

REPORT ID: **08020.04.T16.RP3**

McLean's Mountain Wind Farm – Turbine T16

IEC 61400-11 Edition 3.0 Measurement Report

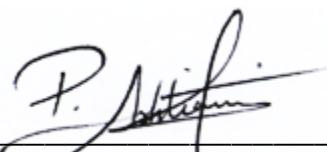
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Revision History

Revision Number	Description	Date
1	Issued Edition 2.1 test report	November 19, 2014
2	Update to section 4.5 and 4.6 to correct an adjustment in the ambient conditions observed during the IEC test	November 21, 2014
3	Issued Edition 3.0 test report	October 11, 2017

This report in its entirety, including appendices contains 86 pages.

Statement Qualifications and Limitations

This report was prepared by Aercoustics Engineering Limited in accordance with International Standard IEC 61400-11 (Edition 3.0, released 2012-11), "Wind turbine generator systems – Part 11: Acoustic noise measurement techniques". This report is specific only to the Wind Turbine identified in this report.

Aercoustics Engineering Limited shall not be responsible for any events or circumstances that may have occurred since the date on which the Wind Turbine was tested and/or this report was prepared, or for any inaccuracies contained in information that was provided to Aercoustics Engineering Limited. Further, Aercoustics Engineering Limited agrees that this report represents test data analysed as per the above described standard for the specific Wind Turbine described in this report, but Aercoustics Engineering Limited makes no other representations with respect to this report or any part thereof.

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This Statement of Qualifications and Limitations is attached to and forms part of this report.

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1 Introduction

Aercoustics Engineering Limited (Aercoustics) was retained by McLean's Mountain Wind GP ("MMFW") to conduct an acoustic measurement of turbine T16 at the McLean's Mountain Wind Farm. The purpose of the measurement was to provide verification of the maximum noise emission of the turbine. The measurement was carried out in accordance with International Standard IEC 61400-11 (Edition 3.0, released 2012-11), "Wind turbine generator systems – Part 11: Acoustic noise measurement techniques". This report is specific only to Turbine T16.

2 Wind Turbine Information

2.1 Wind turbine equipment specific information

Wind turbine specific equipment information for turbine T16 was provided by GE Energy and is summarized in Tables 1 – 5.

Table 1 - Wind Turbine Details

Wind Turbine Details	
Manufacturer	GE
Model Number	2.85 DFIG
Turbine ID	T16: 28124313

Table 2 - Operating Details

Operating Details	
Vertical or Horizontal axis wind turbine	Horizontal axis wind turbine
Upwind or downwind rotor	Upwind rotor
Hub height	98.3 m
Horizontal distance from rotor centre to tower axis	4170mm
Diameter of rotor	103 m
Tower type (lattice or tube)	Tube
Passive stall, active stall, or pitch controlled turbine	Pitch controlled turbine
Constant or variable speed	Variable speed
Power curve	See Figure B.01
Rotational speed at each integer standardised wind speed	See Figure B.02 from measurement data
Rated power output	2.49 MW
Control software version	44.62.06c TurbineCONTROL

Table 3 - Rotor Details

Rotor Details	
Rotor control devices	Rotary Pulse Transducer
Presence of vortex generators, stall strips, serrated trailing edges	Vortex generators: No, Stall strips: No, Serrated trailing edge: Yes
Blade type	Tecsis, Fibre glass, 50.2
Serial number	B1: TEC 0547, B2: TEC 0585, B3: TEC 0519
Number of blades	3

Table 4 - Gearbox Details

Gearbox Details	
Manufacturer	Nanjing
Model number	FDM3B 400V 60 Hz Ratio 93.877
Serial number	FDM3B-1032R1

Table 5 - Generator Details

Generator Details	
Manufacturer	Indar
Model number	60 Hz 90/95
Serial number	22216060078

2.2 Wind Turbine Location

Turbine T16 is located in the Manitoulin district near the town of Little Current, on Lot 12 Con 3. The area surrounding T16 is flat and consists primarily of grassland.

A general layout of the area in which the turbine is located is provided in the site plan (Figure A.01).

3 Measurement Details

3.1 Measurement Equipment

3.1.1 Acoustic Measurement Equipment

A summary of acoustic equipment utilized by Aercoustics for the measurement of turbine T16 is summarized in Table 6.

Table 6 - Acoustic Measurement Equipment

Equipment	Manufacturer Name & Model	Serial Number
Acoustic Data acquisition system	LMS SCADA Mobile	53103922
Microphone	B&K 4189	2622169
Pre-amplifier	B&K 2671	2614900
Acoustic calibrator	B&K 4231	2513184

Calibration of the measurement setup was carried out before and after Aercoustics set of measurements.

3.1.2 Meteorological Equipment

Wind speed for Turbine ON was derived from the power curve (as per procedures outlined in IEC 61400-11). Wind direction for turbine ON measurements was utilized from the nacelle anemometer located at hub height (98.3m high) from turbine T16. Data for background measurements was obtained from a 10m high anemometer, which was placed as per guidelines outlined in IEC-61400-11 edition 2.1. See section 4.1 for details.

The meteorological equipment is summarized in Table 7

Table 7 – Meteorological Measurement Equipment

Equipment	Manufacturer Name & Model	Serial Number
Anemometer	VAISALA WXT520	K2420011
Serial to Analog Converter	NOKEVAL 7470	A159784

3.2 Measurement Setup

3.2.1 Microphone Placement

The measurement microphone was setup 150m from the base of the turbine in ‘Position 1’, (i.e. downwind of the turbine, as per IEC 61400-11) at an elevation of 0m relative to the base of T16. The microphone was placed in the centre of a circular, acoustically reflective board.

During the measurement period only data points for which the microphone was within 15 degrees of downwind from the turbine were used. The microphone position relative to

downwind of the turbine was monitored via the yaw angle output provided from the turbine system (discussed further in Section 3.5). During placement of the microphone the turbine was parked and the reference yaw angle for that measurement logged.

When measurements of T16 were taken, the surrounding land was grassland. There were no nearby reflecting surfaces (houses, barns etc.); as such the influence from reflecting surfaces was considered to be negligible.

Photos of the measurement setup are provided in Figure A.02, Appendix A.

3.2.2 Double Windscreen Setup

A double windscreen setup was not utilized.

3.3 Measurement Schedule

Table 8 provides a summary of the test date and times. Data was logged in 10 second intervals for post-processing (as per the measurement standard).

Table 8 - Measurement Schedule Summary

Date	Test Type	Start Time	Finish time
October 7, 2014	Turbine ON	9:48am	11:00pm
	Background	11:10am	12:12pm
	Background	12:22pm	1:23pm
	Background	1:31pm	2:32pm
	Background	2:40pm	3:41pm

3.4 Meteorological Conditions

Detailed meteorological data relevant to the measurement is provided in Appendix E.

As previously mentioned, wind speed for Turbine ON was derived from T16's power curve (as per the standard), while wind direction was provided by T16's nacelle anemometer (located at hub height). Background data was obtained from an anemometer located 10m above ground level near T16.

Temperature and pressure readings during the measurement period were provided by the 10m anemometer, located near turbine T16 for the duration of Aercoustics measurements.

3.5 Turbine operational information

Output data from the turbine (Power, yaw, RPM, pitch angle, and nacelle wind speed) were obtained as analog output signals that were simultaneously acquired with the acoustic and anemometer measurement data using Aercoustics data acquisition system.

4 Measurement Results

4.1 Deviations from IEC-61400-11 Edition 3.0

Originally, the test contract required measurements in accordance to edition 2.1 of the standard (61400-11) which requires the anemometer to be placed upwind of the turbine. This test report is a reprocessing of the originally acquired data and as such, during the test, the anemometer position was erected in an upwind (Ed 2.1), rather than crosswind (Ed 3.0) position relative to the test turbine.

The acoustic signal to noise ratio for the noise levels is >6dB. Additionally, the ambient noise levels are steady across the entire wind speed range, with a slope of 0.16dB per integer wind speed. This deviation is therefore considered to be negligible to the assessment of the maximum sound power of this turbine for this test.

4.2 Special Notes & Considerations

Turbines T29 was shut down for the duration of the measurement at T16.

4.3 Analysis Details

The following section outlines analysis of the measurement data acquired for T16. The data presented is exclusive of transient events such as vehicle traffic, wildlife, air traffic etc. The site has been assessed to have a roughness length of 0.05m, representative of farmland with some vegetation.

4.3.1 Double Windscreen Adjustment

As previously mentioned, no double wind screen was used, as such the measurement data did not require adjustment.

4.3.2 Wind Speed Correction

The wind speed for each measurement data point for Turbine ON was derived through the power curve (as per Section 8.2.1.1 of IEC-61400-11). For data points during Turbine ON that were outside the allowed range of the power curve, the wind speed was derived from the nacelle anemometer wind speed (as specified in Section 8.2.1.2 of IEC-61400-11).

Background wind speed was derived utilizing data acquired with the 10m anemometer and normalizing the wind speed (as per Section 8.2.2 of IEC-61400-11).

4.4 Type B uncertainties

Type B uncertainties were obtained through interpretation of information provided in Annex C of IEC-61400-11, and instrument uncertainties obtained from the calibration certificate. A summary of Type B uncertainties is provided in Table 9, while detailed information (including data in 1/3 octave) is provided in Appendix C.

Table 9 - Summary of Type B uncertainties

Component	Typical (dB)	Used (dB)
Calibration	0.2	0.2
Board	0.3	0.3
Distance & direction	0.1	0.1
Air absorption	0	0
Weather conditions	0.5	0.5
Wind speed measured	0.7	0.7
Wind speed derived	0.2	0.2
Wind speed from power curve	0.2	0.2

4.5 Sound Pressure Level Measurements

Sound pressure level measurements are summarized in Table 10. Detailed 1/3 Octave band spectrum data, respective uncertainties, and analysis plots are provided in Appendix C. A copy of the measurement data used for analysis is provided in Appendix E and includes meteorological and turbine operational data.

Table 10 - Summary of Sound Pressure Level Measurements

Wind Speed (m/s)	Turbine ON		Background		Turbine ON, Background adjusted L _{eq} , (dBA)
	L _{eq} , (dBA)	# of data pts	L _{eq} , (dBA)	# of data pts	
8.5	53.6	30	46.3	50	52.7
9	53.7	34	46.5	59	52.8
9.5	53.8	51	46.2	68	53.0
10	53.7	47	46.8	71	52.7
10.5	53.7	28	46.9	65	52.6
11	53.5	33	46.6	60	52.5
11.5	53.7	26	47.1	52	52.6
12	53.7	10	46.7	53	52.8
12.5	53.3	19	46.7	61	52.2
13	53.1	11	46.9	56	51.9
13.5	53.5	10	47.4	40	52.2

4.6 Sound Power Level of Turbine

The calculated sound power level of the turbine T16 (as per IEC 61400-11) is summarized in Table 11 (hub height) Table 12 (10m height). Detailed 1/3 Octave band spectrum data and respective uncertainties are provided in Appendix C.

Table 11 - $L_{WA,K}$ at each integer wind speed

Wind Speed (m/s)	Apparent L_{WA} , (dBA)	Uncertainty (dB)
8.5	102.9	0.9
9	103.0	0.9
9.5	103.2	0.8
10	102.9	0.9
10.5	102.9	0.9
11	102.7	0.9
11.5	102.8	0.9
12	103.0	1.0
12.5	102.4	0.9
13	102.1	1.0
13.5	102.4	1.0

Table 12 - $L_{WA,10m,K}$ at each integer wind speed

Wind Speed (m/s)	Apparent L_{WA} , (dBA)	Uncertainty (dB)
5	101.0	1.4
6	102.9	0.9
7	103.0	0.9
8	102.7	0.9
9	102.3	0.9
10	102.6	0.9

4.7 Tonality Analysis

The tonality analysis for Turbine T16 is summarized in Table 13, while plots of narrow band spectra at each wind speed are provided in Appendix D. The ΔL_{tn} and ΔL_a values reported represent the energy average of all data points with an identified tone that falls within the same frequency origin (as specified in Section 9.5.8 in IEC-61400-11).

The narrow band spectra provided in the plots represents an energy average of all data points in the given wind speed bin for both Turbine ON and Background.

Table 13 - Tonality Assessment Summary

Wind Speed (m/s)	Frequency (Hz)	Tonality, ΔL_{tn} (dB)	Tonal audibility, ΔL_a (dB)	FFT's with tones	Total # of FFT's	Presence (%)
8.5	417	0.4	2.6	30	30	100%
	1448	-4.0	-0.9	29	30	97%
9	403	-0.7	1.5	8	34	24%
	1449	-2.5	0.7	30	34	88%
9.5	400	-1.8	0.4	13	51	25%
	1445	-1.7	1.5	47	51	92%
10	403	-1.4	0.8	13	47	28%
	1448	-1.7	1.5	44	47	94%
10.5	1452	-2.4	0.8	28	28	100%
11	403	-3.0	-0.8	9	33	27%
	1451	-3.0	0.2	33	33	100%
	1579	-6.2	-3.0	12	33	36%
11.5	400	-2.0	0.2	8	26	31%
	1457	-4.0	-0.9	26	26	100%
12	1457	-4.4	-1.3	8	10	80%
12.5	140	-4.6	-2.6	16	19	84%
	1452	-5.2	-2.0	18	19	95%
13	141	-3.6	-1.6	10	11	91%
	1466	-3.5	-0.3	11	11	100%
13.5	140	-3.3	-1.3	10	10	100%
	1466	-4.4	-1.2	10	10	100%

5 Closure

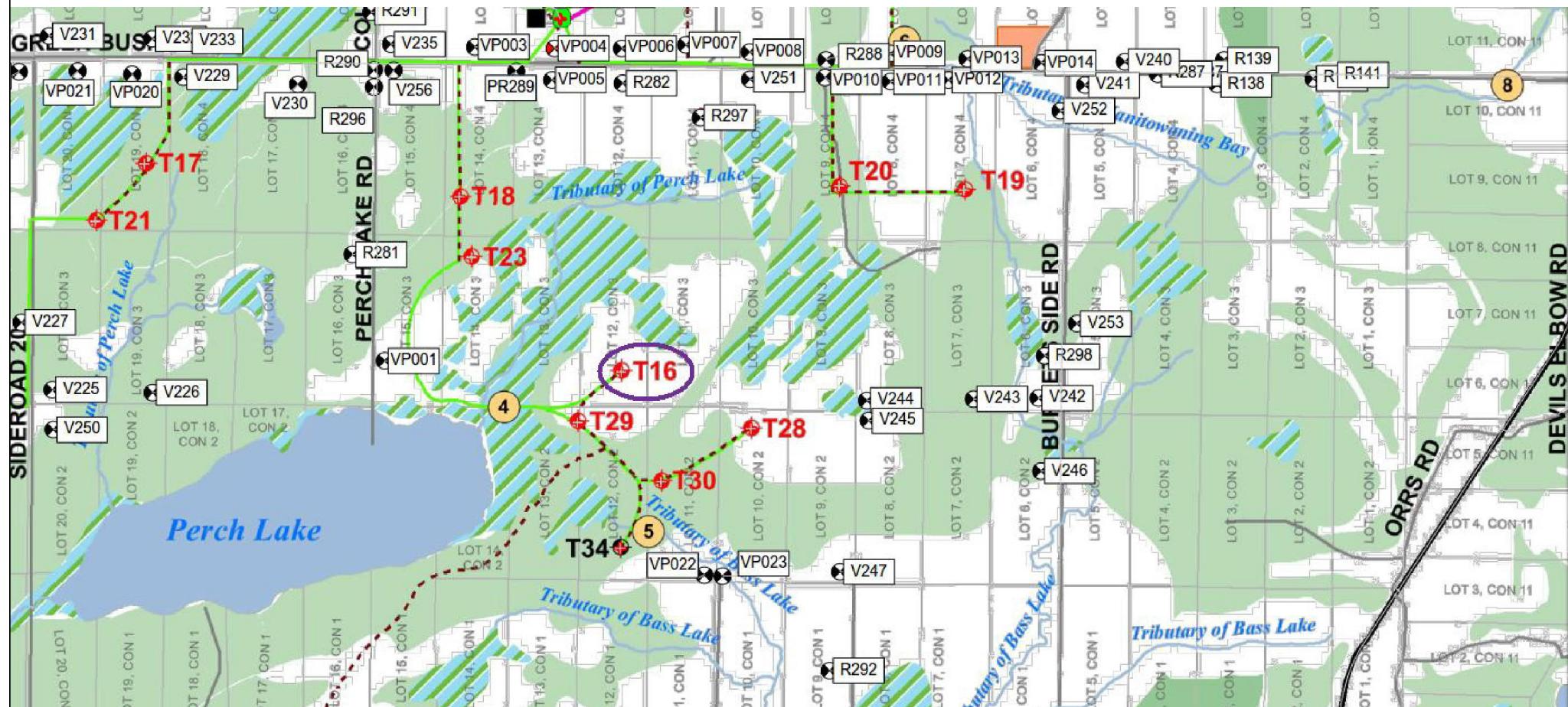
Measurements and analysis were carried on Turbine T16 of the McLean's Mountain Wind Farm, located on Manitoulin Island as per International IEC 61400-11 (Edition 3.0, released 2012-11), “Wind turbine generator systems – Part 11: Acoustic noise measurement techniques”.

Should you have any questions or comments please do not hesitate to contact the authors of this report.

6 References

1. International Standard IEC 61400-11 (Edition 3.0, released 2012-11), “Wind turbine generator systems – Part 11: Acoustic noise measurement techniques”.

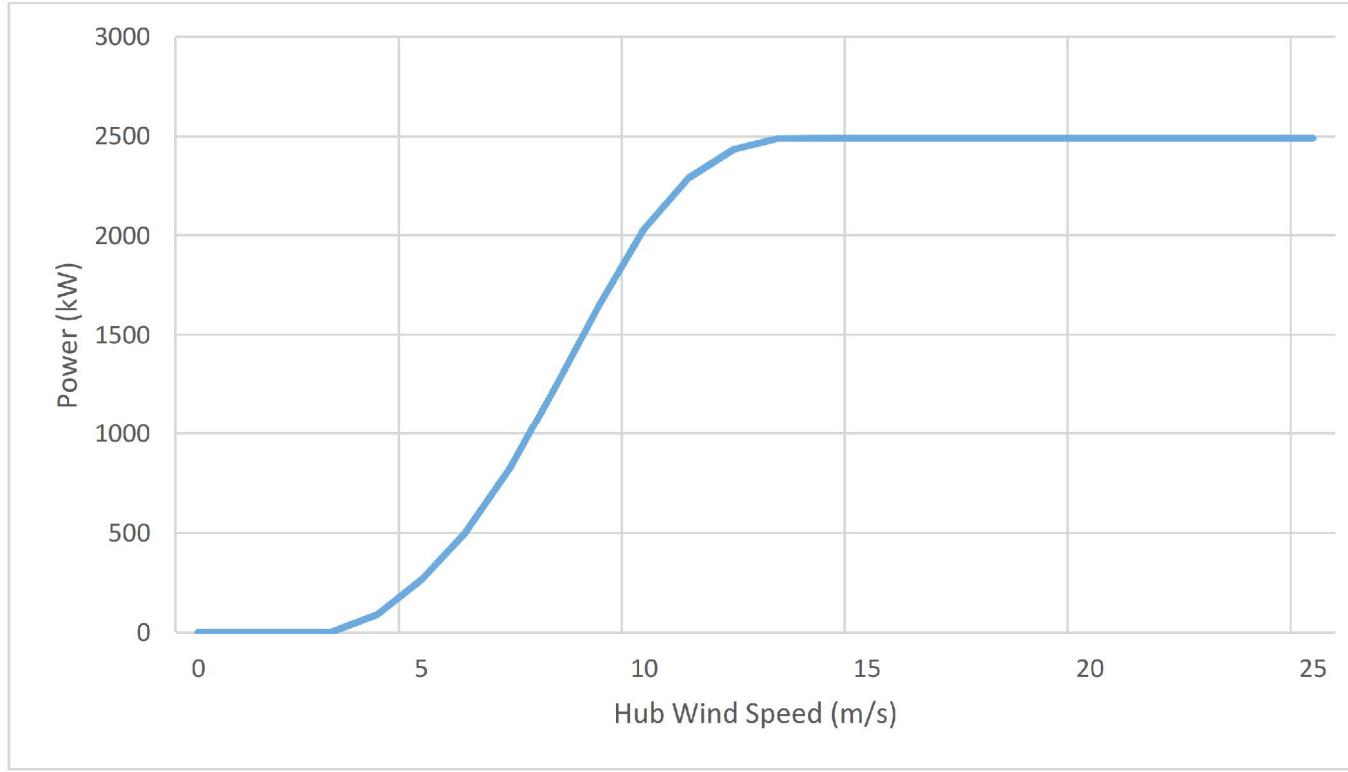
Appendix A Site Details



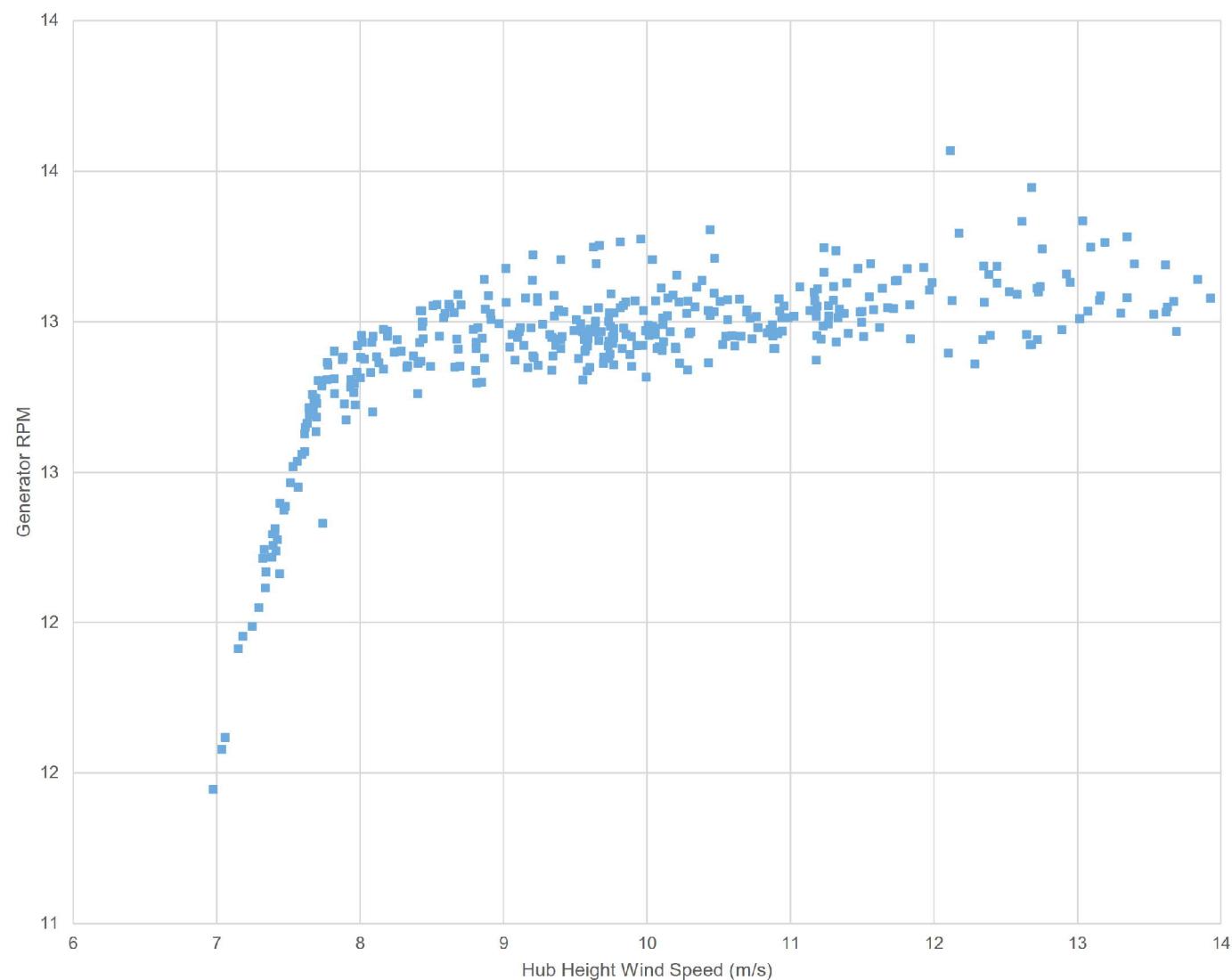


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	Scale: NTS Drawn by: AM Reviewed by: PA Date: Sept 13, 2017 Revision: 1	Figure Title Site photos
		Figure A.02

Appendix B Turbine Information



Power Curve	
Hub Wind Speed (m/s)	Power [kW]
0	0
1	0
2	0
3	2
4	86
5	263
6	499
7	824
8	1231
9	1652
10	2031
11	2292
12	2432
13	2489
14	2490
15	2490
16	2490
17	2490
18	2490
19	2490
20	2490
21	2490
22	2490
23	2490
24	2490
25	2490



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Project Name

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Scale: NTS

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Reviewed by: PA

Date: Sept 13, 2017

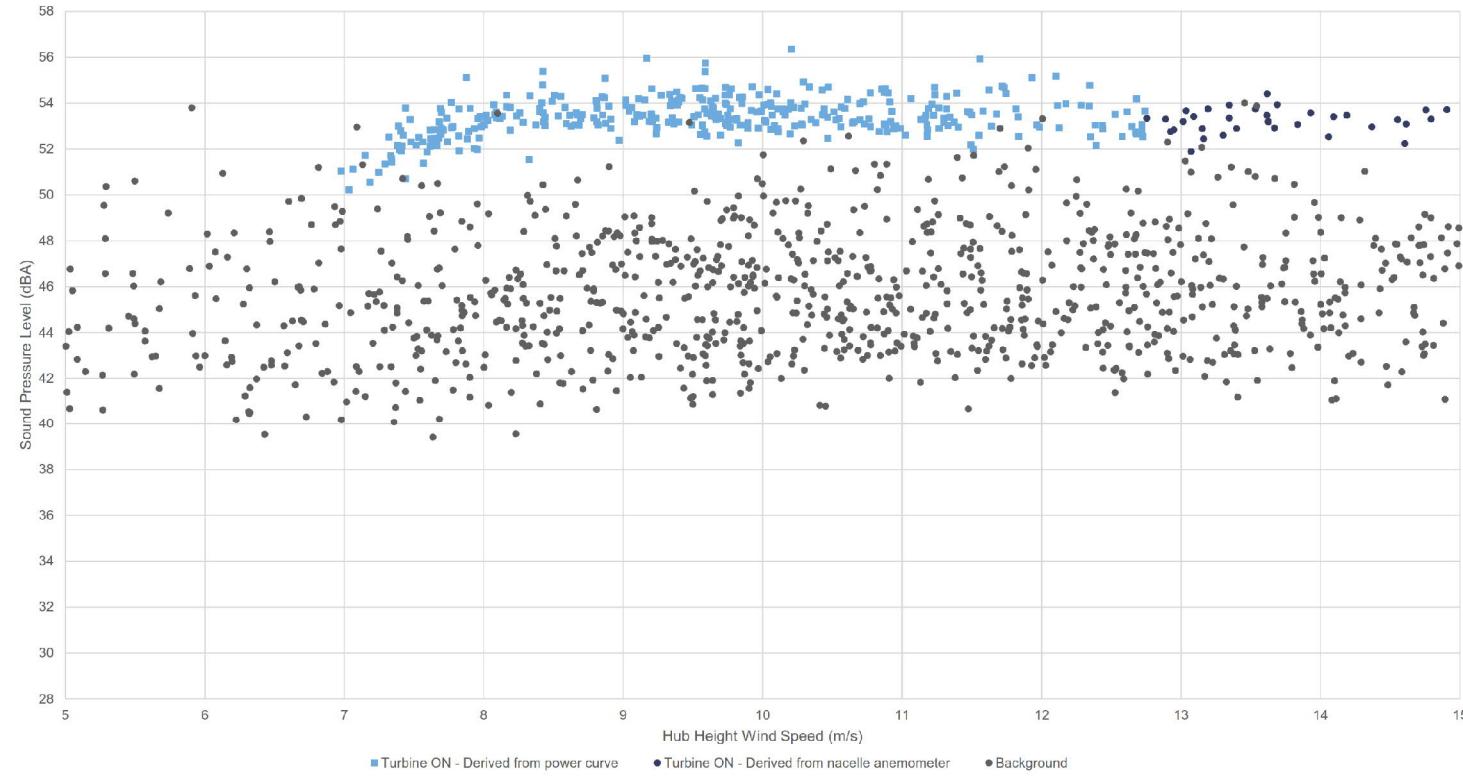
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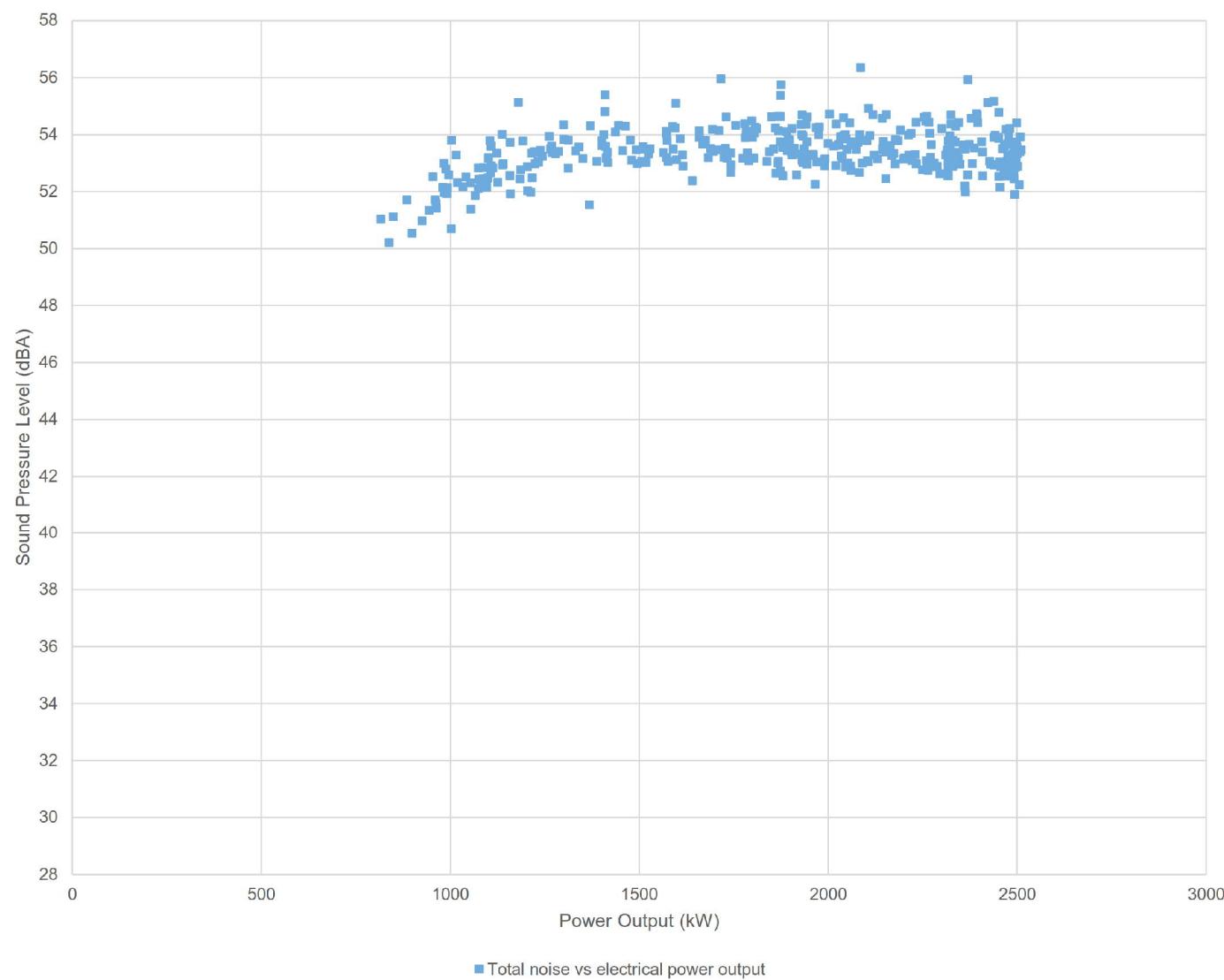
Figure Title

Rotor RPM vs. wind speed

Figure B.02

Appendix C Apparent Sound Power Level





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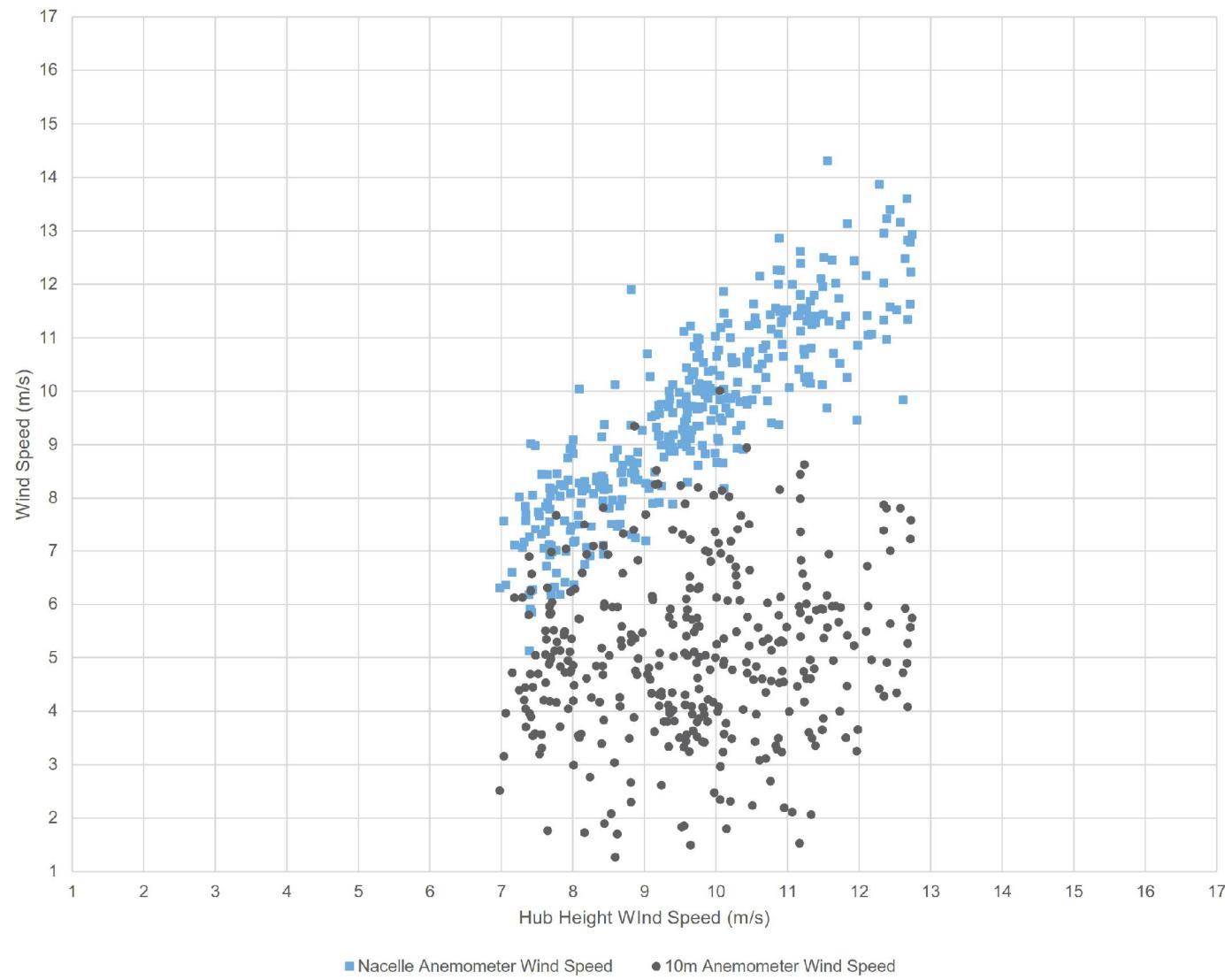
Project Name

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Figure Title

Plot of measured total noise vs electrical power output

Figure C.02



08020.04.T16.RP3

Project Name

Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0

Scale: NTS

Drawn by: AM

Reviewed by: PA

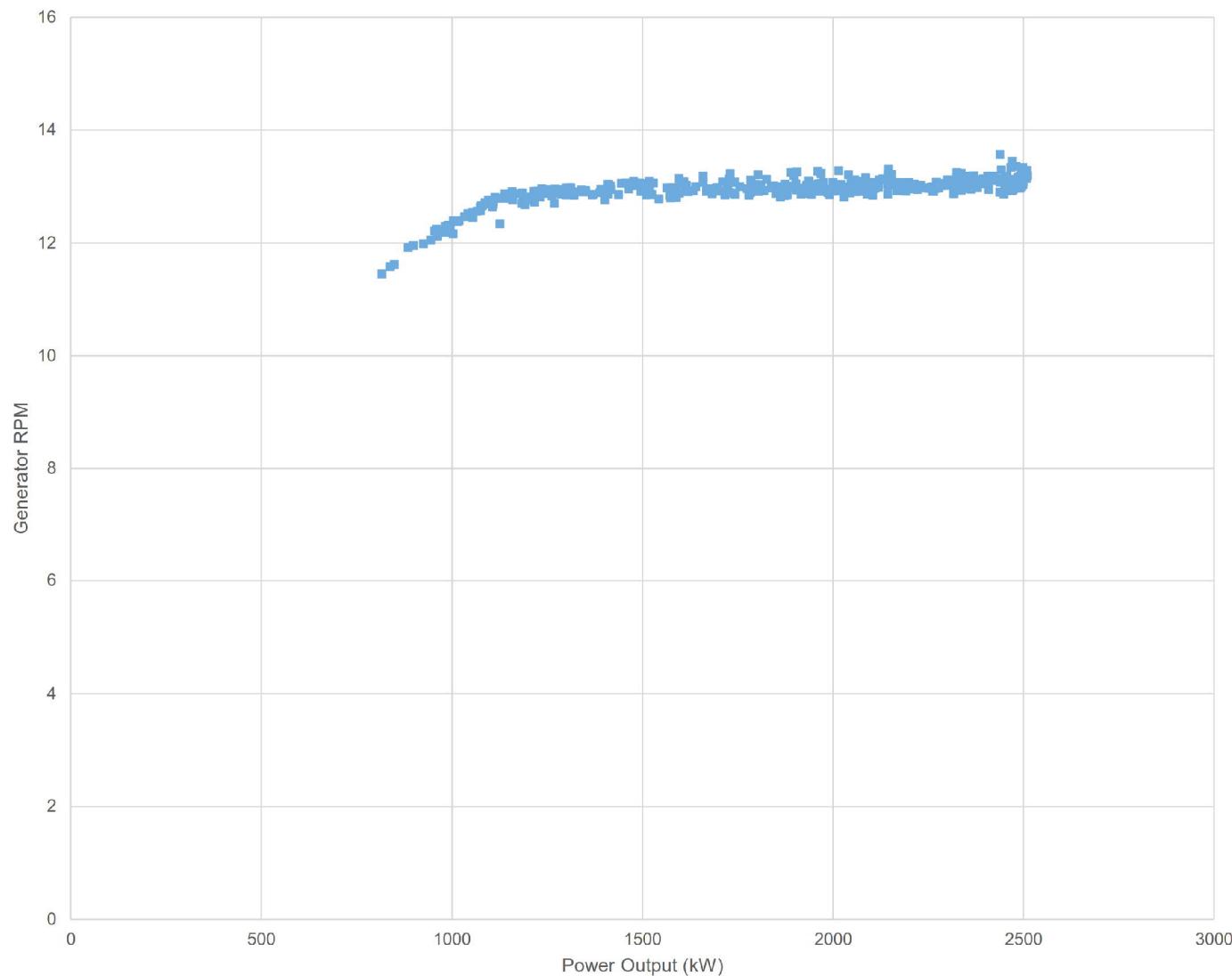
Date: Sept 13, 2017

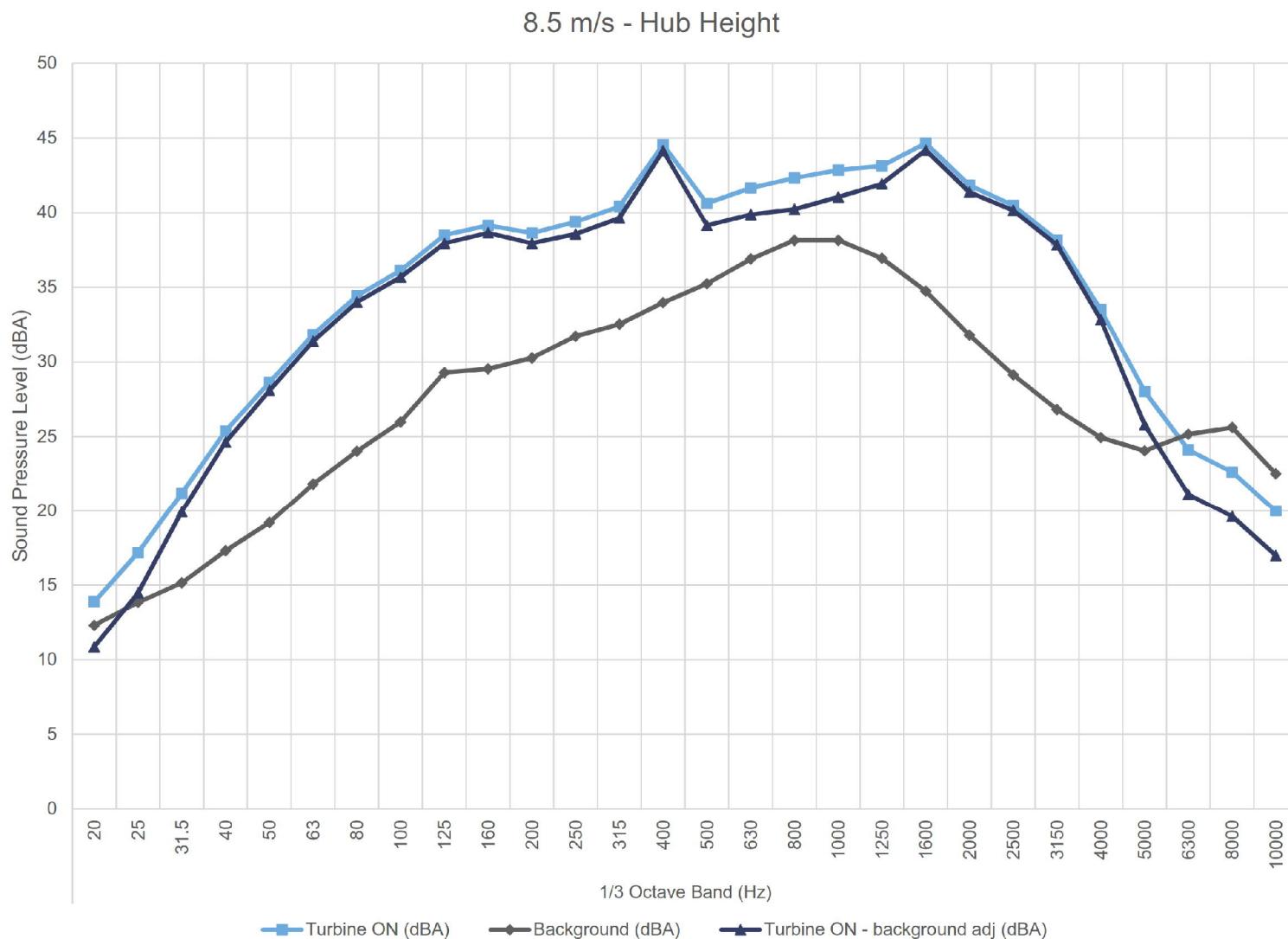
Revision: 1

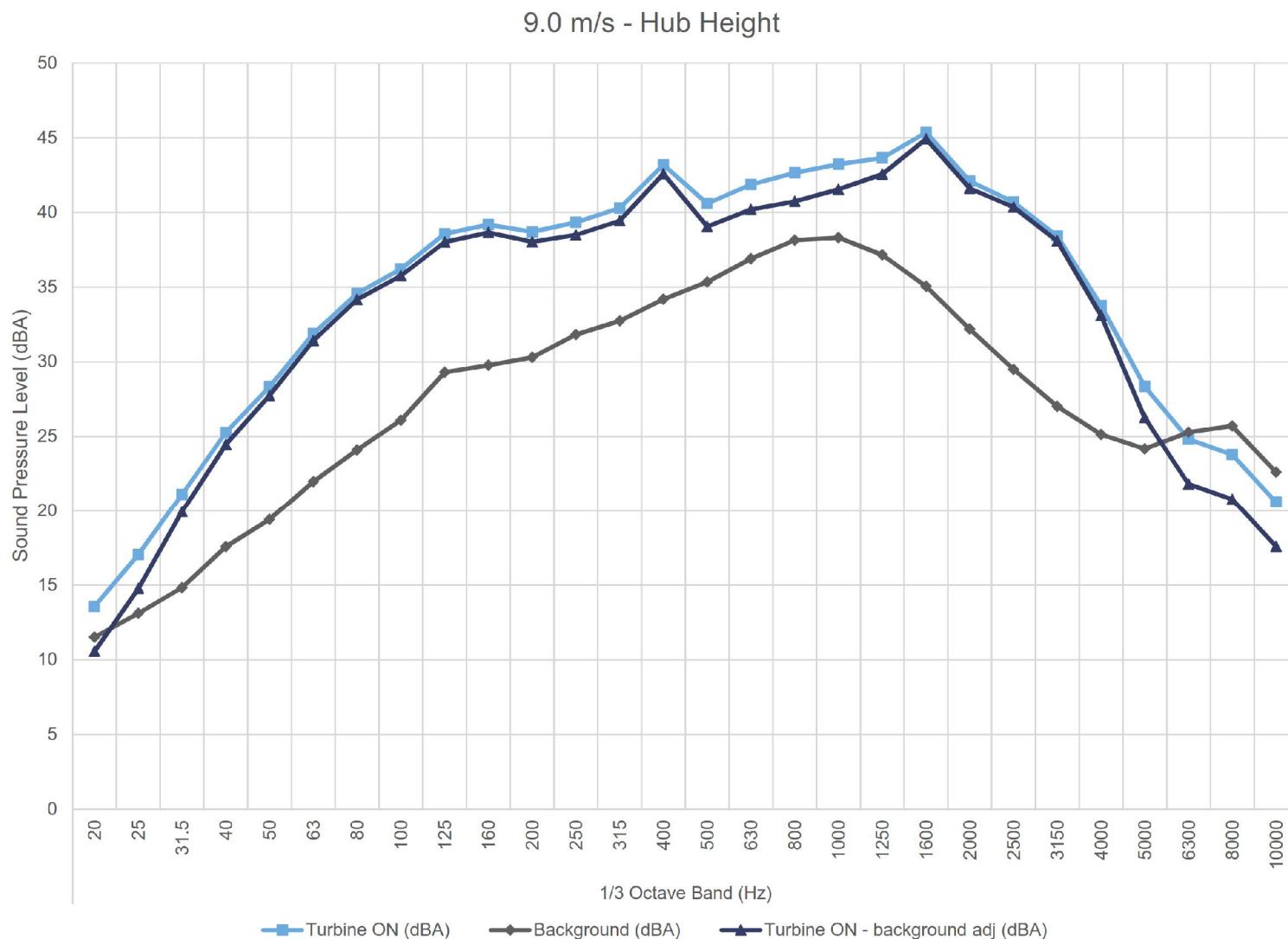
Figure Title

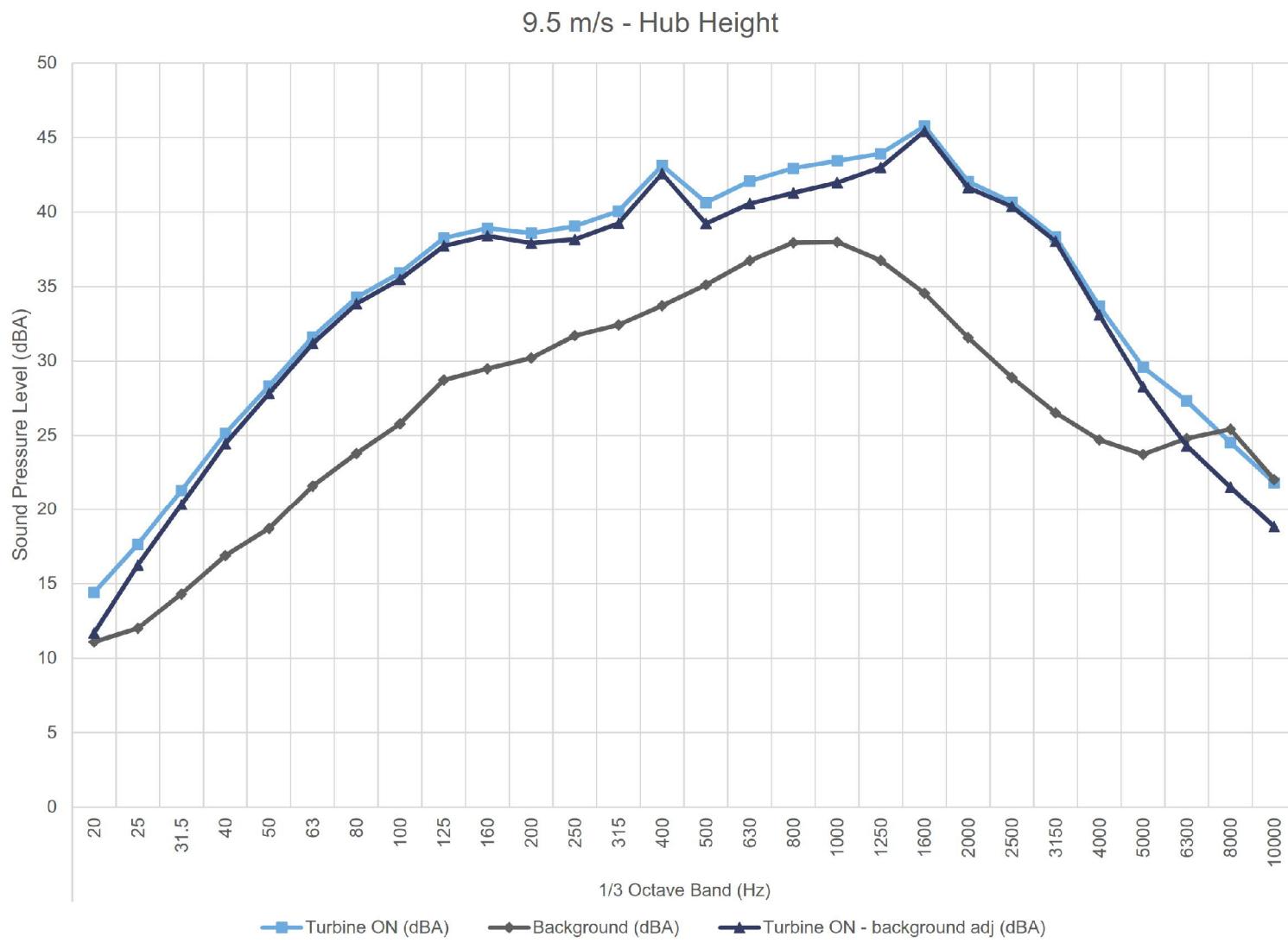
Plot of power curve relative to nacelle anemometer and 10m anemometer

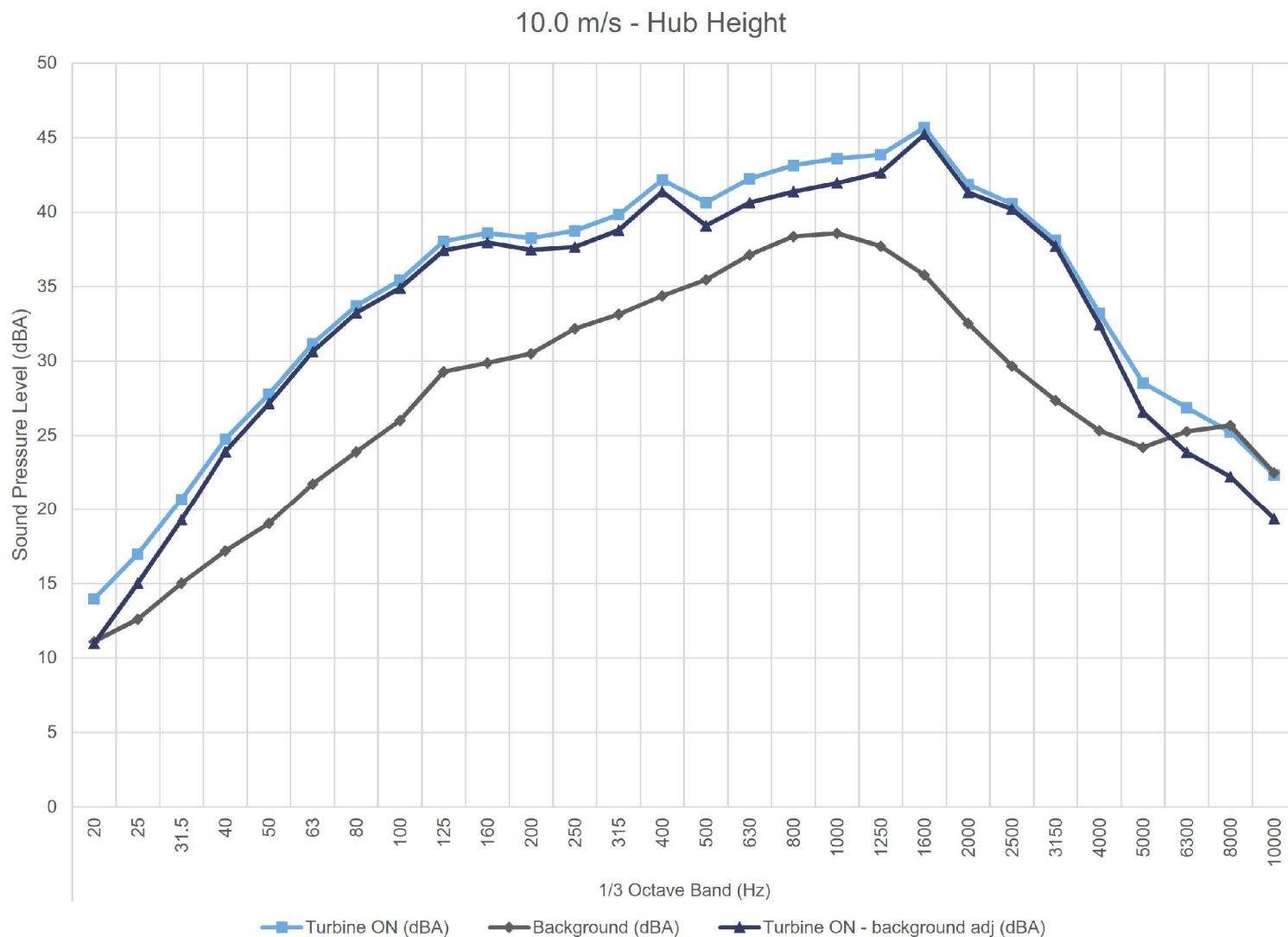
Figure C.03

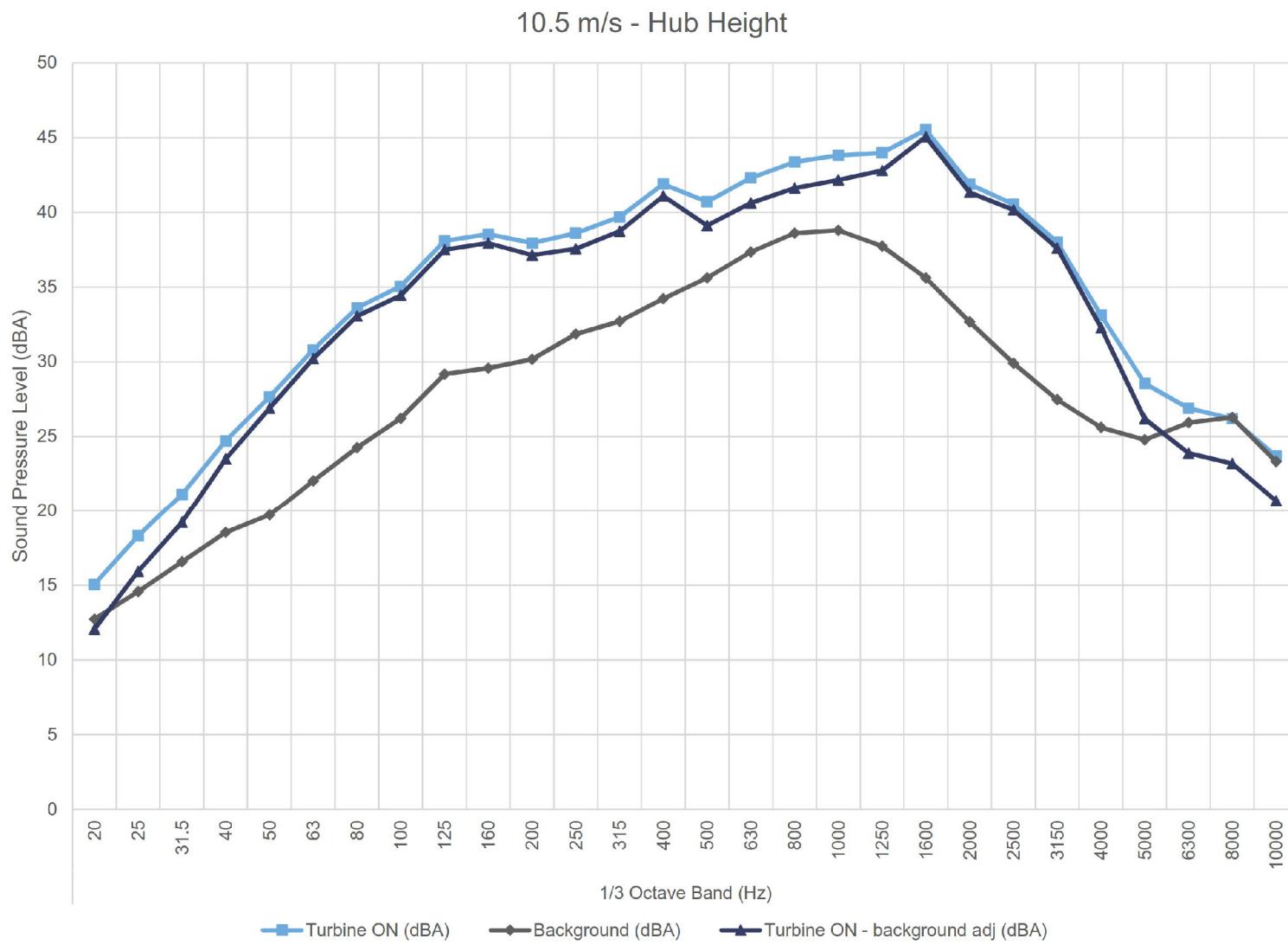


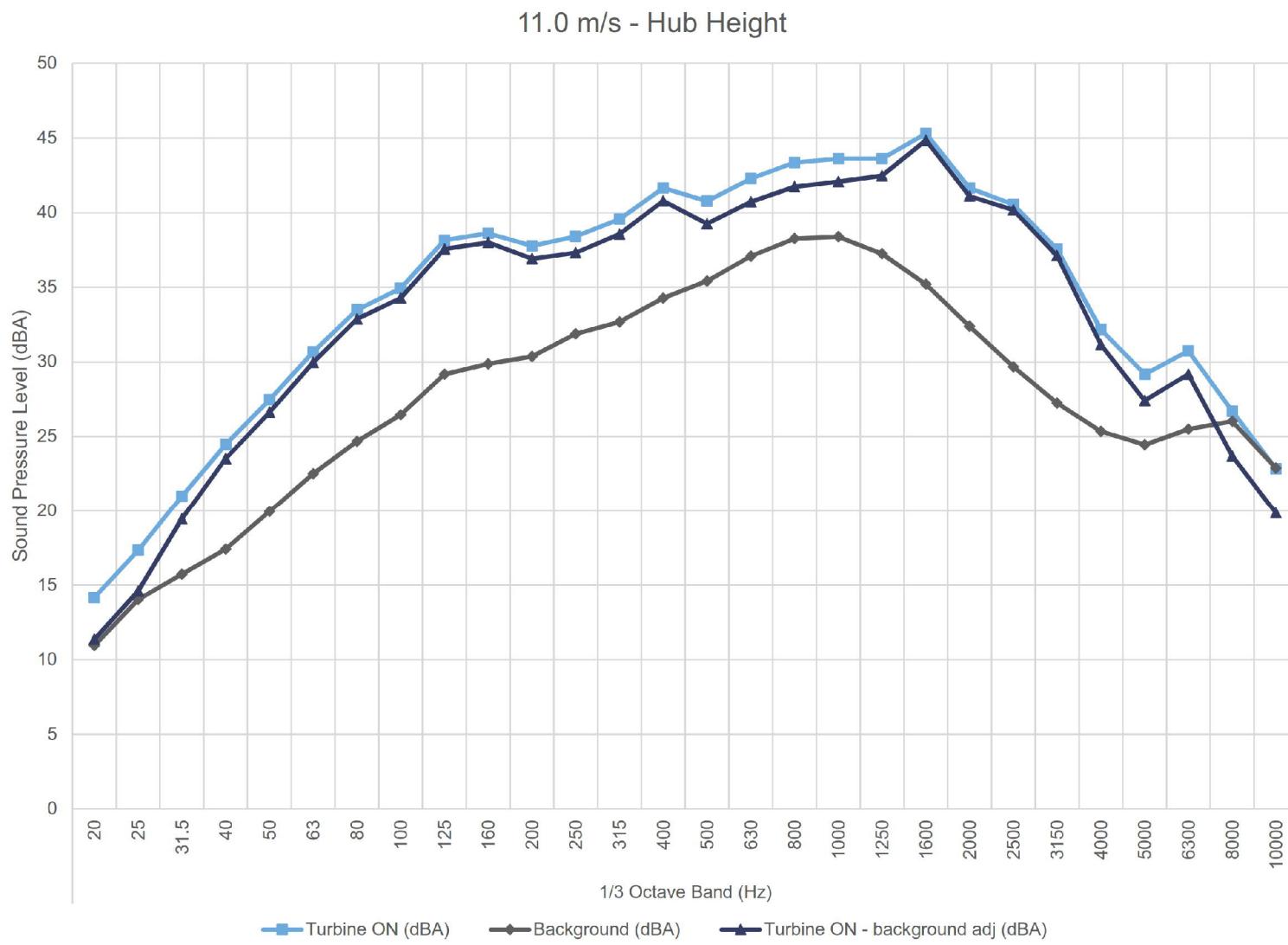


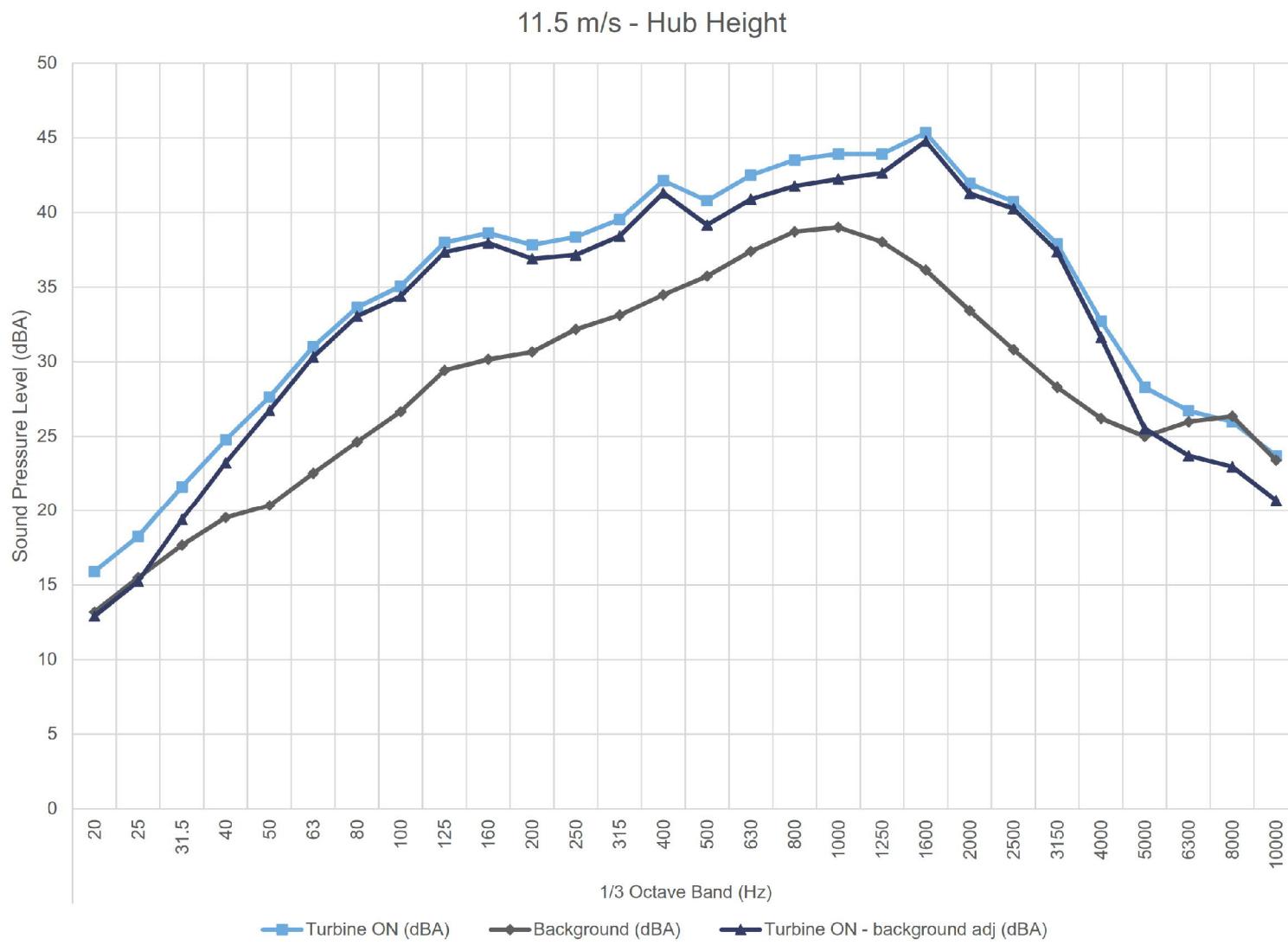


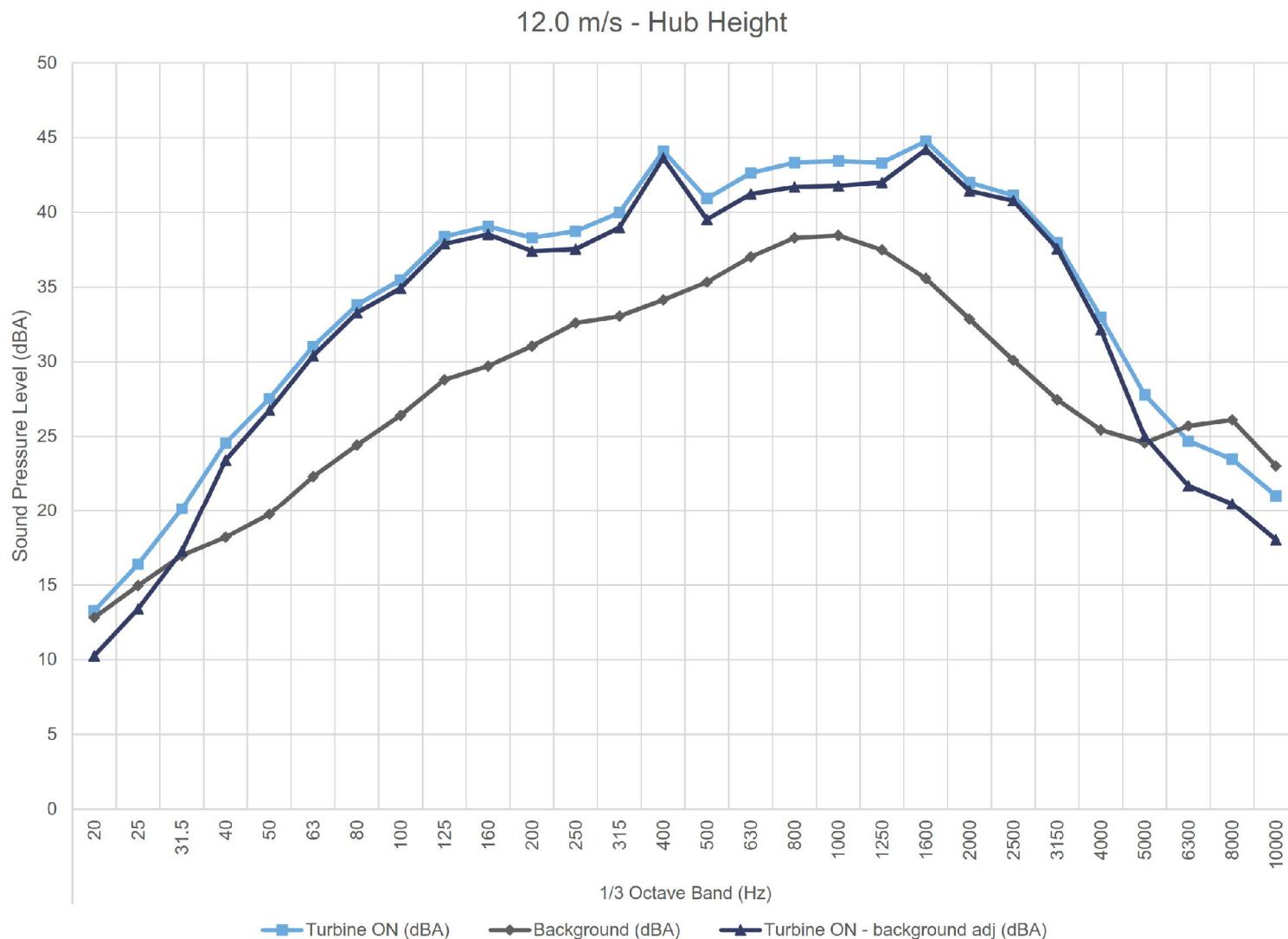


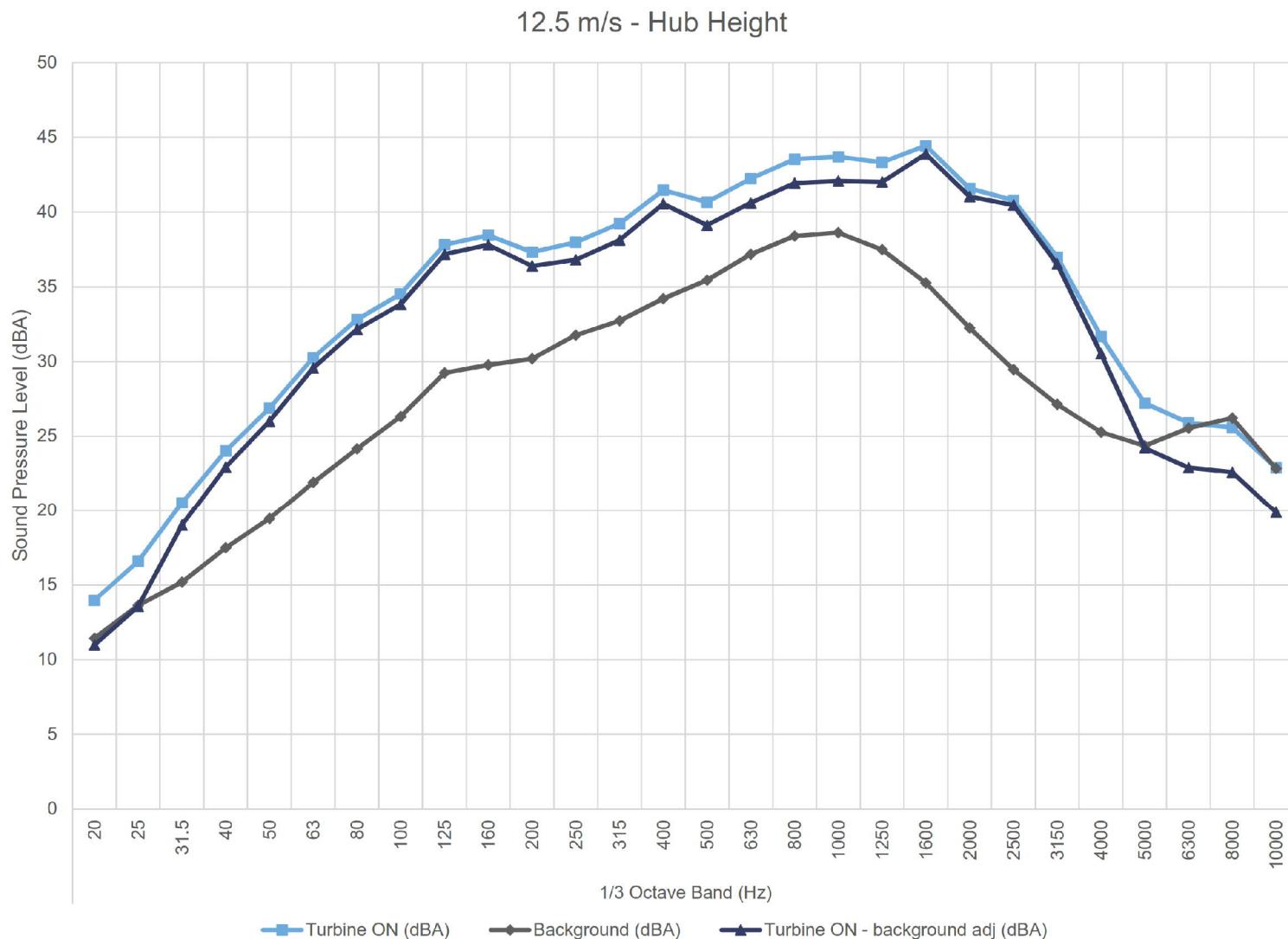


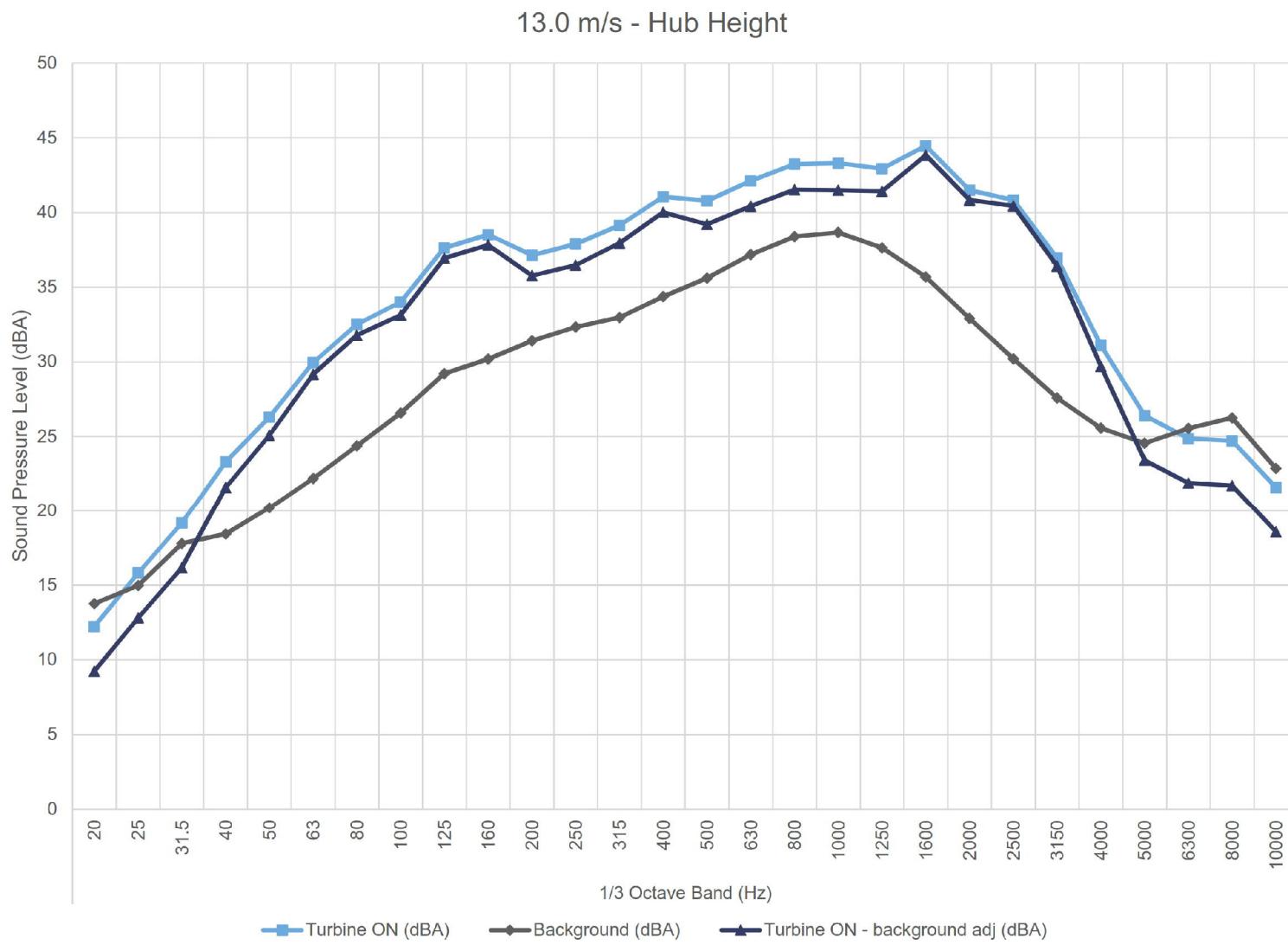












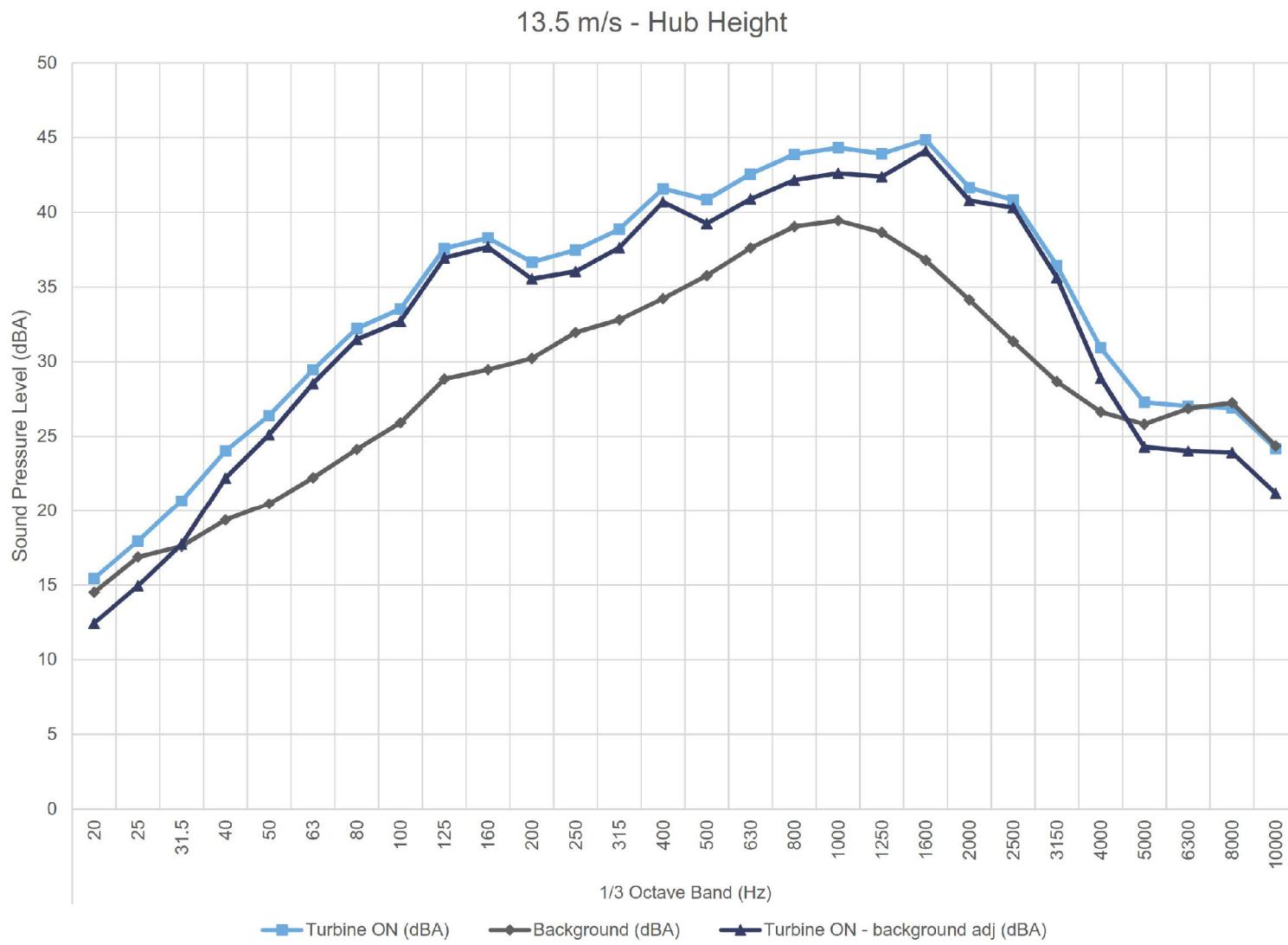


Table C.01 Detailed apparent sound power level data at hub height

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

Report ID: 08020.04.T16.RP3

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Created on: 9/13/2017

1/3 Octave values marked with brackets [] denote less than 3 dB difference between Turbine ON and Background

Overall levels marked with an asterisk * denote 3 to 6 dB difference between Turbine ON and Background, while Overall values with less than 3 dB difference between Turbine ON and Background are not reported

Wind Bin (m/s)	Parameter	1/3 Octave Band (Hz)																									Overall			
		20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000	
8.5	Turbine ON (dBA)	13.9	17.2	21.2	25.4	28.6	31.8	34.4	36.1	38.5	39.1	38.6	39.4	40.4	44.5	40.6	41.6	42.3	42.8	43.1	44.7	41.8	40.5	38.2	33.5	28.0	24.1	22.6	20.0	53.6
	Background (dBA)	12.3	13.8	15.1	17.3	19.2	21.8	24.0	26.0	29.3	29.5	30.3	31.7	32.5	34.0	35.2	36.9	38.1	38.1	36.9	34.7	31.8	29.1	26.8	24.9	21.1	25.2	25.6	22.5	46.3
	Turbine ON - background adj (dBA)	[10.9]	14.5	19.9	24.6	28.1	31.4	34.0	35.7	37.9	38.6	37.9	38.6	39.6	44.1	39.1	39.9	40.2	41.0	41.9	44.2	41.4	40.1	37.8	32.8	25.8	[21.1]	[19.6]	[17]	52.7
	Signal to noise (dB)	1.6	3.3	6.0	8.1	9.4	10.0	10.4	10.1	9.2	9.6	8.4	7.7	7.9	10.6	5.4	4.7	4.2	4.7	6.2	9.9	10.0	11.3	11.4	8.5	4.0	-1.0	-3.0	-2.5	7.3
	Uncertainty (dB)	2.5	2.3	1.2	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.2	1.0	0.8	0.8	0.9	0.9	1.0	2.0	2.2	3.4	0.9	
9.0	PWL (dBA)	[61.1]	64.7	70.1	74.8	78.3	81.6	84.2	85.9	88.1	88.9	88.2	88.8	89.8	94.4	89.4	90.1	90.4	91.2	92.1	94.4	91.6	90.4	88.0	83.0	76.0	[71.3]	[69.8]	[67.2]	102.9
	Turbine ON (dBA)	13.6	17.0	21.1	25.3	28.3	31.9	34.6	36.2	38.6	39.2	38.7	39.3	40.3	43.2	40.6	41.9	42.6	43.2	43.7	45.3	42.1	40.7	38.4	33.7	28.4	24.8	23.8	20.6	53.7
	Background (dBA)	11.5	13.1	14.8	17.6	19.4	22.0	24.1	26.1	29.3	29.8	30.3	31.8	32.7	34.2	35.3	36.9	38.1	38.3	37.2	35.1	32.2	29.5	27.0	25.1	24.2	25.3	25.7	22.6	46.5
	Turbine ON - background adj (dBA)	[10.6]	14.8	19.9	24.5	27.7	31.4	34.2	35.8	38.0	38.6	38.0	38.5	39.4	42.6	39.0	40.2	40.7	41.5	42.6	44.9	41.6	40.4	38.1	33.1	26.3	[21.8]	[20.8]	[17.6]	52.8
	Signal to noise (dB)	2.1	3.9	6.3	7.7	8.9	9.9	10.5	10.1	9.3	9.4	8.4	7.5	7.5	9.0	5.2	5.0	4.5	4.9	6.5	10.3	9.9	11.2	11.4	8.6	4.2	-0.5	-1.9	-2.0	7.2
9.5	Uncertainty (dB)	2.4	1.9	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.1	0.9	0.8	0.8	0.8	0.9	1.4	2.0	2.2	3.4	0.9	
	PWL (dBA)	[60.8]	65.0	70.1	74.7	77.9	81.6	84.4	86.0	88.2	88.9	88.2	88.7	89.7	92.8	89.3	90.4	91.0	91.7	92.8	95.1	91.8	90.6	88.3	83.3	76.5	[72]	[71]	[67.8]	103.0
	Turbine ON (dBA)	14.4	17.6	21.3	25.1	28.3	31.6	34.3	35.9	38.2	38.9	38.6	39.1	40.1	43.1	40.6	42.1	42.9	43.4	43.9	45.8	42.0	40.7	38.3	33.7	29.6	27.3	24.5	21.8	53.8
	Background (dBA)	11.1	12.0	14.3	16.9	18.7	21.6	23.8	25.8	28.7	29.5	30.2	31.7	32.4	33.7	35.1	36.7	37.9	38.0	36.8	34.6	31.6	28.9	26.5	24.7	23.7	24.8	25.4	22.0	46.2
	Turbine ON - background adj (dBA)	11.7	16.3	20.3	24.4	27.8	31.2	33.8	35.5	37.7	38.4	37.9	38.2	39.2	42.6	39.2	40.6	41.3	42.0	43.0	45.4	41.6	40.4	38.0	33.1	28.3	[24.3]	[21.5]	[18.8]	53.0
9.5	Signal to noise (dB)	3.3	5.6	7.0	8.3	9.6	10.0	10.5	10.1	9.5	9.4	8.4	7.4	7.6	9.4	5.5	5.3	5.0	5.4	7.2	11.2	10.5	11.8	11.8	9.0	5.8	2.5	-0.9	-0.2	7.6
	Uncertainty (dB)	2.1	1.4	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	0.8	0.7	0.7	0.8	0.8	0.9	1.1	2.0	3.2	0.8			
	PWL (dBA)	[61.9]	66.5	70.5	74.6	78.0	81.4	84.1	85.7	87.9	88.6	88.1	88.4	89.4	92.8	89.4	90.8	91.5	92.2	93.2	95.6	91.8	90.6	88.3	83.3	78.5	[74.5]	[71.7]	[69]	103.2
	Turbine ON (dBA)	14.0	17.0	20.7	24.8	27.8	31.2	33.7	35.4	38.1	38.6	38.3	38.7	39.8	42.2	43.1	43.6	43.9	45.7	41.9	40.6	38.1	33.2	28.5	26.9	25.2	22.4	53.7		
	Background (dBA)	11.1	12.6	15.0	17.2	19.0	21.7	23.9	26.0	29.3	29.9	30.5	32.2	33.1	34.4	35.5	37.1	38.4	38.6	37.7	35.8	32.5	29.7	27.4	25.3	24.2	25.3	25.7	22.5	46.8
10.0	Turbine ON - background adj (dBA)	[11]	15.0	19.3	23.9	27.2	30.6	33.2	34.9	37.4	38.0	37.5	37.7	38.8	41.4	39.1	40.6	41.4	42.0	42.6	45.2	41.3	40.2	37.7	32.4	26.6	[23.9]	[22.2]	[19.4]	52.7
	Signal to noise (dB)	2.9	4.4	5.7	7.6	8.7	9.4	9.8	9.4	8.8	8.7	7.8	6.6	6.7	7.8	5.2	5.1	4.8	5.0	6.1	9.9	9.3	10.9	10.7	7.9	4.3	1.6	-0.4	-0.1	6.9
	Uncertainty (dB)	2.4	1.8	1.2	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.0	0.8	0.8	0.9	0.9	1.0	1.4	2.0	2.0	3.3	0.9	
	PWL (dBA)	[61.2]	65.2	69.5	74.1	77.4	80.8	83.4	85.1	87.6	88.2	87.7	87.9	89.0	91.6	89.3	90.9	91.6	92.2	92.9	95.4	91.5	90.4	87.9	82.6	76.8	[74.1]	[72.4]	[69.6]	102.9
	Turbine ON (dBA)	15.1	18.3	21.1	24.7	27.7	30.8	33.6	35.1	38.1	38.5	37.9	38.6	39.7	41.9	40.7	42.3	43.4	43.8	44.0	45.5	41.9	40.6	38.0	33.1	28.6	26.9	26.2	23.7	53.7
10.5	Background (dBA)	12.7	14.6	16.6	18.5	19.7	22.0	24.3	26.2	29.2	29.6	30.2	31.9	32.7	34.2	35.6	37.3	38.6	38.8	37.7	35.6	32.7	29.9	27.5	25.6	24.8	25.9	26.3	23.3	46.9
	Turbine ON - background adj (dBA)	[12.1]	15.9	19.2	23.5	26.9	30.2	33.1	34.5	37.5	37.9	37.1	37.6	38.7	41.1	39.1	40.6	41.6	42.2	42.8	45.1	41.3	40.2	37.6	32.3	26.2	[23.9]	[23.2]	[20.7]	52.6
	Signal to noise (dB)	2.3	3.7	4.5	6.2	7.9	8.8	9.3	8.8	8.9	9.0	7.8	6.7	7.0	7.7	5.1	5.0	4.8	5.0	6.2	9.9	9.2	10.7	10.5	7.5	3.8	1.0	-0.1	0.4	6.8
	Uncertainty (dB)	2.6	2.2	1.4	1.1	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.1	1.1	1.0	0.8	0.8	0.9	0.9	1.0	1.6	2.1	2.2	3.5	0.9	
	PWL (dBA)	[62.3]	66.1	69.4	73.7	77.1	80.4	83.3	84.7	87.7	88.2	87.4	87.8	88.9	91.3	89.3	90.8	91.8	92.4	93.0	95.3	91.5	90.4	87.8	82.5	76.4	[74.1]	[73.4]	[70.9]	102.9
11.0	Turbine ON (dBA)	14.2	17.3	21.0	24.5	27.5	30.7	33.5	34.9	38.1	38.6	37.8	38.4	39.6	41.7	40.8	42.3	43.3	43.6	43.6	45.3	41.7	40.5	37.5	32.2	29.2	30.7	26.7	22.8	53.5
	Background (dBA)	10.9	14.0	15.7	17.4	19.9	22.5	24.7	26.4	29.2	29.9	30.4	31.9	32.7	34.3	35.4	37.1	38.3	38.4	37.2	35.2	32.4	29.7	27.2	25.4	24.4	25.5	26.0	22.9	46.6
	Turbine ON - background adj (dBA)	11.4	14.6	19.4	23.5	26.6	30.0	32.9	34.3	37.6	38.0	36.9	37.3	38.6	40.8	39.3	40.7	41.7	42.1	42.5	44.8	41.1	40.2	37.1	31.1	27.4	29.2	[23.7]	[19.8]	52.5
	Signal to noise (dB)	3.2	3.3	5.2	7.1	7.5	8.2	8.8	8.5	9.0	8.8	7.4	6.5	6.9	7.4	5.3	5.2	5.1	5.2	6.4	10.1	9.3	10.9	10.3	6.8	4.7	5.2	0.7	0.0	6.9
	Uncertainty (dB)	2.3	2.3	1.3	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.1	1.1	1.0	0.9	0.8	0.8	0.9	0.9	1.1	1.5	2.0	2.2	3.4	0.9	
	PWL (dBA)	61.6	64.8	69.6	73.7	76.8	80.2	83.1	84.5	87.8	88.2	87.1	87.5	88.8	91.0	89.5	90.9	91.9	92.3	92.7	95.1	91.3	90.4	87.3	81.4	77.6	79.4	[73.9]	[70.1]	102.7

Table C.01 Detailed apparent sound power level data at hub height

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

Report ID: 08020.04.T16.RP3

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Created on: 9/13/2017

1/3 Octave values marked with brackets [] denote less than 3 dB difference between Turbine ON and Background

Overall levels marked with an asterisk * denote 3 to 6 dB difference between Turbine ON and Background, while Overall values with less than 3 dB difference between Turbine ON and Background are not reported

Wind Bin (m/s)	Parameter	1/3 Octave Band (Hz)																								Overall							
		20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000				
11.5	Turbine ON (dBA)	15.9	18.2	21.6	24.8	27.6	31.0	33.6	35.1	38.0	38.6	37.8	38.4	39.5	42.1	40.8	42.5	43.5	43.9	45.3	41.9	40.7	37.9	32.7	28.3	26.7	26.0	23.7	53.7				
	Background (dBA)	13.2	15.5	17.7	19.5	20.4	22.5	24.6	26.7	29.4	30.2	30.7	32.2	33.1	34.5	35.7	37.4	38.7	39.0	38.0	36.1	33.4	30.8	28.3	26.2	25.0	26.3	23.4	47.1				
	Turbine ON - background adj (dBA)	[12.9]	[15.2]	19.4	23.2	26.7	30.3	33.1	34.4	37.3	38.0	36.9	37.2	38.4	41.3	39.2	40.9	41.8	42.2	42.6	44.8	41.3	40.3	37.4	31.6	25.5	[23.7]	[20.7]	52.6				
	Signal to noise (dB)	2.7	2.7	4.0	5.2	7.3	8.5	9.0	8.4	8.6	8.5	7.2	6.2	6.4	7.6	5.1	5.1	4.8	4.9	5.9	9.2	8.5	9.9	9.6	6.5	3.3	0.7	-0.4	0.3	6.5			
	Uncertainty (dB)	2.8	2.6	1.7	1.2	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.0	0.8	0.8	0.9	0.9	1.1	1.8	2.1	3.4	0.9	0.9			
	PWL (dBA)	[63.1]	[65.4]	69.6	73.4	76.9	80.5	83.3	84.6	87.5	88.2	87.1	87.4	88.6	91.5	89.4	91.1	92.0	92.4	92.8	95.0	91.5	90.5	87.6	81.8	75.7	[73.9]	[73.2]	[70.9]	102.8			
12.0	Turbine ON (dBA)	13.3	16.4	20.1	24.6	27.5	31.0	33.8	35.5	38.4	39.1	38.3	38.7	40.0	44.1	40.9	42.6	43.3	43.4	43.3	44.8	42.0	41.1	38.0	33.0	27.8	24.7	23.5	21.0	53.7			
	Background (dBA)	12.8	15.0	17.0	18.2	19.8	22.3	24.4	26.4	28.8	29.7	31.0	32.6	33.1	34.2	35.3	37.0	38.3	38.4	37.5	35.6	32.9	30.1	27.5	25.4	24.6	25.7	26.1	23.0	46.7			
	Turbine ON - background adj (dBA)	[10.3]	[13.4]	17.3	23.4	26.8	30.4	33.3	34.9	37.9	38.5	37.4	37.5	39.0	43.6	39.5	41.2	41.7	41.8	42.0	44.2	41.4	40.8	37.6	32.1	25.0	[21.7]	[20.5]	[18]	52.8			
	Signal to noise (dB)	0.5	1.4	3.2	6.3	7.8	8.7	9.4	9.1	9.6	9.4	7.3	6.1	6.9	10.0	5.6	5.6	5.0	5.0	5.8	9.2	9.1	11.0	10.5	7.5	3.2	-1.0	-2.6	-2.0	7.0			
	Uncertainty (dB)	2.7	2.7	2.1	1.2	1.1	1.1	1.1	1.1	0.9	0.9	1.0	1.0	0.9	1.5	1.0	1.1	1.1	1.1	1.1	0.8	0.9	1.1	1.3	2.0	2.0	2.3	3.6	1.0	1.0			
	PWL (dBA)	[60.5]	[63.6]	67.5	73.6	77.0	80.6	83.5	85.1	88.1	87.6	87.7	89.2	93.9	89.7	91.4	91.9	92.0	92.2	94.4	91.6	91.0	87.8	82.3	75.2	[71.9]	[70.7]	[68.2]	103.0				
12.5	Turbine ON (dBA)	14.0	16.6	20.5	24.0	26.9	30.3	32.8	34.5	37.8	38.4	37.3	38.0	39.2	41.5	40.7	42.2	43.5	43.7	43.3	44.4	41.6	40.8	37.0	31.7	27.2	25.9	25.6	22.9	53.3			
	Background (dBA)	11.4	13.6	15.2	17.5	19.4	21.9	24.2	26.3	29.2	29.8	30.2	31.8	32.7	34.2	35.4	37.2	38.4	38.6	37.5	35.3	32.3	29.5	27.1	25.3	24.4	25.5	26.2	22.8	46.7			
	Turbine ON - background adj (dBA)	[11]	[13.6]	19.0	22.9	26.0	29.6	32.2	33.8	37.2	37.8	36.4	36.8	38.1	40.6	39.1	40.6	41.9	42.1	42.0	43.9	41.0	40.5	36.5	30.5	[24.2]	[22.9]	[22.6]	[19.9]	52.2			
	Signal to noise (dB)	2.5	2.9	5.3	6.5	7.4	8.3	8.6	8.2	8.6	8.7	7.1	6.2	6.5	7.2	5.2	5.1	5.1	5.1	5.8	9.2	9.3	11.3	9.8	6.4	2.9	0.4	-0.6	0.0	6.6			
	Uncertainty (dB)	2.5	2.4	1.2	1.0	1.0	0.9	1.0	1.0	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.0	0.8	0.8	0.9	1.1	1.9	2.0	2.1	3.4	0.9	0.9			
	PWL (dBA)	[61.2]	[63.8]	69.2	73.1	76.2	79.8	82.4	84.0	87.4	88.0	86.6	87.0	88.3	90.8	89.3	90.8	92.1	92.3	92.2	94.1	91.2	90.7	86.7	80.7	[74.4]	[73.1]	[72.8]	[70.1]	102.4			
13.0	Turbine ON (dBA)	12.2	15.8	19.2	23.3	26.3	30.0	32.5	34.0	37.6	38.5	37.1	37.9	39.1	41.1	40.8	42.1	43.2	43.3	42.9	44.5	41.5	40.8	36.9	31.1	26.4	24.9	24.7	21.6	53.1			
	Background (dBA)	13.8	15.0	17.8	18.4	20.2	22.2	24.4	26.6	29.2	30.2	31.4	32.3	33.0	34.4	35.6	37.2	38.4	38.7	37.6	35.7	32.9	30.2	27.6	25.6	24.6	25.6	26.3	22.9	46.9			
	Turbine ON - background adj (dBA)	[9.2]	[12.8]	[16.2]	21.6	25.1	29.2	31.8	33.1	36.9	37.8	35.8	36.5	37.9	40.0	39.2	40.4	41.5	41.5	41.4	43.8	40.8	40.4	36.4	29.7	[23.4]	[21.9]	[21.7]	[18.6]	51.9			
	Signal to noise (dB)	-1.5	0.8	1.4	4.9	6.1	7.8	8.1	7.4	8.4	8.3	5.7	5.6	6.2	6.7	5.2	4.9	4.9	4.7	5.3	8.8	8.6	10.6	9.3	5.5	1.9	-0.7	-1.5	-1.3	6.2			
	Uncertainty (dB)	2.6	2.5	2.1	1.4	1.3	1.1	1.1	1.1	0.9	0.9	1.0	1.0	0.9	0.9	1.1	1.1	1.2	1.1	1.1	1.2	1.1	0.8	0.8	0.9	0.9	1.2	1.9	2.1	2.0	3.4	1.0	1.0
	PWL (dBA)	[59.4]	[63]	[66.4]	71.8	75.3	79.4	82.0	83.3	87.2	88.0	86.0	86.7	88.2	90.2	89.4	90.6	91.7	91.7	91.6	94.0	91.0	90.6	86.6	79.9	[73.6]	[72.1]	[71.9]	[68.8]	102.1			
13.5	Turbine ON (dBA)	15.4	18.0	20.7	24.0	26.4	29.5	32.2	33.5	37.6	38.3	36.7	37.5	38.9	41.6	40.9	42.6	43.9	44.3	43.9	44.9	41.6	40.8	36.4	30.9	27.3	27.0	26.9	24.2	53.5			
	Background (dBA)	14.5	16.9	17.6	19.4	20.5	22.2	24.1	25.9	28.9	29.5	30.2	32.0	32.8	34.2	35.8	37.6	39.0	39.4	38.7	36.8	34.1	31.4	28.7	26.6	25.8	26.9	27.3	24.4	47.4			
	Turbine ON - background adj (dBA)	[12.4]	[15]	17.7	22.2	25.1	28.5	31.5	32.7	37.0	37.7	35.5	36.0	37.6	40.7	39.3	40.9	42.2	42.6	42.4	44.1	40.8	40.3	35.6	28.9	[24.3]	[24]	[23.9]	[21.2]	52.2			
	Signal to noise (dB)	0.9	1.1	3.1	4.7	5.9	7.2	8.1	7.6	8.7	8.8	6.4	5.5	6.1	7.3	5.1	5.0	4.8	4.9	5.3	8.1	7.5	9.5	7.8	4.3	1.5	0.2	-0.3	-0.2	6.0			
	Uncertainty (dB)	3.4	3.1	2.4	1.5	1.2	1.1	1.1	1.1	0.9	0.9	1.0	1.0	0.9	1.0	1.1	1.1	1.2	1.1	0.9	0.9	1.0	1.4	2.1	2.4	3.7	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	PWL (dBA)	[62.7]	[65.2]	67.9	72.4	75.3	78.7	81.7	82.9	87.2	87.9	85.8	86.2	87.8	90.9	89.5	91.1	92.4	92.8	92.6	94.3	91.0	90.5	85.8	79.1	[74.5]	[74.2]	[74.1]	[71.4]	102.4			

Table C.02 Detailed apparent sound power level data at 10m height

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1/3 Octave values marked with brackets [] denote less than 3 dB difference between Turbine ON and Background

Overall levels marked with an asterisk * denote 3 to 6 dB difference between Turbine ON and Background, while Overall values with less than 3 dB difference between Turbine ON and Background are not reported

Wind Bin (m/s)	Parameter	1/3 Octave Band (Hz)																								Overall					
		20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000		
5.0	Turbine ON (dBA)	13.6	16.0	20.3	25.3	27.9	31.0	33.2	34.8	39.3	37.6	37.1	39.1	38.9	42.5	39.2	40.6	41.1	41.7	41.3	40.2	38.6	36.1	30.9	25.5	22.1	21.4	18.4	52.0		
	Background (dBA)	12.1	13.4	15.6	17.4	19.2	21.6	24.1	26.0	28.9	29.3	29.8	31.5	32.2	33.5	34.9	36.6	37.8	37.9	36.8	34.6	31.7	29.0	26.6	24.7	24.0	25.0	25.5	22.4	46.1	
	Turbine ON - background adj (dBA)	[10.6]	[13]	18.6	24.5	27.2	30.5	32.6	34.2	38.8	36.9	36.2	38.3	37.8	41.9	37.2	38.4	38.3	39.4	39.9	40.2	39.5	38.1	35.6	29.8	[22.5]	[19.1]	[18.4]	[15.4]	50.8*	
	Signal to noise (dB)	1.5	2.7	4.7	7.9	8.7	9.4	9.1	8.7	10.4	8.3	7.3	7.6	6.7	9.0	4.3	4.0	3.3	3.8	4.8	6.6	8.4	9.7	9.6	6.2	1.5	-2.9	-4.1	-4.0	6.0	
	Uncertainty (dB)	3.2	3.1	1.8	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.3	1.2	1.6	1.7	2.0	1.8	1.5	1.3	1.2	1.3	1.3	1.5	2.4	2.5	2.6	4.4	1.4	
6.0	PWL (dBA)	[60.8]	[63.3]	68.8	74.7	77.5	80.7	82.8	84.4	89.0	87.1	86.4	88.5	88.0	92.1	87.4	88.6	88.5	89.6	90.1	90.4	89.7	88.4	85.8	80.0	[72.7]	[69.4]	[68.6]	[65.6]	101*	
	Turbine ON (dBA)	13.7	17.1	21.2	25.4	28.5	31.8	34.4	36.0	38.5	39.0	38.6	39.3	40.3	43.8	40.5	41.7	42.4	43.0	43.4	44.9	41.9	40.5	38.2	33.4	28.1	24.5	23.3	20.4	53.6	
	Background (dBA)	12.1	13.8	15.3	18.0	19.5	21.9	24.0	26.0	29.2	29.6	30.1	31.7	32.5	34.0	35.2	36.8	38.1	38.1	36.9	34.8	31.9	29.2	26.8	25.0	24.0	25.1	25.6	22.4	46.3	
	Turbine ON - background adj (dBA)	[10.7]	[14.3]	19.9	24.5	27.9	31.3	34.0	35.6	37.9	38.5	37.9	38.5	39.5	43.3	39.0	40.0	40.5	41.3	42.3	44.5	41.4	40.1	37.8	32.8	29.9	[21.5]	[20.3]	[17.4]	52.7	
	Signal to noise (dB)	1.6	3.3	5.8	7.4	9.0	9.9	10.4	10.0	9.3	9.5	8.4	7.7	7.7	9.9	5.3	4.8	4.4	4.9	6.4	10.1	10.0	11.2	11.3	8.5	4.0	-0.6	-2.3	-2.1	7.3	
7.0	Uncertainty (dB)	2.3	2.2	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.1	0.9	0.8	0.8	0.9	0.9	1.4	1.9	1.9	3.3	0.9		
	PWL (dBA)	[60.9]	64.5	70.1	74.7	78.1	81.5	84.2	85.8	88.2	88.7	88.1	87.7	89.7	93.6	89.2	90.2	90.7	91.5	92.5	94.7	91.6	90.3	88.0	83.0	76.1	[71.7]	[70.5]	[67.6]	102.9	
	Turbine ON (dBA)	14.5	17.6	21.1	24.9	28.0	31.2	33.9	35.5	38.1	38.7	38.3	38.8	39.9	42.5	40.7	42.2	43.1	43.6	43.9	45.7	41.9	40.6	38.1	33.3	29.0	27.3	25.3	22.6	53.7	
	Background (dBA)	11.8	13.2	15.5	17.6	19.2	21.8	24.0	26.0	29.1	29.7	30.3	31.9	32.8	34.1	35.4	37.1	38.3	38.5	37.5	35.4	32.3	29.5	27.2	25.3	24.3	25.4	25.8	22.7	46.6	
	Turbine ON - background adj (dBA)	[11.5]	15.7	19.7	24.0	27.3	30.7	33.4	35.0	37.5	38.1	37.5	37.8	38.9	41.8	39.1	40.6	41.4	42.0	42.8	45.2	41.4	40.2	37.8	32.6	27.2	[24.3]	[22.3]	[19.6]	52.8	
8.0	Signal to noise (dB)	2.7	4.4	5.6	7.3	8.8	9.5	9.9	9.5	9.0	9.0	8.0	6.9	7.1	8.4	5.3	5.1	4.8	5.1	6.4	10.3	9.6	11.1	11.0	8.0	4.7	1.9	-0.5	-0.1	7.1	
	Uncertainty (dB)	2.3	1.7	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	0.9	0.7	0.7	0.8	0.8	0.9	1.2	1.8	3.1	0.9		
	PWL (dBA)	[61.7]	65.9	69.9	74.2	77.6	80.9	83.6	85.2	87.7	88.3	87.7	88.0	89.1	92.0	89.3	90.8	91.6	92.2	93.0	95.4	91.6	90.4	88.0	82.8	77.5	[74.5]	[72.5]	[69.8]	103.0	
	Turbine ON (dBA)	14.8	17.5	21.1	24.5	27.5	30.8	33.5	34.9	38.1	38.6	37.8	38.4	39.6	42.1	40.8	42.4	43.4	43.7	45.2	41.8	40.7	37.6	32.3	28.5	28.8	26.1	23.1	53.6		
	Background (dBA)	12.4	14.8	16.8	18.5	20.0	22.4	24.6	26.5	29.2	29.9	30.8	32.3	33.0	34.3	35.5	37.1	38.4	38.5	37.5	35.6	32.9	30.2	27.7	25.7	24.6	25.6	26.1	23.0	46.8	
9.0	Turbine ON - background adj (dBA)	[11.8]	[14.5]	19.0	23.3	26.6	30.1	32.9	34.3	37.5	38.0	36.8	37.1	38.5	41.4	39.3	40.9	41.8	42.1	42.5	44.7	41.2	40.3	37.2	31.3	26.2	25.9	[23.1]	[20.1]	52.5	
	Signal to noise (dB)	2.4	2.7	4.2	6.1	7.4	8.3	8.9	8.4	8.9	8.7	7.0	6.1	6.6	7.8	5.3	5.3	5.1	5.2	6.1	9.6	8.9	10.4	9.9	6.7	3.9	3.1	0.0	0.0	6.8	
	Uncertainty (dB)	2.3	2.3	1.4	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.8	0.9	1.0	1.0	1.0	0.9	0.7	0.7	0.8	0.8	0.9	1.0	1.4	1.9	1.8	3.1	0.9
	PWL (dBA)	[62]	[64.7]	69.2	73.5	76.8	80.3	83.1	84.5	87.7	88.2	87.0	87.3	88.7	91.6	89.5	91.1	92.0	92.4	92.7	94.9	91.4	90.5	87.4	81.5	76.4	76.1	[73.3]	[70.3]	102.7	
	Turbine ON (dBA)	13.5	16.4	20.0	23.8	26.6	30.1	32.7	34.3	37.7	38.5	37.2	37.9	39.2	41.1	40.7	42.2	43.5	43.7	44.5	43.3	44.5	41.6	40.9	37.0	31.5	27.1	25.8	25.5	22.7	53.2
10.0	Background (dBA)	13.2	15.2	17.0	18.4	20.1	22.2	24.3	26.4	29.1	29.9	30.7	32.0	32.8	34.2	35.6	37.3	38.6	38.9	37.9	35.9	33.0	30.2	27.7	25.7	24.9	26.0	26.6	23.4	47.0	
	Turbine ON - background adj (dBA)	[10.5]	[13.4]	17.1	22.3	25.6	29.3	32.1	33.6	37.1	37.9	36.1	36.6	38.0	40.1	39.1	40.5	41.8	41.9	41.8	43.8	41.0	40.5	36.5	30.2	[24.1]	[22.8]	[22.5]	[19.7]	52.1	
	Signal to noise (dB)	0.3	1.2	3.1	5.3	6.6	7.9	8.4	8.0	8.6	8.6	6.5	5.9	6.3	6.9	5.1	4.9	4.9	4.8	5.4	8.6	8.6	10.6	9.3	5.8	2.2	-0.2	-1.1	-0.7	6.2	
	Uncertainty (dB)	2.3	2.3	1.8	1.2	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.0	1.0	1.1	1.1	1.0	0.8	0.8	0.9	1.1	1.8	1.9	3.2	0.9			
	PWL (dBA)	[60.7]	[63.6]	67.3	72.5	75.8	79.6	82.3	83.8	87.3	88.1	86.3	86.8	88.2	90.3	89.3	90.7	92.0	92.1	92.0	94.0	91.2	90.7	86.7	80.4	[74.3]	[73]	[72.7]	[69.9]	102.3	
10.0	Turbine ON (dBA)	15.8	18.2	20.7	23.8	26.1	29.2	31.9	33.3	37.3	38.0	36.5	37.3	38.7	41.5	40.8	42.7	44.1	44.5	43.9	44.5	41.6	40.6	35.8	31.0	27.9	27.7	27.2	24.8	53.4	
	Background (dBA)	10.6	12.7	15.0	17.0	18.9	21.6	23.9	26.0	29.1	29.9	30.9	31.9	32.5	34.1	35.4	37.1	38.2	38.3	37.0	34.9	32.0	29.4	27.1	25.1	23.9	25.0	25.5	22.2	46.5	
	Turbine ON - background adj (dBA)	14.2	16.7	19.3	22.7	25.1	28.3	31.2	32.4	36.5	37.3	35.1	35.9	37.5	40.6	39.4	41.3	42.9	43.3	43.0	44.0	41.1	40.3	35.2	29.7	25.6	[24.7]	[24.2]	[21.8]	52.4	
	Signal to noise (dB)	5.2	5.5	5.7	6.8	7.1	7.5	8.0	7.3	8.2	8.2	5.6	5.5	6.2	7.3	5.4	5.6	6.0	6.2	6.9	9.6	9.6	11.2	8.7	5.9	4.0	2.7	1.8	2.6	7.0	
	Uncertainty (dB)	1.5	1.4	1.1	1.0	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.7	0.8	0.9	1.1	1.4	1.8	1.9	3.2	0.9	
10.0	PWL (dBA)	64.4	66.9	69.5	72.9	75.3	78.5	81.4	82.6	86.8	87.5	85.3	86.1	87.8	90.8	89.6	91.5	93.1	93.5	93.2	94.2	91.3	90.5	85.4	79.9	75.9	[74.9]	[74.5]	[72]	102.6	

Table C.03 Type B measurement uncertainty summary

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Overall Equipment Uncertainties		
	Typical values	Used values
Calibration	0.2 dB	0.2 dB
Board	0.3 dB	0.3 dB
Distance	0.1 dB	0.1 dB
Air absorption	0 dB	0 dB
Weather	0.5 dB	0.5 dB

1/3 Octave Band Uncertainties		
Frequency (Hz)	Microphone Uncertainty	Overall (including overall equipment Uncertainties)
20	0.8 dB	1 dB
25	0.8 dB	1 dB
31.5	0.5 dB	0.8 dB
40	0.5 dB	0.8 dB
50	0.5 dB	0.8 dB
63	0.5 dB	0.8 dB
80	0.5 dB	0.8 dB
100	0.5 dB	0.8 dB
125	0.5 dB	0.8 dB
160	0.5 dB	0.8 dB
200	0.3 dB	0.7 dB
250	0.3 dB	0.7 dB
315	0.3 dB	0.7 dB
400	0.3 dB	0.7 dB
500	0.3 dB	0.7 dB
630	0.3 dB	0.7 dB
800	0.3 dB	0.7 dB
1000	0.3 dB	0.7 dB
1250	0.3 dB	0.7 dB
1600	0.3 dB	0.7 dB
2000	0.3 dB	0.7 dB
2500	0.5 dB	0.8 dB
3150	0.5 dB	0.8 dB
4000	0.5 dB	0.8 dB
5000	0.5 dB	0.8 dB
6300	0.5 dB	0.8 dB
8000	0.5 dB	0.8 dB
10000	1.3 dB	1.4 dB

Table C.04 Detailed measurement uncertainty at hub height

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Wind Bin (m/s)	Parameter	Average Wind Speed (m/s)	# of data points	Parameter	1/3 Octave Band (Hz)																								Overall				
					20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	445	40.6	41.7	42.3	42.8	43.1	44.7	41.8	40.5	38.2	33.5				
8.5	Turbine ON	8.51	30	Average (dBA)	13.9	17.2	21.2	25.4	28.6	31.8	34.4	36.1	38.5	39.2	38.6	39.4	40.4	44.5	40.6	41.7	42.3	42.8	43.1	44.7	41.8	40.5	38.2	33.5	28.0	24.1	22.6	20.0	53.6
				Uncertainty A (dB)	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.6	0.6	0.6	0.6
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4		
	Background	8.47	50	Average (dBA)	12.3	13.9	15.2	17.3	19.2	21.8	24.0	26.0	29.3	29.5	30.3	31.7	32.5	34.0	35.2	36.9	38.2	38.1	36.9	34.7	31.8	29.1	26.8	24.9	24.0	25.2	25.6	22.5	46.3
				Uncertainty A (dB)	0.9	0.8	0.6	0.3	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.6	0.5	0.6	0.5
9.0	Turbine ON	8.99	34	Average (dBA)	13.6	17.0	21.1	25.3	28.3	31.9	34.6	36.2	38.6	39.2	38.7	39.3	40.3	43.1	40.6	41.9	42.7	43.2	43.7	45.4	42.1	40.7	38.4	33.8	28.4	24.8	23.8	20.6	53.7
				Uncertainty A (dB)	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.4	0.7	0.6	0.6	0.6
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4		
	Background	8.99	59	Average (dBA)	11.5	13.1	14.8	17.6	19.4	22.0	24.1	26.1	29.3	29.8	30.3	31.8	32.7	34.2	35.3	36.9	38.1	38.3	37.2	35.1	32.2	29.5	27.0	25.1	24.2	25.3	25.7	22.6	46.5
9.5	Turbine ON	9.48	51	Average (dBA)	14.5	17.7	21.3	25.1	28.3	31.6	34.2	35.9	38.2	38.9	38.6	39.0	40.0	43.1	40.7	42.7	43.0	43.5	43.9	45.8	42.0	40.7	38.3	33.7	29.7	27.6	24.6	22.0	53.8
				Uncertainty A (dB)	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.5	0.5	0.5	
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4		
	Background	9.53	68	Average (dBA)	11.1	11.9	14.3	16.8	18.7	21.6	23.8	25.8	28.7	29.5	30.2	31.7	32.4	33.7	35.1	36.7	37.9	38.0	36.7	34.5	31.5	28.9	26.5	24.7	23.7	24.8	25.4	22.0	46.1
10.0	Turbine ON	9.97	47	Average (dBA)	14.0	17.0	20.7	24.8	27.8	31.2	33.7	35.4	38.1	38.6	38.3	38.8	39.8	42.2	40.7	42.2	43.1	43.6	43.9	45.7	41.9	40.6	38.1	33.2	28.5	26.9	25.2	22.3	53.7
				Uncertainty A (dB)	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.5	0.4	0.5	0.5	
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4		
	Background	9.98	71	Average (dBA)	11.0	12.5	15.0	17.2	19.0	21.7	23.9	26.0	29.3	29.9	30.5	32.2	33.2	34.4	35.5	37.1	38.4	38.6	37.7	35.8	32.5	29.7	27.3	25.3	24.2	25.3	25.6	22.5	46.8

Table C.04 Detailed measurement uncertainty at hub height

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

Report ID: 08020.04.T16.RP3

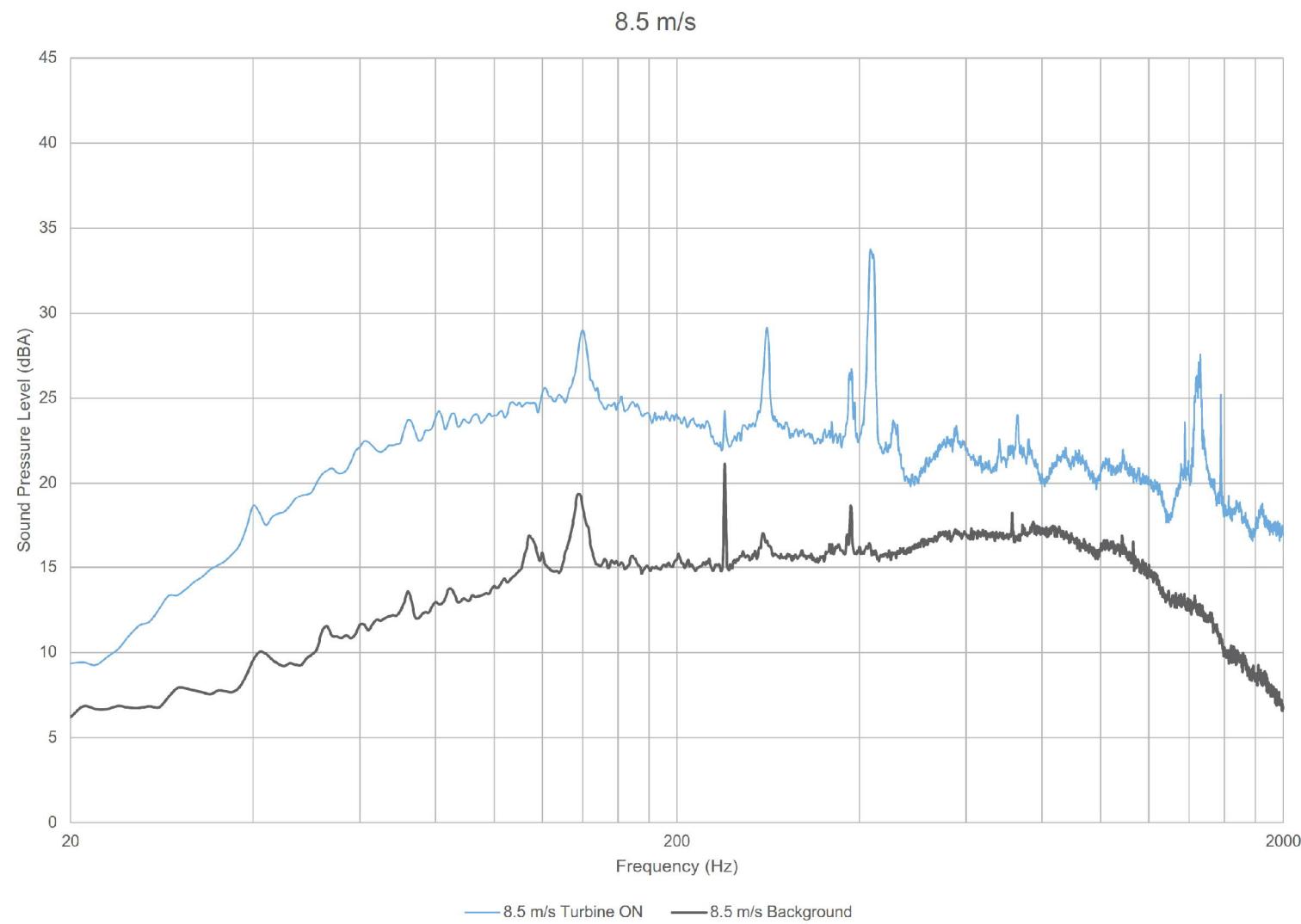
Page 2 of 2

Created on: 9/12/2017

Wind Bin (m/s)	Parameter	Average Wind Speed (m/s)	# of data points	Parameter	1/3 Octave Band (Hz)																								Overall					
					20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000		
10.5	Turbine ON	10.46	28	Average (dBA)	15.1	18.3	21.1	24.7	27.7	30.8	33.6	35.1	38.1	38.5	37.9	38.6	39.7	41.9	40.7	42.3	43.4	43.8	44.0	45.5	41.9	40.6	38.0	33.1	28.5	26.8	26.2	23.7	53.7	
				Uncertainty A (dB)	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.3	0.3	0.5	0.6	0.7		
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4			
	Background	10.50	65	Average (dBA)	12.7	14.6	16.6	18.6	19.7	22.0	24.3	26.2	29.2	29.6	30.2	31.9	32.7	34.2	35.6	37.4	38.6	38.8	37.7	35.6	32.7	29.9	27.5	25.6	24.8	25.9	26.3	23.3	46.9	
				Uncertainty A (dB)	0.8	0.8	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.5			
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4			
11.0	Turbine ON	10.99	33	Average (dBA)	14.1	17.3	21.0	24.5	27.5	30.7	33.5	34.9	38.1	38.6	37.8	38.4	39.6	41.6	40.8	42.3	43.3	43.6	43.6	45.3	41.6	40.5	37.5	32.1	29.2	30.8	26.7	22.8	53.5	
				Uncertainty A (dB)	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.5	1.1	0.7	0.6			
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.4			
	Background	11.00	60	Average (dBA)	10.9	14.0	15.7	17.4	19.9	22.5	24.7	26.4	29.2	29.9	30.4	31.9	32.7	34.3	35.4	37.1	38.3	38.4	37.2	35.2	32.4	29.7	27.2	25.3	24.4	25.5	26.0	22.9	46.6	
				Uncertainty A (dB)	0.7	0.7	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.6	0.5	0.5	0.4	0.5	0.5	0.5				
				Uncertainty B (dB)	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	1.5			
11.5	Turbine ON	11.46	26	Average (dBA)	16.1	18.4	21.7	24.8	27.6	31.0	33.6	35.0	38.0	38.6	37.8	38.3	39.5	42.0	40.8	42.5	43.5	44.0	44.0	45.4	41.9	40.7	37.9	32.7	28.3	26.8	26.1	23.9	53.7	
				Uncertainty A (dB)	0.7	0.6	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.4	0.4	0.6	0.6				
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
	Background	11.51	52	Average (dBA)	13.2	15.5	17.7	19.6	20.4	22.5	24.6	26.7	29.4	30.2	30.7	32.2	33.1	34.5	35.8	37.4	38.7	39.0	38.0	36.2	33.4	30.8	28.3	26.2	25.0	26.0	26.4	23.4	47.2	
				Uncertainty A (dB)	1.0	1.0	0.8	0.6	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.7	0.6	0.5	0.5	0.6	0.6	0.7				
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
12.0	Turbine ON	11.94	10	Average (dBA)	13.3	16.4	20.1	24.6	27.6	31.0	33.8	35.5	38.4	39.1	38.3	38.8	40.0	44.2	40.4	42.6	43.3	43.4	43.3	44.8	42.0	41.1	38.0	33.0	27.8	24.7	23.4	21.0	53.8	
				Uncertainty A (dB)	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.3	0.6	0.7	0.6	0.8	0.9			
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
	Background	11.96	53	Average (dBA)	12.9	15.1	17.1	18.3	19.8	22.3	24.4	26.4	28.8	29.7	31.1	32.7	33.1	34.1	35.3	37.0	38.3	38.4	37.5	35.6	32.9	30.1	27.5	25.4	24.6	25.7	26.1	23.0	46.7	
				Uncertainty A (dB)	1.0	0.9	0.8	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.6	0.5	0.5	0.5	0.6	0.6	0.7			
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
12.5	Turbine ON	12.45	19	Average (dBA)	14.0	16.6	20.6	24.0	26.8	30.2	32.7	34.5	37.8	38.4	37.2	37.9	39.2	41.2	40.7	42.2	43.6	43.7	43.3	44.4	41.5	41.0	40.8	36.9	31.6	27.2	26.0	25.8	23.0	53.2
				Uncertainty A (dB)	0.6	0.5	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.1	0.3	0.4	0.4	0.5	0.6	0.7				
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
	Background	12.51	61	Average (dBA)	11.4	13.6	15.1	17.5	19.4	21.9	24.2	26.3	29.3	29.8	30.2	31.8	32.7	34.2	35.4	37.2	38.4	38.6	37.5	35.3	32.2	29.5	27.1	25.3	24.4	25.5	26.2	22.8	46.7	
				Uncertainty A (dB)	0.7	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.5				
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
13.0	Turbine ON	13.06	11	Average (dBA)	12.1	15.8	19.1	23.3	26.3	29.9	32.5	34.0	37.6	38.5	37.1	37.9	39.1	41.1	40.8	42.1	43.2	43.3	42.9	44.5	41.5	40.8	36.9	31.1	26.4	24.8	24.7	21.5	53.1	
				Uncertainty A (dB)	0.4	0.4	0.4	0.4	0.6	0.6	0.5	0.5	0.1	0.1	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.4	0.6	0.5	0.7				
				Uncertainty B (dB)	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	1.4				
	Background	12.98	56	Average (dBA)	13.7	14.9	17.8	18.4	20.2	22.2	24.4	26.6	29.2	30.2	31.5	32.3	33.0	34.4	35.6	37.2	38.4	38.6	37.6	35.6	32.9	30.2	27.6	25.5	24.5	25.5	26.2	22.8	46.9	
				Uncertainty A (dB)	1.1	0.9	0.8	0.5	0.4	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.5	0.6	0.6</												

Appendix D

Tonality Assessment



08020.04.T16.RP3

Project Name

Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0

Scale: NTS

Drawn by: AM

Reviewed by: PA

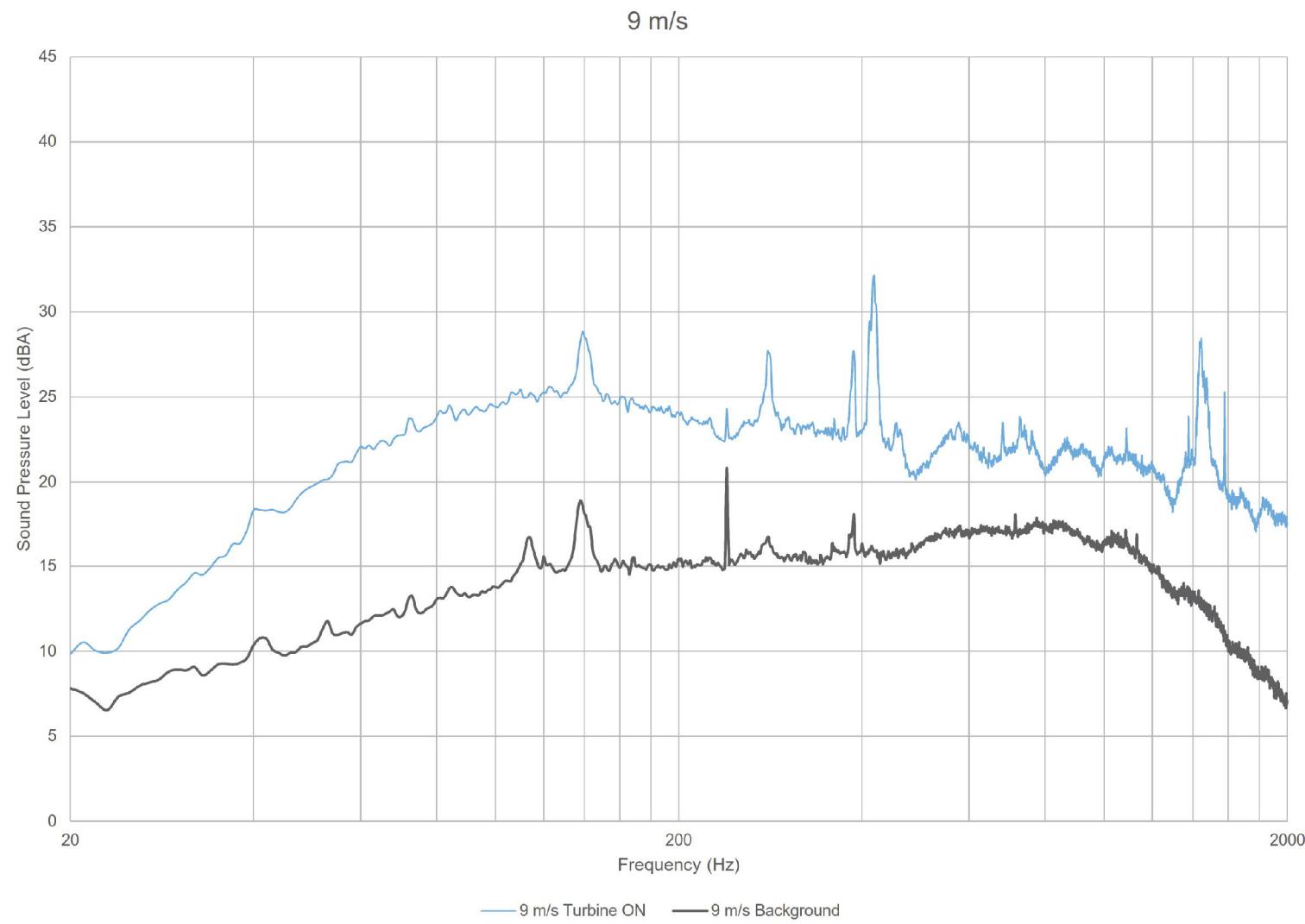
Date: Sept 13, 2017

Revision: 1

Figure Title

Plot of narrow band spectra – Turbine ON vs. Background at 8.5 m/s

Figure D.01



 aercoustics

08020.04.T16.RP3

Scale: NTS
Drawn by: AM
Reviewed by: PA
Date: Sept 13, 2017
Revision: 1

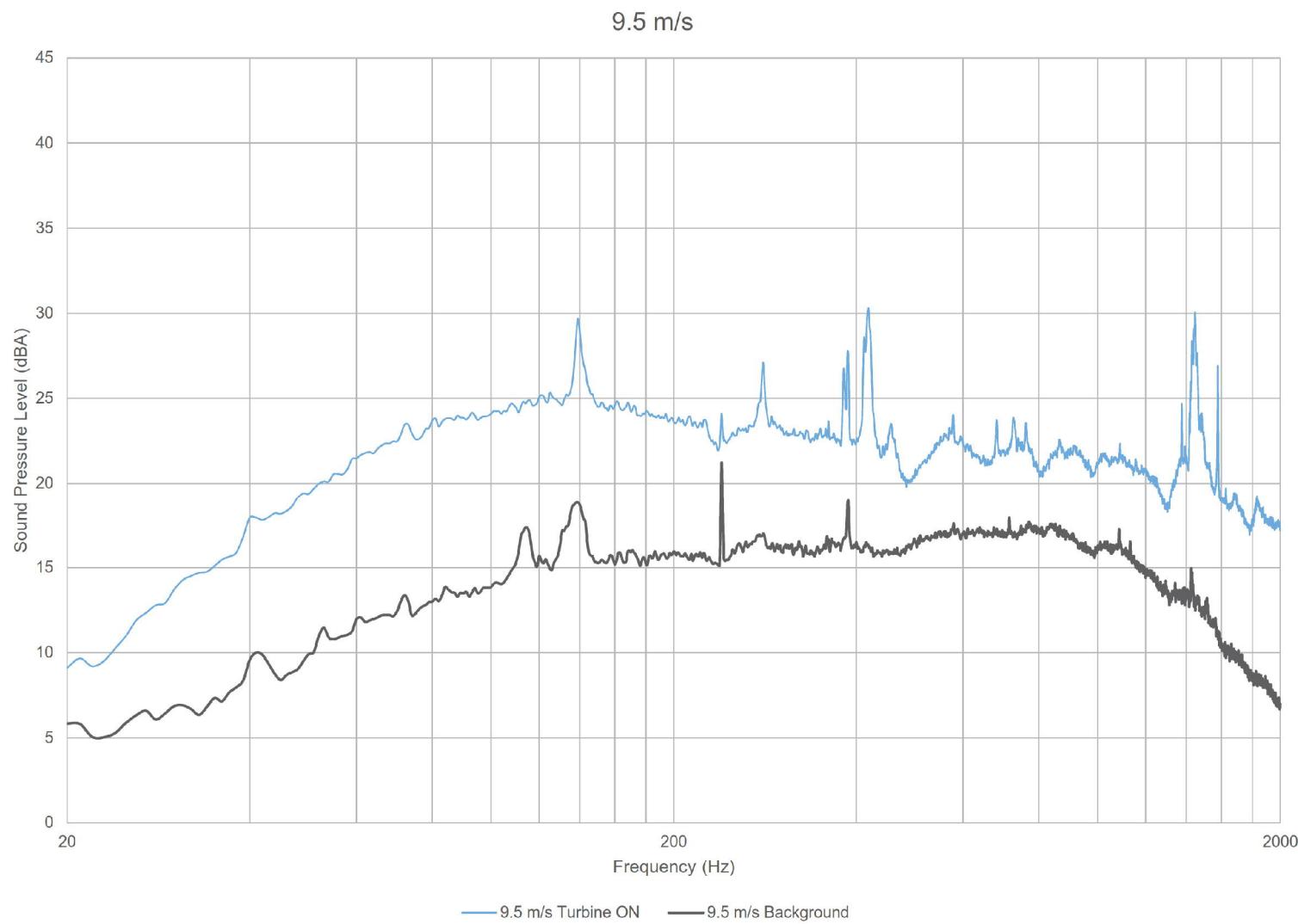
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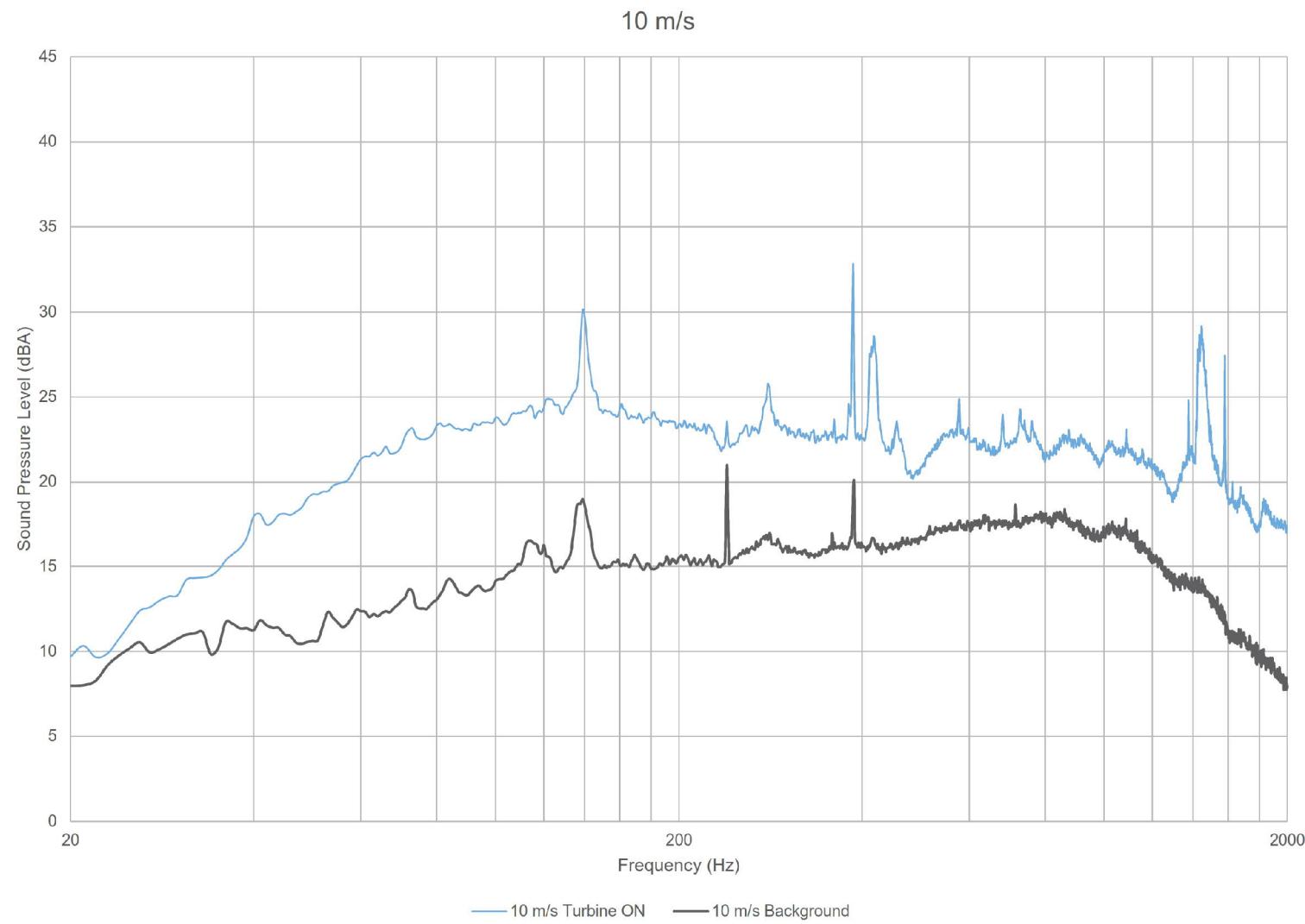
Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0

Figure Title

Plot of narrow band spectra – Turbine ON vs. Background at 9 m/s

Figure D.02



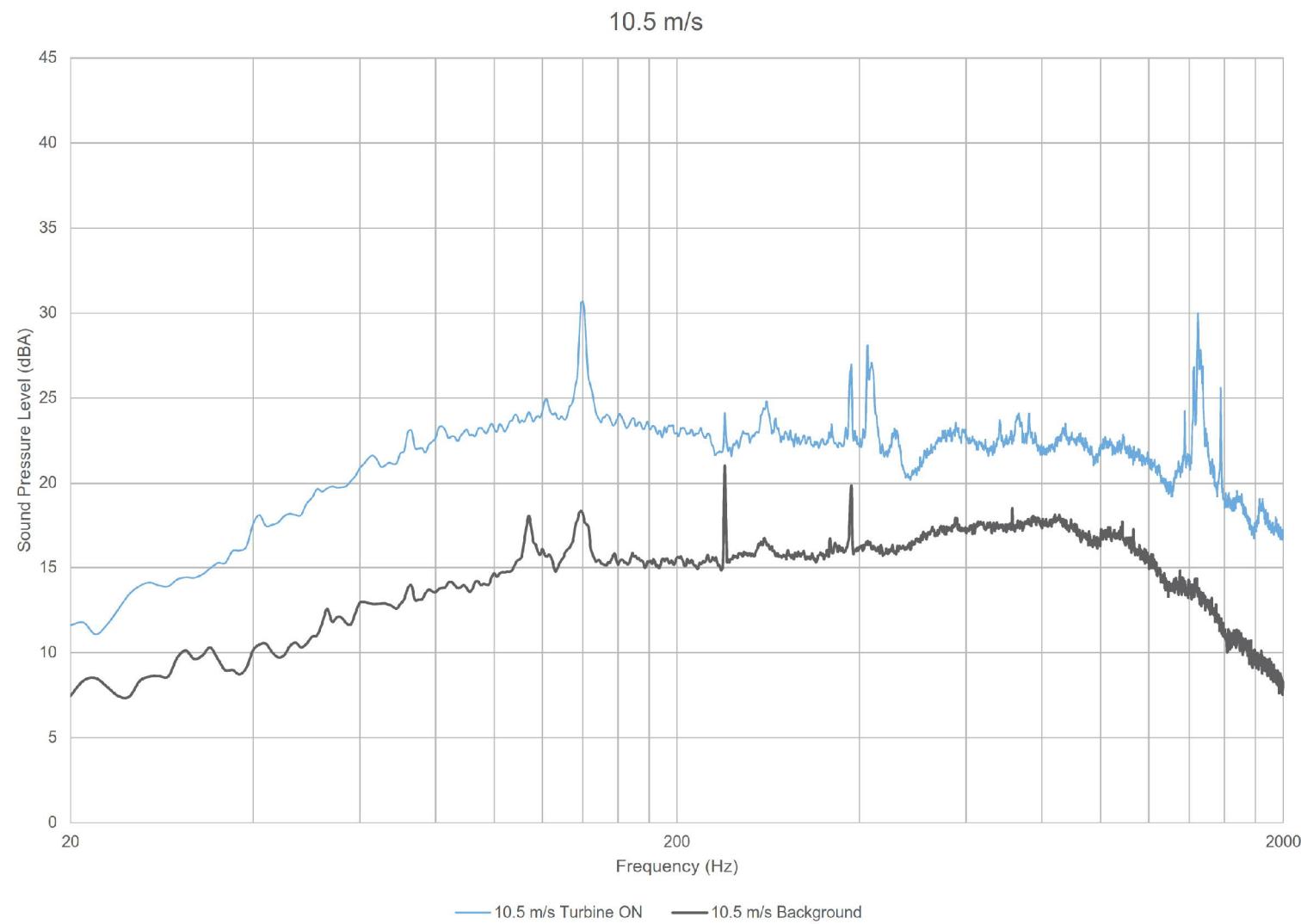


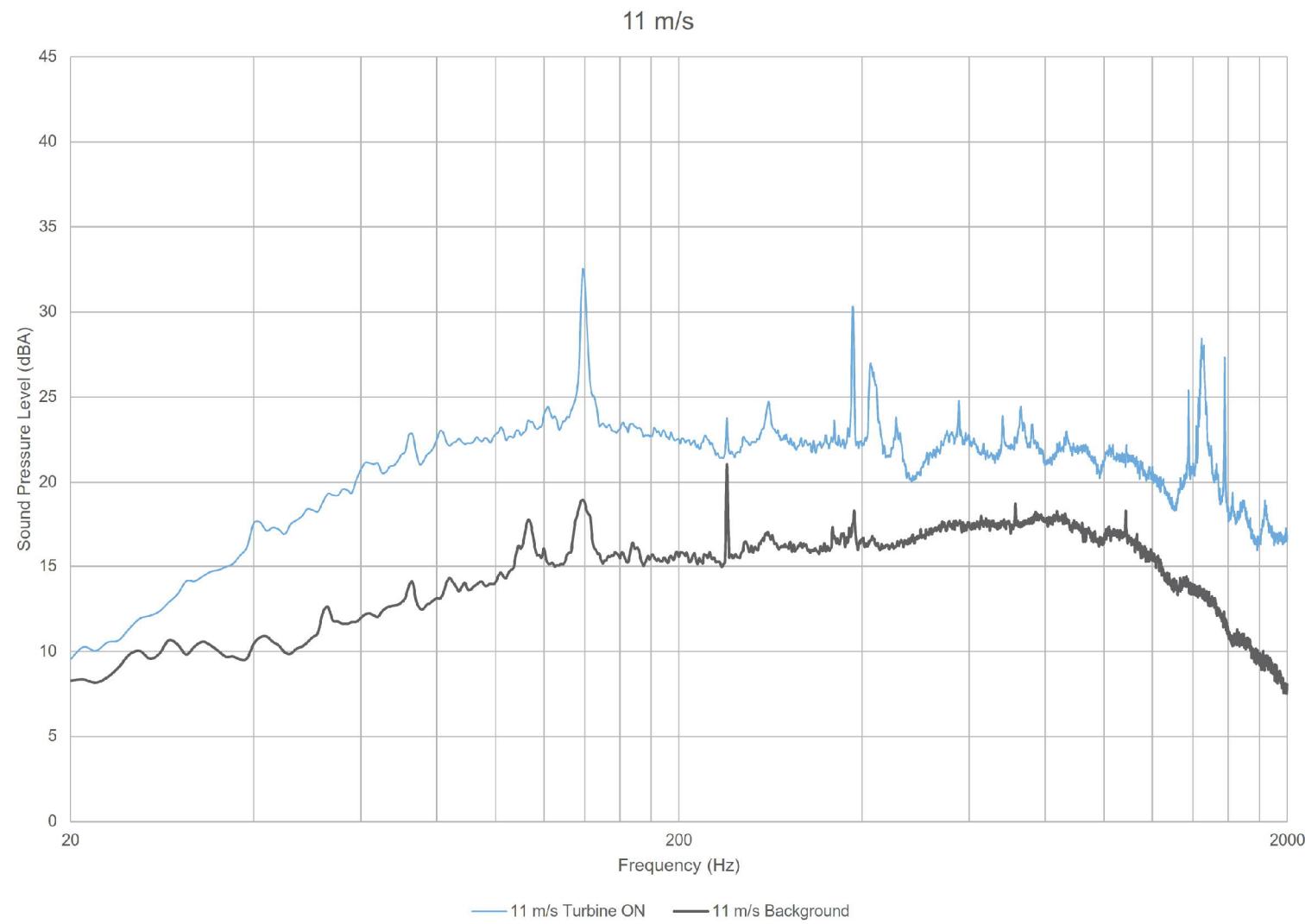
 aercoustics

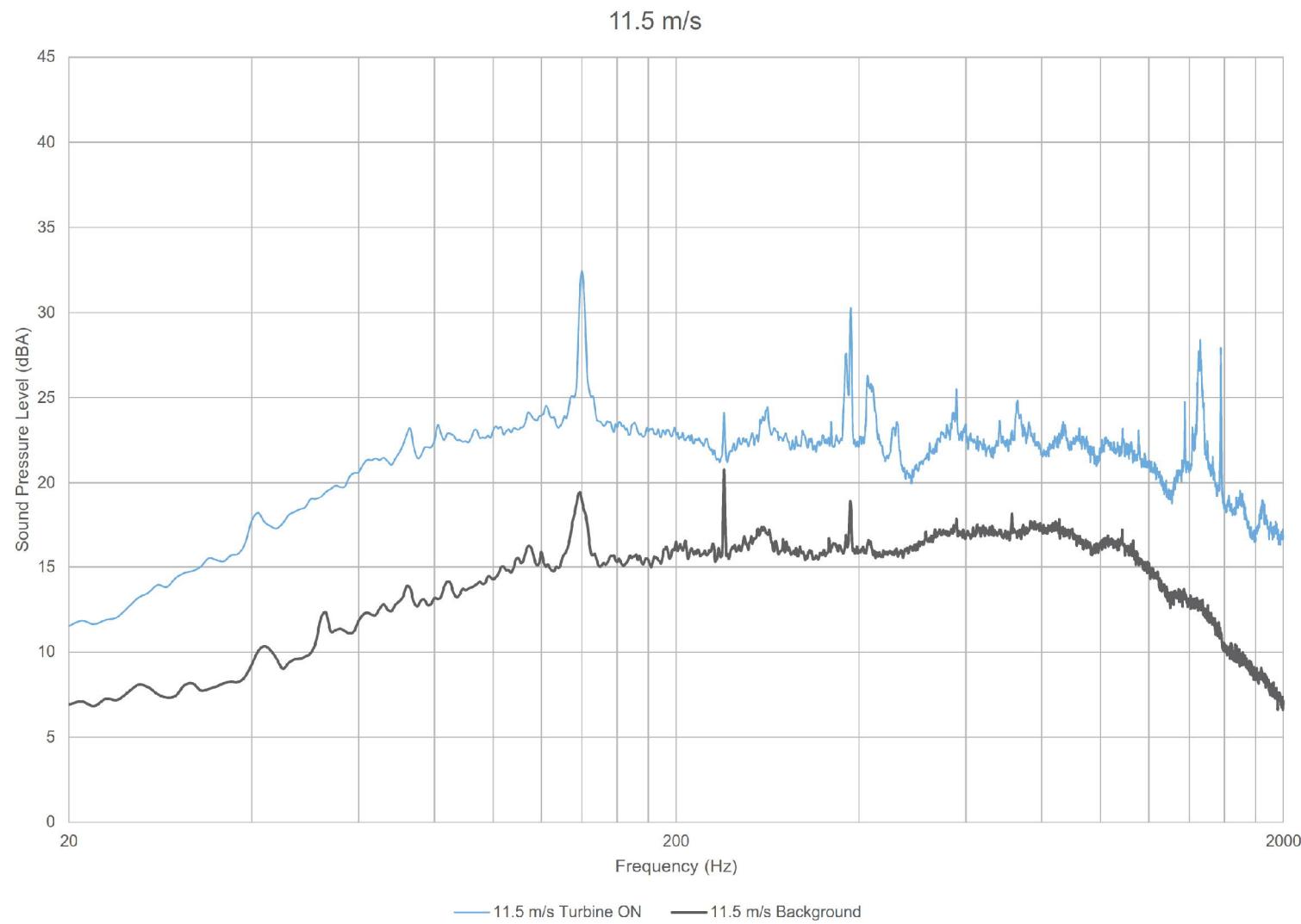
08020.04.T16.RP3
 Scale: NTS
 Drawn by: AM
 Reviewed by: PA
 Date: Sept 13, 2017
 Revision: 1

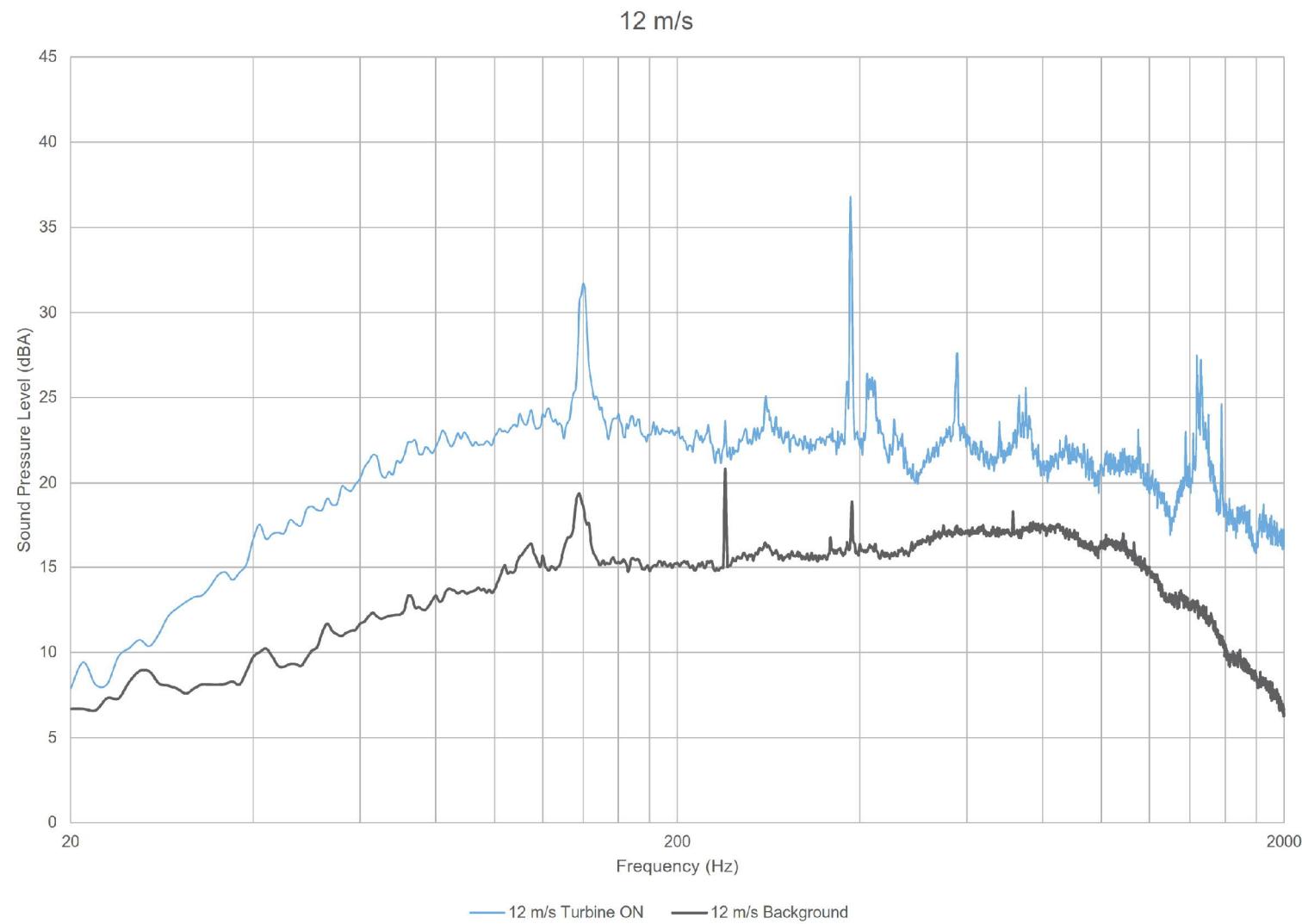
Project Name
 Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0
Figure Title
 Plot of narrow band spectra – Turbine ON vs. Background at 10 m/s

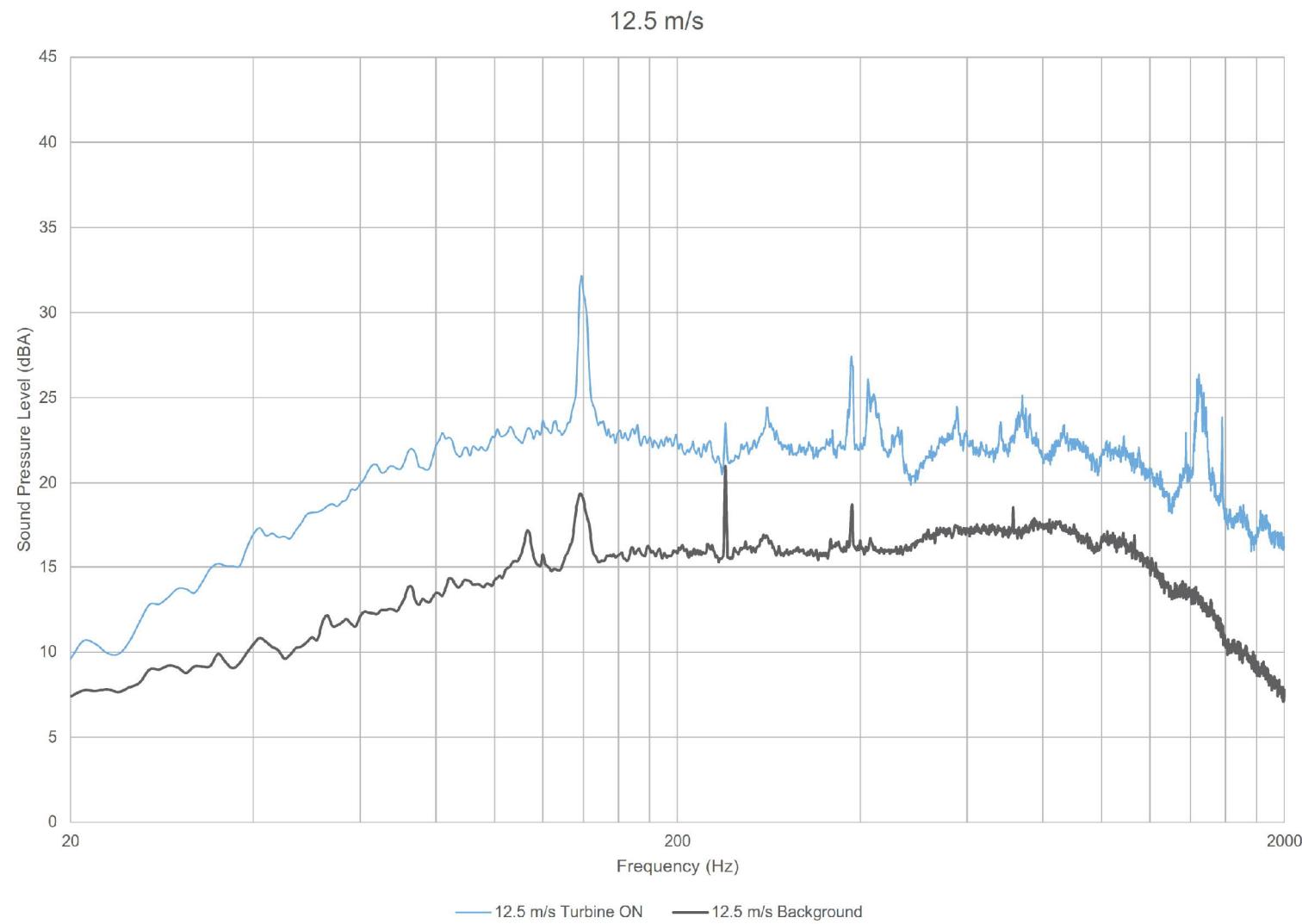
Figure D.04











08020.04.T16.RP3

Scale: NTS
 Drawn by: AM
 Reviewed by: PA
 Date: Sept 13, 2017
 Revision: 1

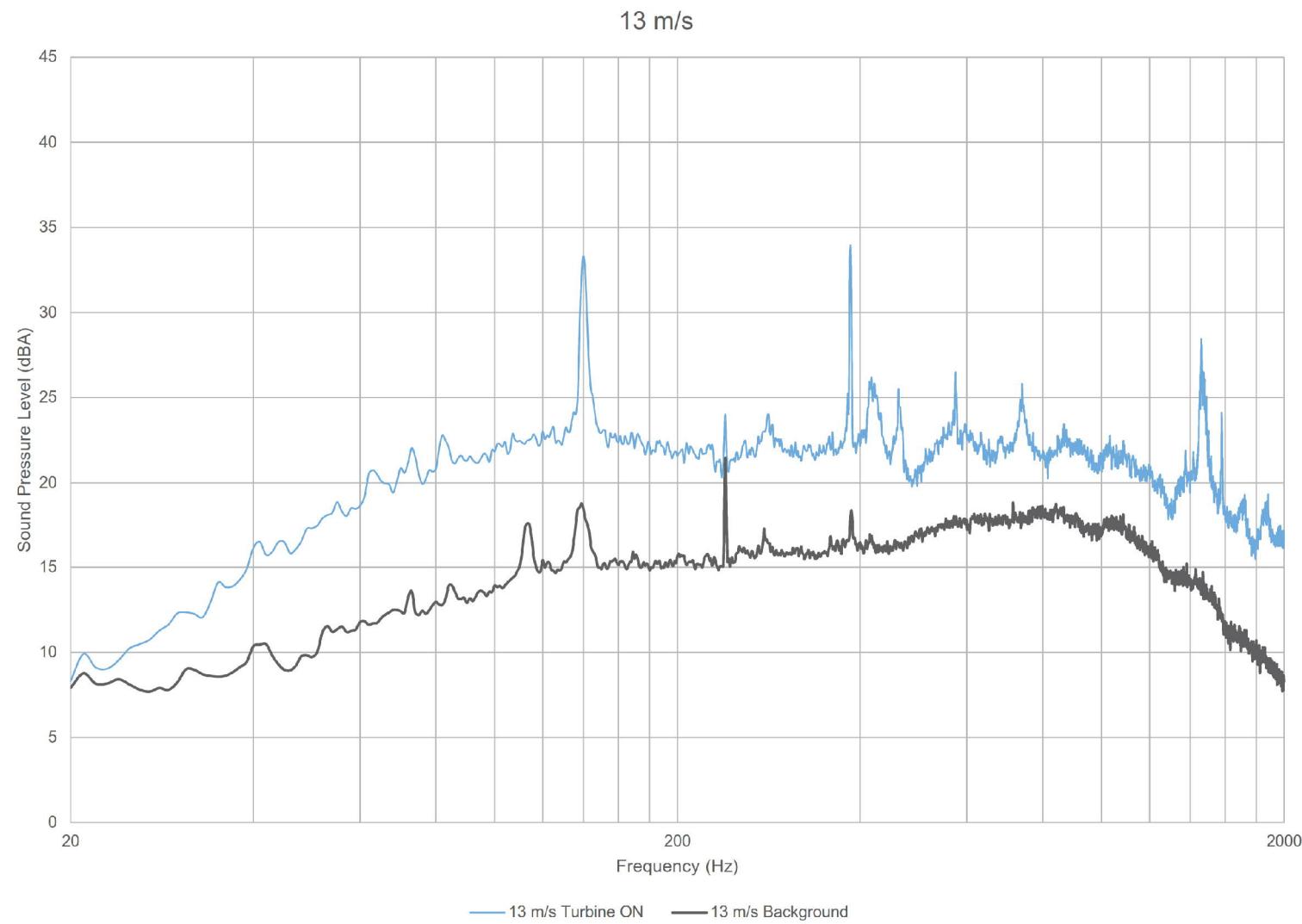
Project Name

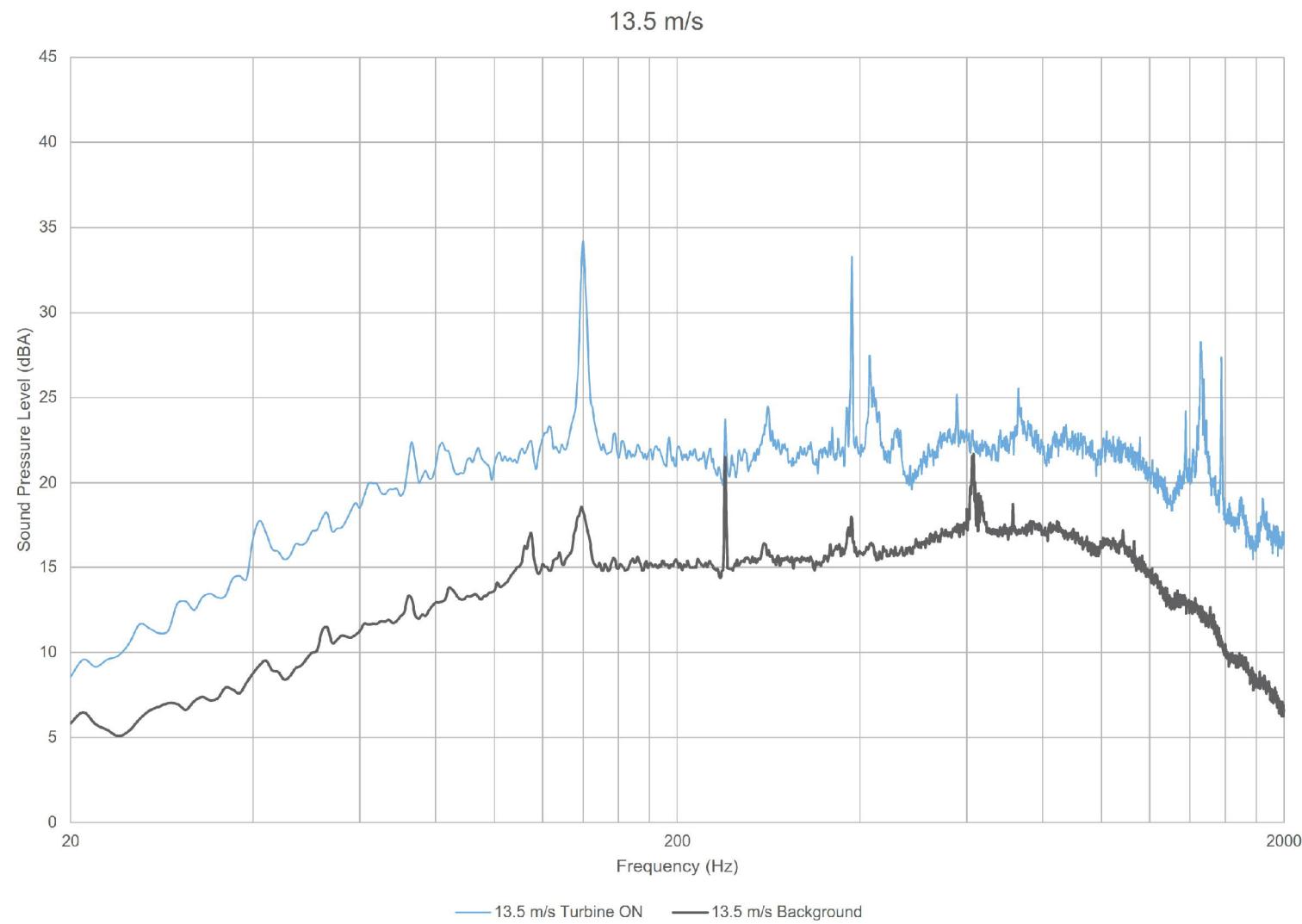
Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0

Figure Title

Plot of narrow band spectra – Turbine ON vs. Background at 12.5 m/s

Figure D.09





 aercoustics

08020.04.T16.RP3
 Scale: NTS
 Drawn by: AM
 Reviewed by: PA
 Date: Sept 13, 2017
 Revision: 1

Project Name
 Mclean's Mountain Wind Farm - Turbine T16 - IEC61400-11 Edition 3.0
Figure Title
 Plot of narrow band spectra – Turbine ON vs. Background at 13.5 m/s

Figure D.11

Table D.01 Tonality Assessment Table - 8.5 m/s

Project: McLean's Mountain Wind Farm- Turbine T16 - IEC 61400-11 Measurement

Report ID: 08020.04.T16.RP3

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
117	385			24.2	42.9	45.6	2.7	-2.2	4.9
307	389			24.0	42.7	44.5	1.8	-2.2	4.0
62	409			22.4	41.2	37.5	-3.7	-2.2	-1.5
35	412			23.7	42.4	34.4	-8.0	-2.2	-5.8
207	414			23.0	41.7	40.1	-1.7	-2.2	0.5
337	415			23.3	42.0	43.5	1.5	-2.2	3.7
256	416			22.2	41.0	42.2	1.2	-2.2	3.4
33	416			23.1	41.8	40.3	-1.6	-2.2	0.7
362	417			22.8	41.5	43.1	1.5	-2.2	3.7
361	417			22.4	41.2	42.7	1.5	-2.2	3.8
19	417			22.3	41.0	42.5	1.5	-2.2	3.7
24	417			22.7	41.4	43.3	1.9	-2.2	4.1
340	418			22.4	41.1	41.5	0.4	-2.2	2.6
21	418			22.8	41.6	44.0	2.5	-2.2	4.7
386	418			22.5	41.2	43.0	1.8	-2.2	4.1
11	418			23.0	41.7	41.7	0.0	-2.2	2.2
308	420			23.7	42.5	41.2	-1.3	-2.2	0.9
302	420			23.3	42.0	43.7	1.7	-2.2	3.9
22	420			22.2	41.0	40.6	-0.4	-2.2	1.8
338	421			23.4	42.1	40.2	-2.0	-2.2	0.3
390	421			23.1	41.9	43.0	1.2	-2.2	3.4
25	422			22.7	41.5	41.3	-0.2	-2.2	2.0
10	422			22.7	41.4	38.1	-3.3	-2.2	-1.1
389	422			23.1	41.9	41.5	-0.4	-2.2	1.8
355	422			22.1	40.8	39.2	-1.6	-2.2	0.6
347	423			22.8	41.6	38.9	-2.7	-2.2	-0.5
301	423			23.0	41.8	40.4	-1.4	-2.2	0.8
391	423			22.9	41.6	39.9	-1.7	-2.2	0.5
23	424			22.6	41.4	43.3	1.9	-2.2	4.1
209	424			22.5	41.2	43.8	2.6	-2.2	4.8
Average	417						0.4	-2.2	2.6

Table D.01 Tonality Assessment Table - 8.5 m/s

Project: McLean's Mountain Wind Farm- Turbine T16 - IEC 61400-11 Measurement

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
62	1415			20.8	42.4	35.0	-7.3	-3.2	-4.2
117	1425			21.9	43.4	39.0	-4.5	-3.2	-1.3
19	1428			20.7	42.3	37.4	-4.9	-3.2	-1.8
207	1430			21.3	42.9	40.1	-2.7	-3.2	0.4
307	1433			22.7	44.3	30.9	-13.4	-3.2	-10.3
337	1434			22.0	43.6	42.4	-1.2	-3.2	2.0
256	1436			20.5	42.1	40.6	-1.5	-3.2	1.7
24	1439			20.9	42.5	38.3	-4.2	-3.2	-1.1
340	1443			20.4	42.0	40.2	-1.8	-3.2	1.4
21	1445			20.4	42.0	38.7	-3.3	-3.2	-0.1
33	1445			21.6	43.3	40.3	-3.0	-3.2	0.2
35	1449			21.1	42.7	33.7	-9.0	-3.2	-5.8
338	1450			20.9	42.5	38.4	-4.1	-3.2	-0.9
22	1451			19.7	41.3	37.8	-3.5	-3.2	-0.3
11	1451			20.6	42.3	34.9	-7.3	-3.2	-4.2
361	1452			21.0	42.6	42.6	0.0	-3.2	3.2
355	1453			20.1	41.8	33.4	-8.4	-3.2	-5.2
390	1453			20.4	42.0	38.4	-3.6	-3.2	-0.4
302	1455			21.5	43.1	37.1	-6.0	-3.2	-2.9
347	1457			20.9	42.6	38.2	-4.4	-3.2	-1.2
10	1458			20.9	42.5	36.8	-5.7	-3.2	-2.5
301	1460			20.1	41.8	35.5	-6.2	-3.2	-3.0
23	1461			20.3	42.0	39.9	-2.1	-3.2	1.1
25	1461			20.8	42.4	38.6	-3.8	-3.2	-0.6
389	1461			20.5	42.2	37.0	-5.2	-3.2	-2.0
209	1461			21.2	42.8	37.2	-5.6	-3.2	-2.4
391	1463			20.8	42.4	39.2	-3.3	-3.2	-0.1
386	1464			21.1	42.8	35.2	-7.5	-3.2	-4.4
362	1468			21.1	42.8	39.1	-3.7	-3.2	-0.5
Average	1448						-4.0	-3.2	-0.9

Table D.02 Tonality Assessment Table - 9 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
305	387			23.1	41.7	38.7	-3.0	-2.2	-0.9
339	388			23.2	41.9	39.6	-2.2	-2.2	0.0
306	389			23.9	42.6	46.0	3.4	-2.2	5.6
296	409			22.9	41.7	38.4	-3.3	-2.2	-1.1
369	411			25.5	44.3	44.0	-0.3	-2.2	1.9
199	412			21.8	40.5	40.5	0.0	-2.2	2.2
116	412			24.7	43.4	43.2	-0.2	-2.2	2.0
424	413			23.3	42.0	33.4	-8.5	-2.2	-6.3
Average	403						-0.7	-2.2	1.5

Table D.02 Tonality Assessment Table - 9 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
116	1425			23.7	45.3	41.8	-3.4	-3.2	-0.2
199	1427			20.8	42.4	42.6	0.3	-3.2	3.4
8	1430			21.5	43.1	44.9	1.7	-3.2	4.9
369	1432			22.2	43.8	37.1	-6.6	-3.2	-3.5
305	1432			21.1	42.7	40.5	-2.2	-3.2	1.0
417	1436			21.0	42.6	39.8	-2.9	-3.2	0.3
292	1436			22.5	44.1	43.2	-0.8	-3.2	2.3
395	1436			21.5	43.1	39.3	-3.8	-3.2	-0.7
187	1438			20.2	41.8	41.9	0.1	-3.2	3.3
296	1439			21.6	43.2	39.0	-4.2	-3.2	-1.0
176	1439			23.5	45.1	35.1	-10.0	-3.2	-6.8
336	1439			21.1	42.7	41.4	-1.3	-3.2	1.9
306	1440			21.7	43.3	39.1	-4.2	-3.2	-1.0
293	1442			21.2	42.8	42.0	-0.9	-3.2	2.3
364	1444			21.6	43.2	39.5	-3.7	-3.2	-0.5
60	1445			22.3	43.9	40.9	-2.9	-3.2	0.2
186	1445			21.6	43.2	42.6	-0.7	-3.2	2.5
178	1448			22.3	43.9	38.1	-5.8	-3.2	-2.6
310	1452			21.3	42.9	36.6	-6.3	-3.2	-3.1
311	1457			21.0	42.7	35.7	-7.0	-3.2	-3.8
20	1458			21.3	43.0	41.3	-1.7	-3.2	1.5
360	1459			20.7	42.4	40.0	-2.4	-3.2	0.8
392	1461			21.5	43.1	40.9	-2.2	-3.2	1.0
309	1466			21.3	43.0	38.0	-5.1	-3.2	-1.9
339	1468			21.4	43.1	38.1	-5.0	-3.2	-1.8
399	1469			21.1	42.8	39.5	-3.3	-3.2	-0.1
424	1469			21.5	43.1	40.4	-2.8	-3.2	0.4
119	1474			21.2	42.9	40.6	-2.3	-3.2	0.9
430	1474			21.7	43.4	41.4	-2.0	-3.2	1.2
31	1479			21.3	43.1	41.8	-1.3	-3.2	1.9
Average	1449						-2.5	-3.2	0.7

Table D.03 Tonality Assessment Table - 9.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
251	381			24.7	43.3	39.8	-3.5	-2.2	-1.3
253	382			23.4	42.1	44.4	2.3	-2.2	4.5
181	387			23.1	41.8	41.3	-0.5	-2.2	1.7
197	387			23.3	42.0	42.4	0.4	-2.2	2.6
330	387			23.3	42.0	41.5	-0.5	-2.2	1.7
332	388			23.0	41.6	42.3	0.7	-2.2	2.9
429	412			22.7	41.4	35.6	-5.8	-2.2	-3.6
323	412			22.7	41.4	36.3	-5.1	-2.2	-2.9
18	412			22.6	41.3	38.9	-2.4	-2.2	-0.2
172	412			22.9	41.7	35.7	-6.0	-2.2	-3.8
78	413			22.6	41.3	35.8	-5.5	-2.2	-3.3
129	413			22.6	41.3	32.4	-8.9	-2.2	-6.7
304	414			23.3	42.1	40.4	-1.6	-2.2	0.6
Average	400						-1.8	-2.2	0.4

Table D.03 Tonality Assessment Table - 9.5 m/s

Project: McLean's Mountain Wind Farm- Turbine T16 - IEC 61400-11 Measurement
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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
323	1417			21.8	43.3	40.8	-2.5	-3.2	0.7
253	1422			21.6	43.2	43.9	0.8	-3.2	3.9
172	1424			22.4	44.0	40.9	-3.1	-3.2	0.1
181	1429			21.7	43.3	42.1	-1.2	-3.2	2.0
185	1429			21.2	42.7	42.5	-0.2	-3.2	2.9
255	1430			21.3	42.9	42.2	-0.7	-3.2	2.4
304	1430			22.7	44.3	39.3	-5.0	-3.2	-1.8
429	1430			22.0	43.5	43.2	-0.4	-3.2	2.8
78	1430			21.7	43.2	45.3	2.0	-3.2	5.2
197	1431			23.1	44.6	44.5	-0.1	-3.2	3.1
124	1434			21.3	42.9	44.3	1.4	-3.2	4.6
128	1436			21.6	43.1	43.8	0.6	-3.2	3.8
291	1437			22.4	44.0	40.7	-3.4	-3.2	-0.2
55	1440			21.3	42.9	43.5	0.6	-3.2	3.8
71	1440			22.2	43.8	40.5	-3.3	-3.2	-0.1
58	1441			21.5	43.1	40.2	-2.9	-3.2	0.3
330	1441			22.8	44.4	40.0	-4.4	-3.2	-1.2
137	1442			21.2	42.8	42.8	0.0	-3.2	3.1
160	1442			20.3	41.9	41.4	-0.5	-3.2	2.7
161	1445			21.6	43.2	41.5	-1.7	-3.2	1.5
56	1447			21.5	43.2	41.1	-2.1	-3.2	1.1
162	1447			20.9	42.5	40.4	-2.1	-3.2	1.1
415	1447			21.8	43.4	41.8	-1.6	-3.2	1.6
165	1447			22.5	44.1	41.8	-2.2	-3.2	1.0
426	1447			21.6	43.3	41.2	-2.0	-3.2	1.1
59	1447			21.8	43.4	43.1	-0.3	-3.2	2.9
175	1448			22.3	43.9	40.1	-3.8	-3.2	-0.7
129	1449			20.7	42.3	41.0	-1.4	-3.2	1.8
72	1449			22.8	44.5	40.7	-3.8	-3.2	-0.6
130	1449			20.7	42.3	40.6	-1.8	-3.2	1.4
332	1449			20.5	42.2	36.9	-5.2	-3.2	-2.0
32	1451			21.7	43.3	41.9	-1.5	-3.2	1.7
163	1451			21.0	42.6	42.9	0.3	-3.2	3.5
18	1453			22.1	43.8	40.2	-3.6	-3.2	-0.4
328	1453			22.2	43.8	40.0	-3.8	-3.2	-0.6
174	1453			21.8	43.5	40.7	-2.7	-3.2	0.4
164	1455			21.0	42.7	40.2	-2.5	-3.2	0.7
403	1456			21.4	43.0	41.9	-1.1	-3.2	2.1
402	1457			20.8	42.4	38.7	-3.8	-3.2	-0.6
177	1457			23.0	44.7	40.1	-4.6	-3.2	-1.4
400	1457			21.1	42.7	38.8	-3.9	-3.2	-0.7
61	1458			22.5	44.2	39.1	-5.1	-3.2	-1.9
166	1459			21.4	43.1	38.4	-4.7	-3.2	-1.5
363	1460			21.1	42.8	39.6	-3.2	-3.2	0.0
251	1460			22.7	44.4	39.7	-4.7	-3.2	-1.5
401	1461			20.7	42.3	40.3	-2.1	-3.2	1.1
121	1464			20.5	42.1	42.2	0.0	-3.2	3.2
Average	1445					-1.7	-3.2		1.5

Table D.04 Tonality Assessment Table - 10 m/s

Project: McLean's Mountain Wind Farm- Turbine T15 - IEC 61400-11 Measurement
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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
70	386			23.1	41.7	40.0	-1.7	-2.2	0.5
329	386			23.5	42.2	40.0	-2.1	-2.2	0.0
196	387			23.7	42.4	49.8	7.4	-2.2	9.6
331	388			23.5	42.2	40.8	-1.3	-2.2	0.9
182	388			23.6	42.3	33.8	-8.5	-2.2	-6.3
326	412			22.6	41.3	31.1	-10.2	-2.2	-8.0
88	412			22.7	41.4	31.1	-10.3	-2.2	-8.1
218	412			22.2	40.9	38.4	-2.5	-2.2	-0.3
405	412			22.8	41.5	33.0	-8.5	-2.2	-6.3
17	413			22.4	41.1	34.1	-6.9	-2.2	-4.7
327	413			22.7	41.4	36.2	-5.2	-2.2	-3.0
250	413			22.6	41.3	36.3	-5.0	-2.2	-2.8
335	413			22.8	41.6	30.0	-11.6	-2.2	-9.4
Average	403						-1.4	-2.2	0.8

Table D.04 Tonality Assessment Table - 10 m/s

Project: McLean's Mountain Wind Farm- Turbine T15 - IEC 61400-11 Measurement
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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
326	1423			22.2	43.8	38.3	-5.5	-3.2	-2.3
45	1423			22.9	44.4	42.9	-1.5	-3.2	1.6
94	1425			22.2	43.8	44.7	0.9	-3.2	4.1
327	1425			23.1	44.7	41.5	-3.2	-3.2	0.0
17	1426			22.5	44.1	43.9	-0.2	-3.2	3.0
295	1430			23.3	44.8	42.5	-2.3	-3.2	0.8
70	1432			22.6	44.2	44.6	0.4	-3.2	3.6
250	1434			21.7	43.2	43.8	0.6	-3.2	3.8
49	1435			21.9	43.5	44.1	0.6	-3.2	3.7
136	1436			22.6	44.2	43.2	-0.9	-3.2	2.2
289	1436			22.1	43.7	40.4	-3.2	-3.2	-0.1
88	1438			21.4	43.0	42.7	-0.3	-3.2	2.9
126	1439			20.9	42.5	42.5	0.0	-3.2	3.2
196	1440			21.4	43.0	44.9	2.0	-3.2	5.1
173	1441			21.6	43.2	41.5	-1.7	-3.2	1.4
222	1441			22.3	43.9	38.6	-5.3	-3.2	-2.1
112	1442			21.1	42.7	41.3	-1.4	-3.2	1.7
218	1444			20.6	42.2	41.9	-0.4	-3.2	2.8
115	1445			23.4	45.0	42.5	-2.5	-3.2	0.7
412	1445			21.7	43.3	41.6	-1.6	-3.2	1.6
413	1446			22.9	44.5	41.5	-3.0	-3.2	0.2
220	1446			21.5	43.1	39.6	-3.5	-3.2	-0.4
334	1447			21.2	42.9	40.7	-2.2	-3.2	1.0
405	1447			21.1	42.8	40.0	-2.8	-3.2	0.4
75	1448			20.8	42.4	41.3	-1.2	-3.2	2.0
182	1448			21.9	43.5	36.8	-6.7	-3.2	-3.5
114	1451			21.4	43.0	42.3	-0.7	-3.2	2.5
7	1452			21.2	42.9	42.0	-0.8	-3.2	2.4
212	1455			23.2	44.8	39.8	-5.0	-3.2	-1.8
331	1455			22.4	44.1	41.3	-2.8	-3.2	0.4
335	1455			21.3	43.0	38.9	-4.0	-3.2	-0.8
368	1457			21.9	43.6	40.0	-3.6	-3.2	-0.4
219	1458			21.5	43.2	42.7	-0.5	-3.2	2.7
73	1459			21.2	42.8	41.2	-1.6	-3.2	1.6
79	1460			22.6	44.2	40.4	-3.9	-3.2	-0.7
329	1462			21.6	43.2	38.4	-4.9	-3.2	-1.7
414	1463			22.9	44.6	38.7	-5.8	-3.2	-2.6
57	1465			21.1	42.8	41.6	-1.2	-3.2	2.0
416	1466			21.3	43.0	40.6	-2.3	-3.2	0.8
83	1469			21.2	42.9	42.2	-0.6	-3.2	2.5
254	1469			22.6	44.3	42.3	-2.0	-3.2	1.2
425	1470			22.1	43.8	37.4	-6.3	-3.2	-3.1
404	1472			21.7	43.4	41.5	-1.9	-3.2	1.3
431	1473			21.6	43.2	41.0	-2.2	-3.2	1.0
Average	1448						-1.7	-3.2	1.5

Table D.05 Tonality Assessment Table - 10.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
325	1423			21.4	42.9	42.3	-0.7	-3.2	2.5
238	1426			22.1	43.6	45.6	1.9	-3.2	5.1
198	1427			22.1	43.7	41.0	-2.8	-3.2	0.4
111	1439			21.5	43.1	41.1	-2.0	-3.2	1.2
273	1440			20.8	42.4	40.4	-2.0	-3.2	1.2
411	1444			21.2	42.8	42.4	-0.4	-3.2	2.7
54	1445			23.1	44.7	40.3	-4.4	-3.2	-1.2
133	1446			21.1	42.8	42.0	-0.8	-3.2	2.4
290	1446			23.5	45.2	41.3	-3.9	-3.2	-0.7
272	1447			20.9	42.5	41.0	-1.6	-3.2	1.6
90	1447			21.7	43.4	41.2	-2.1	-3.2	1.0
134	1448			21.3	43.0	34.5	-8.4	-3.2	-5.3
221	1449			21.8	43.5	40.2	-3.3	-3.2	-0.1
91	1449			22.4	44.0	43.4	-0.6	-3.2	2.6
76	1450			20.7	42.3	38.4	-4.0	-3.2	-0.8
180	1451			21.7	43.3	38.9	-4.4	-3.2	-1.2
65	1454			23.5	45.2	38.1	-7.1	-3.2	-3.9
428	1457			19.9	41.6	38.7	-2.9	-3.2	0.3
333	1458			21.0	42.6	40.9	-1.8	-3.2	1.4
127	1459			23.0	44.6	40.2	-4.5	-3.2	-1.3
122	1459			20.3	41.9	35.9	-6.0	-3.2	-2.8
113	1463			22.9	44.6	36.2	-8.4	-3.2	-5.2
131	1465			20.5	42.1	43.6	1.5	-3.2	4.7
125	1465			20.5	42.2	39.6	-2.6	-3.2	0.6
367	1469			22.2	43.9	34.9	-8.9	-3.2	-5.7
427	1470			20.3	42.0	40.2	-1.8	-3.2	1.4
406	1472			22.4	44.1	40.7	-3.4	-3.2	-0.2
294	1476			22.5	44.2	42.4	-1.8	-3.2	1.4
Average	1452						-2.4	-3.2	0.8

Table D.06 Tonality Assessment Table - 11 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
409	385			22.8	41.5	39.8	-1.7	-2.2	0.5
194	386			23.3	41.9	41.2	-0.8	-2.2	1.4
195	387			24.1	42.8	46.8	4.0	-2.2	6.1
87	410			22.6	41.3	29.7	-11.7	-2.2	-9.5
288	411			22.5	41.2	29.3	-11.9	-2.2	-9.7
85	412			22.9	41.6	29.2	-12.4	-2.2	-10.2
271	413			22.7	41.4	32.9	-8.5	-2.2	-6.3
95	413			22.7	41.5	30.6	-10.8	-2.2	-8.6
270	413			22.6	41.3	32.0	-9.2	-2.2	-7.0
Average	403						-3.0	-2.2	-0.8

Table D.06 Tonality Assessment Table - 11 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
159	1429			21.2	42.8	41.9	-0.9	-3.2	2.3
44	1432			23.2	44.8	37.0	-7.8	-3.2	-4.6
216	1433			21.1	42.6	40.3	-2.3	-3.2	0.9
239	1440			20.4	42.0	40.2	-1.9	-3.2	1.3
52	1441			22.5	44.2	36.6	-7.6	-3.2	-4.4
81	1441			23.5	45.1	39.6	-5.4	-3.2	-2.2
288	1442			20.9	42.5	39.6	-2.9	-3.2	0.3
244	1443			19.9	41.5	40.9	-0.6	-3.2	2.6
85	1444			21.0	42.6	37.9	-4.7	-3.2	-1.5
321	1445			22.7	44.3	38.6	-5.7	-3.2	-2.5
270	1445			21.8	43.4	39.3	-4.1	-3.2	-0.9
217	1445			20.8	42.4	37.0	-5.4	-3.2	-2.2
408	1446			21.5	43.2	39.2	-4.0	-3.2	-0.8
245	1446			20.5	42.2	41.2	-1.0	-3.2	2.2
409	1447			20.5	42.2	38.5	-3.6	-3.2	-0.4
195	1447			21.6	43.2	41.7	-1.5	-3.2	1.7
271	1449			21.5	43.2	38.7	-4.4	-3.2	-1.2
95	1450			20.8	42.4	38.4	-4.0	-3.2	-0.9
87	1451			20.9	42.5	42.3	-0.2	-3.2	3.0
248	1452			20.7	42.4	37.8	-4.6	-3.2	-1.4
123	1454			20.6	42.2	38.3	-3.9	-3.2	-0.8
247	1454			19.7	41.3	37.1	-4.3	-3.2	-1.1
194	1455			20.5	42.2	39.5	-2.6	-3.2	0.6
77	1456			20.6	42.2	41.2	-1.0	-3.2	2.2
82	1459			21.1	42.8	40.1	-2.7	-3.2	0.5
135	1459			20.3	42.0	39.6	-2.4	-3.2	0.8
132	1460			20.7	42.3	41.5	-0.9	-3.2	2.3
183	1462			21.0	42.6	38.9	-3.8	-3.2	-0.6
213	1468			20.3	42.0	39.9	-2.1	-3.2	1.1
74	1470			20.4	42.0	39.0	-3.1	-3.2	0.1
89	1470			20.8	42.5	35.6	-6.9	-3.2	-3.7
92	1476			21.2	42.9	42.1	-0.8	-3.2	2.4
319	1481			21.2	42.9	36.2	-6.6	-3.2	-3.4
Average	1451						-3.0	-3.2	0.2

Table D.06 Tonality Assessment Table - 11 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
248	1577			19.5	41.4	35.8	-5.6	-3.3	-2.4
159	1578			19.6	41.6	34.4	-7.2	-3.3	-4.0
123	1578			19.2	41.2	34.7	-6.4	-3.3	-3.2
244	1578			18.7	40.7	29.3	-11.4	-3.3	-8.2
195	1578			20.2	42.2	32.7	-9.5	-3.3	-6.3
194	1578			19.4	41.4	38.2	-3.2	-3.3	0.1
239	1579			18.8	40.7	37.2	-3.6	-3.3	-0.3
409	1579			19.3	41.3	31.7	-9.5	-3.3	-6.3
271	1579			20.0	42.0	30.1	-11.9	-3.3	-8.7
245	1579			19.2	41.1	36.3	-4.9	-3.3	-1.6
135	1580			19.4	41.4	37.3	-4.0	-3.3	-0.8
82	1581			19.6	41.6	33.6	-8.0	-3.3	-4.8
Average	1579						-6.2	-3.3	-3.0

Table D.07 Tonality Assessment Table - 11.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
252	380			24.0	42.6	45.1	2.5	-2.2	4.6
156	387			24.2	42.8	33.7	-9.1	-2.2	-6.9
43	388			24.1	42.8	44.2	1.4	-2.2	3.6
410	388			23.2	41.9	43.0	1.1	-2.2	3.3
158	413			22.7	41.4	32.1	-9.3	-2.2	-7.1
102	413			22.8	41.5	34.8	-6.8	-2.2	-4.5
246	413			22.1	40.9	31.0	-9.9	-2.2	-7.7
97	414			22.5	41.2	28.6	-12.6	-2.2	-10.4
Average	400						-2.0	-2.2	0.2

Table D.07 Tonality Assessment Table - 11.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
171	1428			20.9	42.4	41.7	-0.7	-3.2	2.5
43	1436			23.2	44.8	33.5	-11.2	-3.2	-8.1
170	1441			20.2	41.8	41.1	-0.7	-3.2	2.4
243	1443			19.8	41.4	39.8	-1.6	-3.2	1.6
407	1446			20.3	41.9	37.7	-4.2	-3.2	-1.0
68	1448			21.5	43.1	35.6	-7.5	-3.2	-4.4
97	1448			21.1	42.8	39.0	-3.8	-3.2	-0.6
158	1449			20.1	41.8	40.3	-1.4	-3.2	1.7
246	1449			20.1	41.7	40.2	-1.5	-3.2	1.7
103	1452			23.0	44.6	33.5	-11.2	-3.2	-8.0
102	1452			22.9	44.6	38.2	-6.3	-3.2	-3.1
84	1453			21.1	42.7	37.6	-5.1	-3.2	-1.9
184	1455			20.3	42.0	38.9	-3.1	-3.2	0.1
240	1459			20.2	41.9	39.2	-2.6	-3.2	0.5
322	1459			22.0	43.6	34.5	-9.1	-3.2	-5.9
67	1460			20.9	42.5	37.6	-5.0	-3.2	-1.8
410	1460			20.4	42.1	36.4	-5.7	-3.2	-2.5
80	1460			21.8	43.5	39.8	-3.7	-3.2	-0.5
50	1462			22.4	44.0	39.0	-5.1	-3.2	-1.9
96	1465			22.8	44.5	41.4	-3.1	-3.2	0.1
324	1467			21.5	43.1	33.8	-9.3	-3.2	-6.1
93	1468			20.9	42.6	39.7	-2.9	-3.2	0.3
66	1474			21.0	42.6	39.5	-3.1	-3.2	0.0
156	1476			22.4	44.1	37.1	-7.0	-3.2	-3.8
279	1479			20.5	42.2	36.7	-5.5	-3.2	-2.3
252	1480			22.7	44.4	37.0	-7.4	-3.2	-4.2
Average	1457						-4.0	-3.2	-0.9

Table D.08 Tonality Assessment Table - 12 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
48	1436			20.9	42.5	41.1	-1.4	-3.2	1.8
110	1439			21.0	42.6	39.7	-2.8	-3.2	0.3
98	1449			20.3	42.0	38.9	-3.0	-3.2	0.2
16	1457			20.3	41.9	36.9	-5.0	-3.2	-1.9
53	1458			21.3	42.9	38.8	-4.1	-3.2	-0.9
281	1462			20.6	42.2	36.4	-5.9	-3.2	-2.7
280	1463			20.8	42.4	33.6	-8.8	-3.2	-5.7
193	1488			21.1	42.9	29.0	-13.9	-3.2	-10.7
Average	1457						-4.4	-3.2	-1.3

Table D.09 Tonality Assessment Table - 12.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
228	138			23.0	41.3	37.6	-3.7	-2.0	-1.7
101	138			21.9	40.2	37.1	-3.1	-2.0	-1.1
267	138			21.6	39.9	37.5	-2.5	-2.0	-0.4
237	139			22.2	40.5	38.0	-2.5	-2.0	-0.5
233	139			22.3	40.6	36.7	-3.8	-2.0	-1.8
242	139			22.0	40.3	34.5	-5.9	-2.0	-3.8
269	139			22.7	41.0	38.4	-2.7	-2.0	-0.7
169	140			24.1	42.4	35.5	-6.9	-2.0	-4.9
37	140			23.5	41.8	35.0	-6.8	-2.0	-4.8
69	140			22.5	40.8	35.5	-5.3	-2.0	-3.3
223	141			24.4	42.7	34.3	-8.3	-2.0	-6.3
215	141			23.3	41.6	33.1	-8.5	-2.0	-6.5
283	141			23.4	41.7	37.2	-4.5	-2.0	-2.4
260	141			22.3	40.6	35.7	-4.9	-2.0	-2.9
234	142			23.3	41.6	34.8	-6.8	-2.0	-4.8
214	142			23.8	42.1	38.0	-4.1	-2.0	-2.1
Average	140						-4.6	-2.0	-2.6

Table D.09 Tonality Assessment Table - 12.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
237	1425			21.1	42.7	42.0	-0.7	-3.2	2.5
228	1428			22.6	44.2	35.0	-9.2	-3.2	-6.0
267	1433			21.6	43.2	38.4	-4.8	-3.2	-1.7
69	1434			22.1	43.7	37.1	-6.6	-3.2	-3.4
233	1437			20.0	41.6	39.1	-2.5	-3.2	0.7
101	1441			22.1	43.7	38.8	-4.9	-3.2	-1.7
42	1446			22.2	43.8	34.6	-9.2	-3.2	-6.0
260	1446			20.7	42.3	37.1	-5.2	-3.2	-2.0
269	1447			22.2	43.8	34.7	-9.1	-3.2	-5.9
242	1447			19.9	41.5	34.2	-7.4	-3.2	-4.2
214	1455			20.8	42.4	36.3	-6.1	-3.2	-2.9
169	1459			20.3	42.0	36.6	-5.4	-3.2	-2.2
37	1461			19.9	41.5	39.3	-2.3	-3.2	0.9
215	1467			20.6	42.3	28.1	-14.2	-3.2	-11.0
223	1471			21.5	43.2	38.1	-5.1	-3.2	-1.9
283	1472			20.7	42.4	34.4	-8.0	-3.2	-4.8
234	1476			20.7	42.4	34.9	-7.5	-3.2	-4.3
167	1486			19.7	41.4	38.4	-3.0	-3.2	0.2
Average	1452						-5.2	-3.2	-2.0

Table D.10 Tonality Assessment Table - 13 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
109	139			21.6	39.9	37.9	-1.9	-2.0	0.1
268	139			21.5	39.8	38.0	-1.9	-2.0	0.1
262	140			20.9	39.2	38.5	-0.7	-2.0	1.4
39	140			23.0	41.3	36.4	-4.9	-2.0	-2.9
241	140			22.7	41.0	36.7	-4.2	-2.0	-2.2
263	140			21.4	39.7	38.5	-1.2	-2.0	0.8
99	141			22.2	40.5	35.5	-5.0	-2.0	-3.0
282	141			23.2	41.5	36.4	-5.1	-2.0	-3.1
320	142			24.3	42.6	30.8	-11.8	-2.0	-9.8
86	143			23.8	42.1	30.0	-12.1	-2.0	-10.1
Average	141						-3.6	-2.0	-1.6

Table D.10 Tonality Assessment Table - 13 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
268	1451			22.0	43.6	33.7	-9.9	-3.2	-6.7
109	1454			20.7	42.3	38.9	-3.4	-3.2	-0.2
86	1460			20.8	42.5	38.9	-3.5	-3.2	-0.4
262	1461			19.2	40.8	39.3	-1.6	-3.2	1.6
39	1462			19.9	41.6	36.1	-5.5	-3.2	-2.3
282	1463			19.9	41.6	38.3	-3.3	-3.2	-0.2
241	1463			20.0	41.7	39.8	-2.0	-3.2	1.2
263	1464			19.3	41.0	39.7	-1.3	-3.2	1.9
99	1476			20.3	42.0	39.2	-2.8	-3.2	0.4
320	1480			21.7	43.4	39.4	-3.9	-3.2	-0.7
168	1491			21.8	43.5	36.5	-7.0	-3.2	-3.8
Average	1466						-3.5	-3.2	-0.3

Table D.11 Tonality Assessment Table - 13.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
231	139			21.5	39.8	38.4	-1.4	-2.0	0.6
100	140			21.8	40.1	36.5	-3.6	-2.0	-1.6
235	140			23.2	41.5	36.8	-4.6	-2.0	-2.6
236	140			21.9	40.2	37.6	-2.6	-2.0	-0.6
107	140			21.7	40.0	36.4	-3.6	-2.0	-1.6
266	140			21.0	39.3	37.1	-2.2	-2.0	-0.2
108	140			21.1	39.4	37.0	-2.3	-2.0	-0.3
224	141			23.8	42.1	32.6	-9.5	-2.0	-7.5
261	141			22.0	40.3	36.7	-3.6	-2.0	-1.6
285	142			23.3	41.6	37.7	-3.9	-2.0	-1.9
Average	140						-3.3	-2.0	-1.3

Table D.11 Tonality Assessment Table - 13.5 m/s

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Measurement #	Centre frequency (Hz)	Energy average of all masking lines (dB)	Background (dB)	Background adjusted criterion level (dB)	Masking level (dB)	Tone level (dB)	Determination of tonality (dB)	Frequency dependent audibility criterion (dB)	Tonal Audibility (dB)
108	1454			21.0	42.7	40.8	-1.9	-3.2	1.3
107	1455			21.9	43.5	37.8	-5.7	-3.2	-2.5
266	1457			20.4	42.1	36.8	-5.3	-3.2	-2.1
231	1460			22.1	43.8	35.1	-8.7	-3.2	-5.5
235	1462			20.9	42.5	38.9	-3.6	-3.2	-0.4
100	1464			20.3	41.9	35.3	-6.6	-3.2	-3.5
236	1466			19.9	41.5	39.7	-1.8	-3.2	1.4
261	1474			19.4	41.1	38.8	-2.3	-3.2	0.9
285	1477			21.3	43.0	37.5	-5.5	-3.2	-2.3
224	1488			20.6	42.3	32.2	-10.2	-3.2	-6.9
Average	1466						-4.4	-3.2	-1.2

Appendix E Measurement Data

Table E.01 Measurement data - Turbine ON

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Timestamp (s)	Wind Speed	LAeq	Unloaded Power Output (kW)	Reference Year Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Humidity (%)	
1		2342	230.0	229.9	3.9	13.1	11.8	4.8	6	95	75			
2		2059	230.0	229.9	3.2	13.0	10.5	5.0	6	95	75			
3		2342	230.0	229.9	2.8	13.1	11.5	2.5	6	95	75			
4		1863	230.0	229.9	2.2	13.0	11.1	1.1	6	95	75			
5		2166	230.0	229.9	2.2	13.0	10.2	5.5	6	95	75			
6		2052	230.0	229.9	2.9	13.0	11.0	4.4	6	95	75			
7	9.8	1940	230.0	229.9	1.0	13.0	9.7	3.9	6	95	75			
8	8.8	54.1	1572	230.0	229.9	0.3	12.8	9.4	2.7	6	95	75		
9	8.2	54.3	1300	230.0	229.9	0.2	12.8	8.3	1.7	6	95	75		
10	8.6	53.5	1492	230.0	229.9	0.5	13.1	8.9	1.7	6	95	75		
11	8.3	53.6	1340	230.0	229.9	0.2	12.8	7.5	4.3	6	95	75		
12	8.1	53.5	230.0	229.9	0.2	12.8	7.5	4.7	6	95	75			
13	7.7	53.2	1101	230.0	229.9	0.2	12.7	6.9	5.8	6	95	75		
14	7.7	52.9	1108	230.0	229.9	0.2	12.7	6.2	5.8	6	95	75		
15	9.8	53.3	1961	230.0	229.9	0.5	13.3	9.0	3.4	6	95	75		
16	11.8	53.7	2406	230.0	229.9	3.8	13.2	11.4	3.5	6	95	75		
17	9.8	53.0	1943	230.0	229.9	3.9	12.9	9.4	5.6	6	95	75		
18	9.7	54.1	2130	230.0	229.9	0.2	12.7	10.0	5.8	6	95	75		
19	8.7	53.5	1519	230.0	229.9	0.1	12.8	9.0	5.2	6	95	75		
20	8.8	53.1	1577	230.0	229.9	0.1	13.0	7.3	5.4	6	95	75		
21	8.4	54.0	1406	230.0	229.9	0.1	12.9	8.3	4.8	6	95	75		
22	8.4	53.2	1413	230.0	229.9	0.1	13.0	8.4	3.8	6	95	75		
23	8.6	53.0	1496	230.0	229.9	0.1	13.0	7.5	5.9	6	95	75		
24	8.6	54.3	1464	230.0	229.9	0.1	13.0	8.0	5.9	6	95	75		
25	8.4	53.2	1415	230.0	229.9	0.1	13.0	8.2	5.9	6	95	75		
26	8.2	53.8	230.0	229.9	0.1	13.0	7.1	5.9	6	95	75			
27	7.8	53.7	1159	230.0	229.9	0.1	12.8	6.2	5.1	6	95	75		
28	7.4	52.6	996	230.0	229.9	0.1	12.3	5.8	6.6	6	95	75		
29	7.3	51.3	944	230.0	229.9	0.1	12.0	7.1	6.1	6	94	75		
30	7.6	51.9	1067	230.0	229.9	0.1	12.6	7.0	4.2	6	94	75		
31	9.2	53.5	1729	230.0	229.9	0.1	13.1	9.7	4.3	6	94	75		
32	9.3	54.3	1755	230.0	229.9	0.1	13.0	8.8	3.8	6	94	75		
33	8.5	54.1	230.0	229.9	0.1	13.0	9.2	6.9	6	94	75			
34	7.8	54.0	1158	230.0	229.9	0.1	12.8	7.0	7.7	6	94	75		
35	8.3	53.1	1351	230.0	229.9	0.1	12.9	8.1	7.1	6	95	75		
36	12.1	53.9	2439	230.0	229.9	4.2	13.6	11.4	6.7	6	95	75		
37	12.4	52.9	2457	230.0	229.9	7.2	13.1	13.4	5.6	6	95	75		
38	5.1	53.1	2504	230.0	229.9	7.6	13.2	12.2	7.3	6	95	75		
39	13.2	52.9	2493	230.0	229.9	8.3	13.1	12.9	4.2	6	95	75		
40	14.1	53.4	230.0	229.9	8.6	13.1	12.9	4.8	6	95	75			
41	15.8	54.2	2491	230.0	229.9	9.1	13.1	16.5	5.6	6	95	75		
42	12.6	53.0	2469	230.0	229.9	8.5	13.1	12.5	5.9	6	95	75		
43	11.6	54.6	2376	230.0	236.3	7.4	13.0	12.4	6.0	6	95	75		
44	10.9	54.6	2261	230.0	239.7	5.7	13.0	9.4	5.8	6	95	75		
45	9.9	54.7	2044	230.0	239.7	3.9	12.9	9.5	6.8	6	95	75		
46	14.6	53.3	2480	230.0	239.7	5.6	13.4	11.0	6.3	6	95	75		
47	11.8	52.5	2409	230.0	239.7	8.0	12.9	13.1	5.4	6	95	75		
48	10.2	53.0	2091	230.0	239.7	4.9	12.9	10.5	4.8	6	95	75		
49	11.7	54.4	2396	230.0	239.7	3.5	13.1	11.2	5.9	6	95	75		
50	10.9	54.0	2269	230.0	239.7	5.9	13.0	11.3	5.3	6	95	75		
51	10.6	53.7	2492	230.0	239.7	6.1	13.2	12.0	5.1	6	95	75		
52	10.9	54.0	2269	230.0	239.7	5.9	13.0	11.3	5.3	6	95	75		
53	11.8	53.4	2409	230.0	239.7	4.9	13.1	10.3	4.5	6	95	75		
54	10.6	54.2	230.0	239.7	4.8	12.7	12.2	3.1	6	95	75			
55	9.7	53.8	1934	230.0	239.7	3.0	12.9	10.8	4.6	6	95	75		
56	9.7	53.5	1910	230.0	239.7	0.0	13.0	10.3	3.6	6	95	75		
57	10.2	53.8	2086	230.0	239.7	0.7	13.1	10.6	3.5	6	95	75		
58	9.6	53.7	1873	230.0	239.7	0.7	12.9	9.9	3.4	6	95	75		
59	9.3	53.9	1781	230.0	239.7	0.1	12.9	9.7	3.3	6	95	75		
60	9.1	53.8	1675	230.0	239.7	0.1	13.0	8.2	4.8	6	95	75		
61	9.4	54.5	1798	230.0	239.7	0.1	13.1	8.9	4.3	6	95	75		
62	8.4	53.8	230.0	239.7	0.5	13.2	9.1	5.2	6	95	75			
63	7.9	52.0	1205	230.0	239.7	0.1	12.8	8.3	4.0	6	95	75		
64	10.0	53.6	2015	230.0	239.7	0.1	13.3	10.4	4.2	6	95	75		
65	10.3	54.7	2119	230.0	239.7	2.4	13.1	9.8	6.1	6	95	75		
66	11.7	54.7	2394	230.0	239.7	3.7	13.1	10.5	4.0	6	95	75		
67	11.5	53.5	2362	230.0	239.7	5.1	13.0	11.4	3.9	6	95	75		
68	11.6	53.1	2302	230.0	239.7	5.4	13.1	10.7	4.9	6	95	75		
69	12.7	53.7	2673	230.0	239.7	1.2	13.0	9.5	5.7	6	95	75		
70	10.0	53.6	2029	230.0	239.7	5.1	12.8	11.0	5.0	6	95	75		
71	9.7	54.7	1931	230.0	239.7	5.1	12.9	10.0	5.7	6	95	75		
72	9.4	54.2	1807	230.0	239.7	0.3	13.0	9.2	5.0	6	95	75		
73	9.8	54.2	1969	230.0	239.7	0.2	13.1	10.0	3.9	6	95	75		
74	11.1	54.2	2301	230.0	239.7	3.0	13.1	12.0	2.1	6	95	75		
75	10.1	52.7	2061	230.0	239.7	4.0	13.0	11.2	4.6	6	95	75		
76	10.7	53.3	2213	230.0	239.7	2.6	13.0	10.3	3.1	6	95	75		
77	10.8	53.3	2307	230.0	239.7	0.9	13.0	11.4	2.7	6	95	75		
78	9.7	53.3	1916	230.0	239.7	2.8	12.9	10.8	5.1	6	95	75		
79	10.0	54.4	2022	230.0	239.7	0.1	13.0	10.0	2.5	6	95	75		
80	11.4	54.4	2347	230.0	239.7	2.1	13.1	11.3	3.4	6	95	75		
81	10.9	54.6	2254	230.0	239.7	5.0	13.0	12.3	3.3	6	95	75		
82	10.8	54.4	2233	230.0	239.7	4.0	13.0	11.2	4.6	6	95	75		
83	10.0	53.2	2030	230.0	239.7	3.1	13.1	10.7	4.0	6	95	75		
84	11.3	53.3	2204	230.0	239.7	3.4	13.1	11.4	2.5	6	95	75		
85	11.0	53.0	2281	230.0	239.7	4.2	13.1	11.5	2.2	6	95	75		
86	13.1	53.4	2496	230.0	239.7	7.4	13.2	12.8	4.1	6	95	75		
87	10.9	53.0	2262	230.0	239.7	6.5	12.9	12.9	4.5	6	95	75		
88	10.1	52.9	2059	230.0	239.7	4.5	12.9	11.9	4.9	6	95	75		

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Timestamp (s)	Wind Speed	LAeq	Unloaded Power Output (kW)	Reference Year Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Relative Humidity (%)

<tbl_r cells="15" ix="1

Table E.01 Measurement data - Turbine ON

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**Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Chronological Order	Wind Speed	Output (kW)	Reference Year	Tilt Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Relative Humidity (%)
177	9.6	55.4	1875	230.0	224.1	0.4	13.0	9.0	6	93	75	
178	8.9	55.1	1597	230.0	224.1	0.1	12.9	8.5	6	93	75	
179	10.0	54.8	1597	230.0	224.1	1.2	12.9	8.5	6	94	75	
180	10.7	54.0	2213	230.0	224.8	0.6	13.0	10.8	6	94	75	
181	9.6	54.1	1869	230.0	231.6	1.5	12.9	9.1	6	94	75	
182	10.1	53.8	2047	230.0	232.6	0.4	13.1	9.5	6	94	75	
183	11.2	53.5	2316	230.0	232.6	3.5	13.1	11.4	1.5	6	94	75
184	11.3	53.0	2338	230.0	232.6	4.3	13.0	10.8	2.1	6	94	75
185	9.6	52.6	1862	230.0	232.6	3.0	12.8	9.3	1.9	6	95	75
186	9.1	53.5	1706	230.0	232.6	0.3	12.9	8.5	3.6	6	95	75
187	8.8	53.2	1573	230.0	232.6	0.1	12.9	8.5	5.3	6	95	75
188	7.9	52.9	1574	230.0	232.6	0.1	12.8	8.5	6.9	6	95	75
189	7.9	55.1	1181	230.0	232.6	0.1	12.9	8.2	5.4	6	95	75
190	7.7	53.8	1105	230.0	232.6	0.1	12.7	8.0	5.0	6	94	75
191	7.6	52.4	1077	230.0	232.6	0.1	12.7	7.8	4.5	6	94	75
192	12.2	54.0	2442	230.0	232.6	2.4	13.3	11.1	5.0	6	94	75
193	11.1	53.3	2311	230.0	232.6	4.6	13.3	11.4	4.5	6	94	75
194	10.9	54.5	2259	230.0	232.6	4.5	13.0	11.1	5.5	6	94	75
195	10.2	54.0	2094	230.0	229.1	3.8	12.9	11.0	2.3	6	94	75
196	9.6	55.7	1876	230.0	226.7	1.0	12.9	9.7	3.6	6	95	75
197	10.4	54.6	2143	230.0	227.0	2.1	13.0	9.8	4.9	6	95	75
199	9.2	52.9	1744	230.0	227.0	0.9	12.9	8.2	4.3	6	95	75
200	7.9	52.8	1187	230.0	227.0	0.2	12.7	6.4	4.7	6	95	75
201	8.0	53.4	1228	230.0	227.0	0.1	12.9	6.4	4.5	6	95	75
202	7.5	52.8	2307	230.0	227.0	0.1	12.9	7.4	5.5	6	94	75
203	7.6	52.4	1087	230.0	227.0	0.1	12.7	6.4	5.3	6	94	75
204	7.7	52.8	1113	230.0	227.0	0.1	12.8	7.0	6.0	6	94	75
205	7.9	52.4	1184	230.0	227.0	0.1	12.9	7.6	5.5	6	94	75
206	9.7	53.3	1905	230.0	227.0	0.1	13.3	10.3	3.9	6	94	75
207	8.7	53.3	1524	230.0	227.0	0.1	12.9	8.6	6.6	6	94	75
208	8.0	53.2	1244	230.0	227.0	0.1	12.9	7.2	6.3	6	94	75
209	8.4	53.6	2317	230.0	227.0	0.1	12.9	6.9	7.1	6	93	75
210	8.2	53.8	1300	230.0	227.0	0.1	13.0	6.7	7.5	6	93	75
211	9.0	54.1	1659	230.0	227.0	0.1	13.2	8.3	7.7	6	93	75
212	10.2	56.3	2096	230.0	227.0	0.1	13.2	9.9	7.2	6	93	75
213	11.2	54.7	2325	230.0	227.0	2.7	13.2	10.3	8.6	6	93	75
214	12.4	53.0	2454	230.0	227.0	6.1	13.2	11.0	7.8	6	93	75
215	12.4	53.0	2457	230.0	227.0	6.8	13.2	11.6	7.0	6	93	75
216	10.9	52.7	2301	230.0	227.0	6.4	13.1	11.5	8.2	6	93	75
217	11.2	53.1	2317	230.0	227.0	5.5	13.0	11.6	8.4	6	93	75
218	10.1	53.0	2053	230.0	227.0	3.9	12.9	9.4	8.1	6	93	75
219	10.1	53.7	2060	230.0	227.0	2.0	13.0	8.2	4.9	6	93	75
220	10.1	53.7	2065	230.0	227.0	1.2	13.0	9.7	3.8	6	93	75
221	10.7	54.0	2219	230.0	227.0	3.1	13.0	9.8	6.0	6	93	75
222	10.1	54.0	2046	230.0	227.0	3.2	13.0	10.3	10.0	6	93	75
223	12.3	54.8	2452	230.0	227.0	3.9	13.1	7.9	7.9	6	93	75
224	13.3	53.9	2500	230.0	227.0	4.7	13.1	13.1	9.6	6	93	75
225	14.1	54.1	2424	230.0	227.0	5.0	13.0	14.3	10.0	6	93	75
226	14.8	53.7	2493	230.0	227.0	10.6	13.1	14.5	5.0	6	93	75
227	14.9	53.7	2492	230.0	227.0	11.5	13.1	14.6	6.5	6	93	75
228	12.3	53.9	2448	230.0	226.7	9.5	12.9	13.9	4.4	6	93	75
229	13.9	53.6	2499	230.0	231.0	9.8	13.1	13.7	4.2	6	93	75
230	14.8	53.3	2330	230.0	231.0	9.7	13.0	14.5	7.1	6	93	75
231	13.7	53.5	2301	230.0	230.0	8.3	13.1	13.4	7.1	6	93	75
232	12.6	53.6	2460	230.0	230.0	8.4	13.0	12.0	6.2	6	93	75
233	12.4	52.1	2454	230.0	234.8	7.3	13.0	13.2	4.9	6	94	75
234	12.7	52.5	2473	230.0	234.8	7.2	13.1	12.2	7.6	6	94	75
235	13.3	53.3	2491	230.0	234.8	8.6	13.1	13.1	5.6	6	94	75
236	13.7	52.9	2494	230.0	234.8	8.8	13.1	13.4	5.7	6	94	75
237	12.7	52.7	2471	230.0	234.8	8.3	12.9	12.8	5.3	6	94	75
238	10.3	53.1	2105	230.0	234.8	5.6	12.8	10.5	6.5	6	94	75
239	10.8	53.0	2301	230.0	234.8	4.7	12.8	9.4	5.1	6	94	75
240	11.6	52.8	2969	230.0	234.8	4.0	13.1	9.7	6.2	6	94	75
241	12.9	52.8	2487	230.0	234.8	5.9	13.2	12.7	6.5	6	94	75
242	12.6	52.5	2465	230.0	234.8	7.2	13.1	13.2	7.8	6	94	75
243	11.5	52.0	2363	230.0	234.8	5.6	12.9	12.5	5.4	6	94	75
244	11.2	52.5	2318	230.0	234.8	5.2	13.0	11.1	7.4	6	93	75
245	11.2	52.5	2317	230.0	234.8	4.9	13.0	11.8	5.8	6	93	75
246	11.5	52.2	2303	230.0	234.8	5.0	13.0	11.9	5.9	6	93	75
247	10.8	52.8	2520	230.0	234.8	5.0	13.0	11.5	4.4	6	93	75
248	11.0	52.6	2296	230.0	234.8	4.1	13.0	10.1	4.0	6	93	75
249	9.6	53.4	2490	230.0	234.8	5.3	12.8	7.5	4.4	6	93	75
250	9.9	53.1	1992	230.0	234.8	4.5	12.9	10.4	7.0	6	93	75
251	9.7	53.0	1934	230.0	234.2	0.1	13.0	11.0	6.3	6	94	75
252	11.6	55.9	2370	230.0	229.6	2.6	13.2	14.3	5.6	6	94	75
253	9.3	54.2	2307	230.0	229.1	2.4	13.1	13.1	6	94	75	
254	10.1	54.4	2057	230.0	229.1	1.5	13.1	8.7	3.2	6	94	75
255	9.5	54.6	1850	230.0	229.1	1.2	12.9	9.0	1.8	6	94	75
256	8.7	53.6	1510	230.0	229.1	0.3	12.8	7.5	4.1	6	94	75
257	8.2	53.4	1332	230.0	229.1	0.2	12.9	6.9	2.8	6	94	75
258	9.6	54.1	1890	230.0	229.1	0.3	13.2	10.2	3.2	6	94	75
259	12.7	54.2	2471	230.0	229.1	4.6	13.4	11.3	4.1	6	94	75
260	12.4	52.5	2452	230.0	229.1	6.6	13.0	13.0	4.3	6	94	75
261	13.1	52.9	2305	230.0	229.1	7.8	13.2	13.1	5.3	6	94	75
262	12.2	53.4	2492	230.0	229.1	6.8	13.1	12.0	4.6	6	93	75
263	13.1	51.9	2493	230.0	229.1	8.8	13.0	12.8	4.9	6	93	75
264	14.6	52.2	2506	230.0	229.1	10.2	13.2	14.3	7.2	6	93	75

**Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Chronological Order	Wind Speed	Output (kW)	Reference Year	Tilt Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Relative Humidity (%)
265	14.2	53.5	2493	230.0	225.1	9.5	13.0	13.9	6.5	6	93	75
266	13.6	54.4	2499	230.0	231.1	10.2	13.0	13.4	5.4	6	93	75
267	12.9	52.7	2493	230.0	231.1	10.2	12.9	12.9	4.9	6	93	75
268	13.0	53.2										

Table E.01 Measurement data - Turbine ON

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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.														
Data Point #	Unwindlocked	Wind Speed	LAEq	Unwindlocked	Output (kW)	Reference Year	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Relative Humidity (%)
353	7.1	51.1	849	230.0	229.9	0.1	11.6	6.4	4.0	7	94	75		
354	7.2	51.7	886	230.0	229.9	0.1	11.9	6.6	4.7	7	94	75		
355	8.0	51.3	1363	230.0	229.9	0.1	12.0	6.3	4.8	7	94	75		
356	7.5	52.2	1034	230.0	229.9	0.1	12.5	7.7	4.7	7	94	75		
358	7.4	51.9	991	230.0	229.9	0.1	12.3	9.0	6.2	7	94	75		
359	8.0	52.0	1213	230.0	229.9	0.1	12.8	8.9	5.1	7	94	75		
360	8.9	53.9	1609	230.0	229.9	0.1	13.1	8.7	4.7	7	94	75		
361	8.7	53.5	1515	230.0	229.9	0.1	12.9	8.5	5.3	7	94	75		
362	8.7	53.1	1507	230.0	229.9	0.1	13.0	7.9	4.3	7	94	75		
363	9.4	53.9	1786	230.0	229.9	0.2	13.0	9.9	4.0	7	94	75		
364	9.1	53.4	1007	230.0	229.9	0.1	13.0	9.9	4.1	7	94	75		
365	7.9	53.8	1192	230.0	229.9	0.1	12.7	7.0	7.0	7	94	75		
366	7.7	52.6	1107	230.0	229.9	0.1	12.6	6.3	5.0	7	94	75		
367	10.4	53.5	2146	230.0	229.9	1.4	13.3	10.5	5.8	7	94	75		
368	9.8	53.7	1943	230.0	229.9	1.8	13.0	11.0	6.3	7	94	75		
369	8.8	53.8	1574	230.0	229.9	0.6	12.8	8.7	5.4	7	94	75		
370	8.0	53.4	1145	230.0	227.2	0.3	12.7	7.6	8.0	7	94	75		
371	7.9	53.0	1259	230.0	227.0	0.5	12.8	8.8	8.6	7	94	75		
372	7.7	52.0	1215	230.0	217.4	0.3	12.9	8.0	4.0	7	94	75		
373	7.7	53.6	1108	230.0	217.2	0.3	12.7	7.1	7.0	7	94	75		
374	8.1	53.4	1270	230.0	217.2	0.3	13.0	8.3	5.7	7	94	75		
375	7.7	53.2	1102	230.0	217.2	0.3	12.7	7.8	5.8	7	94	75		
376	7.5	52.3	1010	230.0	217.2	0.3	12.4	7.4	5.0	6	94	75		
377	7.3	51.7	960	230.0	217.2	0.3	12.2	7.8	4.4	6	94	75		
378	7.0	51.0	917	230.0	217.2	0.3	12.5	5.3	3.5	6	94	75		
379	7.0	50.2	839	230.0	217.4	0.3	11.6	7.6	3.2	6	94	75		
380	7.6	53.3	1193	230.0	221.3	0.3	12.7	8.0	4.1	6	94	75		
381	7.7	53.3	1123	230.0	226.9	0.3	12.8	8.2	5.5	6	94	75		
382	8.0	53.0	1225	230.0	229.9	0.3	12.9	8.9	5.4	6	94	75		
383	7.6	52.3	1054	230.0	229.9	0.3	12.5	7.3	3.6	6	94	75		
384	7.3	51.4	963	230.0	229.9	0.3	12.2	7.7	3.7	6	94	75		
385	7.6	51.4	1205	230.0	229.9	0.3	12.4	8.4	3.3	6	94	75		
386	8.4	53.0	1416	230.0	229.9	0.3	12.9	9.4	4.0	6	94	75		
387	7.6	52.8	1088	230.0	229.9	0.3	12.7	7.9	1.8	6	94	75		
388	7.6	52.0	1250	230.0	232.0	0.3	12.9	7.3	3.2	6	94	75		
389	8.5	54.3	1445	230.0	234.8	0.3	13.1	7.8	5.0	6	95	75		
390	8.4	53.4	1416	230.0	234.8	0.3	13.0	8.3	6.0	6	95	75		
391	8.7	53.5	1520	230.0	234.8	0.3	13.1	8.3	7.3	6	95	75		
392	8.9	53.3	1523	230.0	234.8	0.3	13.1	8.9	6.8	6	95	75		
393	8.1	53.4	1287	230.0	234.8	0.3	13.0	8.1	6.6	6	95	75		
394	9.4	53.2	1893	230.0	234.8	0.0	13.2	6.8	5.6	6	95	75		
395	9.0	53.7	1668	230.0	234.8	0.3	12.9	10.7	4.7	6	94	75		
396	8.0	53.3	1215	230.0	234.8	0.3	12.8	7.4	4.7	6	94	75		
397	7.4	52.8	989	230.0	234.8	0.3	12.3	5.9	4.7	6	94	75		
398	7.4	50.7	1003	230.0	234.8	0.3	12.2	8.1	3.5	6	94	75		
399	9.2	52.7	1743	230.0	234.8	0.2	13.1	9.7	4.4	6	94	75		
400	9.4	53.4	1786	230.0	234.8	0.2	13.1	8.9	4.0	6	94	75		
401	9.7	53.4	1253	230.0	234.8	0.7	13.0	11.7	4.1	6	95	75		
402	9.5	53.1	1838	230.0	234.8	0.6	13.0	10.0	3.5	6	95	75		
403	9.7	53.2	1932	230.0	234.8	0.3	13.0	9.7	3.5	6	95	75		
404	10.1	53.6	2068	230.0	234.8	0.7	13.1	9.9	1.8	6	95	75		
405	10.1	52.8	2047	230.0	234.8	2.1	13.0	9.8	2.3	6	95	75		
406	10.5	53.6	2165	230.0	234.8	0.2	13.1	9.8	2.2	6	95	75		
407	11.3	53.4	2340	230.0	234.8	4.0	13.1	11.2	3.5	6	94	75		
408	11.0	52.9	2398	230.0	234.8	4.5	13.0	11.5	3.6	6	94	75		
409	10.9	52.9	2278	230.0	234.8	5.4	13.0	11.5	4.5	6	94	75		
410	11.4	53.2	2344	230.0	237.8	5.1	13.0	11.8	4.8	6	94	75		
411	10.5	53.3	2168	230.0	239.7	5.3	12.9	11.6	4.6	6	94	75		
412	10.2	53.5	2074	230.0	239.7	3.1	13.0	11.3	6.1	6	94	75		
413	9.8	53.3	1944	230.0	239.7	1.7	12.9	10.7	6.3	6	94	75		
414	10.0	53.9	2103	230.0	239.7	1.8	12.9	10.7	6.1	6	94	75		
415	9.4	53.1	1790	230.0	239.7	1.4	12.9	9.8	6.1	6	94	75		
416	9.9	53.7	2000	230.0	239.7	0.0	13.1	10.1	4.8	6	94	75		
417	9.2	53.2	1733	230.0	239.7	0.5	12.9	9.6	5.1	6	94	75		
418	8.0	52.5	1218	230.0	239.7	0.2	12.7	8.1	6.2	6	94	75		
419	7.6	52.4	1081	230.0	239.7	0.2	12.7	6.7	5.3	6	93	75		
420	7.7	52.4	1098	230.0	239.7	0.2	12.7	7.6	6.0	6	93	75		
421	7.8	53.0	1141	230.0	239.7	0.2	12.9	8.5	5.3	6	93	75		
422	7.4	52.1	2393	230.0	239.7	0.5	12.9	8.3	3.3	6	93	75		
423	7.3	51.8	863	230.0	239.7	0.2	12.1	7.6	4.0	6	93	75		
424	9.0	52.4	1640	230.0	239.7	0.2	13.0	9.3	5.5	6	93	75		
425	9.9	54.0	1976	230.0	239.7	0.6	13.1	9.9	5.0	6	93	75		
426	9.5	53.5	1856	230.0	239.7	0.8	13.0	9.3	7.3	6	93	75		
427	10.5	53.4	2153	230.0	239.7	2.4	13.1	11.2	7.5	6	93	75		
428	10.5	52.4	2153	230.0	239.7	3.0	13.0	10.7	5.2	6	93	75		
429	9.5	52.5	1880	230.0	239.7	2.7	12.8	9.6	5.0	6	93	75		
430	9.2	53.2	1724	230.0	239.7	0.3	13.0	9.2	8.3	6	93	75		
431	10.2	53.7	2079	230.0	239.7	0.6	13.1	9.9	8.0	6	93	75		
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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.														
Data Point #	Unwindlocked	Wind Speed	LAEq	Unwindlocked	Output (kW)	Reference Year	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (Pa)	Relative Humidity (%)
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Table E.02 Measurement data - Background

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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	1m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
1	11.7	48.6	0.3	5.3	6	94	75
2	9.5	47.3	0.6	4.3	6	94	75
3	10.6	46.6	0.4	4.9	6	93	75
4	14.0	46.6	0.4	6.4	6	93	75
5	14.9	46.8	0.3	6.8	6	93	75
6	10.8	46.7	0.2	4.9	6	93	75
7	8.9	46.9	0.2	4.1	6	93	75
8	15.6	46.0	0.4	5.6	6	93	75
9	12.9	46.2	0.4	5.9	6	93	75
10	11.6	46.3	0.3	5.3	6	93	75
11	8.8	47.5	0.2	4.0	6	93	75
12	12.3	47.9	0.4	5.6	6	93	75
13	14.6	47.1	0.4	6.7	6	93	75
14	12.4	46.8	0.3	5.7	6	93	75
15	13.6	47.3	0.3	6.2	7	93	75
16	18.1	46.0	0.2	8.3	7	93	75
17	20.1	46.5	0.4	9.2	7	93	75
18	17.1	48.2	0.5	7.9	7	93	75
19	16.1	50.9	0.5	7.4	7	93	75
20	11.1	51.0	0.4	5.4	7	93	75
21	18.0	50.2	0.4	8.2	7	93	75
22	14.4	47.6	0.5	6.6	7	93	75
23	9.9	48.7	0.5	4.6	7	93	75
24	15.0	50.6	0.5	6.9	7	93	75
25	10.5	51.1	0.5	4.8	7	93	75
26	7.0	49.3	0.4	3.2	7	92	75
27	8.4	49.4	0.4	3.9	7	92	75
28	15.6	48.9	0.4	7.1	7	92	75
29	19.1	49.7	0.4	6.5	7	92	75
30	8.9	48.2	0.3	4.1	7	92	75
31	6.0	46.9	0.3	2.8	7	92	75
32	12.4	48.0	0.3	5.7	7	92	75
33	12.0	51.1	0.5	5.5	7	92	75
34	12.3	49.6	0.6	5.6	7	92	75
35	8.7	50.6	0.5	4.0	6	92	75
36	7.7	50.5	0.6	3.5	6	92	75
37	11.3	49.1	0.5	5.2	6	92	75
38	5.5	46.6	0.4	2.5	7	92	75
39	10.2	47.8	0.2	4.7	7	92	75
40	10.4	48.1	0.3	6.8	7	92	75
41	9.2	47.3	0.3	4.2	7	92	75
42	6.0	48.3	0.2	2.8	7	92	75
43	5.3	49.5	0.3	2.4	7	92	75
44	4.4	48.4	0.2	2.0	7	92	75
45	5.5	50.6	0.2	2.5	7	92	75
46	7.4	50.7	0.2	3.4	7	92	75
47	10.4	47.1	0.3	4.7	7	92	75
48	5.9	46.8	0.6	2.7	7	92	75
49	6.3	46.8	0.5	2.9	7	92	75
50	5.0	48.4	0.3	4.8	7	92	75
51	11.8	48.2	0.5	5.4	7	92	75
52	14.9	47.5	0.4	6.8	7	92	75
53	12.4	47.2	0.6	5.7	7	92	75
54	13.1	47.2	0.4	6.0	7	92	75
55	10.6	46.0	0.3	4.8	7	92	75
56	9.4	46.2	0.3	4.3	7	92	75
57	11.5	47.3	0.3	5.3	7	92	75
58	15.3	46.5	0.3	7.0	7	92	75
59	13.2	46.1	0.3	6.0	7	92	75
60	10.9	45.5	0.2	5.0	7	92	75
61	5.7	47.9	0.3	3.8	7	92	75
62	9.9	48.7	0.2	4.5	7	92	75
63	14.3	46.1	0.3	6.5	7	92	75
64	13.6	46.0	0.3	6.2	7	92	75
65	13.7	46.8	0.4	6.3	7	92	75
66	9.3	47.0	0.2	4.3	7	92	75
67	13.1	46.0	0.3	6.0	7	92	75
68	16.8	46.7	0.3	7.7	7	92	75
69	15.3	47.1	0.5	7.0	7	92	75
70	8.0	46.3	0.3	3.7	7	92	75
71	6.7	46.0	0.3	3.1	7	92	75
72	11.2	46.0	0.2	5.1	7	92	75
73	7.7	47.5	0.3	3.5	7	92	75
74	10.9	51.3	0.3	5.0	7	92	75
75	11.9	52.0	0.3	5.5	7	92	75
76	13.1	48.1	0.2	6.0	7	92	75
77	10.9	48.9	0.3	5.0	7	92	75
78	12.4	48.4	0.3	5.7	7	92	75
79	10.3	48.3	0.3	4.7	7	92	75
80	8.5	48.1	0.4	3.9	7	92	75
81	6.1	50.9	0.3	2.8	7	92	75
82	12.9	48.0	0.4	5.9	7	92	75
83	16.9	46.7	0.3	7.7	7	92	75

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	1m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
84	12.8	47.4	0.2	5.9	7	92	75
85	9.4	47.6	0.3	4.3	7	92	75
86	11.5	48.8	0.4	5.2	7	92	75
87	10.1	48.1	0.5	4.6	7	92	75
88	9.5	47.1	0.5	4.4	7	92	75
89	9.9	46.9	0.4	4.5	7	92	75
90	8.7	47.4	0.4	4.0	7	92	75
91	8.9	46.5	0.3	4.1	7	92	75
92	12.7	46.0	0.4	5.8	6	92	75
93	14.7	46.5	0.3	6.7	6	92	75
94	11.8	46.0	0.4	5.4	6	92	75
95	11.5	46.4	0.2	5.3	6	92	75
96	9.3	48.0	0.4	4.3	6	92	75
97	11.4	49.0	0.4	5.2	6	92	75
98	7.9	48.6	0.3	3.6	6	92	75
99	9.9	46.4	0.2	4.5	6	92	75
100	10.0	46.2	0.4	4.6	6	92	75
101	10.5	46.2	0.3	3.0	6	92	75
102	9.0	45.5	0.3	4.5	6	92	75
103	10.2	45.9	0.4	4.7	6	92	75
104	10.7	49.3	0.3	4.9	6	92	75
105	8.9	51.2	0.3	4.1	6	92	75
106	6.2	47.3	0.4	2.8	6	92	75
107	11.1	48.0	0.4	5.1	6	92	75
108	10.8	50.2	0.2	5.0	6	92	75
109	13.8	48.3	0.2	6.3	6	92	75
110	15.0	48.6	0.5	6.9	6	92	75
111	12.3	47.5	0.3	5.6	6	92	75
112	12.9	47.5	0.3	5.9	6	92	75
113	11.5	47.6	0.5	5.3	6	92	75
114	7.1	62.0	0.4	3.2	6	92	75
115	6.7	49.8	0.4	3.1	6	92	75
116	9.8	49.0	0.5	4.5	6	92	75
117	16.2	50.4	0.4	7.4	6	92	75
118	13.0	51.5	0.3	6.0	6	92	75
119	10.5	48.7	0.5	4.8	6	92	75
120	10.2	47.4	0.4	4.7	6	92	75
121	19.8	48.2	0.3	9.1	6	92	75
122	14.0	49.0	0.3	6.4	6	92	75
123	12.5	47.0	0.3	3.9	6	92	75
124	13.5	45.6	0.2	6.2	6	92	75
125	18.3	47.6	0.2	8.4	6	92	75
126	14.7	49.2	0.3	6.8	6	92	75
127	14.4	47.8	0.4	6.6	6	92	75
128	9.9	46.5	0.3	4.5	6	92	75
129	8.1	53.6	0.4	3.7	6	92	75
130	7.6	50.4	0.5	3.5	6	92	75
131	8.2	46.7	0.2	3.8	6	91	75
132	13.2	45.9	0.4	4.5	6	91	75
141	7.2	45.7	0.3	3.3	6	92	75
142	13.3	43.8	0.3	6.1	6	92	75
143	19.6	43.0	0.4	9.0	6	92	75
144	17.6	43.8	0.3	8.0	6	92	75
145	14.8	43.5	0.3	6.8	6	92	75
146	10.9	43.1	0.4	5.0	6	92	75
147	8.6	43.0	0.5	3.9	6	91	75
148	8.4	43.5	0.2	3.9	6	91	75
149	10.7	43.2	0.6	4.9	6	91	75
150	11.6	43.7	0.7	5.3	6	91	75
151	11.8	45.4	0.4	5.4	6	91	75
152	14.7	48.6	0.3	6.7	6	92	75
153	13.2	47.4	0.2	6.0	6	92	75
154	17.6	46.6	0.4	8.0	6	92	75
155	17.1	45.1	0.5	7.8	6	92	75
156	16.7	45.5	0.4	7.5	6	92	75
157	13.0	44.5	0.3	6.0	6	92	75
158	14.8	46.4	0.2	6.8	6	92	75
159	12.5	47.8	0.3	5.7	6	92	75
160	14.2	45.7	0.4	6.5	6	92	75
161	9.2	48.0	0.4	4.2	6	92	75
162	14.5	47.0	0.4	6.6	6	92	75
163	17.7	46.5	0.3	8.1	6	92	75
164	13.8	49.0	0.2	6.3	6	92	75
165	11.7	48.4	0.2	5.4	6	91	75
166	12.5	46.1	0.1	5.7	6	91	75

***Blank data denotes values that

Table E.02 Measurement data - Background

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

Report ID: 0820.04.T16.RP3

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	LAEq	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
250	10.4	45.7	0.4	4.7	7	91	75
251	7.5	43.8	0.5	3.4	7	91	75
252	7.3	42.5	0.5	3.3	7	91	75
253	5.6	43.0	0.3	2.6	7	91	75
254	8.1	44.5	0.3	3.7	7	91	75
255	9.1	43.2	0.5	4.2	7	91	75
256	7.8	43.2	0.4	3.6	7	91	75
257	6.0	42.5	0.5	2.7	7	91	75
258	8.5	42.8	0.3	3.9	7	91	75
259	10.8	43.5	0.3	4.9	7	91	75
260	8.3	43.4	0.2	3.8	7	91	75
261	9.6	43.1	0.2	4.4	7	91	75
262	6.4	42.0	0.3	2.9	7	91	75
263	5.9	43.0	0.2	2.7	7	91	75
264	13.3	46.3	0.2	6.1	7	91	75
265	12.2	48.0	0.3	5.6	7	91	75
266	11.8	44.1	0.2	5.4	7	90	75
267	12.9	42.9	0.3	5.9	7	90	75
268	10.9	43.3	0.3	7.3	7	90	75
269	11.0	42.4	0.4	5.0	7	90	75
270	3.2	44.2	0.4	1.5	7	90	75
271	1.6	44.3	0.3	0.7	7	90	75
272	5.5	44.7	0.3	2.5	7	91	75
273	9.3	47.0	0.3	4.3	7	92	75
274	5.3	50.4	0.3	2.4	7	92	75
275	7.5	48.1	0.5	3.4	7	92	75
276	9.8	49.0	0.4	4.5	7	92	75
277	12.5	47.4	0.4	5.7	7	92	75
278	1.1	45.2	0.1	6.5	7	91	75
279	8.3	46.5	0.2	3.8	7	90	75
280	11.2	46.4	0.2	5.1	7	90	75
281	11.8	47.5	0.3	5.4	7	90	75
282	12.4	48.5	0.3	5.7	7	90	75
283	7.6	45.4	0.4	3.5	7	90	75
284	12.2	44.6	0.5	5.6	7	90	75
285	15.2	48.4	0.5	7.0	7	90	75
286	11.4	47.4	0.3	5.2	7	90	75
287	10.9	45.2	0.3	5.0	7	90	75
288	11.0	45.6	0.4	5.0	7	90	75
289	10.5	45.3	0.4	8.2	7	90	75
290	14.1	46.2	0.5	6.5	7	90	75
291	9.4	47.2	0.4	4.3	7	90	75
292	11.5	48.7	0.2	5.3	7	90	75
293	14.7	48.1	0.3	6.7	7	90	75
294	13.2	48.1	0.4	6.1	7	90	75
295	12.6	45.0	0.2	5.8	7	90	75
296	6.8	43.5	0.4	3.1	7	90	75
297	4.1	42.9	0.4	1.9	7	90	75
298	6.2	42.6	0.3	2.8	7	90	75
299	10.2	43.2	0.4	4.7	7	90	75
300	10.7	42.8	0.4	4.9	7	90	75
301	15.5	48.1	0.5	4.7	7	90	75
302	8.2	46.4	0.5	3.7	7	90	75
303	6.9	44.4	0.3	3.1	7	90	75
304	11.3	46.1	0.4	5.2	7	90	75
305	11.1	45.0	0.2	5.1	7	90	75
306	19.4	47.9	0.2	8.9	7	90	75
307	17.3	47.4	0.4	7.9	7	90	75
308	14.2	44.3	0.6	6.5	7	89	75
309	11.0	46.0	0.5	5.0	7	88	75
310	13.2	47.1	0.4	6.0	7	88	75
311	9.6	43.5	0.3	4.4	7	88	75
312	7.3	45.8	0.4	3.3	7	88	75
313	7.2	46.2	0.3	3.3	7	88	75
314	12.4	44.0	0.6	5.7	7	89	75
315	10.6	45.3	0.9	4.9	7	89	75
316	8.5	44.2	0.5	3.9	7	89	75
317	8.3	43.5	0.3	3.8	7	89	75
318	5.9	44.0	0.3	2.7	7	89	75
319	12.6	44.0	0.5	5.8	7	89	75
320	7.9	44.9	0.4	3.6	7	90	75
321	5.5	44.4	0.3	2.5	7	90	75
322	6.6	43.1	0.3	3.0	7	90	75
323	5.0	45.6	0.3	2.5	7	90	75
324	7.5	44.4	0.6	3.4	7	90	75
325	4.1	45.2	0.5	1.9	7	90	75
326	6.7	45.8	0.4	3.1	7	90	75
327	8.1	45.4	0.5	3.7	7	90	75
328	16.6	45.0	0.4	7.6	7	90	75
329	17.6	43.6	0.5	8.1	7	90	75
330	12.8	43.9	0.4	5.9	7	90	75
331	14.8	47.3	0.4	6.8	7	90	75
332	15.5	48.8	0.4	7.1	7	89	75

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	LAEq	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
333	10.0	52.4	0.3	7.2	7	88	75
334	10.0	50.7	0.3	4.6	7	88	75
335	9.2	48.0	0.5	4.2	7	88	75
336	10.0	50.0	0.4	4.6	7	88	75
337	12.5	48.2	0.4	5.7	7	88	75
338	10.2	49.7	0.3	4.7	7	88	75
339	15.2	47.2	0.5	6.8	7	89	75
340	13.2	46.5	0.5	8.0	7	89	75
341	12.7	46.6	0.5	5.8	7	89	75
342	18.3	45.6	0.6	8.4	7	89	75
343	15.6	47.3	0.5	7.2	7	89	75
344	12.5	44.3	0.4	5.7	7	89	75
345	20.0	44.7	0.3	9.2	7	89	75
346	16.7	45.6	0.6	7.6	7	89	75
347	16.7	46.2	0.4	7.6	7	89	75
348	14.1	45.5	0.4	6.5	7	89	75
349	15.2	46.7	0.4	7.0	7	89	75
350	14.7	47.0	0.3	6.7	7	88	75
351	20.7	47.0	0.5	9.5	7	88	75
352	16.2	46.8	0.3	7.4	7	88	75
353	10.7	46.4	0.4	4.9	7	88	75
354	16.2	46.6	0.3	7.4	7	88	75
355	15.8	45.9	0.4	7.3	7	88	75
356	11.5	44.9	0.3	5.3	7	88	75
357	8.7	48.2	0.3	4.0	7	88	75
358	12.7	48.3	0.4	5.8	7	88	75
359	10.0	46.8	0.4	4.6	7	88	75
360	6.6	49.7	0.3	3.0	7	88	75
361	15.6	47.0	0.4	7.3	7	88	75
362	12.6	45.7	0.5	5.8	7	88	75
363	12.2	45.2	0.4	5.6	7	88	75
364	9.7	43.5	0.4	4.4	6	89	75
365	15.5	42.1	0.5	7.1	6	89	75
366	10.8	43.0	0.5	4.9	6	89	75
367	12.0	43.4	0.3	5.5	6	89	75
368	9.0	44.2	0.3	4.1	6	89	75
369	13.4	51.2	0.3	6.1	7	89	75
370	13.2	42.7	0.3	6.1	7	88	75
371	10.6	43.4	0.2	4.9	7	88	75
372	9.8	43.0	0.3	4.5	7	88	75
373	9.5	45.4	0.4	4.5	7	88	75
374	11.9	44.1	0.3	5.4	7	88	75
375	12.4	43.2	0.3	5.7	7	88	75
376	15.5	42.3	0.3	4.2	7	88	75
377	13.0	42.4	0.4	5.9	7	88	75
378	6.5	42.8	0.4	3.0	7	88	75
379	7.7	43.2	0.3	3.5	7	88	75
380	8.5	44.0	0.6	3.9	7	88	75
381	11.9	49.1	0.7	5.4	7	88	75
382	9.4	45.5	0.6	4.3	7	88	75
383	11.4	46.6	0.3	5.2	7	88	75
384	8.6	45.3	0.4	4.0	7	88	75
385	10.5	44.7	0.3	4.8	7	88	75
386	9.8	43.8	0.3	4.2	7	88	75
387	9.1	42.0	0.4	4.1	7	88	75
388	10.4	43.3	0.4	4.8	7	88	75
389	11.0	44.8	0.4	5.0	7	88	75
390	5.0	46.8	0.3	2.3	7	88	75
391	9.8	44.8	0.3	4.5	7	88	75
392	8.3	43.9	0.3	3.8	7	88	75
393	10.2	42.6	0.2	4.7	7	88	75
394	12.1	43.5	0.1	5.5	7	88	75
395	12.7	43.1	0.3	5.8	7	88	75
396	11.1	44.2	0.3	7.6	7	88	75
397	20.1	42.4	0.2	9.2	7	88	75
398	15.1	43.6	0.2	6.9	7	88	75
399	11.3	42.8	0.3	5.2	7	88	75
400	14.6	42.3	0.3	6.7	7	88	75
401	8.6	42.3	0.2	4.0	7	88	75
402	12.6	42.0	0.3	5.8	7	88	75
403	7.3	42.5	0.3	3.4	7	88	75
404	9.3	43.0	0.3	4.2	7	88	75
405	12.0	42.9	0.5	5.5	7	88	75
406	11.0	43.8	0.6	5.0	7	88	75
407	11.9	43.9	0.6	5.4	7	88	75

Table E.02 Measurement data - Background

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

Report ID: 0820.04.T16.RP3

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Created on: 9/13/2017

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
499	12.8	45.7	0.4	5.8	7	88	75
500	14.2	49.0	0.4	6.5	7	88	75
501	11.9	45.5	0.3	5.5	7	88	75
502	17.1	43.5	0.3	7.8	7	88	75
503	13.9	44.4	0.2	6.4	7	88	75
504	14.7	43.0	0.3	6.7	7	88	75
505	13.9	43.9	0.3	6.4	7	88	75
506	13.0	47.3	0.2	6.4	7	88	75
507	12.3	46.8	0.2	5.6	7	88	75
508	8.3	44.3	0.2	3.8	7	88	75
509	7.7	43.9	0.3	3.5	7	88	75
510	4.4	44.1	0.2	2.0	7	88	75
511	6.3	45.9	0.3	2.9	7	89	75
512	5.7	46.2	0.4	2.6	7	89	75
513	8.5	45.5	0.2	3.9	7	89	75
514	9.6	43.0	0.4	4.4	7	89	75
515	13.3	43.0	0.5	6.1	7	89	75
516	10.6	42.9	0.4	4.6	7	89	75
517	11.5	43.3	0.3	5.3	7	89	75
518	7.7	40.2	0.5	3.4	7	89	75
519	10.0	51.7	0.7	4.6	7	88	75
520	12.9	48.9	0.5	5.9	7	88	75
521	11.3	46.8	0.4	5.2	7	88	75
522	15.2	53.4	0.5	6.9	7	88	75
523	10.3	52.4	0.4	4.7	7	88	75
524	6.9	49.5	0.4	3.2	7	88	75
525	9.7	46.9	0.3	4.4	7	88	75
526	10.4	45.6	0.3	4.8	7	88	75
527	11.2	44.8	0.3	5.5	7	88	75
528	13.5	45.0	0.5	6.2	7	88	75
529	18.1	45.8	0.5	8.3	7	89	75
530	14.1	44.2	0.4	6.4	7	88	75
531	10.6	44.5	0.4	4.8	7	88	75
532	19.5	44.8	0.4	8.9	7	88	75
533	14.6	43.6	0.5	6.7	7	88	75
534	18.7	42.9	0.2	8.6	7	88	75
535	19.3	43.7	0.6	8.8	7	88	75
536	12.0	44.5	0.6	5.5	7	89	75
537	15.7	43.1	0.6	7.2	7	89	75
538	11.0	44.8	0.7	6.4	7	89	75
539	17.1	47.4	0.5	7.8	7	89	75
540	10.4	46.4	0.4	4.8	7	89	75
541	7.2	49.4	0.3	3.3	7	89	75
542	11.8	50.4	0.4	5.4	7	89	75
543	12.3	50.7	0.4	5.6	7	89	75
544	10.7	46.5	0.4	4.9	7	89	75
545	9.6	49.7	0.4	4.4	7	89	75
546	11.2	49.7	0.4	5.1	7	89	75
547	13.0	49.2	0.3	6.0	7	88	75
548	9.0	48.2	0.3	4.1	7	88	75
549	14.0	48.4	0.6	6.4	7	88	75
550	18.9	50.0	0.5	6.7	7	88	75
551	18.6	51.2	0.4	8.5	7	89	75
552	21.4	49.4	0.6	9.8	7	88	75
553	19.8	51.3	0.6	9.1	7	87	75
554	19.1	52.4	0.6	8.7	7	86	75
555	13.1	52.1	0.4	6.0	7	86	75
556	10.8	50.8	0.4	5.0	7	86	75
557	13.1	51.0	0.2	6.0	7	86	75
558	16.6	49.9	0.2	7.6	7	86	75
559	16.1	48.3	0.5	7.4	7	87	75
560	9.0	48.3	0.6	4.1	7	87	75
561	10.0	50.5	0.4	4.6	7	87	75
562	11.0	47.8	0.3	5.4	7	87	75
563	8.0	49.2	0.5	3.7	7	87	75
564	9.7	49.0	0.6	4.4	7	87	75
565	9.8	49.1	0.5	4.5	7	87	75
566	5.7	49.2	0.6	2.6	7	87	75
567	8.0	49.6	0.5	3.6	7	87	75
568	9.5	50.2	0.4	4.4	7	87	75
569	11.1	49.4	0.5	5.1	7	87	75
570	9.2	48.7	0.4	4.2	7	87	75
571	11.5	51.7	0.3	5.3	7	87	75
572	14.1	48.1	0.4	6.8	7	87	75
573	12.8	46.8	0.3	5.9	7	87	75
574	11.2	46.4	0.3	5.1	7	87	75
575	13.8	47.1	0.4	6.3	7	87	75
576	17.4	46.4	0.4	8.0	7	87	75
577	16.1	45.5	0.4	7.4	7	86	75
578	10.1	46.4	0.4	4.6	7	86	75
579	6.6	44.5	0.4	3.0	7	86	75
580	9.3	44.2	0.3	4.2	7	86	75
581	9.9	44.2	0.5	4.5	7	86	75

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
582	8.3	48.4	0.4	3.8	7	86	75
583	8.4	49.1	0.4	3.8	7	87	75
584	13.7	46.1	0.7	6.3	7	87	75
585	12.0	47.5	0.6	5.5	7	87	75
586	13.8	50.5	0.4	6.3	7	87	75
587	10.3	49.2	0.3	4.7	7	87	75
588	8.3	45.3	0.3	3.8	7	87	75
589	6.4	43.5	0.2	2.9	7	87	75
590	5.1	44.2	0.6	2.3	7	87	75
591	10.5	47.1	0.4	4.8	7	87	75
592	13.9	44.2	0.3	6.4	7	87	75
593	16.7	46.1	0.2	7.6	7	87	75
594	12.3	46.0	0.3	5.6	7	87	75
595	9.6	43.7	0.3	4.4	7	87	75
596	13.1	42.8	0.3	6.0	8	87	75
597	7.9	42.6	0.3	3.6	8	87	75
598	11.5	42.4	0.3	5.3	8	87	75
599	12.5	42.4	0.5	5.7	8	87	75
600	9.8	44.5	0.2	5.6	8	87	75
601	11.8	42.4	0.4	6.8	7	87	75
602	16.3	42.7	0.4	7.5	7	87	75
603	13.0	43.0	0.3	6.0	7	87	75
604	13.6	43.3	0.4	6.2	7	87	75
605	13.4	43.2	0.6	6.1	7	87	75
606	13.4	44.3	0.4	6.1	7	87	75
607	14.7	44.0	0.4	6.7	7	87	75
608	12.9	44.0	0.3	5.9	7	87	75
609	11.0	43.6	0.2	5.0	7	87	75
610	12.4	44.1	0.3	5.7	7	87	75
611	12.2	44.6	0.2	5.6	7	87	75
612	14.9	44.4	0.2	6.8	7	87	75
613	11.5	45.0	0.2	5.3	7	87	75
614	12.5	44.4	0.3	5.7	7	87	75
615	12.7	44.5	0.4	5.8	7	87	75
616	14.3	42.7	0.3	6.5	7	87	75
617	7.9	44.9	0.4	3.6	7	87	75
618	13.8	43.1	0.4	6.3	7	87	75
619	11.8	44.6	0.3	5.4	7	88	75
620	10.0	44.8	0.2	4.8	7	88	75
621	9.5	46.1	0.3	4.5	7	88	75
622	10.2	45.4	0.4	4.7	7	88	75
623	11.8	44.2	0.4	5.4	7	88	75
624	13.9	44.9	0.3	6.3	7	88	75
625	9.2	48.1	0.2	4.2	7	88	75
626	9.7	47.2	0.3	4.4	7	88	75
627	10.6	47.3	0.3	4.9	7	88	75
628	8.5	45.5	0.2	3.9	7	88	75
629	11.2	44.6	0.3	5.1	7	88	75
630	10.6	44.6	0.4	4.8	7	88	75
631	8.8	45.4	0.4	4.0	7	88	75
632	5.0	44.5	0.3	2.3	7	88	75
633	4.5	43.5	0.3	2.1	7	88	75
634	5.3	44.6	0.3	2.4	7	88	75
635	6.3	45.2	0.3	2.9	7	88	75
636	6.7	44.5	0.3	3.1	7	88	75
637	9.7	44.6	0.3	4.4	7	89	75
638	9.4	42.4	0.3	4.3	7	89	75
639	8.2	45.2	0.3	3.7	7	89	75
640	8.6	41.8	0.3	3.9	7	89	75
641	6.3	40.6	0.4	2.9	7	89	75
642	5.1	42.8	0.4	2.3	7	89	75
643	6.7	41.7	0.3	3.0	7	89	75
644	6.6	44.3	0.2	3.0	7	89	75
645	7.5	45.6	0.3	3.6	7	89	75
646	10.5	43.9	0.3	4.8	7	89	75
647	9.5	41.2	0.3	4.4	7	89	75
648	9.5	40.9	0.3	4.4	7	89	75
649	9.4	41.6	0.3	4.3	7	89	75
650	9.9	43.5	0.3	4.5	7	89	75
651	8.0	43.0	0.3	3.7	7	89	75
652	12.6	43.4	0.2	5.8	7	89	75
653	10.4	40.8	0.2	4.8	7	89	75
654	10.5	40.8	0.2	4.8	7	89	75
655	14.1	41.3	0.3	6.4	7	89	75

Table E.02 Measurement data - Background

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	Turbine Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
748	9.0	41.5	0.2	4.1	7	88	75
749	9.8	41.4	0.2	4.5	7	88	75
750	14.9	41.1	0.2	6.8	7	88	75
751	14.1	41.1	0.2	6.5	7	88	75
752	11.1	41.8	0.2	5.1	7	89	75
753	7.7	41.9	0.2	3.5	7	89	75
754	7.6	41.9	0.2	4.4	7	89	75
755	14.2	43.1	0.2	6.5	7	89	75
756	12.9	44.9	0.2	5.9	7	89	75
757	8.5	46.7	0.2	3.9	7	89	75
758	9.3	44.7	0.1	4.3	8	89	75
759	10.2	44.9	0.2	4.7	8	89	75
760	9.7	47.8	0.4	4.4	8	89	75
761	10.2	46.3	0.5	4.7	8	89	75
762	10.9	43.2	0.4	5.0	8	89	75
763	12.0	46.3	0.2	5.5	8	89	75
764	10.9	46.3	0.1	5.0	8	88	75
765	12.6	42.6	0.1	5.5	8	88	75
766	9.9	41.8	0.1	4.5	5	88	75
767	7.5	42.8	0.1	3.4	8	88	75
768	9.9	47.1	0.3	4.5	8	88	75
769	10.2	44.9	0.2	4.7	8	88	75
770	10.9	44.1	0.4	5.0	8	88	75
771	10.3	44.3	0.4	4.7	8	88	75
772	7.7	46.0	0.6	3.5	8	88	75
773	12.7	47.4	0.4	5.8	8	88	75
774	12.6	49.2	0.4	5.8	8	88	75
775	10.2	49.7	0.2	4.7	8	88	75
776	10.9	46.1	0.1	5.5	8	88	75
777	15.0	44.8	0.2	6.8	5	88	75
778	13.6	45.1	0.2	6.2	8	88	75
779	11.9	46.6	0.4	5.4	8	88	75
780	17.4	48.5	0.7	8.0	8	88	75
781	16.0	48.1	0.6	7.3	8	88	75
782	18.7	44.4	0.4	8.6	8	87	75
783	14.6	47.2	0.4	6.7	8	87	75
784	9.0	45.0	0.5	4.1	8	87	75
785	8.2	44.2	0.5	3.7	8	87	75
786	12.2	49.9	0.3	5.6	8	87	75
787	10.5	47.3	0.2	4.8	5	87	75
788	13.2	45.4	0.3	5.7	5	88	75
789	14.4	44.9	0.2	6.6	8	88	75
790	21.2	44.7	0.3	9.7	8	88	75
791	20.0	46.2	0.6	9.1	8	88	75
792	16.1	46.5	0.5	7.4	8	88	75
793	15.4	49.2	0.4	7.0	8	88	75
794	12.2	49.6	0.4	5.6	8	87	75
795	11.5	47.9	0.3	5.3	8	87	75
796	12.7	48.1	0.2	5.8	8	87	75
797	11.2	48.7	0.3	5.1	8	87	75
798	12.8	43.6	0.4	5.9	5	87	75
799	15.5	45.6	0.7	6.9	5	87	75
800	14.3	46.9	0.4	6.5	8	87	75
801	13.2	45.1	0.2	6.0	8	87	75
802	10.7	44.9	0.3	4.9	8	87	75
803	8.7	46.7	0.3	4.0	8	87	75
804	5.1	45.8	0.2	2.3	8	87	75
805	7.3	45.2	0.2	3.3	8	88	75
806	8.9	45.3	0.4	4.1	8	88	75
807	9.6	44.0	0.4	4.4	8	88	75
808	12.0	42.9	0.3	5.5	8	88	75
809	10.0	42.7	0.2	4.6	8	88	75
810	8.9	45.0	0.3	4.1	8	88	75
811	13.4	44.1	0.3	5.1	5	88	75
812	11.9	50.2	0.2	5.5	8	88	75
813	14.7	45.1	0.2	6.7	8	88	76
814	10.2	46.3	0.2	4.7	8	88	76
815	13.9	46.6	0.1	6.4	8	88	76
816	11.2	48.4	0.2	5.1	8	88	76
817	10.3	49.5	0.2	4.7	8	88	76
818	8.4	45.3	0.2	3.8	8	88	75
819	7.6	43.9	0.2	3.5	8	88	75
820	13.1	45.9	0.2	6.0	5	88	75
821	15.1	45.3	0.2	6.9	5	88	75
822	13.6	45.5	0.4	6.2	8	88	75
823	10.1	45.6	0.8	4.6	8	88	75
824	12.0	43.5	0.6	5.5	8	88	75
825	14.7	44.9	0.4	6.7	8	88	75
826	15.3	45.8	0.3	7.0	8	88	75
827	12.3	43.3	0.7	5.6	8	88	75
828	11.3	44.2	0.7	5.2	8	88	75
829	9.6	46.8	0.4	4.4	8	88	75
830	17.5	46.1	0.3	8.0	8	88	75

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	L _{Aeq}	RPM	Turbine Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
831	17.5	43.5	0.5	8.0	8	88	75
832	13.4	46.0	0.6	6.1	8	88	75
833	12.9	46.6	0.5	5.9	8	88	75
834	12.7	50.2	0.3	5.8	8	88	75
835	8.8	47.7	0.5	4.0	8	88	75
836	10.8	46.9	0.5	4.9	8	88	75
837	13.3	46.4	0.4	6.1	8	88	75
838	10.9	44.0	0.3	5.0	8	88	75
839	8.5	44.9	0.2	3.9	8	88	75
840	5.5	46.0	0.3	2.5	8	89	75
841	9.9	46.4	0.5	4.5	8	88	75
842	16.1	47.7	0.4	7.4	8	88	75
843	11.5	46.9	0.5	5.3	8	88	75
844	19.2	46.5	0.6	8.8	8	88	75
845	15.3	48.3	0.3	7.0	8	88	75
846	15.7	48.2	0.5	7.2	8	88	75
847	19.1	54.8	0.7	8.7	8	88	75
848	17.4	47.0	0.3	4.1	8	88	75
849	13.5	54.0	0.7	8.2	8	87	75
850	9.3	52.5	0.5	4.3	8	87	75
851	9.8	50.0	0.5	4.5	8	87	76
852	17.4	47.9	0.6	8.0	8	87	76
853	10.3	47.0	0.4	4.7	8	87	76
854	11.4	51.6	0.4	5.2	8	87	75
855	7.1	51.3	0.5	3.3	8	87	75
856	5.9	53.8	0.6	2.7	8	87	75
857	9.3	47.9	0.5	4.3	8	87	75
858	11.6	47.7	0.4	5.3	8	87	75
859	17.0	47.0	0.3	4.1	8	88	75
860	10.8	45.5	0.5	4.1	8	88	75
861	13.5	53.0	0.5	6.2	8	88	75
862	8.5	47.8	0.3	3.9	8	88	75
863	9.0	49.0	0.2	4.1	8	88	75
864	7.5	48.2	0.1	3.4	8	88	75
865	6.5	48.0	0.1	3.0	8	88	75
866	8.4	50.4	0.2	3.9	8	88	76
867	11.7	52.9	0.3	5.4	8	88	76
868	17.3	48.2	0.4	7.9	8	88	76
869	14.7	47.8	0.4	6.7	8	88	76
870	13.7	45.3	0.4	6.3	8	88	76
871	12.8	43.8	0.4	5.9	8	88	76
872	7.6	44.1	0.3	3.5	8	88	76
873	6.8	47.0	0.3	3.1	8	88	76
874	8.7	47.0	0.3	3.4	8	88	76
875	12.5	45.8	0.3	4.1	8	88	76
876	8.1	45.7	0.1	3.7	8	88	76
877	7.0	44.6	0.2	3.2	8	88	76
878	17.7	44.8	0.3	8.1	8	88	76
879	18.7	47.6	0.3	8.5	8	88	76
880	12.8	47.5	0.6	5.8	8	88	76
881	10.4	48.0	0.4	4.8	8	87	76
882	12.9	44.2	0.4	5.9	8	88	76
883	17.7	44.9	0.3	4.4	8	87	76
884	11.9	44.6	0.7	6.4	8	87	76
885	10.1	45.5	0.7	4.6	8	88	76
886	9.8	45.0	0.5	4.2	8	88	76
887	9.6	47.2	0.5	4.4	8	88	76
888	9.2	45.6	0.5	4.2	8	88	76
889	10.6	44.1	0.6	4.9	8	88	76
890	12.1	43.7	0.4	7.8	8	88	76
891	9.0	45.1	0.3	5.7	8	88	76
892	12.6	47.4	0.4	5.8	8	87	76
893	12.9	48.6	0.3	5.9	8	87	76
894	10.5	45.3	0.3	4.4	8	87	76
895	13.9	44.6	0.7	6.4	8	87	76
896	10.1	45.5	0.7	4.6	8	88	76
897	9.8	45.0	0.5	4.2	8	88	76
898	14.7	44.7	0.3	6.7	8	87	76
899	11.2	44.0	0.5	5.1	8	87	76
900	14.7	44.7	0.3	6.7	8	87	76
901	8.1	45.6	0.6	3.7	8	88	76
902	12.1	44.1	0.3	5.7	8	88	76
903	12.9	48.6	0.3	5.9	8	88	76
904	13.1	45.2	0.2	6.0	8	88	76</td

Table E.02 Measurement data - Background

Project: McLeans Mountain Wind Farm - Turbine T16 - IEC 61400-11 Measurement

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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	LAEq	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
997	5.5	44.6	0.3	2.5	8	89	76
998	12.1	46.9	0.3	5.5	8	89	76
999	16.5	45.1	0.2	7.6	8	89	76
1000	13.8	42.5	0.2	6.3	8	89	76
1001	12.6	43.4	0.4	5.8	8	89	76
1002	11.7	42.9	0.5	5.4	8	89	76
1003	8.9	42.3	0.3	4.1	8	89	76
1004	10.5	45.5	0.3	5.0	5	89	76
1005	10.1	43.1	0.3	4.6	8	89	76
1006	12.6	45.3	0.4	5.8	8	89	76
1007	13.7	46.8	0.4	6.3	8	89	76
1008	17.4	46.3	0.4	8.0	8	89	76
1009	17.0	44.5	0.6	7.8	8	89	76
1010	16.4	41.7	0.4	7.5	8	90	75
1011	14.7	43.4	0.3	6.7	8	90	75
1012	9.7	46.7	0.5	4.4	8	90	75
1013	9.1	47.3	0.5	4.2	8	90	75
1014	11.2	48.6	0.4	5.1	8	90	75
1015	6.7	44.5	0.3	3.1	5	90	75
1016	8.2	46.0	0.2	3.7	8	90	75
1017	9.4	43.5	0.2	4.3	8	90	75
1018	11.2	43.1	0.1	5.1	8	90	75
1019	7.5	43.3	0.1	3.4	8	90	75
1020	8.1	44.5	0.2	3.7	8	90	75
1021	7.2	43.5	0.2	3.3	8	90	75
1022	7.6	43.2	0.3	3.5	8	90	75
1023	8.5	44.0	0.3	3.9	8	90	75
1024	9.0	44.9	0.4	4.1	8	90	75
1025	9.7	43.8	0.4	4.5	8	90	75
1026	7.5	42.4	0.4	3.5	5	90	75
1027	9.9	42.7	0.3	4.5	8	90	75
1028	14.5	41.7	0.3	6.6	8	90	75
1029	12.8	43.5	0.3	5.8	8	90	75
1030	13.5	47.7	0.3	6.2	8	90	75
1031	11.7	43.3	0.6	5.4	8	90	75
1032	10.3	43.7	0.5	4.7	8	90	75
1033	15.1	43.4	0.3	6.9	8	90	75
1034	10.8	43.0	0.3	5.0	8	90	75
1035	11.1	43.4	0.3	5.1	8	90	75
1036	7.1	42.3	0.6	3.3	8	90	75
1037	4.7	45.5	0.5	2.2	5	90	75
1038	10.6	47.5	0.3	4.8	8	90	75
1039	11.9	46.6	0.2	5.4	8	90	75
1040	13.9	47.1	0.2	6.4	8	91	76
1041	10.5	45.0	0.1	4.8	8	91	76
1042	9.1	43.9	0.3	4.2	8	91	76
1043	9.1	42.1	0.5	4.2	8	91	76
1044	12.5	42.4	0.5	5.7	8	91	76
1045	10.1	42.0	0.5	4.6	8	91	76
1046	10.2	43.0	0.3	4.7	8	90	76
1047	7.0	41.2	0.2	3.6	8	90	76
1048	6.6	42.5	0.1	2.9	5	90	76
1049	9.2	44.4	0.3	3.8	8	91	76
1050	9.6	41.3	0.4	4.4	8	90	75
1051	9.5	41.1	0.3	4.3	8	91	76
1052	10.6	43.7	0.3	4.8	8	91	76
1053	9.7	44.0	0.3	4.5	8	91	76
1054	8.4	42.2	0.3	3.8	8	91	76
1055	8.0	40.8	0.2	3.7	8	91	76
1056	5.1	42.3	0.2	2.4	8	91	76
1057	5.0	41.4	0.2	2.3	8	91	76
1058	6.3	40.5	0.1	2.9	8	91	76
1059	6.4	39.5	0.1	2.9	8	91	76
1060	7.4	40.1	0.1	3.4	5	91	76
1061	6.3	40.5	0.1	2.9	8	91	76
1062	7.6	39.4	0.1	3.5	8	91	76
1063	8.2	39.5	0.3	3.8	8	91	76
1064	7.7	40.2	0.3	3.5	8	91	76
1065	8.8	40.7	0.3	4.0	8	91	76
1066	7.1	42.5	0.5	3.2	8	91	76
1067	6.9	42.3	0.5	3.2	8	91	76
1068	7.2	41.2	0.3	3.3	8	91	76
1069	7.2	40.2	0.2	2.9	8	91	76
1070	7.0	40.2	0.2	3.2	8	91	76
1071	8.8	41.9	0.1	4.0	5	91	76
1072	9.5	43.0	0.1	4.3	8	91	76
1073	7.3	44.2	0.1	3.4	8	91	76
1074	7.8	44.1	0.1	3.6	8	91	76
1075	8.2	42.8	0.1	3.8	8	91	76
1076	6.8	42.2	0.1	3.1	8	92	76
1077	8.7	41.5	0.1	4.0	8	92	76
1078	11.5	40.7	0.1	5.3	8	92	76
1079	17.8	41.4	0.2	8.2	8	92	76

***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	LAEq	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
1080	12.5	43.0	0.3	7.1	8	92	76
1081	11.8	42.0	0.5	5.4	8	92	76
1082	5.0	40.7	0.4	2.3	8	92	76
1084	2.0	40.9	0.3	0.9	8	92	76
1085	3.3	42.8	0.2	1.5	8	92	76
1086	4.0	43.0	0.1	2.7	8	92	76
1087	11.9	42.6	0.1	3.5	8	92	76
1088	12.6	42.5	0.1	5.8	8	92	76
1089	11.4	42.0	0.1	5.2	8	92	76
1090	6.6	42.5	0.1	3.0	8	92	76
1091	9.1	44.0	0.1	4.2	8	92	76
1092	14.2	44.8	0.1	6.5	8	92	76
1093	14.3	44.6	0.1	6.5	8	92	76
1094	17.0	44.6	0.1	7.8	8	91	76
1095	14.2	43.0	0.1	6.5	8	91	76
1096	9.6	46.2	0.1	4.4	8	91	76
1097	9.7	48.9	0.3	4.4	8	91	76
1098	9.9	47.1	0.2	4.5	8	91	76
1099	12.9	46.6	0.2	5.0	8	91	76
1100	10.6	43.3	0.2	4.8	8	92	76
1101	11.6	42.8	0.2	5.3	8	92	76
1102	9.5	42.9	0.1	4.4	8	92	76
1103	9.9	42.6	0.1	4.5	8	92	76
1104							
1105							
1106							
1107							
1108							
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***Blank data denotes values that were omitted in the analysis due to an extraneous event during recording.

Data Point #	Standardized Wind Speed	LAEq	RPM	10m Anemometer	Air Temperature	Pressure (hPa)	Relative Humidity (%)
1163							
1164							
1165							
1166							
1167							
1168							
1169							
1170							
1171							
1172							
1173							
1174							

End of Report
