
Our Ref: NA/1069/22/083/v2.0/460 Cheetham Hill Road

27th November 2023

Mr Belal Rashid
Belal Rashid Technical Architecture
Office 12
Falcon Business Centre
Victoria Street
Oldham
OL9 0HB



Sent by email only belal.brta@outlook.com

Dear Belal,

VALIDATORY NOISE MEASUREMENTS FOR THE INSTALLATION OF A FUME EXTRACTION FLUE TO THE REAR OF 460 CHEETHAM HILL ROAD, MANCHESTER, M8 9JW

MANCHESTER CITY COUNCIL PLANNING PERMISSION 133168/FO/2022

DISCHARGE OF CONDITION 3 'NOISE'

1.00 INTRODUCTION

1.01 RP Acoustics Limited has been commissioned by Mr Arslan Younis to carry out validatory noise measurements for the installation of a fume extraction flue to the rear of 460 Cheetham Hill Road, Manchester, M8 9JW (hereafter referred to as the application site).

1.02 Planning Permission 133168/FO/2022 was granted by Manchester City Council in May 2022 subject to conditions. Condition 3 stated:

a) Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5 dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location. Prior to commencement of the use hereby approved the scheme shall be submitted to and approved in writing by the City Council as local planning authority in order to secure a reduction in the level of noise emanating from the site. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

b) Prior to the operation of the scheme a verification report shall be submitted to and approved in writing by the City Council as local planning authority to validate that the work undertaken throughout the development conforms to the recommendations and requirements in the approved acoustic report. The report shall also undertake post completion testing to confirm that the noise criteria have been met. Any instances of non-conformity with the recommendations in the report shall be detailed along with any measures required to ensure compliance with the agreed noise criteria.

Reason - To minimise the impact of the development and to prevent a general increase in pre-existing background noise levels around the site in accordance with policies SP1 and DM1 of the Core Strategy for the City of Manchester.

1.03 A glossary of acoustic terms is contained in Appendix 1 for reference.

1.04 For reference, the permitted hours of operation of the restaurant / flue are up to midnight (0000 hours).

- 1.05 With respect to a) refer to RP Acoustics Ltd Report Reference NA/1069/22/083/v1.0/460 Cheetham Hill Road dated 30th May 2022.
- 1.06 With respect to b) it is confirmed that all the noise mitigation measures set out in the aforementioned report have been implemented.
- 1.07 In terms of noise validation testing, a trial operation of the fume extraction system (running at full duty) was undertaken during the late evening of Monday 13th November 2023 / early hours of Tuesday 14th November 2023. Validatory noise measurements were taken at the junction of Woodlands Road and Woodlands Street (the nearest residential dwellings to the fume extraction system). The application site location plan is reproduced in Appendix 2 whilst the location of the noise monitoring position is reproduced in Appendix 3 for reference.
- 1.08 Validatory noise measurements were undertaken using NTi Audio XL2 Type 1 integrating sound level meter. A 90 mm windshield was fitted for all measurements. The measurement system calibration was verified immediately before and after measurement sessions and no drift in calibration level was noted (calibration certificates reproduced in Appendix 4 for reference). Weather conditions throughout the survey were appropriate for monitoring.
- 1.09 Validatory noise measurements consisted of A-weighted broadband parameters, together with linear one-third octave band L_{eq} levels, with a logging interval of 1 second. The following table contains a summary of the data rounded to the nearest decibel (and the nearest tenth of a decibel with respect to the L_{A10}).

Table 1.1 – Baseline Noise Measurement Data

NMP	Date	Time	LAeq (dB)	LA90 (dB)	Comments
1	Monday 13/11/23	2300–0000	48	39	Fume extraction system OFF
	Tuesday 14/11/23	0000–0015	46	39	Fume extraction system ON (full duty)
	Tuesday 14/11/23	0015–0030	46	39	Fume extraction system OFF
<p>LAeq due to local traffic; LA90 due to distant traffic No change in LA90 with fume extraction system ON (full duty) Fume extraction system is therefore at least 10 decibels below the background noise level</p>					
<p>This is completely consistent with aural observation as fume extraction system (full duty) was wholly INAUDIBLE at the monitoring position (residential dwellings)</p>					
<p>Note: RP Acoustics Noise Assessment NA/1069/22/083/v1.0/460 Cheetham Hill Road dated 30 May 2022 calculated the noise level proposed fume extraction system (full duty) to be circa 23 dB(A) at the monitoring position (residential dwellings)</p>					

- 1.10 In conclusion Conditions 3a and 3 b of Manchester City Council Planning Permission 133168/FO/2022 should be discharged.

If we can be of any further assistance, please do not hesitate to contact us.

Yours sincerely

Jonathan Rigg MEng (Hons), AMIOA, Diploma in Acoustics and Noise Control
For RP Acoustics Limited

APPENDIX 1 GLOSSARY OF ACOUSTIC TERMS

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 μPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 μPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T , has the same mean-square sound pressure as a sound that varies with time. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T . $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T . L_{A90} is typically taken as representative of background noise.

$L_{AF \max}$

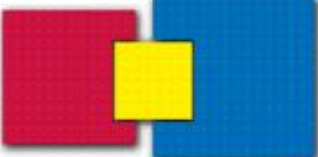
The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

Sound Exposure Level (SEL or L_{AE})

The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events that occur over different lengths of time.

APPENDIX 2 APPLICATION SITE LOCATION PLAN



 S C H E M E D E S I G N S Suite 15, Business Development Centre, Eanam Wharf, Blackburn, BB1 5BL T 01254 503200 M 07989 177834 E mail@schemedesigns.co.uk W www.schemedesigns.co.uk	Client Mr A YOUNIS						
	Project 460 Cheetham Hill Road, Manchester Change of Use & Installation of Extract Flue & Shopfront						
	Drawing Title Location Plan						
	Drawing No. 0664/001/A4/Rev - Scale See DWG						
Issued Date 25 / 05 / 2021 Revision Date -- / -- / --		Drawn By E.K. Checked By E.K.					
Drawing Issue: <table style="width: 100%;"> <tr> <td>☐ Draft Proposals</td> <td>☒ Planning Approval</td> </tr> <tr> <td>☐ Building Regulations</td> <td>☐ Construction</td> </tr> </table>				☐ Draft Proposals	☒ Planning Approval	☐ Building Regulations	☐ Construction
☐ Draft Proposals	☒ Planning Approval						
☐ Building Regulations	☐ Construction						
<p style="font-size: small;">This drawing is the copyright of Scheme Designs Limited and no reproduction is allowed without prior permission. All Drawings must be checked and verified prior to commencement of work on site. All dimensions are in millimeters, unless otherwise stated. Anyone using this drawing e.g. Contractor, Client, Supplier is to check all dimensions on site prior to carrying out work or ordering of materials. DO NOT SCALE FROM THIS DRAWING.</p>							

APPENDIX 3 VALIDATORY NOISE MONITORING POSITION



APPENDIX 4

CALIBRATION CERTIFICATE FOR SOUND LEVEL METER (CALIBRATION EVERY 2 YEARS)

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: **U39995**

Test Object: Sound Level Meter, BS EN IEC 61672-1:2013 Class 1
Associated Frequency Analyser to BS EN IEC 61260:1996 Class 1

Producer: NTi Audio

Type: XL2-TA

Serial number: A2A-17283-E0

Customer: RP Acoustics Ltd

Address: 1 Dobcroft Close,
Sheffield, South Yorkshire. S11 9LL.

Contact Person: Richard Pennell

Order No:

Introduction:

Calibration has been performed as set out in CA Technical Procedures which are based on the procedures for periodic verification of sound level meters as per the **Test Object** listed above. Results and conformance statement are overleaf and detailed results, where appropriate, are provided in the attached Measurement Report.

Tested:	Producer	Type	Serial No	Certificate No
Microphone	NTi Audio	MC230A	A18352	39994
Calibrator*	Larson Davis	CAL200	17115	U39993
Preamplifier	NTi Audio	MA220	8854	Included

* The calibrator was complete with any required coupler for the microphone specified.

Additional items that have also been submitted for verification:

Wind shield - -
Attenuator - -
Extension cable - -

These items have been taken into account wherever appropriate.

Instruction Manual: NTi-Audio XL2 Operating Manual v3,11,02 August 2016 Firmware Version: v4,21 The test object is a single channel instrument.

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	102.80 ±0.04	22.65 ±0.15	31.35 ±0.25

Calibration Dates:

Received date: 17/01/2022 Reviewed date: 25/01/2022
Calibration date: 25/01/2022 Issued date: 25/01/2022

Technicians: (Electronic certificate)

Calibrated by: *Palanivel Marappan B.Eng (Hons), M.Sc*

Reviewed by: *Darren Batten*

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

APPENDIX 4

CALIBRATION CERTIFICATE FOR SOUND LEVEL METER (CALIBRATION EVERY 2 YEARS)

Certificate of Calibration and Conformance

Continuation of Certificate number: U39995

The statements of conformance and observation notes detailed in this certificate are made with reference to the following standards in respect of the calibration of the test object.

Manufactured:	BS EN IEC 61672-1:2013
Periodic Tests:	BS EN IEC 61672-3:2013
Pattern Evaluation:	BS EN IEC 61672-2:2013
Filter Evaluation:	BS EN IEC 61260:1996 Class 1

Conformance:

From markings on the sound level meter or by reference to the manufacturer's published literature it has been determined that the instrument submitted for verification was originally manufactured to the listed standard and similarly that the associated sound calibrator conforms to the BS EN IEC 60942 standard.

Measurement Summary:

Indication at the calibration check frequency - IEC 61672-3 Ed.2.0 #10	Passed
Self-generated noise - IEC 61672-3 Ed.2.0 #11.2	Passed
Acoustical signal tests of a frequency weighting - IEC 61672-3 Ed.2.0 #12	Passed
Electrical signal tests of frequency weightings - IEC 61672-3 Ed.2.0 #13	Passed
Frequency weightings: A Network - IEC 61672-3 Ed.2.0 #13.3	Passed
Frequency weightings: C Network - IEC 61672-3 Ed.2.0 #13.3	Passed
Frequency weightings: Z Network - IEC 61672-3 Ed.2.0 #13.3	Passed
Frequency and time weightings at 1 kHz - IEC 61672-3 Ed.2.0 #14	Passed
Level linearity on the reference level range - IEC 61672-3 Ed.2.0 #16	Passed
Level linearity including the level range control - IEC 61672-3 Ed.2.0 #17	Passed
Toneburst response - IEC 61672-3 Ed.2.0 #18	Passed
Peak C sound level - IEC 61672-3 Ed.2.0 #19	Passed
Overload indication - IEC 61672-3 Ed.2.0 #20	Passed
High level stability test - IEC 61672-3 Ed.2.0 #21	Passed
Long term stability test - IEC 61672-3 Ed.2.0 #15	Passed
1/1octave: Relative attenuation - IEC 61260, #4.4 & #5.3	Passed
1/3octave: Relative attenuation - IEC 61260, #4.4 & #5.3	Passed

Comments

Correct level with associated calibrator is 114.0dB(A).

Statement of Conformance

The sound level meter submitted has successfully completed the periodic tests of the standard listed for the environmental conditions under which the tests were performed. As public evidence(1) was available, from an independent testing organisation responsible for approving the results of pattern evaluation tests performed in accordance with the manufacturer's standard to demonstrate that the model of sound level meter fully conformed to the requirements of the said standard, the sound level meter submitted for testing conforms to the relevant class of the said standard.

(1 - evidence is held on file at the calibration laboratory)

Filter Calibration

The filter functions have been found to conform, by electrical testing, to the relative attenuation requirement of the standard noted over the range of frequencies shown in the attached test report.

Observations

No information on the uncertainty of measurement, required by the listed standard, for the correction data was made available in the instruction manual / data sheets from the equipment manufacturer / supplier for the test object. The uncertainty of measurement of the correction data was therefore assumed to be the maximum-permitted uncertainty given in IEC 62585 for the corresponding free-field correction data and for a coverage probability of 95 %.

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Continuation of Certificate number: U39995

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor $k = 2$, providing a coverage probability of approximately 95 %. The uncertainty evaluation has been carried out in accordance with UKAS requirements. Details of the uncertainty for each measurement are available from the Calibration Laboratory upon request. Details of the sources of corrections and their associated uncertainties that relate to this verification are contained within the test report accompanying this certificate.

Decision Rule

The decision rules will be applied in accordance with the procedure as described in BS EN 61672-3:2013.

A PASS or PASSED statement indicates that the instrument conforms with the relevant accuracy requirements of the testing standard AND the expanded measurement uncertainty ($k = 2$ for approximately 95 % coverage probability) is no greater in magnitude than the accuracy requirements defined in BS EN IEC 61260:1996 standard.

This certificate relates only to the items tested above.

** End of Certificate **

APPENDIX 4

CALIBRATION CERTIFICATE FOR SOUND CALIBRATOR (CALIBRATION EVERY YEAR)

Laboratory Location

Campbell Associates Ltd
5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: **U43128**

Test Object: **Sound Calibrator**

Producer: **Larson Davis**
Type: **CAL200**
Serial number: **17115**
Customer: **RP Acoustics Ltd**
Address: **1 Dobcroft Close,
Sheffield, S11 9LL**
Contact Person: **Richard Pennell**
Order No: **N/A**

Measurement Results	Level dB	Level Stability dB	Frequency Hz	Distortion %
Measurement 1	114.17	0.01	1000.32	0.48
Measurement 2	114.17	0.01	1000.32	0.48
Measurement 3	114.17	0.02	1000.32	0.48
Result (Average):	114.17	0.01	1000.32	0.48
Expanded Uncertainty:	0.1	0.02	1	0.1
Degree of Freedom:	>100	>100	>100	>100
Coverage Factor:	2	2	2	2

The stated level is relative to 20 μ Pa. The level is traceable to National Standards. The stated level is valid at reference conditions. The following correction factors have been applied during the measurement

Pres:0 dB/kPa Temp:0 dB/°C Humi:0 dB/%RH Load volume: 0 dB/mm³

Conditions	Pressure kPa	Temperature °C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	101.932 $\pm$ 0.042	22.4 $\pm$ 0.1	32.9 $\pm$ 0.8

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of $k=2$, providing a level of confidence of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level. The uncertainty has been determined in accordance with UKAS requirements.

Records: K:\C A\Calibration\Nor-1504\Nor-1018 CalCal\Current Year\LDL200_17115_M1.nmf

Preconditioning

The equipment was preconditioned for more than 4 hours in the specified calibration environment.

Method

Calibration has been performed as set out in the current version of CA Technical procedure TP01

Calibration Dates:

Received date:	24/01/2023	Reviewed date:	31/01/2023
Calibration date:	30/01/2023	Issued date:	31/01/2023

Technicians: (Electronic certificate)

Calibrated by: *Katie Brown*
Reviewed by: *Jenny Crawford*

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Doc ref: Calb-Cert-Master-V3-05

APPENDIX 4

CALIBRATION CERTIFICATE FOR SOUND CALIBRATOR (CALIBRATION EVERY YEAR)

Certificate of Calibration and Conformance

Continuation of Certificate number: **U43128**

Reference Microphone: WSM11 (C) - GRAS40AG-291442

Measurements

The calibrator has been tested as described in the following annexes to BS EN IEC60942:2003 Sound Calibrators; B3.4 for sound pressure level, B3.5 for frequency, B3.6 for total distortion and A4.4 for short term stability of the pressure level.

Instruments and Program

A complete list of instruments, hardware and software that have been used for this calibration is available from the calibration laboratory

Comments

94dB spot check = 94.15dB. Note this is not UKAS data.

Statement of Conformance and Calibration

As public evidence was available*, from a testing organisation responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in annex A of BS EN IEC 60942:2003, the sound calibrator tested is considered to conform to all the class 1 requirements of that BS EN IEC 60942:2003.

*This evidence is held on file at the calibration laboratory.

Notes:

The sound pressure level generated by the calibrator in its ½ inch configuration was measured five times and averaged by a WS2P working standard microphone for class 1 or 2 devices or a LS2P reference microphone for class 0 or LS devices as specified in the International Standard BS EN 61094-4. The results of three replications and the mean of the measurements obtained are given in the measurement results table of this certificate. The frequency and distortion were measured in a similar manner. The figures in BOLD are the final results; a small correction factor may need to be added to the sound pressure level quoted here if the device is used to calibrate a sound level meter that is fitted with a free field response microphone. See manufacturer's handbooks for full details of this and other corrections that may be applicable.

Observations:

Decision Rule:

The decision rules have been applied in accordance with the procedure as described in BS EN 60942:2003

This certificate relates only to the items tested above.

** End of Certificate **