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Noise Management Assessment of Unit 9 Gym

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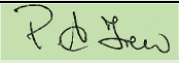
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BRIEF FOR CONSULTANCY

This report has been prepared by Acoustics & Noise Limited, Newport, South Wales, for Unit 9 Gym under the instruction of Mt T Knoyle

Order No: n/a

OBJECTIVES

To provide a noise management strategy to allow the control of music levels as agreed with Neath Port Talbot CBC.

NON-TECHNICAL SUMMARY

Unit 9 Gym plays music as part of the normal activities of the business. This has resulted in complaints from Brickyard Cottages.

Acceptable internal music levels were agreed with Ms Megan Thomas by adjusting the level of the amplification that resulted in acceptable levels at the complainants.

To enable consistent control and to allow for the possibility of the equipment being replaced Acoustics and Noise carried out a survey to provide objective levels at known measurement points.

These levels are to be confirmed and logged at regular intervals.

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1.0 DESCRIPTION OF SITE

- 1.1 The Gym is located in a mainly industrial and commercial trading estate. As such the building is a typically industrial construction of profiled metal sheeting with a 2m concrete block curtain wall.
- 1.2 The bulk of the sheeting has been overclad with insulation and plasterboard.
- 1.3 It is not economically or practically viable to add further insulation to the building envelope as the roof is very unlikely to be able to support any further significant loading.

2.0 DISCUSSION

2.1 As it is not possible to significantly improve the sound reduction properties of the building envelope the recommended Noise Management Strategy is to be based on controlling the internal music levels to those agreed with Ms Megan Thomas at a site meeting 11th August 2021.

2.2 The agreed amplifier settings were forwarded by Ms Thomas by email on 16th August 2021 as follows:

“The levels on the sound system for the two speakers were as follows:

Classes:

6am Levels 4 & 5

7am Levels 4 & 5

9am Levels 4 & 6

6pm Levels 4 & 6

Daytime (no classes) Levels 4 & 4”.

2.3 The use of a budget sound level meter to confirm the levels will suffice as there is no requirement for absolute accuracy rather comparative measurements to ensure that the agreed levels are maintained.

2.4 The measured sound levels are shown below:

	Measured sound		
	level LAeq,1min		
	Near Speaker cluster	Far Speaker cluster	Centre of Counter
6am Levels 4 & 5	77	74	69
7am Levels 4 & 5	77	74	69
9am Levels 4 & 6	77	89	80
6pm Levels 4 & 6	77	89	80
Daytime (no classes) Levels 4 & 4	76	76	69

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- 2.5 As a budget meter will not measure L_{Aeq} a visual average of the sound levels should be taken over a period of 1 minute and recorded in a logbook to act as an historical record in the event of complaints.

3.0 RECOMMENDATIONS

- 3.1 The music levels should be checked and recorded at regular intervals,
- 3.2 Due to the variation in music content and the use of a budget sound level meter, the levels should be adjusted and recorded as a visual average over a period of at least 1min.
- 3.3 Purchase a budget cost sound level meter and take readings at the measurement points at regular intervals.
- 3.4 Record the measurements in a log for future reference if required

P.A.T. 20/08/2021
*M.Sc., I.Eng., M.I.O.A.,
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Appendix 1 Survey Details

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A1.0 SURVEY DETAILS

- A1.1

Programme of Measurements:
- A1.1.1

The meter was calibrated at the start of the measurement procedure and checked after each set of measurements. No significant deviation i.e., > 0.5 dB was recorded.
- A1.1.2

The survey was carried out on 18th August 2021
- A1.2

Measurement Procedure:
- A1.2.1

The microphone was located on a tripod 1.2 m from the ground at the measurement positions which were located underneath each speaker cluster and in the centre of and behind the counter.
- A1.2.2

The meter was adjusted to log and store L_{Aeq} , in 1-minute periods for the duration of the survey.

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A1.3 **Equipment Used:**

Table 1 – Equipment Used

ITEM	Serial No	UKAS Calibration Certificate Date (if applicable)
(ANL-M4) B&K 2250 Handheld Analyser	2567736	Certificate: 15914 Date: 25/03/21
(ANL-C4) B&K 4231 Calibrator	2567363	Certificate: 15912 Date: 25/03/21

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Appendix 2 Range of Typical Noise Levels

A2.0 RANGE OF TYPICAL NOISE LEVELS

Figure 1 – Range of Typical Noise Levels

