



TEST REPORT

Report No.: 2021/0141/031
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Sound Level

Serial No.: IZPL001134582

Measurement 3														
Rated voltage	Applied voltage	Rated current	Applied current	Tap position	Fans in operation	Pumps in operation	Frequency	Distance	Prescribed contour	Height	Surface area	Surface measure	Top oil temperature	Guarantee
[%]	[kV]	[%]	[A]				[Hz]	[m]	[m]	[m]	[m ²]	[dB]	[°C]	[dB(A)]
		100	262.43	11	0		50	1	31.1	5.2	192.8	22.9		

Measurement duration: 35 s

	Frequency [Hz]	L _{1/3} A0		L _{1/3} A0 - L _{1/3} A0		Pressure Intensity Correction	L _{1/3} A	L _{1/3} WA
		[dB(A)]		[dB(A)]	[dB(A)]			
Total Sound Level		56.1	1	58.1	2.1	A	56.1	78.9
Octave Band	63	40.3	1	46.7	6.4	A	40.3	63.2
	125	55.0	1	56.5	1.5	A	55.0	77.9
	250	47.0	1	49.4	2.4	A	47.0	69.9
	500	39.9	1	43.3	3.4	A	39.9	62.7
	1000	37.9	1	42.2	4.3	A	37.9	60.7
	2000	39.0	1	43.1	4.1	A	39.0	61.9
	4000	28.6	1	38.2	9.6	A	28.6	51.4
8000	18.4	1	31.5	13.1	A	18.6	41.4	
1/3 Octave Band	50	40.2	1	46.5	6.4	A	40.2	63.0
	63	24.6	1	30.1	5.6	A	24.6	47.4
	80	21.0	1	29.3	8.3	A	21.0	43.9
	100	49.0	1	51.8	2.8	A	49.0	71.8
	125	38.9	1	41.0	2.1	A	38.9	61.7
	160	53.7	1	54.6	0.9	A	53.7	76.5
	200	42.2	1	44.7	2.5	A	42.2	65.1
	250	39.7	1	42.0	2.3	A	39.7	62.5
	315	43.9	1	46.2	2.3	A	43.9	66.7
	400	37.4	1	40.5	3.1	A	37.4	60.3
	500	33.8	1	37.6	3.8	A	33.8	56.7
	630	32.4	1	36.3	3.8	A	32.4	55.3
	800	31.9	1	35.3	3.4	A	31.9	54.8
	1000	32.2	1	37.2	5.0	A	32.2	55.0
	1250	34.7	1	38.9	4.3	A	34.7	57.5
	1600	37.3	1	40.7	3.3	A	37.3	60.2
	2000	31.3	1	37.0	5.7	A	31.3	54.1
2500	30.8	1	36.0	5.2	A	30.8	53.6	
3150	25.5	1	34.7	9.1	A	25.5	48.4	
4000	24.1	1	33.6	9.5	A	24.1	46.9	
5000	20.2	1	31.3	11.1	A	20.2	43.0	
6300	17.3	1	28.7	11.4	A	17.3	40.2	
8000	12.5	1	26.4	13.9	A	12.5	35.3	
10000	2.9	-1	23.9	21.0	A	0.0	0.0	

Case A: Applies, if the total P-I index is $\Delta L \leq 4$ dB. Then it follows $L_{1/3} = L_{1/3}$ for both the total sound level and sound levels of the individual frequency bands.

Case B: Applies, if the total P-I index is $4 \text{ dB} < \Delta L \leq 8$ dB. Then it follows $L_{1/3} = L_{1/3} - 4$ dB for both the total sound level and sound levels of the individual frequency bands.

Issue Date
29/09/2021

Test Engineer
Kamil Maliński

Test Department
Test Field

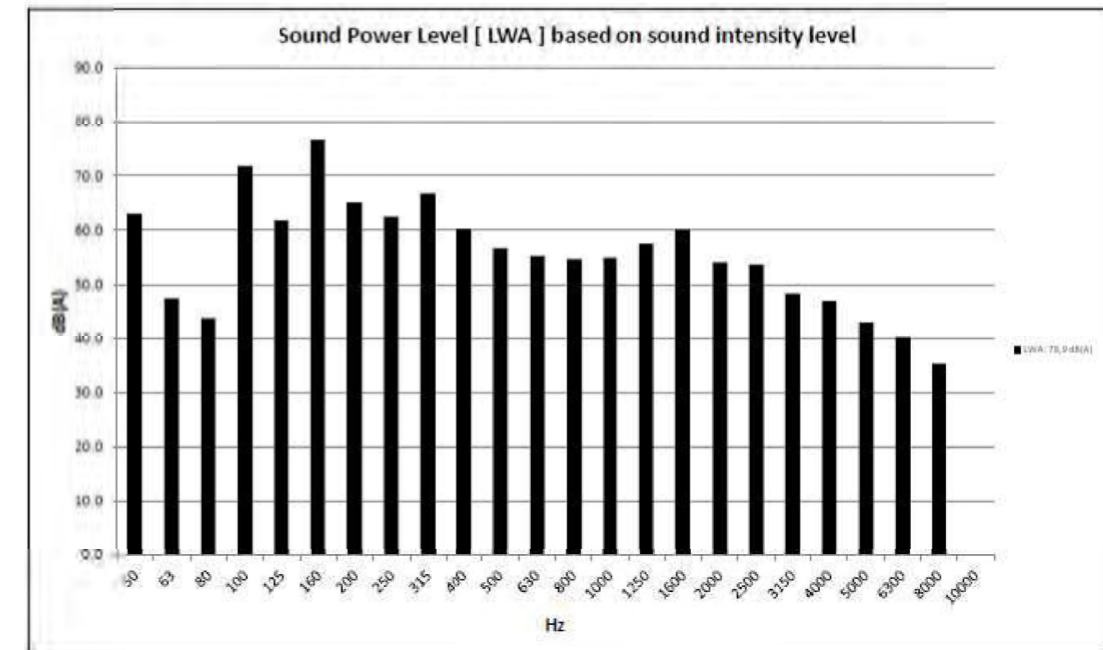
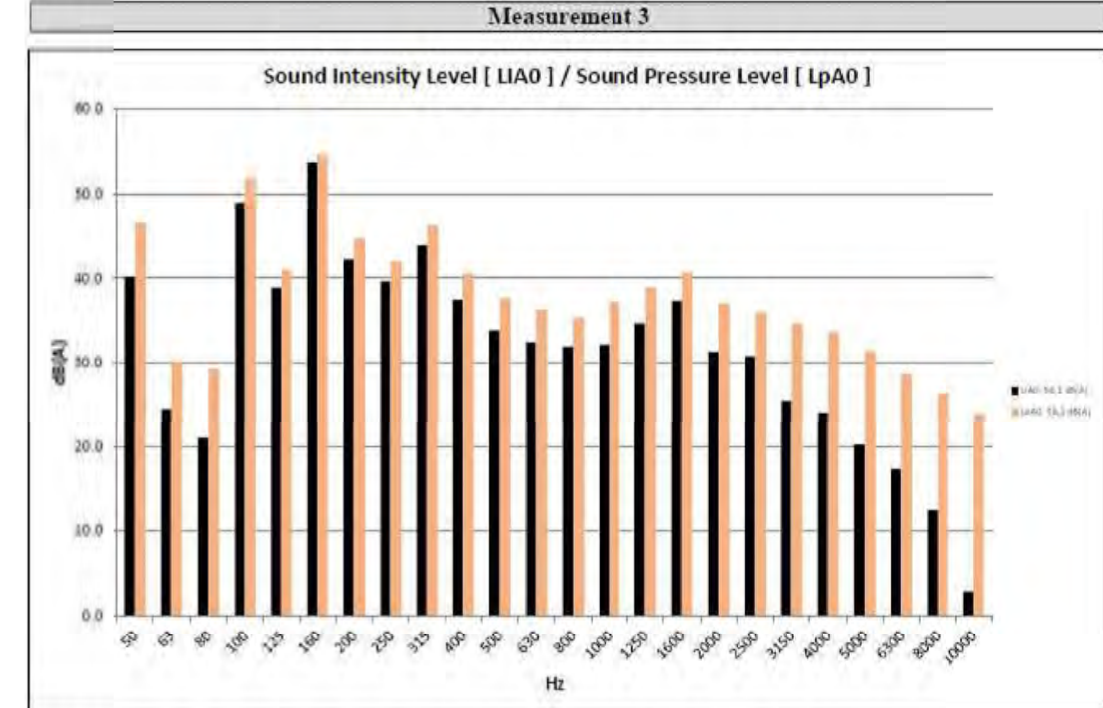


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Test Engineer
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Sound Level

Serial No. : IZPL001134582

Measurement 4

Rated voltage	Applied voltage	Rated current	Applied current	Tap position	Fans in operation	Pumps in operation	Frequency	Distance	Prescribed contour	Height	Surface area	Surface measure	Top oil temperature	Guarantee
[%]	[kV]	[%]	[A]				[Hz]	[m]	[m]	[m]	[m ²]	[dB]	[°C]	[dB(A)]
		100	262.43	11	8		50	2	37.5	5.2	270.0	24.3		

Measurement duration: 89 s

Frequency	L_{pA0}	L_{pA0}	$L_{pA0} - L_{pA0}$	Pressure Intensity Correction	L_{pA}	L_{WA}
[Hz]	[dB(A)]	[dB(A)]	[dB(A)]		[dB(A)]	[dB(A)]
Total Sound Level	63.5	1	65.5	2.0	A	63.5
Octave Band						
63	40.1	1	43.3	3.2	A	40.1
125	55.3	1	56.9	1.6	A	55.3
250	56.9	1	58.6	1.7	A	56.9
500	58.3	1	60.4	2.1	A	58.3
1000	57.4	1	59.6	2.2	A	57.4
2000	51.1	1	53.5	2.4	A	51.1
4000	47.0	1	49.3	2.3	A	47.0
8000	39.9	1	41.6	1.8	A	39.9
1/3 Octave Band						
50	39.4	1	42.7	3.3	A	39.4
63	23.1	1	28.0	4.9	A	23.1
80	30.8	1	33.5	2.6	A	30.8
100	47.6	1	50.6	2.9	A	47.6
125	44.2	1	45.9	1.7	A	44.2
160	54.1	1	55.3	1.2	A	54.1
200	49.4	1	50.9	1.6	A	49.4
250	52.1	1	53.6	1.6	A	52.1
315	53.7	1	55.6	1.9	A	53.7
400	52.7	1	54.8	2.1	A	52.7
500	52.6	1	54.7	2.1	A	52.6
630	54.9	1	56.9	2.1	A	54.9
800	54.3	1	56.6	2.3	A	54.3
1000	52.3	1	54.4	2.1	A	52.3
1250	50.2	1	52.6	2.4	A	50.2
1600	48.0	1	50.5	2.5	A	48.0
2000	45.9	1	48.2	2.3	A	45.9
2500	44.2	1	46.3	2.1	A	44.2
3150	43.2	1	45.5	2.3	A	43.2
4000	42.6	1	45.0	2.4	A	42.6
5000	40.5	1	42.6	2.1	A	40.5
6300	37.2	1	39.4	2.1	A	37.2
8000	34.5	1	35.9	1.4	A	34.5
10000	32.1	1	33.0	0.9	A	32.1

Case A: Applies, if the total P-I index is $\Delta L \leq 4$ dB. Then it follows $L_{pA} = L_{pA0}$ for both the total sound level and sound levels of the individual frequency bands.

Case B: Applies, if the total P-I index is $4 \text{ dB} < \Delta L \leq 8$ dB. Then it follows $L_{pA} = L_{pA0} - 4$ dB for both the total sound level and sound levels of the individual frequency bands.

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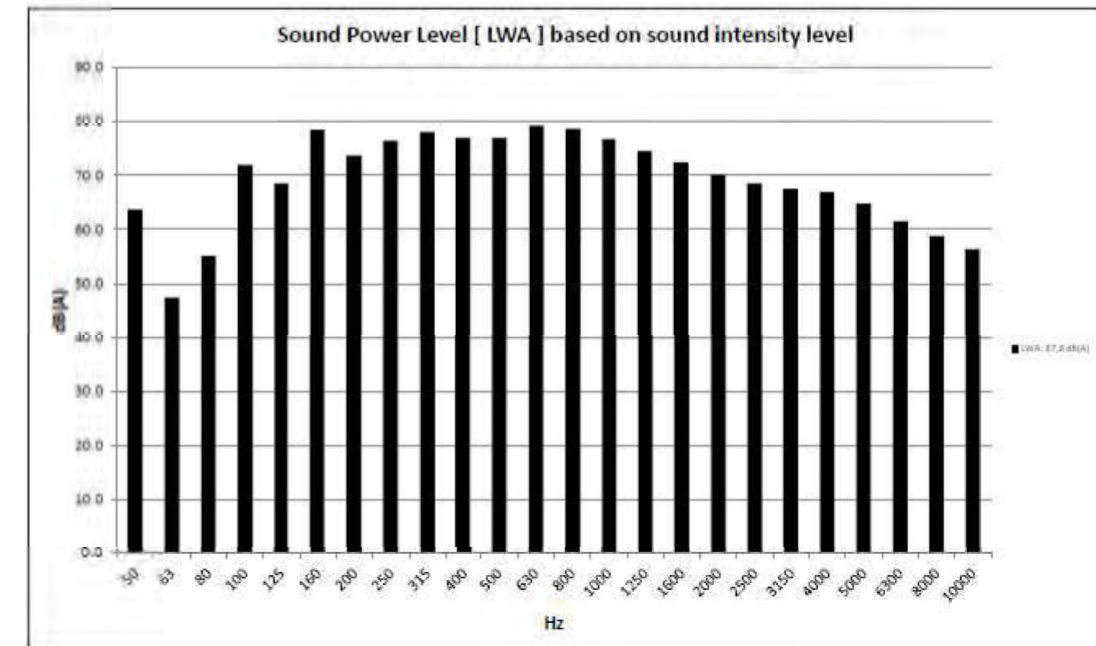
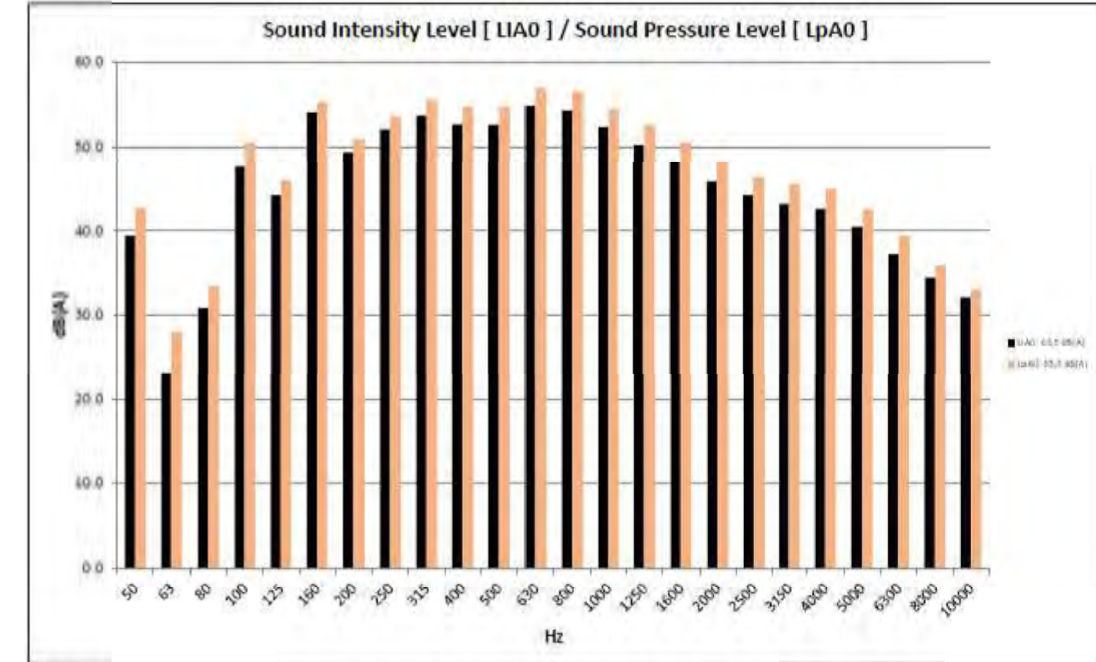
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Measurement 4



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Sungrow Power Supply Co., Ltd.
Add: No. 1699 Xiyou Road, Hefei, China
Tel: +86 551 6532 7834
Email: info@sungrow.cn
Website: www.sungrowpower.com



Sound Level

Serial No. : IZPL001134582

Combination of sound level measurements										
Rated voltage	Applied voltage	Rated current	Applied current	Tap position	Fans in operation	Pumps in operation	Frequency	Measurement 1 Sound Power Level	Measurement 4 Sound Power Level	Combined Sound Power Level
[%]	[kV]	[%]	[A]				[Hz]	[dB(A)]	[dB(A)]	[dB(A)]
100	33	100	262.43		8					
Total Sound Level								76.9	87.8	88.2
Octave Band	63	39.6	64.4				63			64.4
	125	59.5	79.6				125			79.6
	250	76.1	81.2				250			82.3
	500	67.3	82.6				500			82.7
	1000	56.3	81.7				1000			81.7
	2000	51.6	75.4				2000			75.4
	4000	54.1	71.3				4000			71.4
	8000	57.4	64.2				8000			65.0
1/3 Octave Band	50	36.1	63.8				50			63.8
	63	37.0	47.4				63			47.8
	80	0.0	55.1				80			55.1
	100	58.4	71.9				100			72.1
	125	47.5	68.5				125			68.6
	160	51.3	78.4				160			78.4
	200	63.1	73.7				200			74.1
	250	60.9	76.4				250			76.5
	315	75.8	78.0				315			80.1
	400	61.2	77.0				400			77.1
	500	63.7	76.9				500			77.1
	630	62.5	79.2				630			79.3
	800	53.7	78.6				800			78.6
	1000	51.4	76.7				1000			76.7
	1250	47.1	74.5				1250			74.5
	1600	47.0	72.4				1600			72.4
	2000	46.7	70.2				2000			70.2
	2500	46.9	68.5				2500			68.5
3150	48.4	67.5				3150			67.6	
4000	49.6	66.9				4000			67.0	
5000	49.9	64.8				5000			64.9	
6300	51.2	61.5				6300			61.9	
8000	52.9	58.8				8000			59.8	
10000	53.6	56.4				10000			58.2	

Noise Test Report

TYPE TEST SHEET

This Type Test sheet shall be used to record the results of the type testing of Generating Unit			
Type Tested reference number	SG3150U		
Generating Unit technology	Grid-connected PV Inverter		
System supplier name	Sungrow Power Supply Co., Ltd.		
Address	No.1699 Xiyou Rd., New & High Technology Industrial Development Zone, Hefei, P.R. China		
Tel	+86 551 65327834	Fax	+86 551 6532 7800
E:mail	info@sungrow.cn	Web site	www.sungrowpower.com
Maximum export capacity, use separate sheet if more than one connection option.	N/A	kW single phase, single, split or three phase system	
	N/A	kW three phase	
	N/A	kW two phases in three phase system	
Compiled by	On behalf of		Sungrow Power Supply Co., Ltd.
	Test Date		2019-5-13
Note that testing can be done by the manufacturer of an individual component, by an external test house, or by the supplier of the complete system, or any combination of them as appropriate.			
Where parts of the testing are carried out by persons or organisations other than the supplier then the supplier shall keep copies of all test records and results supplied to them to verify that the testing has been carried out by people with sufficient technical competency to carry out the tests.			

Issue Date
29/09/2021

Test Engineer
Kamil Maliński

Test Department
Test Field

Sungrow Power Supply Co., Ltd.
 Add: No. 1699 Xiyou Road, Hefei, China
 Tel: +86 551 6532 7834
 Email: info@sungrow.cn
 Website: www.sungrowpower.com



The aim of this test is to determine the noise level when the PV Grid inverter in rated working condition

Used settings of the measurement device for Noise measurement

Measurement device	Date of measurement
AWA6228	2019-5-13

The conditions during testing are specified below:

PGU operation mode	Rated Working Condition
Voltage range	800-1300V
Grid frequency range	50Hz/ 45-55Hz
Distance	1m
Date	2019-5-13

The system noise level please check the table below.

Orientation	Noise (dB)
Front	77.2
Behind	77.5
Left	78.1
Right	79

Photo:
 Operation Condition:



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Front Test :



Test Record			
Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	53.9	1k	68.7
31.5	56.3	2k	66.6
63	69.3	4k	71.8
125	80.7	8k	59.6
250	76.8	16k	42.4
500	71.8	W_A	77.2

Behind:



Test Record			
Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	55.9	1k	70.6
31.5	64.8	2k	68.3
63	69.5	4k	69.7
125	77.6	8k	59.6
250	77.4	16k	43.1
500	74.4	W_A	77.5

Left:



Test Record			
Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	56.3	1k	70.7
31.5	67.7	2k	68.4
63	69.7	4k	71.3
125	78.6	8k	62.5
250	78.8	16k	52.9
500	73.1	W_A	78.1

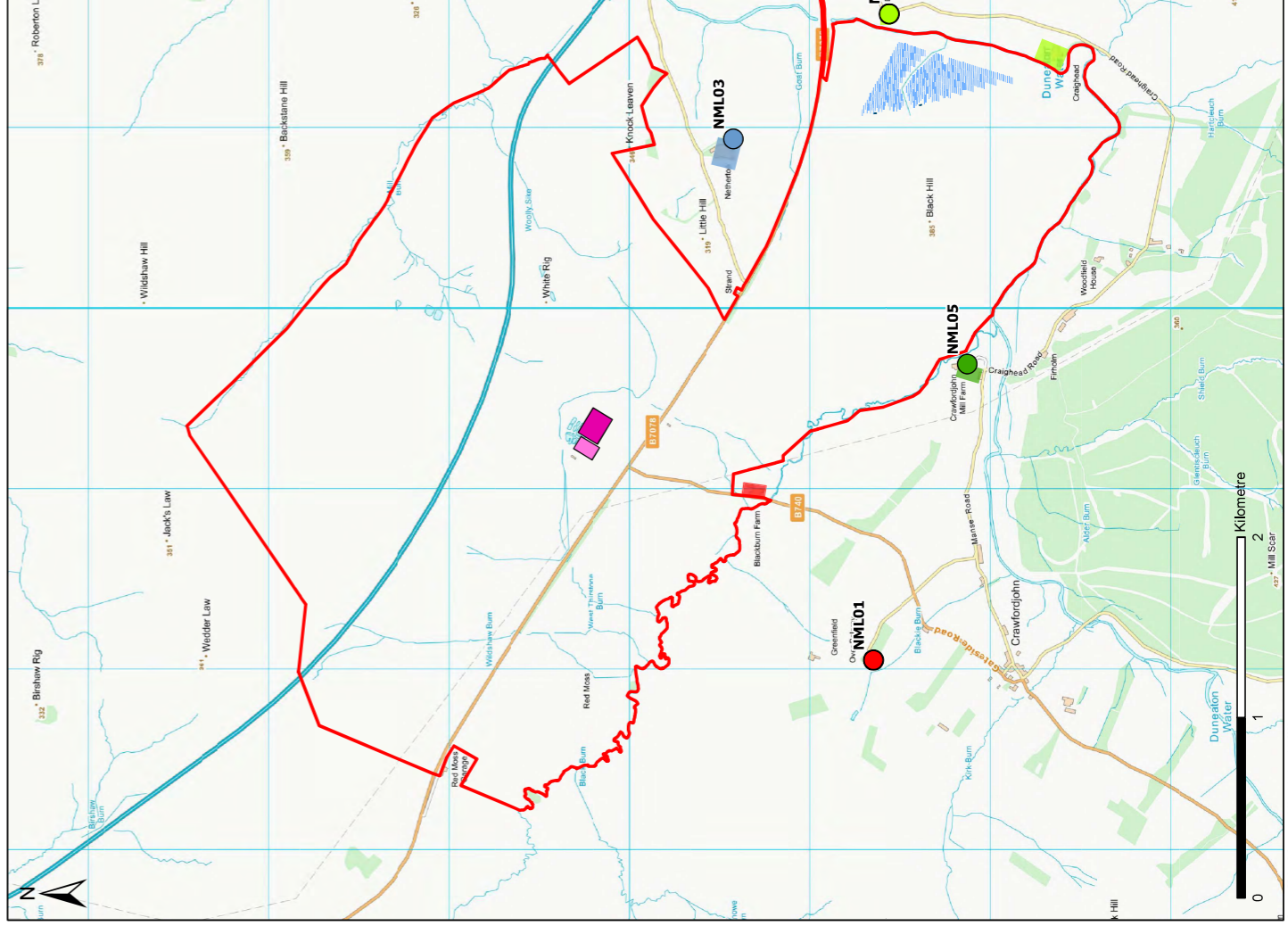
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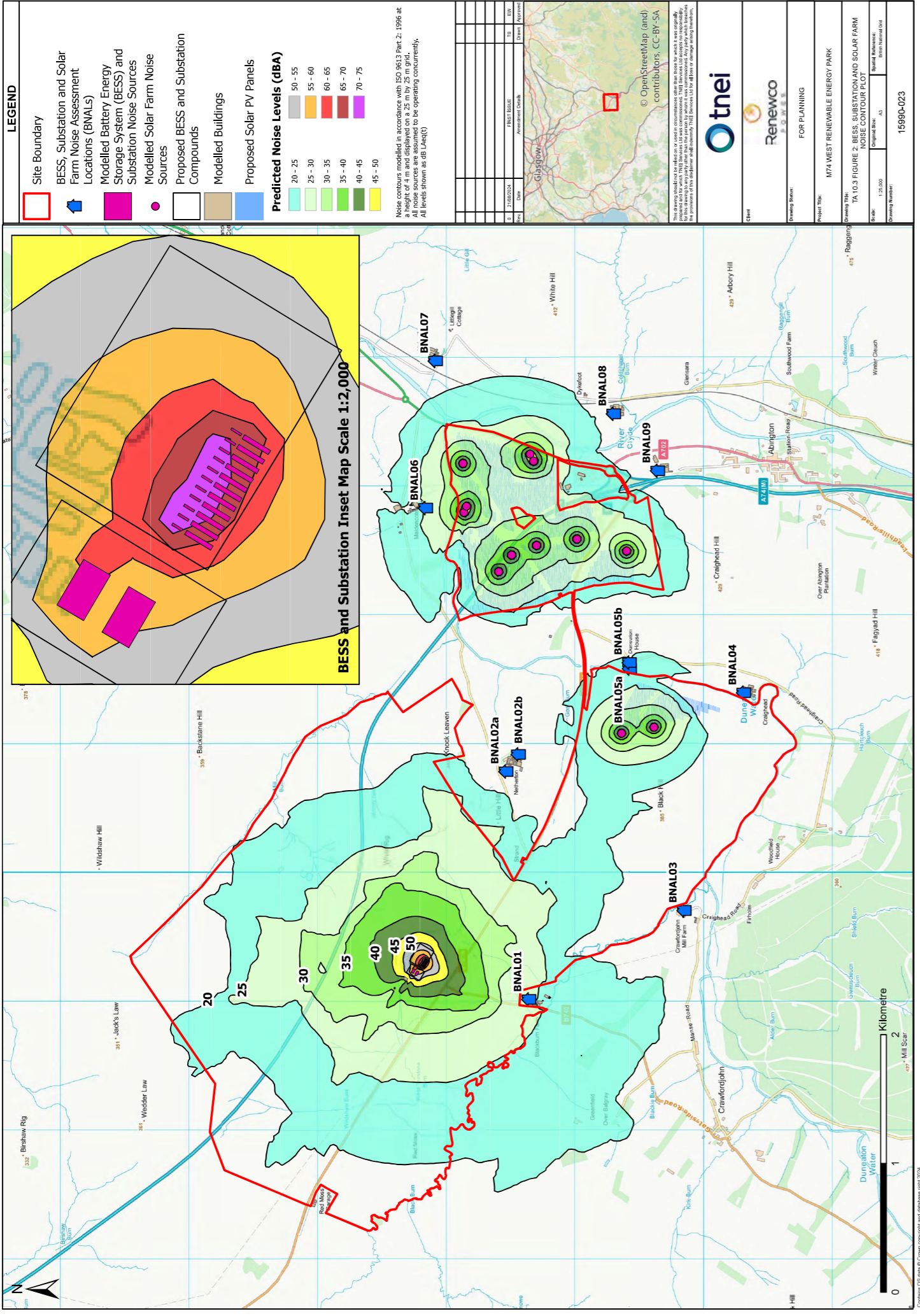


Test Record			
Frequency(Hz)	Noise(dB)	Frequency(Hz)	Noise(dB)
16	57.1	1k	71.7
31.5	67.9	2k	69.6
63	72.7	4k	71.4
125	81.4	8k	63.9
250	78.4	16k	53.2
500	75.4	W_A	79.0

Additional comments

Annex 5 – Figures





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