TEAMAST SOUNDS

Consultants in Noise and Vibration

Acoustic Consultancy Report
4255-ENV-ATN-1

Report on: **11 Frognal Parade Finchley Road London NW3 5HH**

Client: **Lyondale Planning**

September 2021

Analysis of Restaurant Kitchen Extract System

Report Author

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i) Summary of Brief.

Teamast Sounds (TSL), were commissioned to carry out an acoustic survey to establish the current background noise levels at the site of Kitchen extract system and new restaurant use, and then conduct an appraisal of any local residential impact..

ii) Document History

Issue	Date	Issue Details	Issued By	Survey by
1	September 2021	Initial Issue	ATN	KC

1 Introduction

Teamast Sounds (TSL), were commissioned to carry out an acoustic survey to establish the current background noise levels at the site, and then conduct an appraisal of the resultant noise transmitted to the nearest residential receivers.

It is noted that the Restaurant is currently under refurbishment, and that the equipment employed will not alter when sited within the new building.

2 General Structure

2.1 The proposed new building will be a modern insulated building constructed in line with current building regulations.

3 Analysis Method.

The current background noise level was measured from 20 September 2021 at 13:36hrs to 10:31hrs on 21 September 2021

The following instrumentation and equipment was used during the testing:

Sound pressure level measurements were obtained using the following instrumentation complying with the Class 1 specification of BS EN 61672:2003.

- Svantek 949 Sound Level Meter S/N: 36121
- Svantek pre-amplifier SV12L S/N: 33636 with GRAS microphone capsule 4OAE S/N: 58002

Calibration checks were made prior to and after completion of measurements using a Svantek SV3OA calibrator, SIN: 10801 complying with Class 1 specification of BS EN 60942:2003, calibration level 114.0 dB @ 1.0 kHz.

The general background noise was due to local traffic, the weather was dry with little wind.
The abridged results of that survey are shown in Table 2 below.

Table 1.

Period	LA90 Min	LAeq Min	LA Max Fast
Day 07:00 to 19:OOhrs	50.4	56.4	89.4
Evening 19:00 to 23:OOhrs	46.8	57.8	89.9
Night 23:00 to O7:OOhrs	37.1	48.3	83.3

Results.

The full record of the measurements taken is given in Appendix A and shows the sound pressure measured levels, as LA90 & LAeq Smin levels at the selected location.

The proposed hours of operation are 08:30hrs to 23:00hrs Monday to Saturday, 09:00 to 22:00hrs on Sunday, and 10:00 to 21:00hrs on Public Holidays

The maximum LAeq level during this operating period was 69.4 dB(A)

4 Calculation Method

The principal internal noise sources in the Restaurant are the main Kitchen Extract Fan and associated plant cooking

The measurement position shown in Appendix B was positioned to measure maximum noise levels at the front of the plant facing the nearest residential property on the opposite side of the A224

The noise currently transmitted to these receivers was calculated to a distance of 6m from the front of the restaurant

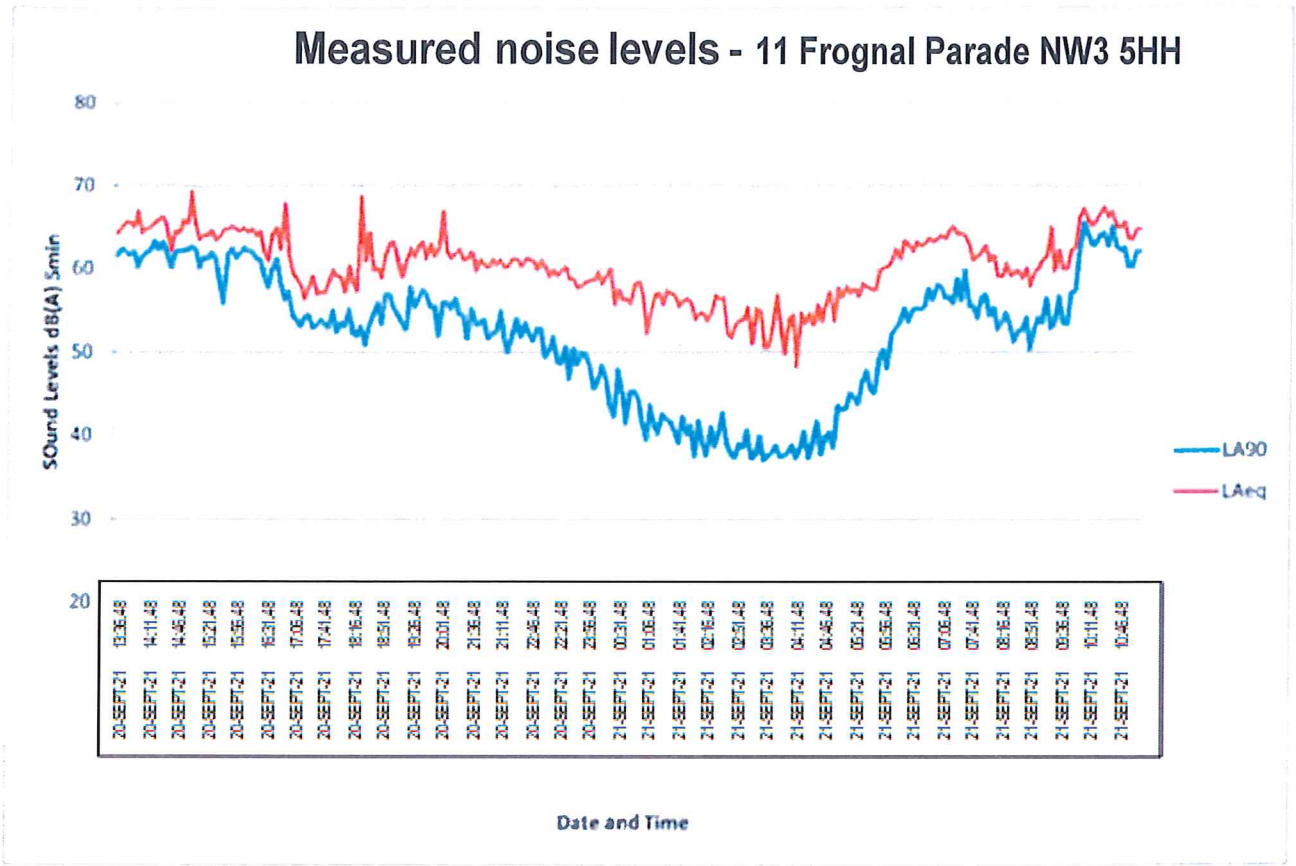
The calculations result in levels of LAeq 40dB at nearest residential property.

Sample road noise levels at the residential property over the same period varied from 59 to 62 dB(A), which was practically evident as the Car Wash was inaudible at that location.

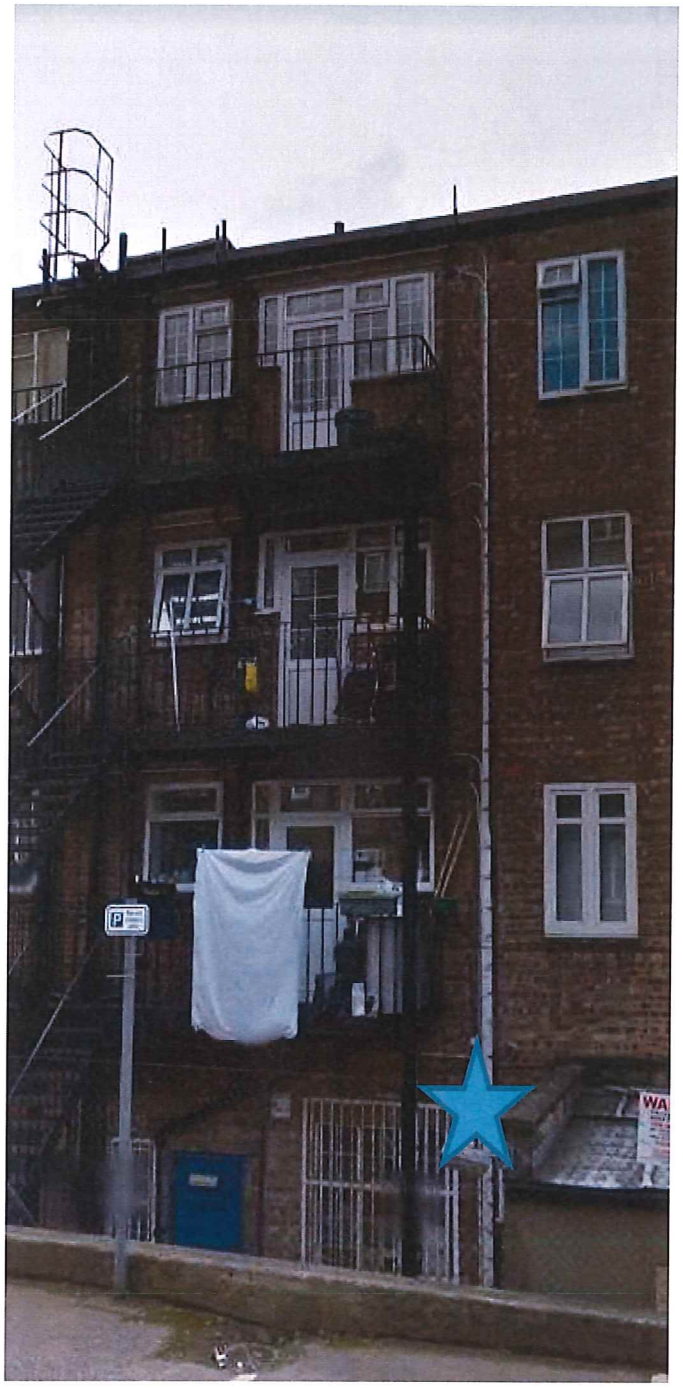
5 Conclusion.

The results of the calculations indicate noise levels that are unlikely to give rise to complaints, as they are some 19dB below the current minimum background level at the nearest residential property.

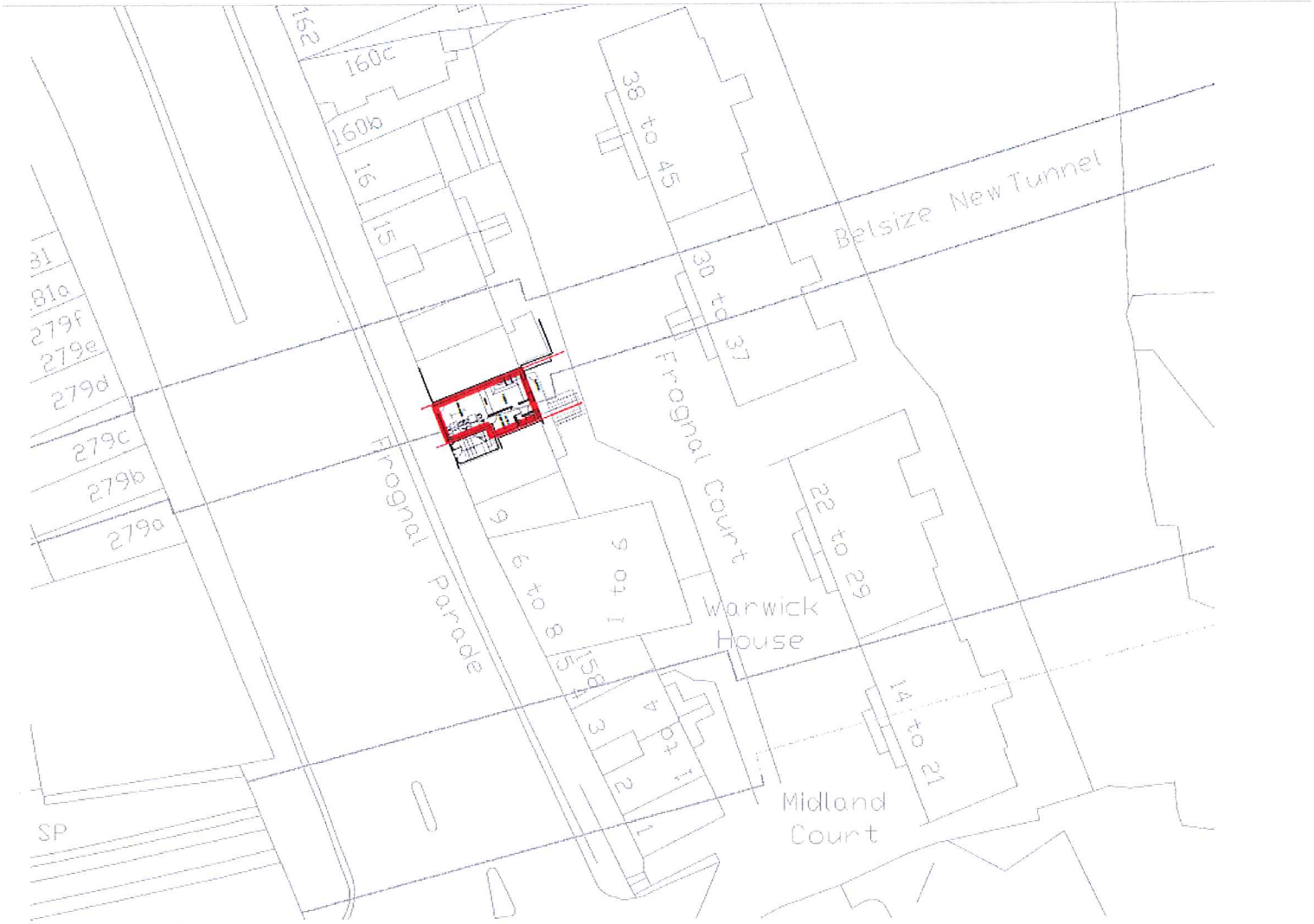
Appendix A: Measurements



Appendix B: Measurement position marked by blue star



Appendix C: Site Plan



Block Plan
Scale 1:500

Appendix D: Glossary

The list below details the major acoustical terms and descriptors, with brief definitions:

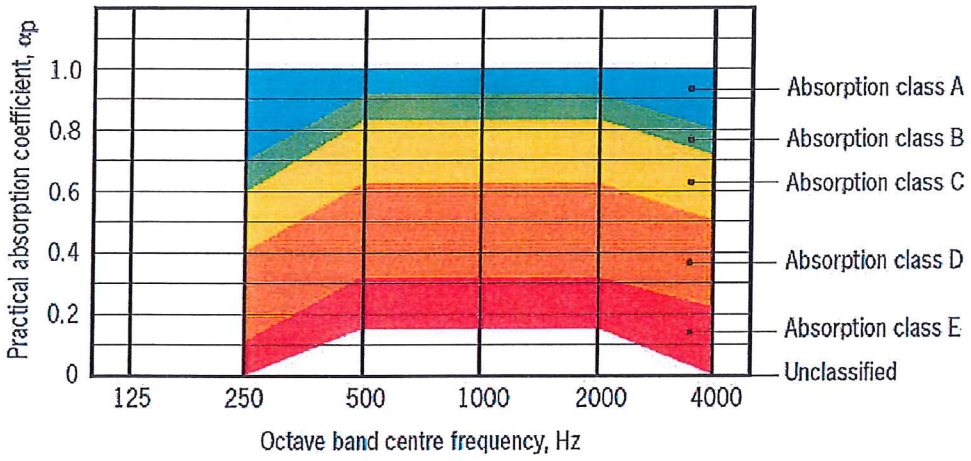
'A' Weighting

Weighting applied to the level in each stated octave band by a specified amount, in order to better represent the response of the human ear. The letter 'A' will follow a descriptor, indicating the value has been 'A' weighted. An 'A' weighted noise level may also be written as dB(A).

Absorption Class

In order to categorise the absorptive effects of different elements (such as ceiling tiles), classes from A to E were derived, as per BS EN ISO 11654:1997. A class 'A' absorber would be very acoustically absorptive, a Class 'E' absorber would be less absorptive and more reflective. A product that is highly reflective may not be classified.

The chart shown below has been extracted from BB93, and demonstrates the characteristics of each class according to BS EN ISO 11654:1997.



Absorption Coefficient (α)

A value usually between 0 and 1 assigned to a material to indicate how acoustically absorptive it is. 0 indicates a material is entirely reflective (and therefore not absorptive), and 1 indicates a material is entirely absorptive (and therefore not reflective). Absorption coefficients are usually given for each octave band between 125Hz and 4kHz, or as an overall 'practical' coefficient.

Airborne Noise

Noise transmitted through air.