



Ref: P4863/L02b/PJK

27 June 2023

To:	Johnson Mulk	of:	Gleeson
Cc:	Ibrahim Altaf	of:	Gleeson

97 Hilltop Park, Rochdale

Verification Measurements

1.0 PURPOSE OF REPORT

- 1.1 The purpose of this short technical report is to present the results of the internal noise levels measured within the living room / kitchen of Plot 93 and the rear bedroom of Plot 97 at Hilltop Park, Rochdale.
- 1.2 The measurements were undertaken to demonstrate compliance with the planning condition placed on the site which required that internal ambient noise levels should be controlled to no greater than 35dB_{L_{Aeq},16h} in living rooms during the daytime (0700-2300h) and 30dB_{L_{Aeq},8h} in bedrooms at night (2300-0700h).
- 1.3 Appendix A provides a brief summary of acoustic terms used in this report.

2.0 MEASURED NOISE LEVELS

- 2.1 Internal noise measurements were measured within the living room / kitchen of Plot 93 during the daytime of Tuesday 25 April 2023 and in the rear bedroom of Plot 97, between 1500h on Friday 23 June and 0700h on Monday 26 June 2023.
- 2.2 All measurements were carried out in general accordance with BS EN ISO 16283-3:2016 'Acoustics – Field measurement of sound insulation in buildings and of building elements. Part 3: Façade Sound Insulation'.
- 2.3 The ambient noise levels measured within the living room / kitchen of Plot 93 are presented in Table 2.1, along with the criteria for comparison purposes.
- 2.4 The ambient noise levels measured in the bedroom of Plot 97 are presented in Graph B.1 in Appendix B, over 15-minute sampling periods. The 8-hour ambient noise level measured in the bedroom on the Friday, Saturday and Sunday nights are presented in Table 2.1, along with RBC's requirements.

Table 2.1 – Measured Internal Noise Levels

Period	Plot / Room	Noise Level, dB		Criteria Met?
		Measured, L _{Aeq,T}	Criteria, L _{Aeq,T}	
Tuesday	Plot 93 - Living Room / Kitchen	33	≤ 35	✓
Friday - Saturday	Plot 97 - Bedroom	29	≤ 30	✓
Saturday - Sunday		25		✓
Sunday - Monday		27		✓

2.5 As demonstrated in Table 2.1, the criteria was met in the living room / kitchen during the daytime and in the bedroom on all three nights.

I trust the above is clear and of assistance.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Paul Knowles', with a stylized flourish at the end.

Paul Knowles BSc (Hons) MIOA(D)

Checked by: DMT

APPENDIX A – Acoustic Terminology in Brief

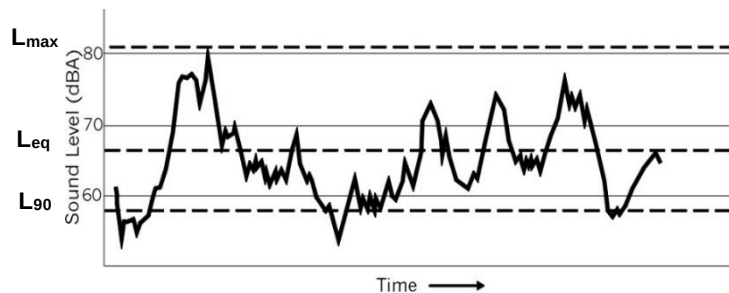
General

Sound is produced by mechanical vibration of a surface, which sets up rapid pressure fluctuations in the surrounding air. The rate at which the pressure fluctuations occur determines the pitch or *frequency* of the sound. The frequency is expressed in Hertz (*Hz*), that is, cycles per second. The human ear is sensitive to sounds from about 20 Hertz to 20,000 Hertz. Although sound can be of one discrete frequency - a 'pure tone' - most noise is made up of many different frequencies.

The human ear is more sensitive to some frequencies than others, and modern instruments can measure sound in the same subjective way. This is the basis of the A-weighted sound pressure level *dBA*, normally used to assess the effect of noise on people. The *dBA* weighting emphasizes or reduces the importance of certain frequencies within the audible range

Sound / Noise Units

The figure below shows an example of sound level varying with time. Because of this variation over time the same period of noise can be described by several different levels. The most common of these are described below.



Commonly Used Descriptors for Sound / Noise

$L_{Aeq,T}$	The equivalent continuous (A-weighted) sound level. It may be thought of as the "average" sound level over a given time, <i>T</i> . It is used for assessing noise from various sources: industrial and commercial premises, construction sites, railways and other intermittent noises. It can be considered as the "ambient" noise level.
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APPENDIX B – Measured Noise Levels

Graph B.1 – Measured Ambient Noise Levels between 1500h Friday and 0700h Monday

