Appendix D

Calibration Certificate for

Construction Noise Monitoring

Equipment

fUGRO

FUGRO

FUGRO TECHNICAL SERVICES LIMITED

Fugro Development Centre
5 Lok Yi Street, Tai Lam
Tuen Mun, NT
Hong Kong

Report no.: 203258CA201566(1)

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CALIBRATION CERTIFICATE OF SOUND LEVEL METER

Client Supplied Information

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Details of Unit Under Test, UUT

Description : Sound Level Meter

Manufacturer : Casella

	Meter	Microphone	Preamplifier
Model No. :	CEL-63X	CE-251	CEL-495
Serial No. :	3756127	04228	004030

Equipment ID : N/A

Next Calibration Due Date : 12-Aug-2021

Specification Limit : EN 61672-1: 2003 Class 1

Laboratory Information

Details of Reference Equipment -

Description : B & K Acoustic Multifunction Calibrator 4226 (Traditional free field setting)

Equipment ID. : R-108-1

Date of Calibration : 13-Aug-2020

Calibration Location : Calibration Laboratory of FTS   Ambient Temperature :   20±2 °C

Method Used : By direct comparison

Calibration Results :

Parameters		Mean Value (dB)	Specification Limit(dB)		
A-weigthing frequency response	4000Hz	1.2	2.6	to	-0.6
	2000Hz	1.3	2.8	to	-0.4
	1000Hz	0.0	1.1	to	-1.1
	500Hz	-3.4	-1.8	to	-4.6
	250Hz	-8.7	-7.2	to	-10.0
	125Hz	-16.1	-14.6	to	-17.6
	63Hz	-26.1	-24.7	to	-27.7
	31.5Hz	-38.8	-37.4	to	-41.4
Differential level linearity	94dB-104dB	0.0	± 0.6		
	104dB-114dB	0.0	± 0.6		

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.

2. The mean value is the average of four measurements.

3. For calibration: Reference SPL are 94, 104 & 114dB, range setting is 20-140dB & time weighting is fast

4. The UUT does comply with EN 61672-1: 2003 Class 1 sound level meter for the above measurement.

5. The values given in this Calibration Certificate only relate to the values at the time of the test and any uncertainties will not include allowance for the equipment long term drift, variations with environment changes, vibration and shock during tranportation, overloading, mis-handling or the capability of any other laboratory to repeat the measurement.

Checked by : _William_ Date : 18-8-2020 Certified by : _K T Leung_ Date : 20-8-2020

CA-R-297 (22/07/2009)   Leung Kwok Tai (Assistant Manager)

** End of Report **

FUGRO

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Hong Kong

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Report no.: 203258CA201871(1)

CALIBRATION CERTIFICATE OF SOUND CALIBRATOR

Client : Fugro Technical Services Ltd.

Project : Calibration Services

Client Supplied Information

Details of Unit Under Test, UUT

Description	:	Sound Calibrator
Manufacturer	:	Casella (Model CEL-120/1)
Serial No.	:	5230736
Equipment ID	:	N-18

Next Calibration Date : 07-Sep-2021

Specification Limit : EN 60942: 2003 Class 1

Laboratory Information

Details of Calibration Equipment

Description	:	Reference Sound level meter
Equipment ID.	:	R-119-1

Calibration Date : 08-Sep-2020

Calibration Location : Calibration Laboratory of FTS   Ambient Temperature : 20±2 °C

Method Used : By direct comparison   Relative Humidity :: <80% R.H.

Calibration Results :

Parameters (Setting of UUT)	Mean Value (error of measurement)	Specification Limit(dB)
94dB	0.1 dB	±0.4dB
114dB	0.2 dB	

Remarks :

1. The equipment used in this calibration is traceable to recognized National Standards.

2. The mean value is the average of four measurements.

3. The unit under test complies with the specification limit.

4. The values given in this Calibration Certificate only relate to the unit-under-test and the values measured at the time of the test. Any uncertainties quoted will not include allowances for the environmental changes, variation and shock during transportation, or the capability of any other laboratory to repeat the measurement.

Checked by : _William_ Date : _11-9-2020_   Certified by : _K T Leung_ Date : _12-9-2020_

CA-R-297 (22/07/2009)

Leung Kwok Tai (Assistant Manager)

** End of Report **