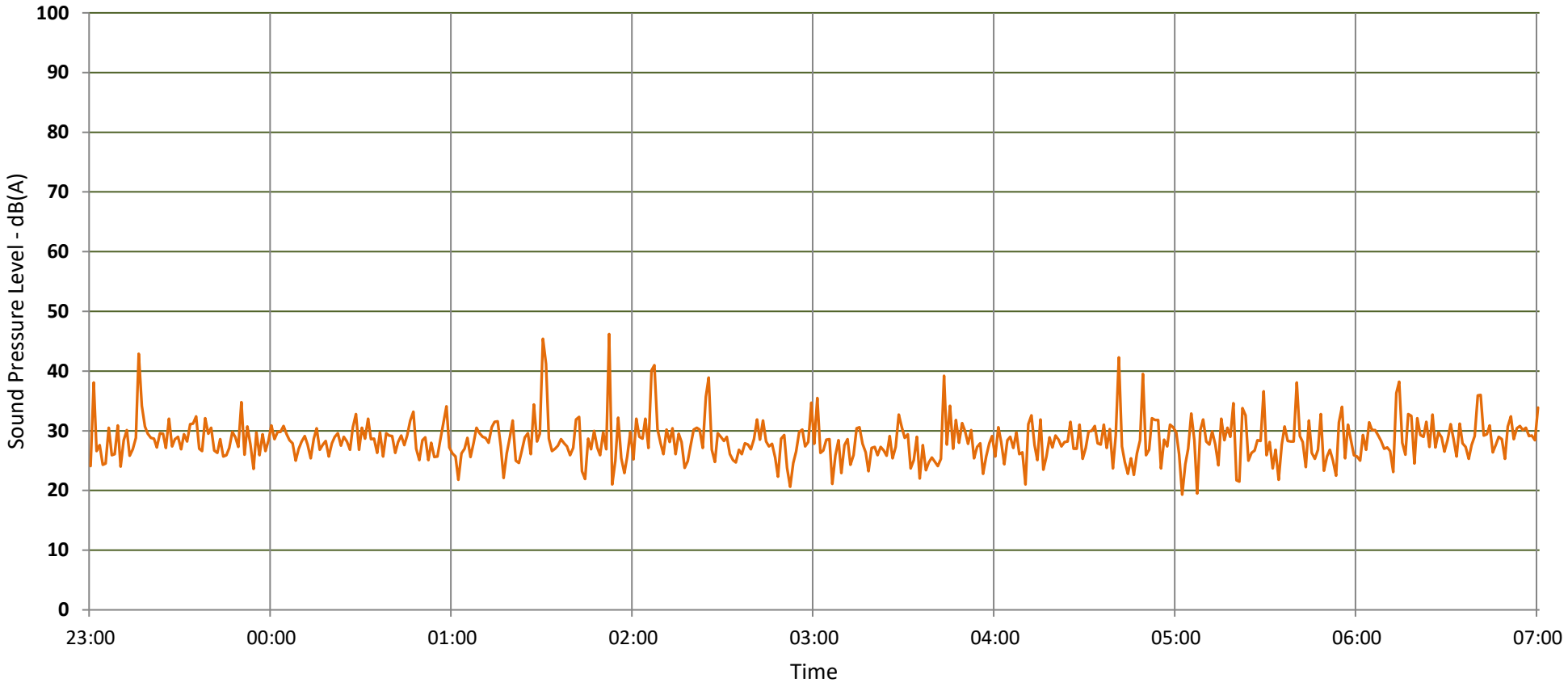
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Notes No $L_{Amax(F)}$ in excess of 45 dB	**Description** 1 minute $L_{Amax(F)}$ in Test House R2 – Living Room	
	Project Collyhurst Village – South site	
	Date 07 April 2026	**Drawing No.** 3447/G3

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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 – South site	
	Survey Date 07 April 2026	**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	15131	July 2025		-0.30	93.7	93.8
01dB	Fusion MCE3 Microphone	14038					
01dB	Fusion 2 Class 1 Sound Level Meter	15130	Jan 2025		-0.30	93.7	93.8
01dB	Fusion MCE3 Microphone	14050					
Svantek	Svan 958A 4 Channel Sound and Vibration Analyser	99958	Oct 2025				
Microtech Gefell	MK 250 Microphone (Mic 1)	9633			0.0	94.0	94.0
Svantek	SV12L Preamplifier	30209					
Microtech Gefell	MK 250 Microphone (Mic 2)	9623			0.0	94.0	94.0
Svantek	SV12L Preamplifier	30255					
Pulsar	Model 105 Calibrator (Cal 7)	110568	Nov 2025	93.98			

APPENDIX B

Acoustic Terminology

The annoyance produced by noise is dependent upon many complex interrelated factors such as 'loudness', its frequency (or pitch) and any variations in its level. In order to have some objective measure of the annoyance, scales have been derived to allow for these subjective factors.

A-weighting — The human ear is more susceptible to mid-frequency noise than the high and low frequencies. To take account of this when measuring noise, the A-weighting scale is used so that the measured noise corresponds roughly to the overall level of noise that is discerned by the average person. It is also possible to calculate the A-weighted noise level by applying certain corrections to an un-weighted spectrum.

When the noise being measured has variable amplitude, such as traffic noise, it is necessary to qualify the basic dB unit. This may be done using a statistical index L_n dB, where n is any value between 0 and 100, and is the percentage of the sample time for which the stated level is exceeded. In defining the use of the index, both the value of n and the length of the sample period must be stated.

L_{10} — L_{10}, being the level exceeded for 10% of the time, has been shown to be a good indicator for traffic noise intrusion, and is used in assessing the effect of traffic noise on residential or commercial premises.

L_{90} — L_{90} is the level exceeded for 90% of the time, and is used as a measure of background noise level, as it excludes the effects of occasional transient levels, such as individual passing cars or aircraft.

In addition to the statistical noise indices defined above, the following noise units are also used to define variable amplitude noise sources:

$L_{eq,T}$ — $L_{eq,T}$ is defined as the notional steady sound pressure level which, over a stated period of time, would contain the same amount of acoustical energy as the actual fluctuating sound measured over the same period. In other words, it is a measure of the "average" noise level

L_{max} — L_{max} is the maximum time-weighted sound pressure level recorded over the stated time period