

NOISE IMPACT ASSESSMENT

**Thamin Retaurant
New Road
Littleborough**

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1.0 SUMMARY

A noise impact assessment has been undertaken at the Thamin Restaurant on New Road , Littleborough to establish what measures are required to ensure that the creation of a self contained flat at the first floor of the property meets with the current requirements of BS 8233 : 2014.

Internal noise measurements were recorded at positions MP1.and MP2 as indicated on the room plan. MP2 is located over the restaurant kitchen. the kitchen and the associated extract plant were operational throughout the measurement periods.

,Where appropriate noise mitigation measures have been recommended. The recommended mitigation measures are based on information provided by the developer and assumption of good site workmanship.

2.0 BRIEF FOR CONSULTANCY

Peter Ellis MiOA has been commissioned by Mr Abdul Kamal to undertake a noise impact survey to support a planning application for the conversion of the first floor of the Thamin Restaurant into a self contained flat..

Following the initial noise impact assessment report Rochdale planning department requested additional internal noise measurements to assess noise arising from the kitchen/restaurant and associated plant inside the proposed flat...

- compare the internal noise measurements against the design criteria stated in BS 8233 : 20114 and recommend mitigation measures where appropriate.

3.0 SITE DESCRIPTION

The front of the proposed flats face New Road ,Littleborough (A58).The Surrounding areas are indicated on the site plan at the end of the report

4.0 POLICY AND GUIDANCE

No specific guidance in the National Planning Policy Framework (NPPF) relates to acoustic design criteria.

Therefore this assessment and validation is primarily based on the following legislation , policy and guidance:

* BS 8233:2014::Guidance on sound insulation and noise reduction for buildings.

* WHO Guidelines on Community Noise 1999

4.1 BS8233:2014:

The BS8233:2014 "Sound insulation and noise reduction for buildings code of practice gives absolute noise limits for steady state anonymous noise (such as road traffic) inside residential properties. Table 1 outlines these target limits.

8233:2014 Target limits

Activity	Location	07:00 – 23:00	23:00 – 07:00
Resting	Living Rooms	35dBLAeq,16Hour	-
Dining	Dining Room	40dBLAeq,16Hour	-
Sleeping	Bedroom	35dBALeq,16Hour	30dBALeq,8Hour

Table 1

4.2 WHO Guidelines on Community Noise : 1999

The document provides useful criteria , which , together with BS8233:2014 is widely used to assess the effect of nearby sound sources of different types , such as roads , motorways and commercial premises on residential dwellings .In particular , the criterion for noise levels at external spaces.Table2 outlines these target limits.

WHO 1999 Target Limits

Activity

Outdoor Living	Serious annoyance , daytime and evening	55dBLAeq,16hour
	Moderate annoyance , daytime and evening	50dBALeq,16hour
Dwelling Indoors	Speech intelligibility and moderate annoyance Daytime asnd evening	35dBALeq,16hour

Table 2

5.0 INTERNAL ROOM NOISE MEASUREMENTS

5.1 Measurement Location

The noise measurements were taken at the location MP2 as indicated on the floor plan at the end of the report. The microphone was located 1.5m above room floor level.

5.2 Measurement Equipment

Piece of equipment	Serial No
Norsonic Type : 118 Sound Level Meter	31338
Sound Calibrator	1251

The sound level meter used is a class 1 (precision) meter conforming to BS EN 61672-1.. The sound level meter was calibrated before and after use to confirm there was no significant drift to the meter response

5.3 Weather Conditions

External weather conditions were appropriate throughout the measurement periods.

5.3 Results

The following parameters were measured:

LAeq

LA10

LA90

LAmx

Measurement period 1 hour.

The measurement results are presented at the end of the report.

6.0 NOISE MITIGATION MEASURES

The 1st floor level building envelope consists of a 450mm solid masonry wall which will provide good sound insulation to the bedroom and kitchen facing New Road (A58). The other two bedrooms are well positioned at the rear of the 1st floor from a sound insulation perspective.

The ground floor kitchen is operational until 23:00 hours and both the kitchen and restaurant were open during the internal noise measurements.

6.1 Glazing

The existing windows in the proposed habitable rooms facing New Road appear to be standard thermal double glazing (4mm glass – 4mm glass) which have a typical sound insulation performance of 25 dB $R_w + C_{tr}$. Although the bedroom noise level L_{Aeq} 8hr meets BS 8233:2014 criteria the L_{Amax} exceeded 45dBA a number of times during the night time survey it is recommended that secondary single glazed window be installed within the existing window reveal. In the bedroom at a distance of 100mm from the existing double glazed window.

6 mm glazing will be adequate but the window design will need to facilitate internal cleaning of the double glazing. This additional glazing will help mitigate against sleep disturbance through the night

The noise measurements for the rear habitable rooms indicates that the newly installed double glazed windows provide adequate sound insulation..

6.2 Ceiling – 1st floor

The exposed roof void area over the proposed front bedroom showed a bare slate tiled roof and no sign of any insulation. The roof void treatment will need to conform to building regulations and the ceilings of the front bedroom and kitchen a ceiling of 15 mm Soundbloc board (.or equiv.) for sound insulation.

6.3 Floor/Ceiling Assembly – 1st / Grd. Floor

Proposed construction is T&G chipboard floor and ceiling comprising 2 No layers of plasterboard fixed direct to the underside of the floor joists . This is acceptable from a sound insulation consideration.

6.4 Ventilation

This internal noise assessment was carried out with a closed window. Open windows will not provide adequate ventilation without noise impact. Adequate ventilation needs to be provided in the front bedroom and kitchen. The ventilation requirements should be based on the **IVO guide and part F of the building regulations**

AVO guide – Acoustics , Ventilation and overheating : Residential Design Guide

We recommend that a specialist acoustic wall mounted Rytons AAC125HP Aircore, ventilator(43dB D,n,e,w) should be installed in the external wall in front of the front bedroom

.and kitchen. An alternative ventilation air intake can be provided for the rear habitable rooms.

Internal Room Noise Measurements_

Date of Survey : 5th December 2024

Survey Period : 0:700 – 23:00

Measurement Period 1 hour

Time Period	A Weighting				Leq Octave Band Centre Frequency (Hz)							
	LAeq	L10	L90	Lmax	63	125	250	500	1k	2k	4k	8k
07.00 – 08.00	27.3	29.8	21.2	45.0								
08.00 – 09.00	28.0	30.3	23.1	42.3								
09.00 – 10.00	29.6	31.9	24.5	47.0								
10.00 – 11.00	52.0	36.7	26.1	88.4								
11.00 – 12.00	46.1	44.3	29.9	70.1								
12.00 – 13.00	54.6	45.8	31.1	83.2								
13.00 – 14.00	28.6	30.5	23.9	43.8								
14.00 – 15.00	30.4	30.9	24.8	62.9								
15.00 – 16.00	30.3	32.4	26.4	53.9								
16.00 – 17.00	33.0	35.6	28.8	56.0								
17.00 – 18.00	33.4	35.5	28.7	50.2								
18.00 – 19.00	31.7	33.4	27.7	55.6								
19.00 – 20.00	32.5	34.2	30.2	55.9								
20.00 – 21.00	32.0	33.3	29.6	53.8								
21.00 – 22.00	31.9	33.4	29.2	53.5								
22.00 – 23.00	32.0	33.5	29.0	51.5								

LAeq (16 hr) = 35 dB (log average value)

The higher LAeq measurements between 10:00 hours and 13:00 hours were caused by piling operations taking place on a nearby building site.

Internal Room Noise Measurements –

Date of Survey: 5/6 December 2024

Survey Period: 23:00 – 07:00 hours

Measurement Period : 1 hour

Time Period	A Weighting				Lz Octave Band Centre Frequency (Hz)							
	LAeq	L10	L90	Lmax	63	125	250	500	1k	2k	4k	8k
23.00 – 24.00	24.5	27.7	18.8	46.2								
24.00 – 01.00	22.8	25.7	17.8	44.9								
01.00 – 02.00	21.0	23.6	17.5	30.7								
02.00 – 03.00	20.8	21.9	17.6	42.5								
03.00 – 04.00	21.0	22.5	17.7	42.3								
04.00 – 05.00	21.7	24.0	17.4	39.1								
05.00 – 06.00	23.7	27.2	17.9	40.7								
06.00 – 07.00	25.5	29.1	18.7	40.2								

LAeq (8 hr) = 24dB (log averaged value)

