

ENVIRONMENTAL NOISE ASSESSMENT

On behalf of

Carlton Park Construction Ltd

For the site at:

Clock Walk, 7 High Street, Bognor Regis, PO21 1SG

REPORT DATE: 5th July 2022

REPORT REF: AA/22/7/CC/CW/NIA2



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1. INTRODUCTION

1.1. General

Amber Acoustics has been commissioned by Carlton Park Construction Ltd to carry out an Environmental Noise assessment to accompany a planning condition discharge at Clock Walk, 7 High Street, Bognor Regis, PO21 1SG .

Planning was granted under decision notice BR/199/19/PL dated 6th December 2019 for the Conversion of an existing Health Centre (D1 non-residential institution) unit to 4 No. studio flats.

Under condition 3 of the approval, it stated:

“Prior to the occupation of the dwellings hereby approved, a scheme to demonstrate that the internal noise levels within the residential units will conform to the 'Indoor ambient noise levels for dwellings' guideline values specified within Table 4 under section 7.7.2 of BS 8233:2014. Details compiled by a competent, independent acoustician on sound insulation and noise reduction for buildings shall be submitted to and approved in writing by the Local Planning Authority. The scheme should take into account the correct number of air changes required for noise affected rooms. The works specified in the approved scheme shall be carried out in accordance with the approved details prior to occupation of these premises and retained thereafter.

Reason: To protect the amenity of local residents in accordance with Policy QE DM1 of the Arun Local Plan.”

Following an initial Environmental Noise Impact assessment and through correspondence with Craig Milligan, Arun Council's Environmental Health Officer, it was established that a verification report post installation would be needed for the full discharge of the planning condition.

1.2. Assessment Scope

This report will seek to demonstrate that the completed apartments, meet the internal sound level standards of BS 8233:2014 and WHO Guidelines.

Amber Acoustics have completed this report for the benefit of the individuals referred to in Section 1.1 and any other relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use, or rely upon, the contents of this report unless explicit written approval has been gained from Amber Acoustics.



Amber Acoustics accepts no responsibility or liability for the consequences of this documentation being used for any purpose or project other than that for which it was commissioned. It should also be noted herein that the issue of this document to any third party with whom approval for use has not been agreed.

2. SITE DESCRIPTION

The development site is the ground floor of Clock Walk, 7 High Street, Bognor Regis, PO21 1SG. The property is flanked by other commercial properties as well as a car park to the rear and a single width vehicle access road to the side.

3. ASSESSMENT STANDARDS

This section of the report outlines the context of the proposed development with respect to noise.

Following correspondence with Craig Milligan, Arun Council's Environmental Health Officer, it was established that a survey encompassing the weekend and at least one day either side would be sufficient to establish the environmental noise levels at the site and that the levels should be in accordance with the internal ambient noise levels set out in BS 8233:2014.

3.1. BS8233:2014

BS8233:2014 contains suggested criteria for common situations, such as resting and sleeping, and proposes noise levels that normally satisfy those criteria for most people. For dwellings, the main considerations are:

- For bedrooms, the acoustic effect on sleep; and
- For other rooms, the acoustic effect on resting, listening and communicating.

Suggested noise levels reflect those contained within the WHO Guidelines. BS8233:2014 advises that the time period T , should be appropriate for the activity involved, in this case the daytime $L_{Aeq,16hr}$ (07:00-23:00) and night-time $L_{Aeq,8hr}$ (23:00-07:00).

Table 2 below details guideline values for dwellings as recommended within BS8233:2014.

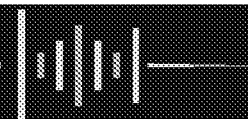


Table 2: BS8233:2014 Recommended Noise Levels

Criterion	Typical situations	Time		
		Daytime 07:00 to 23:00 (L_{Aeq})	Night-time 23:00 to 07:00 (L_{Aeq})	Night-time 23:00 to 07:00 (L_{Amax})
Resting	Living room	35	-	
Sleeping (daytime resting)	Bedroom	35	30	45

Source: BS8233:2014

With regard to external noise levels in amenity spaces such as gardens, the guidance advises that "...it is desirable that the external noise level does not exceed 50dB $L_{Aeq,T}$, with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces but should not be prohibited."

4. SURVEY MEASUREMENTS

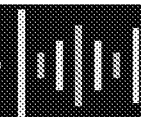
The Environmental Noise Assessment took place over four days between 1st and 5th May 2022.

The Noise survey was carried out generally in accordance with BS7445: 2003 'Description and Measurement of Environmental Noise'.

4.1. Measurement Locations

The Measurement location was as follows:

MP1 – A meter was positioned inside the ground floor flat which not only contained the highest amount of glazing but also flanked both sides of the property, and was therefore deemed to be the most acoustically receptive of the flats. All windows were closed for the duration of the survey.



4.2. Meteorological Conditions

No excessive precipitation was noted during the survey, and the general wind speed in all directions was less than 5m/s, which is suitable for a noise survey. Detailed weather conditions are given in **Appendix C**.

4.3. Measurement Equipment

$L_{Aeq,T}$ and L_{AFmax} sound levels were recorded using a Type 1 Svantek SV307 Sound Analyser (serial number 100907). Measurements were A-weighted and recorded using a fast time response.

The sound level meter was calibrated using a Svantek SV36 Sound Calibrator (serial number 83149) at the start and finish of the monitoring period. No significant calibration drifts were observed. A detailed equipment list is given in **Appendix B** with calibration information in **Appendix D**.

4.4. Observations

The primary noise sources identified on-site were the road traffic and pedestrian usage of the footway and car park abutting the development site.

5. RESULTS

To assess the environmental noise climate, noise measurements were undertaken over a period of 4 days and 4 nights over 1st 15th July 2022.

Date	$L_{Aeq\ 16hr}$ (dB)	$L_{Aeq\ 8hr}$ (dB)	L_{Amax} (dB)
01/07/2022	31.3	26.3	45.0
02/07/2022	32.4	26.8	42.1
03/07/2022	28.7	25.1	39.9
04/07/2022	30.4	27.4	38.8

Table 1: Measurement Summary of Noise Survey 1 (MP1) Results.

6. ASSESSMENT

6.1. Existing Noise Climate

Sound levels in the vicinity of the site were mainly affected by the road traffic and pedestrian usage of the footway and car park abutting the development site. BS8233: 2014 and WHO Guidelines Assessment

A summary of the relevant internal sound levels to be achieved at the proposed development is provided below:

Living rooms (daytime)	$L_{Aeq,T}$ 35dB(A);
Bedrooms(daytime)	$L_{Aeq,T}$ 35dB(A)
Bedrooms(night-time)	$L_{Aeq,T}$ 30dB(A); and
Bedrooms (night-time)	L_{AFmax} 45dB(A);

With regard to internal sound levels, from the site measurement data, it may be extrapolated that, the internal sound levels **DO** achieve BS8233: 2014 and WHO criteria.

7.0 Conclusion

Amber Acoustics was commissioned by Carlton Park Construction Ltd to carry out an Environmental Noise assessment to accompany a planning condition discharge at Clock Walk, 7 High Street, Bognor Regis, PO21 1SG.

The Environmental Noise Assessment has sought to establish existing daytime and night-time sound levels at the site, and to confirm based off of sampling of the apartments, that the internal sound level criteria are as set out within BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' and World Health Organisation 'Guidelines for Community Noise'.

Noise survey results and assessment indicate that based on the sample measurements taken, the internal sound levels **ARE** within the standards required, and no further mitigation is required.



APPENDICES

APPENDIX A - Measurement Details					
Measurement	Kit	Start Date	Start Time	End Date	End Time
MP1	AA1	1 st July 2022	07:00	5 th July 2022	07:00

APPENDIX B - Equipment Details					
Kit	Equipment	Make	Model	Class	Serial Number
AA12	Sound Meter	Svantek	SV307	1	100907
AA2	Calibrator	Svantek	SV36	1	83149

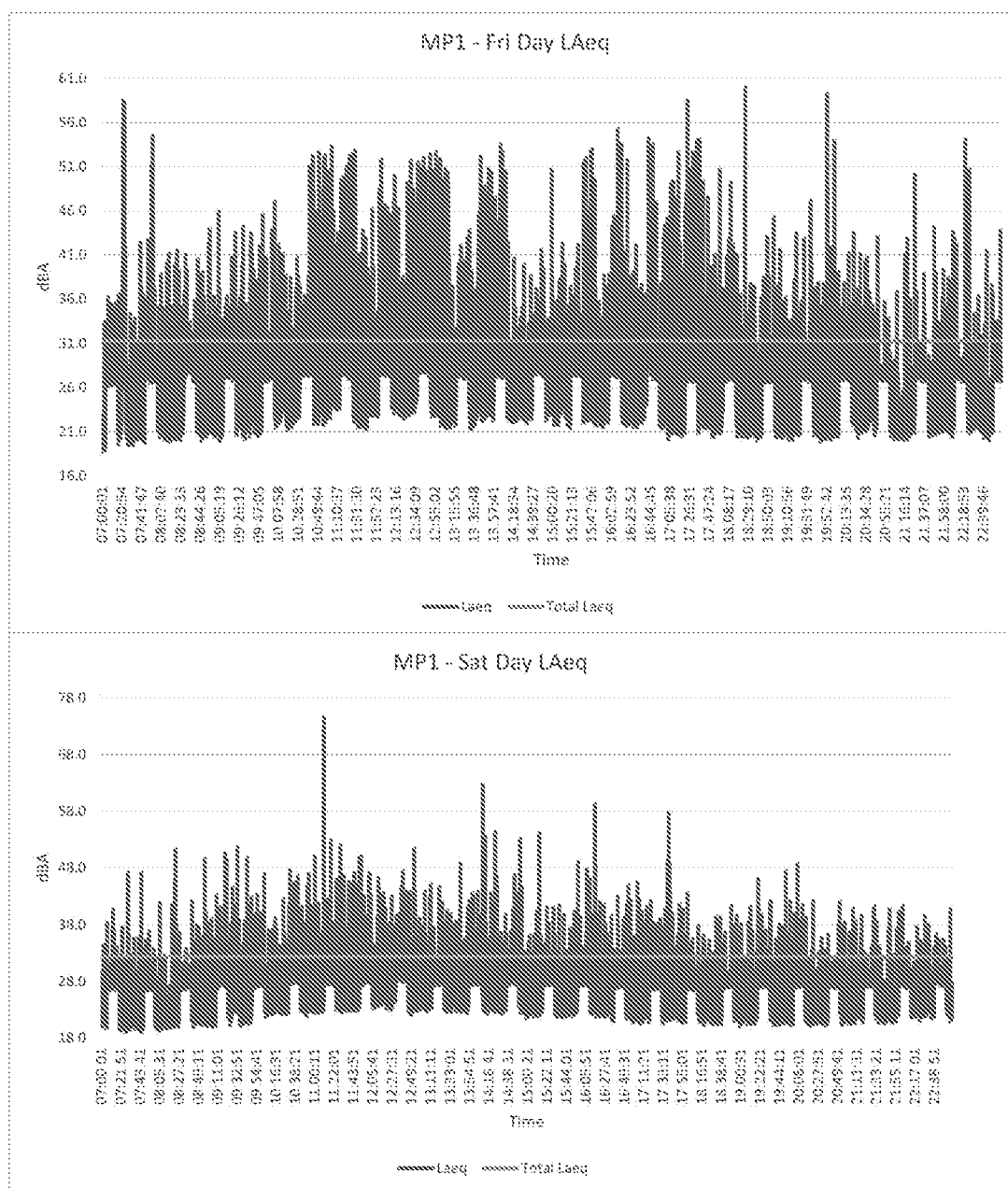
APPENDIX C - Meteorology Details			
Measurement	Temp C (Average)	Wind Speed m/s	Humidity %
MP1	14.3	2.1	57

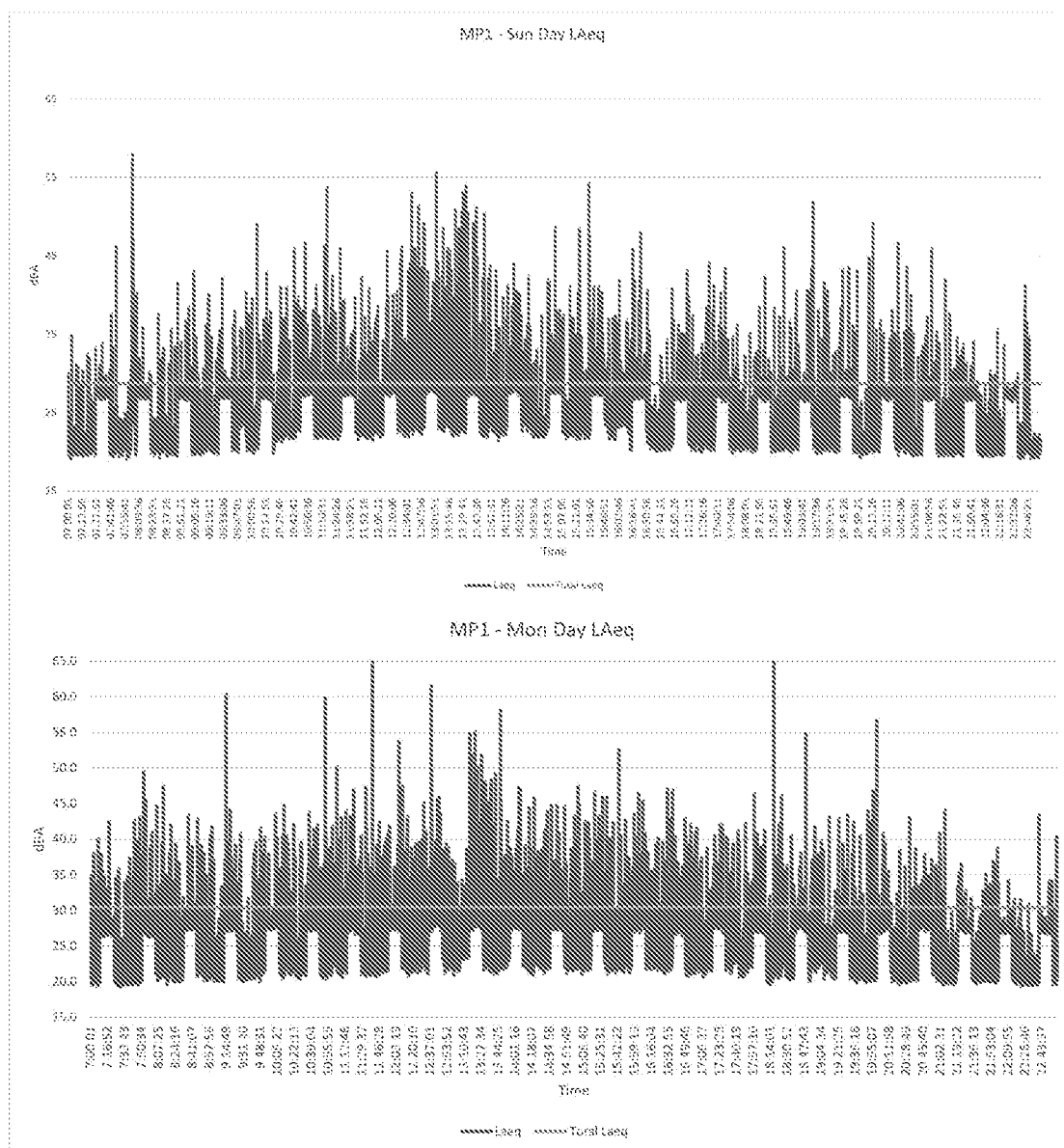
APPENDIX D - Calibration Details					
Measurement	Calibrator Ref Level (dB)	Level Before (dB)	Deviation Before (dB)	Level After (dB)	Deviation After (dB)
MP1	114	114.1	-0.1	114.0	-0



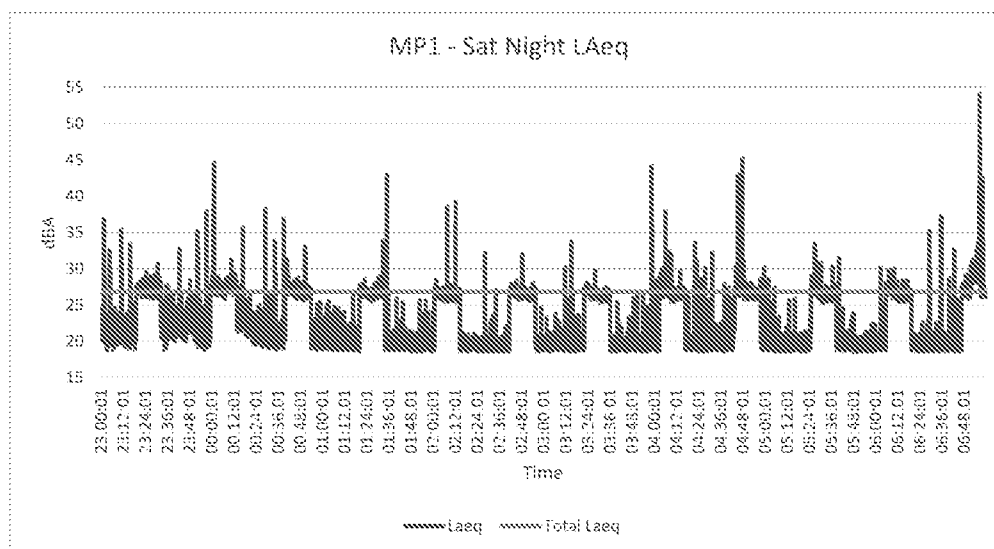
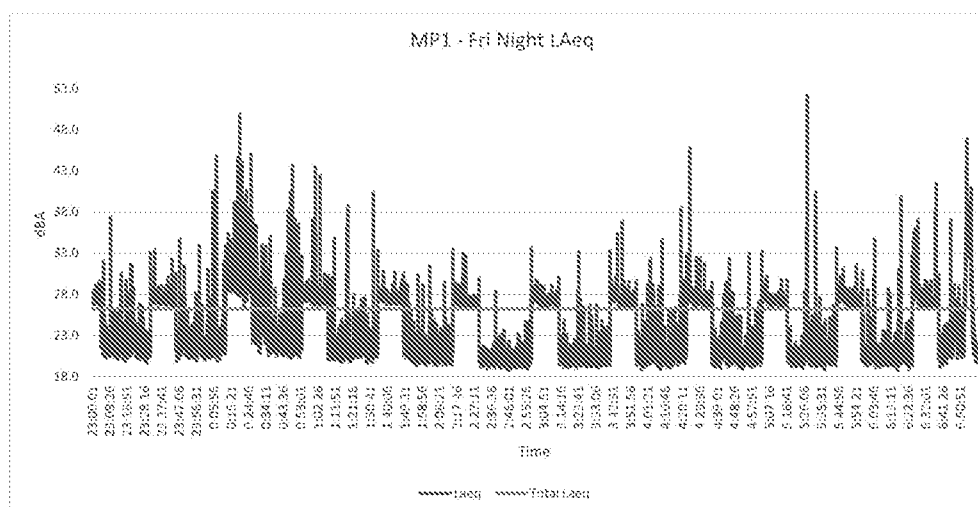
APPENDIX E – Survey Data

Daytime L_{Aeq} Noise Survey Data

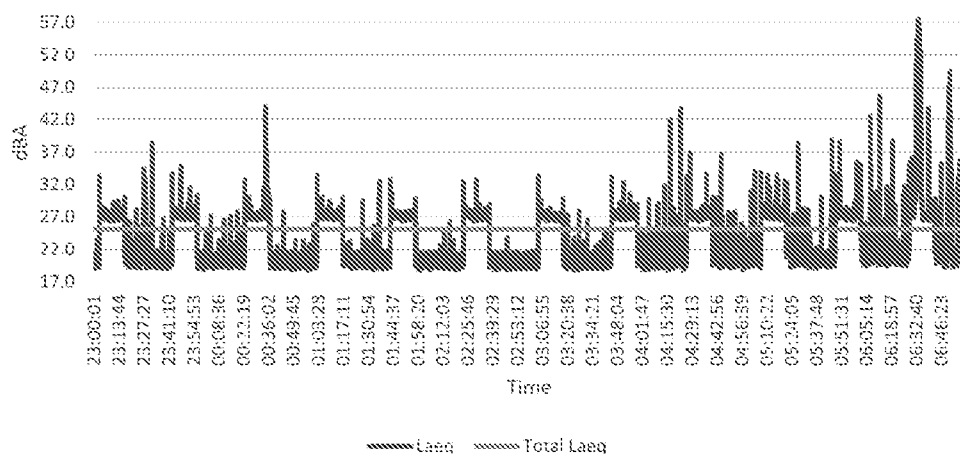




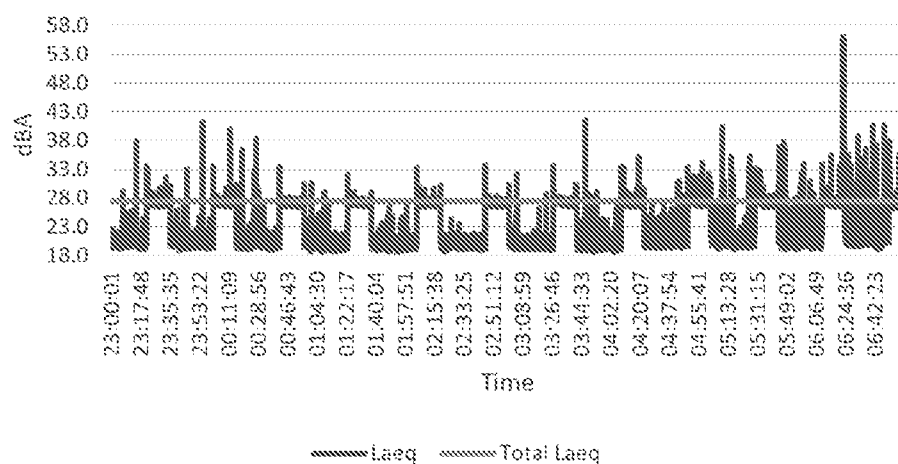
Night time L_{Aeq} Noise Survey Data



MP1 - Sun Night LAeq



MP1 - Mon Night LAeq



Night time L_{Max} (F) Noise Survey Data

