[redacted]

BS4142 Assessment Report

Client:
[redacted]

Date:
23/10/2023

Address:
DMD Design LTD
1 Lower Lane,
Longridge,
Preston,
Lancashire,
United Kingdom,
PR3 3SL

Work carried out by:
[redacted]

[redacted]

Contents

Summary

A noise assessment has been undertaken at DMD Design LTD, 1 Lower Lane, Longridge, Preston, Lancashire, PR3 3SL. This is to assess the noise impact from Live Entertainment & Shop Music on site.

[redacted] have undertaken an assessment where a speaker has been placed inside the shop and audio levels have been recorded both inside and outside the property.

Residential dwellings adjacent to the property, have been identified as the nearest sensitive receptors with regard to noise impact from the proposed Live Entertainment.

Background noise level has been measured and recorded outside the main entrance to DMD Design and also outside the properties of number 1, 2 and 3, Chapel Hill Farm Cottages, Longridge, Preston, PR3 3SL on the opposite side of the road being a problamatic area for noise concerns. Both levels recorded as being 65DBA. The measurement has been taken between 08:37am-09:07am when the background noise would be at its lowest during the overall period of the day.

Note: All properties including DMD Design are installed with double glazed windows.

Test 1
While running Pink Noise inside DMD Design @80DBA 1M away from speaker a level was recorded outside the property @68DBA and @65DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 13:55pm.

Test 2
While running Pink Noise inside DMD Design @90DBA 1M away from speaker a level was recorded outside the property @67DBA and @65DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:00pm.

Test 3
While running Pink Noise inside DMD Design @100DBA 1M away from speaker a level was recorded outside the property @69DBA and @66DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:05pm.

Test 4
While running Pink Noise inside DMD Design @105DBA 1M away from speaker a level was recorded outside the property @70DBA and @66DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:10pm.

All audio recorded with DMD Design main entrance door closed.

(Pink Noise is a noise that uses a full spectrum of frequencies giving us the best representative of full-scale audio)

Noise criteria has been assessed, based on BS4142:2014.

Site Description

Existing site conditions

The site under investigation is DMD Design LTD, 1 Lower Lane, Longridge, Preston, Lancashire, PR3 3SL. The site is located upon Lower Lane which is a busy single-carriageway road. Residential dwellings are located on the opposite side from DMD Design.

Attached is a map to show the site location in greater detail Appendix A.

Proposed site conditions.

The site is hoping to have live entertainment on selected days of the month (NOT EVERY DAY) Keeping the noise to a "stripped back minimum" Acts are under strict instructions to bring minimal sound equipment to keep the audio level down as it is a small shop and keep levels below 90DBA.

The hours of operation will be:
Monday - closed due to church operation
Tuesday – Closed
Wednesday – Saturday 12:00 Noon till 20:00
Sunday – 12 Noon till 17:00

DMD Design LTD adheres stickly to these opening hours and it is our understanding these hours will never be extended.

Nearest sensitive areas

The nearest residential property is opposite DMD Design around 14M away. Both the shop and the residential property have double glazed glass and new PVC Doors.

Environmental noise survey

Daytime and night-time ($LAeq_{,}$) background noise measurements have been carried out, between 08:30 – 18:30 on 23/10/2023. The above period represents the lowest background level.

Measurement Location

Noise measurements have been carried out inside DMD Design, outside of DMD Design and across the road at the residential property 1.2m above the ground and >3m away from any reflective surface.

Measurement Equipment

The summary of measurement equipment and calibration information can be found in Appendix B.

Weather conditions

Climate: 10C Dry, Clear
Humidity: 80%
Wind Speed: 8MPH

Measured Background Noise Levels
A summary of background noise levels measured is shown below.

Measured level, 65DBA @8:40 / 68DBA @13:55 / 65DBA @14:00 / 66DBA @14:05 / 66DBA @14:10

Subjective Impressions

The noise climate at the site was perceptibly high between the hours of 08:00 & 08:30am. Primary noise was perceived from Lower Lane, deemed to be road/tyre noise from passing traffic. Further noise from engine idling as traffic built up from the near round-about noted.

Assessment

As DMD Design is not presently allowed live entertainment due to council restrictions, we had to recreate audio levels ranging from 80DBA – 105DBA to create a live entertainment environment.
Levels of background noise have been recorded throughout the assessment.

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While running Pink Noise inside DMD Design @80DBA 1M away from speaker a level was recorded outside the property @68DBA and @65DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 13:55pm.
Background Level 65DBA

Test 2
While running Pink Noise inside DMD Design @90DBA 1M away from speaker a level was recorded outside the property @67DBA and @65DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:00pm.
Background Level 65DBA

Test 3
While running Pink Noise inside DMD Design @100DBA 1M away from speaker a level was recorded outside the property @69DBA and @66DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:05pm.
Background Level 66DBA

Test 4
While running Pink Noise inside DMD Design @105DBA 1M away from speaker a level was recorded outside the property @70DBA and @66DBA at the property of 1, 2 and 3, Chapel Hill Farm Cottages, Lower Lane, Longridge, Preston, PR3 3SL. Test recorded levels at 14:10pm.
Background Level 66DBA

All audio recorded with DMD Design main entrance door closed.

Conclusion

A noise assessment has been undertaken at DMD Design LTD, 1 Lower Lane, Longridge, Preston, Lancashire, United Kingdom, PR3 3SL to assess the noise impact arising from Live Entertainment inside DMD Design on selected days of the month.

BS4142:2014 assessment shows that the rating noise from Live Entertainment at the nearest sensitive receptors will achieve a level of "NON to Low Impact".

With all properties having double glazing and the traffic from the main road (lower Lane) there is no difference in levels at 105DBA inside DMD Design with the property doors closed.

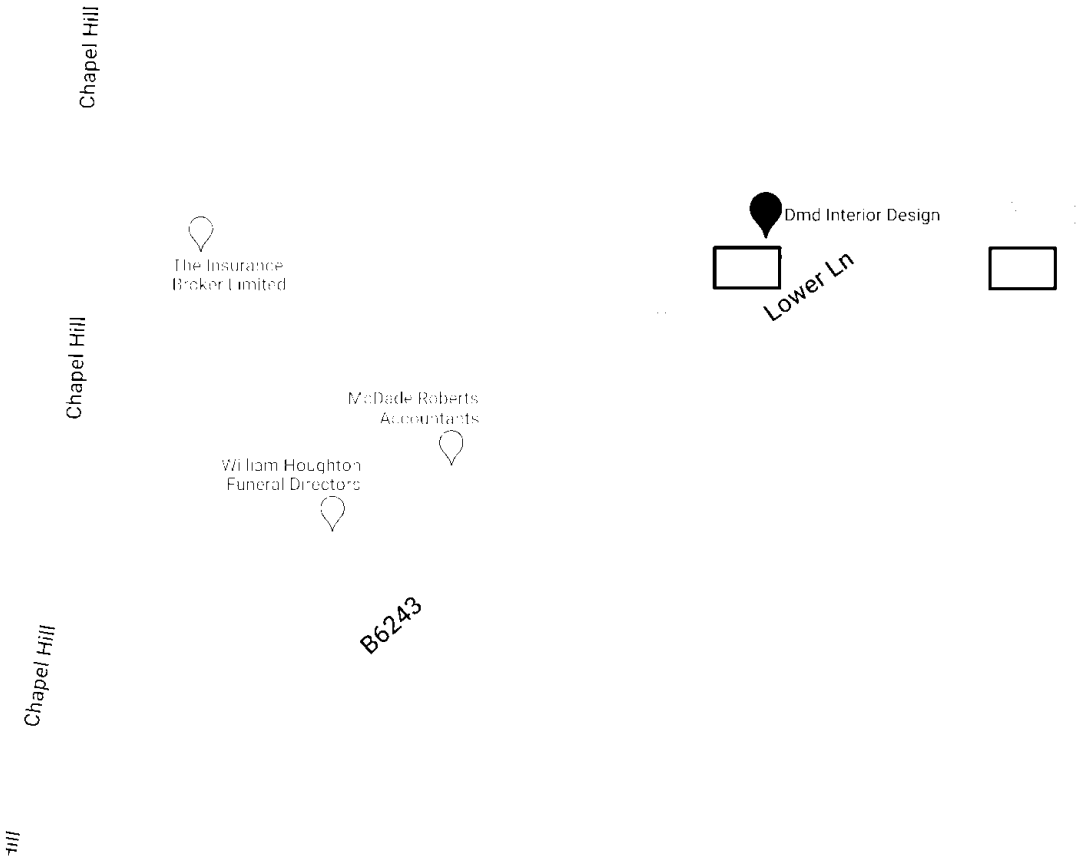
NOTE There is also a large amount of signage inside DMD Design asking to "keep noise down" as leaving and to keep the door closed. It is also worth noting that it is not possible to open any windows inside DMD design, therefore restricting noise levels.

Recommendations

Always keep the main door closed (fit door closer)

Appendix A

Shop Location Including Problematic Area.



Appendix B

Measurement Details

Measurement Microphone – AZ8928
Calibrator – N820961 – IEC942

Appendix C

Glossary of Acoustic Terminology

To aid the understanding of acoustic terminology and the relative difference between noise levels the following background information is provided.

We perceive sound when the ear detects fluctuations in air pressure (sound waves), which are then processed by the brain and perceived as sound. Humans can hear an incredibly wide range of sound intensities ranging from jet engines to fingertips lightly brushing against each other. This range is quantified using a logarithmic scale called the decibel scale (dB). The comfortable range of the decibel scale typically ranges from 0dB (the threshold of hearing) to around 140dB. Here are some examples common environments and their typical noise levels.

Noise Level	**Environment**
0 dB(A)	Threshold of hearing
20 to 30 dB(A)	Quiet bedroom at night
30 to 40 dB(A)	Living room during the day
40 to 50 dB(A)	Typical office
50 to 60 dB(A)	Inside a moving car
60 to 70 dB(A)	Typical high street
100 to 110 dB(A)	Fire alarm at 1 metre away
140 dB(A)	Threshold of pain