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REPORT ID: **14462.00.T03.RP5**

Jericho Wind Energy Centre – Turbine T03
IEC 61400-11 Edition 3.0 Measurement Report

Prepared for:

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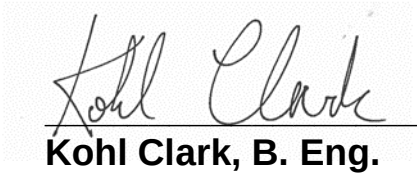
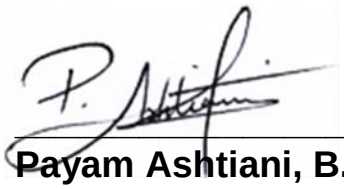


Kohl Clark, B. Eng.



Payam Ashtiani, B.A.Sc., P.Eng.

March 02, 2018 – Revision 5

Revision History

Revision Number	Description	Date
1	Issued Edition 2.1 test report	Nov 19, 2015
2	Minor revision to table 3	Dec 9, 2015
3	Issued Edition 3.0 test repot	Nov 07, 2017
4	Update to Edition 3.0 test report Section 3.2.1 and Appendix G Information for Regulator	March 02,2018
5	Revision to Appendix E Table E.01 and Table E.02 to fix reported values for pressure from Pa to kPa	April 26, 2018

This report in its entirety, including appendices contains 160 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 Jericho Wind LP ("Jericho") to conduct an acoustic measurement of turbine T03 at the Jericho Wind Energy Centre. 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 T03.

2 Wind Turbine Information

2.1 Wind turbine equipment specific information

Wind turbine specific equipment information for turbine T03 was provided by Jericho and is summarized in Tables 1 – 5.

Table 1 - Wind Turbine Details

Wind Turbine Details	
Manufacturer	General Electric
Model Number	1.6-100
Turbine ID	T03

Table 2 - Operating Details

Operating Details	
Vertical or Horizontal axis wind turbine	Horizontal
Upwind or downwind rotor	Upwind
Hub height	80m
Horizontal distance from rotor centre to tower axis	4100mm
Diameter of rotor	100m
Tower type (lattice or tube)	Tube
Passive stall, active stall, or pitch controlled turbine	Pitch control
Constant or variable speed	Variable speed
Power curve	See Figure B.01
Rotational speed at each integer standardised wind speed	See Figure B.02
Rated power output	1.6MW
Control software version	ToolBox 44.73.08

Table 3 - Rotor Details

Rotor Details	
Rotor control devices	Electrical Motors
Presence of vortex generators, stall strips, serrated trailing edges	Yes
Blade type	TPI
Serial number	30350, 50359, 20398
Number of blades	3

Table 4 - Gearbox Details

Gearbox Details	
Manufacturer	Rexroth
Model number	GPV457:IPALL60Hz
Serial number	980807-102-00776-W924

Table 5 - Generator Details

Generator Details	
Manufacturer	GE
Model number	IP54TFFOAN 108W6087P001
Serial number	G07663-105-03707-W930

2.2 Wind Turbine Location

Turbine T03 is located in the municipality of Lambton Shores, approximately 500m North of Bruce Scott Road, and 1170m West of Jericho Road. The area surrounding T03 is flat and consists primarily of farmland.

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 T03 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	2625197
Pre-amplifier	B&K 2671	2614901
Acoustic calibrator	B&K 4231	2513182

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 yaw position from turbine T03. Data for background measurements was obtained from a 10m high anemometer, which was placed as per guidelines outlined in IEC-61400-11.

The meteorological equipment is summarized in Table 7

Table 7 – Meteorological Measurement Equipment

Equipment	Manufacturer Name & Model	Serial Number
Anemometer	VAISALA WXT520	G4420002
Serial to Analog Converter	NOKEVAL 7470	A159784

3.2 Measurement Setup

3.2.1 Microphone Placement

The measurement microphone was setup 130m from the base of the turbine in 'Position 1', (i.e. downwind of the turbine, as per IEC 61400-11) at an elevation of 0 m relative to the base of T03. The slant distance (R_1) from microphone location to rotor centre includes the distance from rotor center (hub) to tower axis (R_1 = 156m^2). 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 T03 were taken, the surrounding land was composed of exposed soil and sprouting crops. The crop was short and as such the influence on the measurement was considered negligible. 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
May 20, 2015	Turbine ON	8:01 am	9:02 am
May 22, 2015	Turbine ON	12:18 pm	1:19 pm
	Turbine ON	1:19 pm	2:23 pm
	Turbine ON	2:24 pm	2:36 pm
	Turbine ON	2:43 pm	2:53 pm
May 25, 2015	Turbine ON	10:16 am	11:17 am
	Background	11:24 am	11:49 am
	Turbine ON	12:08 pm	12:46 pm
	Background	12:50 pm	1:21 pm

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 T03's power curve (as per the standard), while wind direction was provided by T03's yaw position. Background data was obtained from an anemometer located 10m above ground level near T03.

Temperature and pressure readings during the measurement period were provided by the 10m anemometer, located near turbine T03 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 >8.2dB for all wind bins. Additionally, the ambient noise levels are steady across the entire wind speed range, with a slope of 0.22dB 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. This method is in accordance with recommendations made by the convenor of the IEC 61400-11 working group and is detailed in Note N6.023.17 and is provided in Appendix F.

4.2 Special Notes & Considerations

There were no other turbines in the immediate vicinity of T03.

4.3 Analysis Details

The following section outlines analysis of the measurement data acquired for T03. 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	
7	50.1	190	41.9	72	49.5
7.5	51.4	160	41.9	84	50.9
8	52.7	99	42.4	98	52.3
8.5	53.6	65	42.4	96	53.3
9	54.2	36	42.7	71	53.9
9.5	54.5	51	42.5	71	54.2
10	54.3	39	42.3	61	54.1
10.5	54.5	49	42.8	29	54.2
11	54.6	33	42.9	13	54.3

4.6 Sound Power Level of Turbine

The calculated sound power level of the turbine T03 (as per IEC 61400-11) is summarized in Table 11 (hub height) and 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)
7	98.4	0.8
7.5	99.8	0.8
8	101.2	0.7
8.5	102.1	0.8
9	102.8	0.7
9.5	103.1	0.8
10	102.9	0.8
10.5	103.1	0.8
11	103.1	0.7

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

Wind Speed (m/s)	Apparent L_{WA}, (dBA)	Uncertainty (dB)
5	98.3	0.8
6	101.7	0.7
7	103.0	0.8
8	103.1	0.7

4.7 Tonality Analysis

The tonality analysis for Turbine T03 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 (%)
7	73	-3.8	-1.8	39	190	21%
8.5	131	-3.5	-1.5	60	65	92%
	589	-2.5	-0.1	25	65	38%
9	134	-4.3	-2.3	34	36	94%
	617	-0.5	2.0	31	36	86%
	1251	-3.4	-0.3	13	36	36%
9.5	136	-2.7	-0.7	50	51	98%
	615	0.0	2.5	36	51	71%
	1270	-0.9	2.1	27	51	53%
10	137	-2.8	-0.8	38	39	97%
	615	-1.1	1.3	31	39	79%
	1267	-2.5	0.6	25	39	64%
10.5	137	-2.9	-0.9	49	49	100%
	616	0.2	2.6	30	49	61%
	636	-3.6	-1.1	15	49	31%
	1270	-0.6	2.4	25	49	51%
11	137	-2.7	-0.7	33	33	100%
	621	0.7	3.1	30	33	91%
	1257	-0.3	2.8	25	33	76%

5 Closure

Measurements and analysis were carried on Turbine T03 of the Jericho Wind Energy Centre, located in the municipality of Lambton Shores 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".

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Appendix A
Site Details

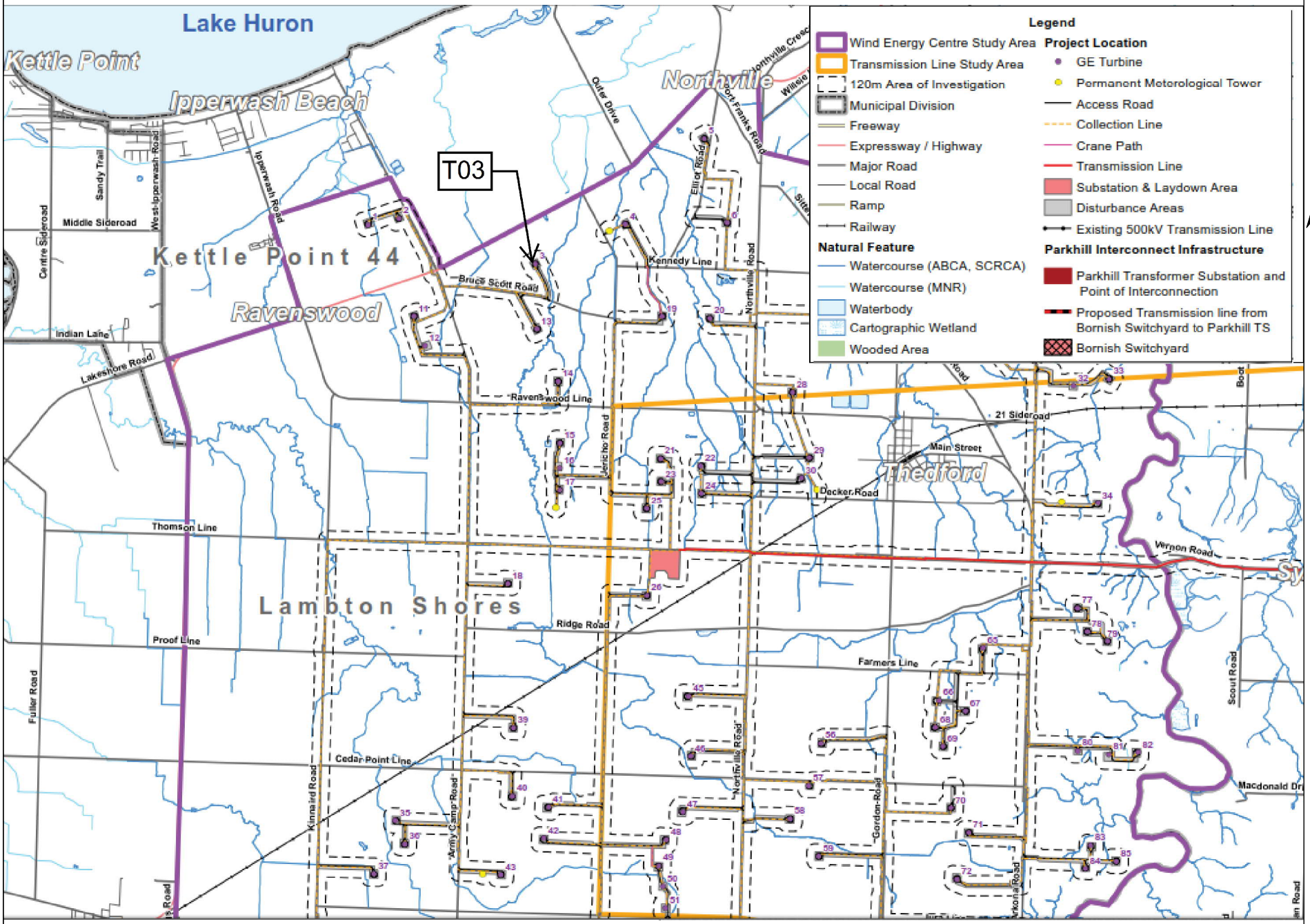

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Figure Title

Site plan

Figure A.01

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Figure Title

Site Photos

Figure A.02

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Appendix B
Turbine Information

Power Curve	
Hub Wind Speed (m/s)	Power (kW)
0	**0**
1	0
2	0
3	4
4	97
5	280
6	527
7	837
8	1217
9	1478
10	1597
11	1620
12	1620
13	1620
14	1620
15	1620
16	1620
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18	1620
19	1620
20	1620
21	1620
22	1620
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25	1620

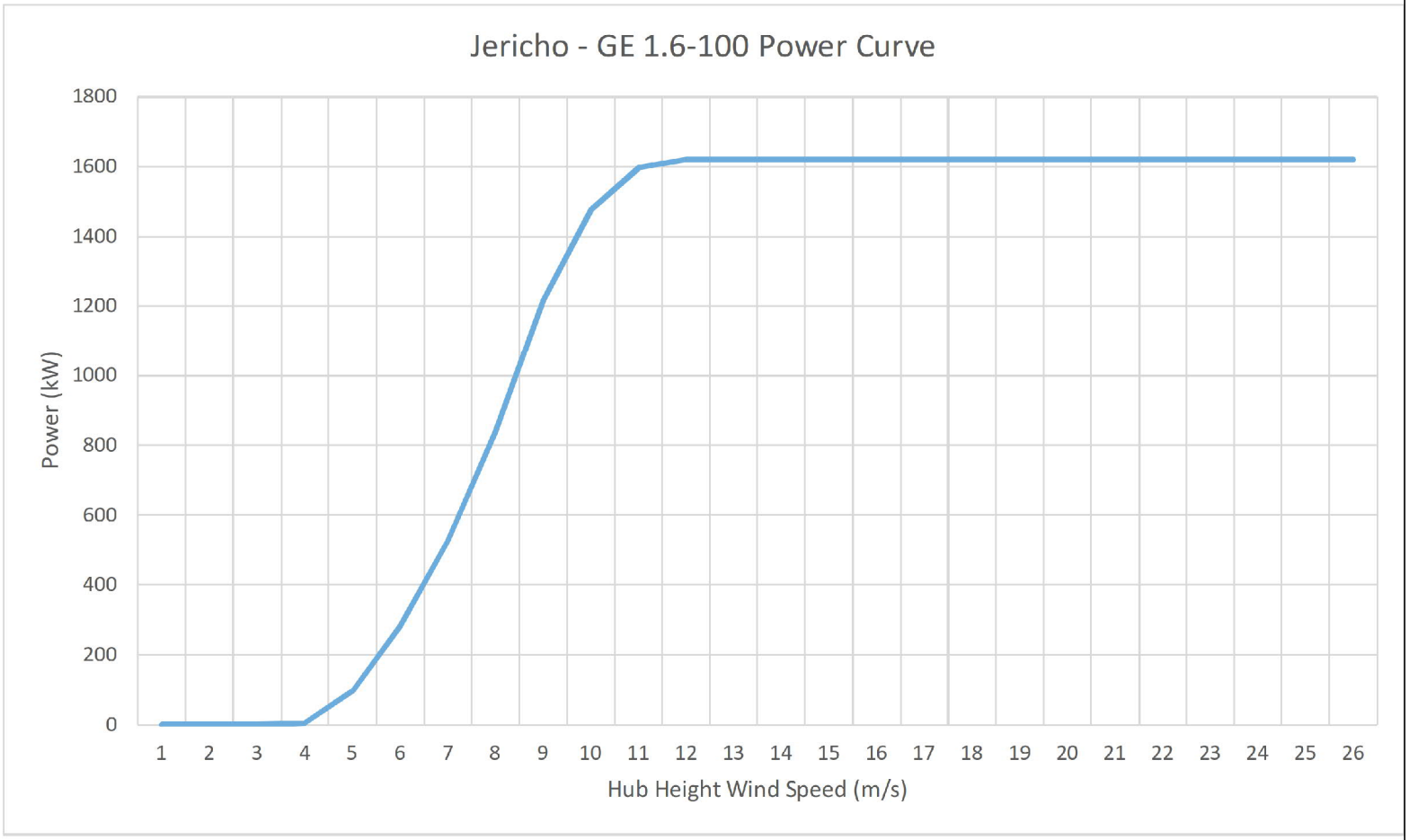

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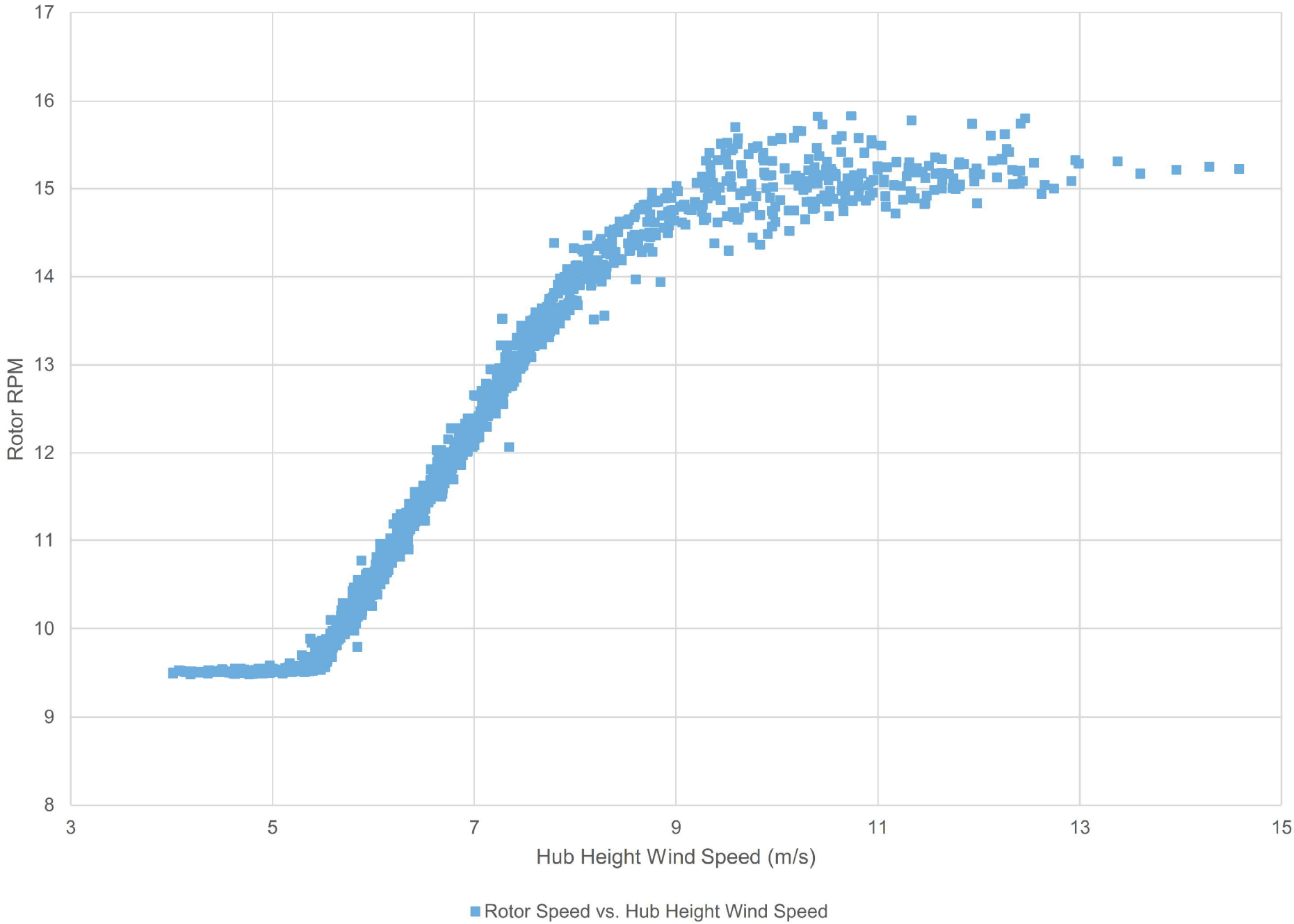
Figure Title

Power curve

Figure B.01



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Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	Jericho Wiond Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0
	Figure Title Rotor RPM vs. Wind Speed

Figure B.02

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Appendix C
Apparent Sound Power Level

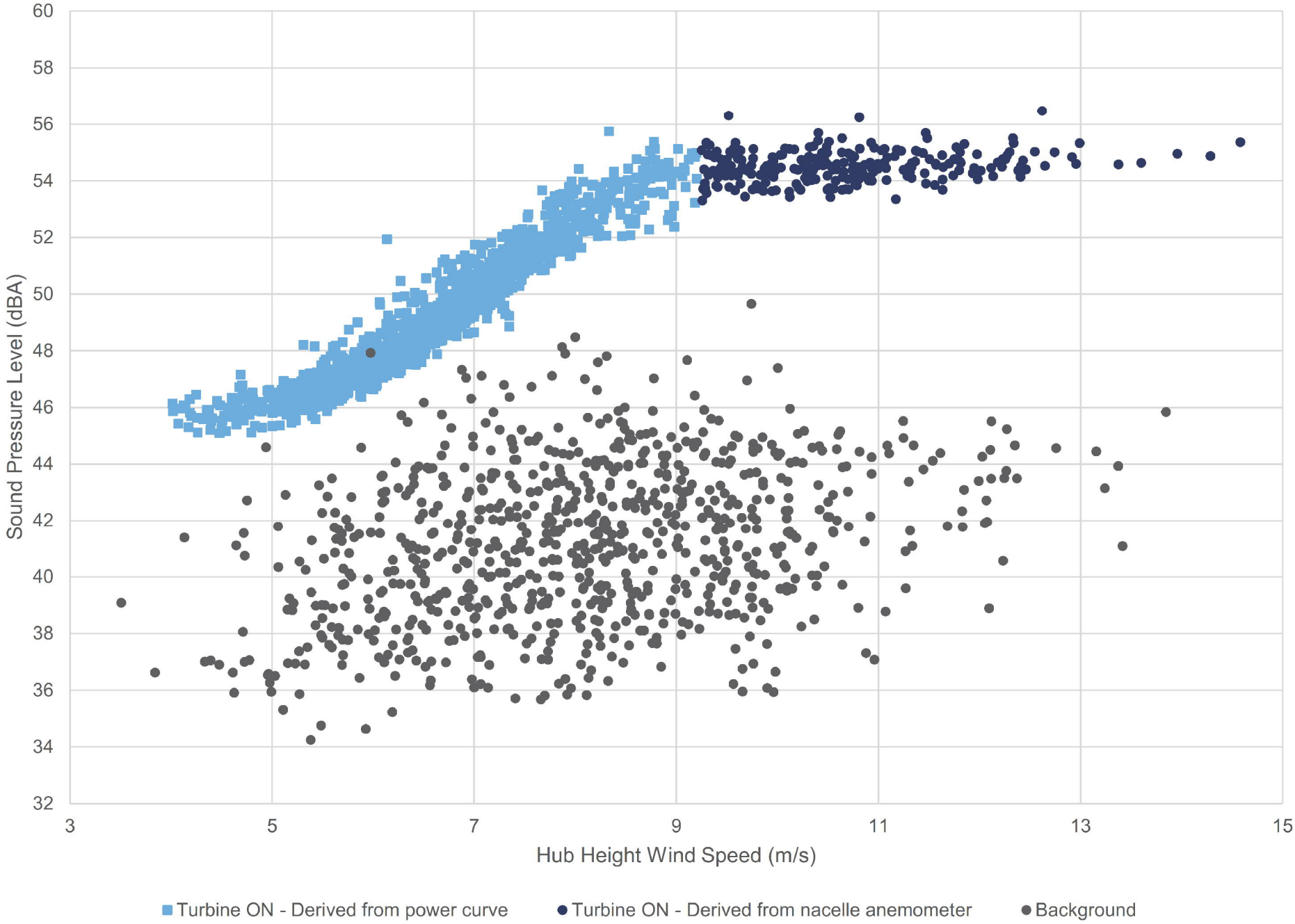

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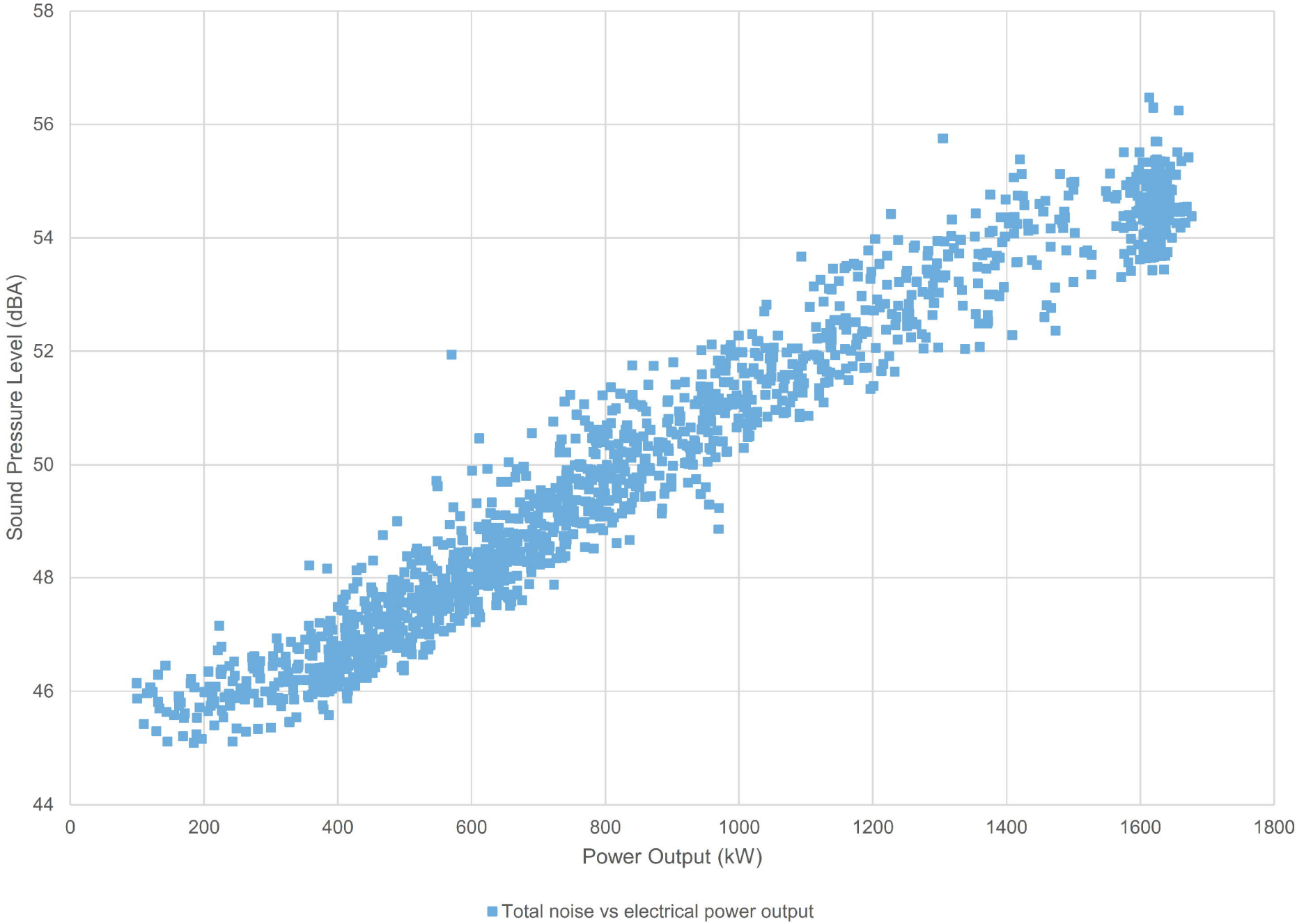
Figure Title

Plot of overall measurement data pairs at Position 1 (Turbine ON &Background)

Figure C.01



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Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0
	Figure Title Plot of measured total noise vs electrical power output

Figure C.02

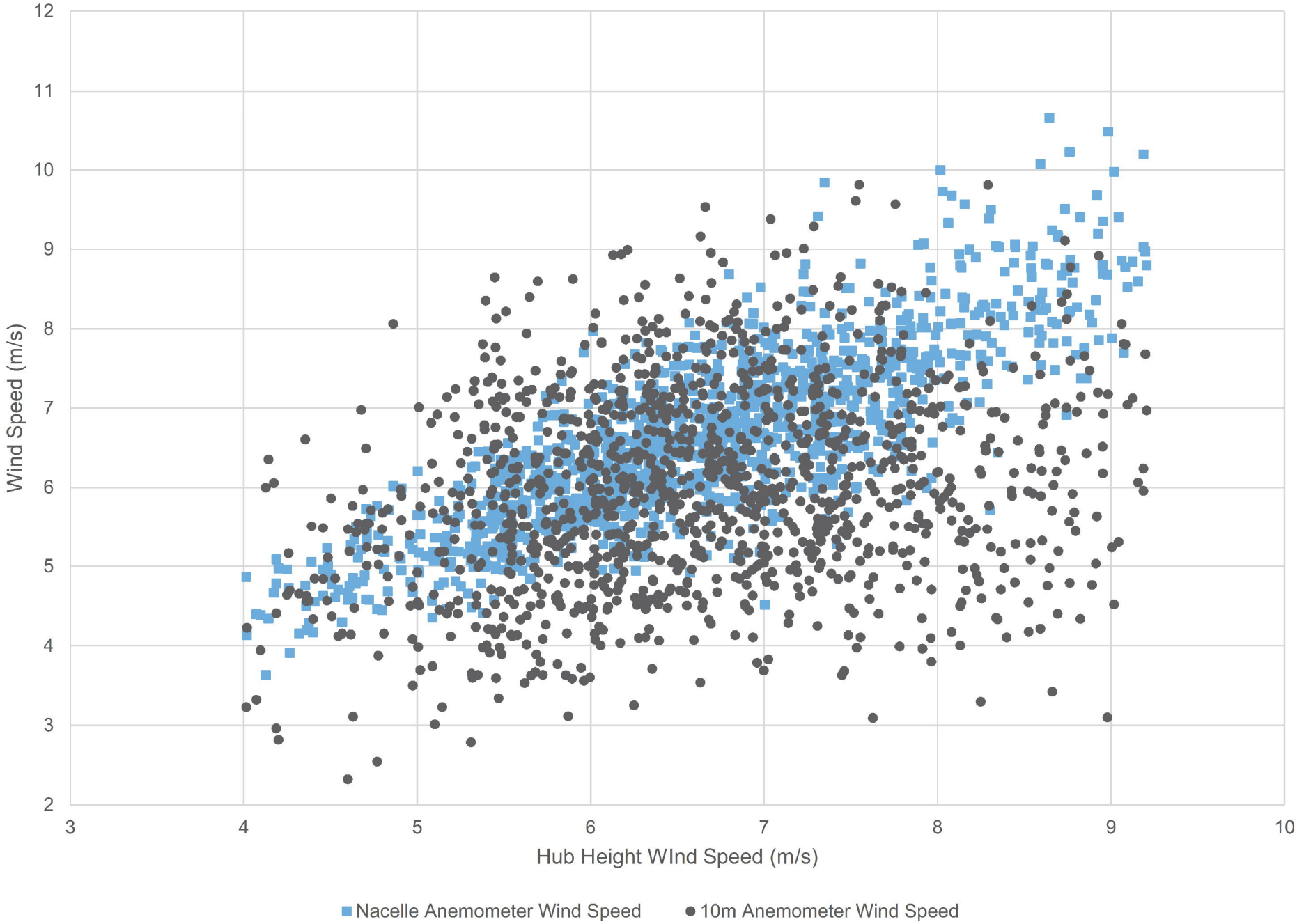

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Figure Title

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

Figure C.03

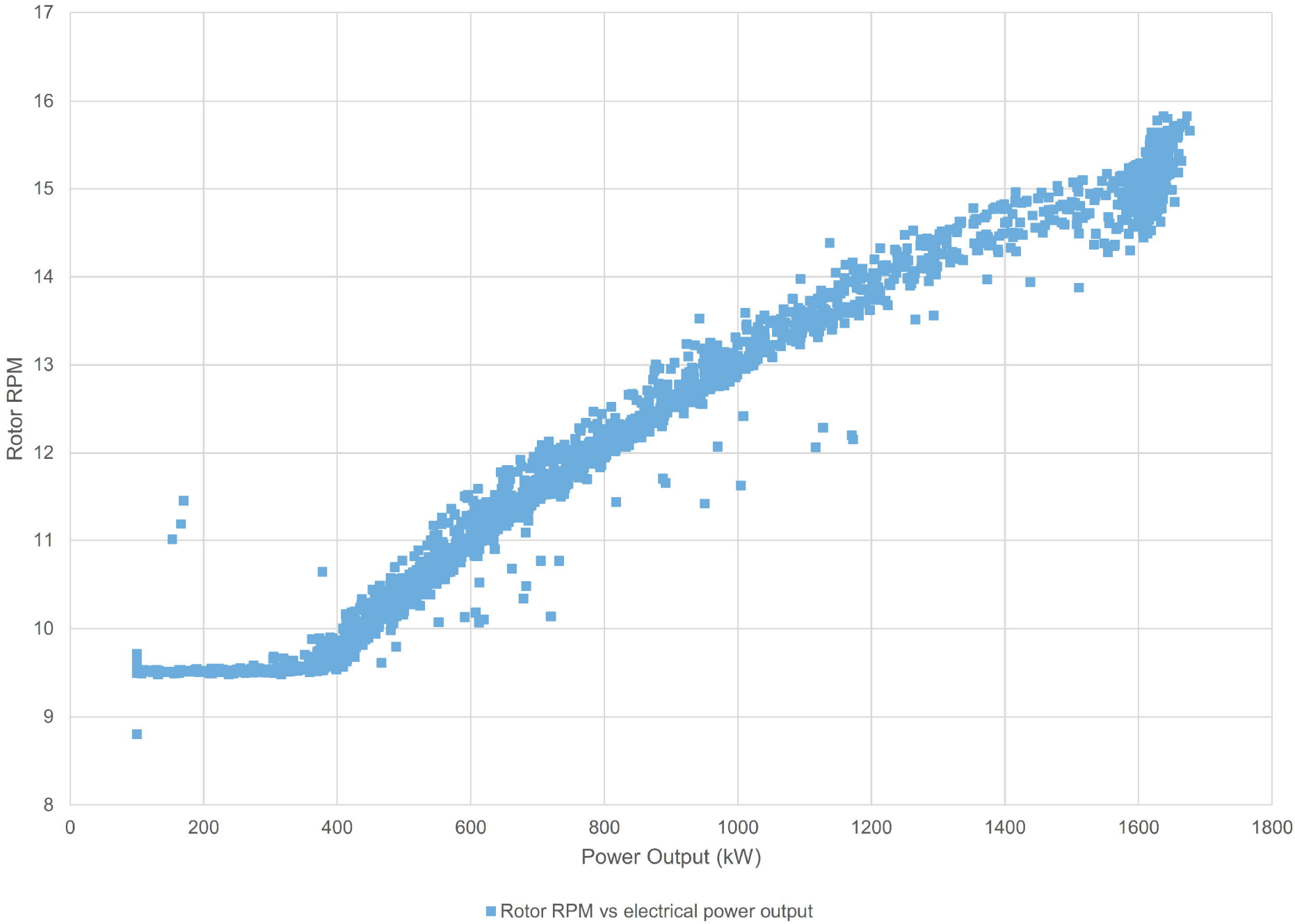

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Figure Title

Plot of rotor RPM vs. electrical power output

Figure C.04

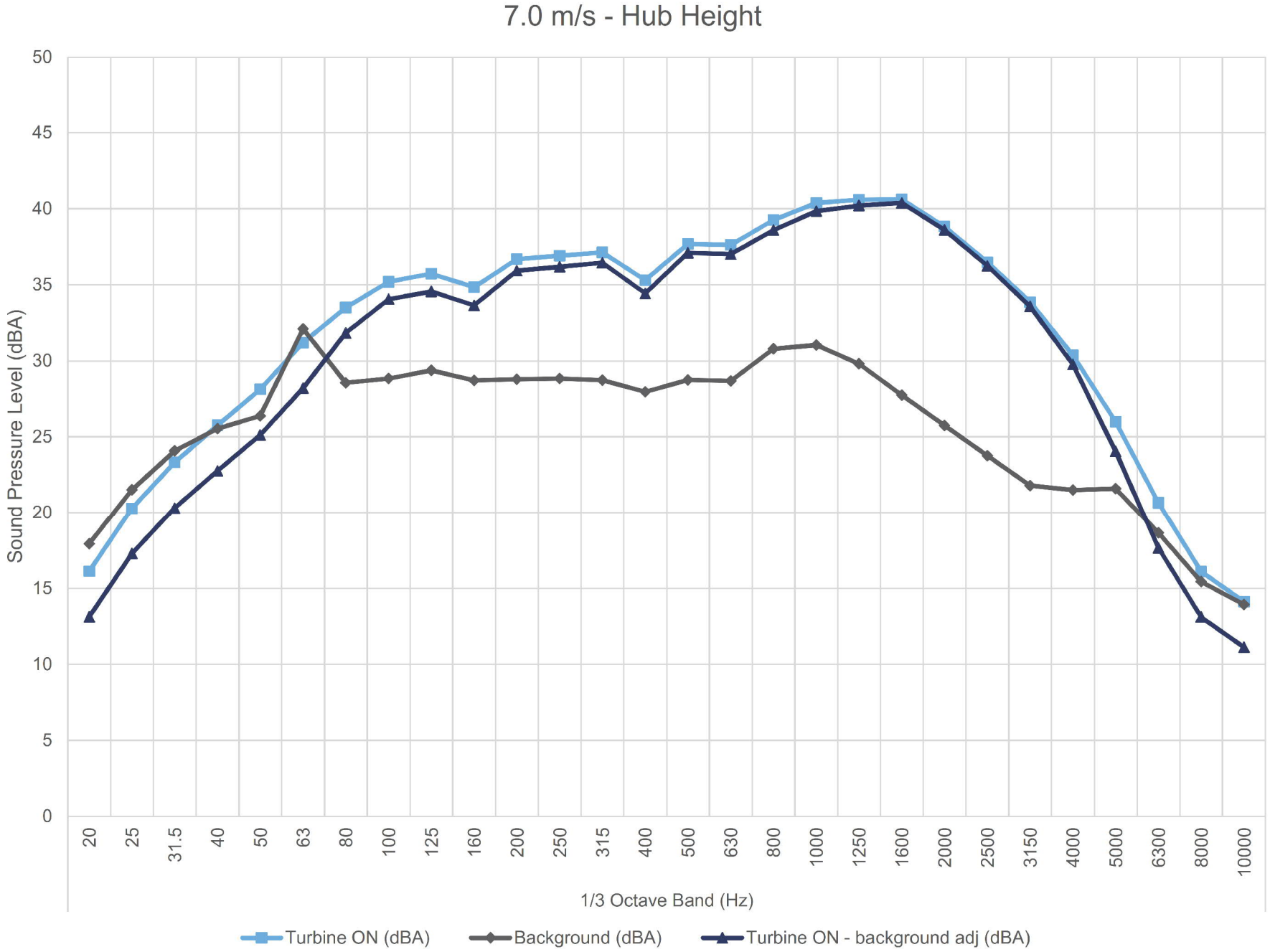

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Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 7 m/s

Figure C.05

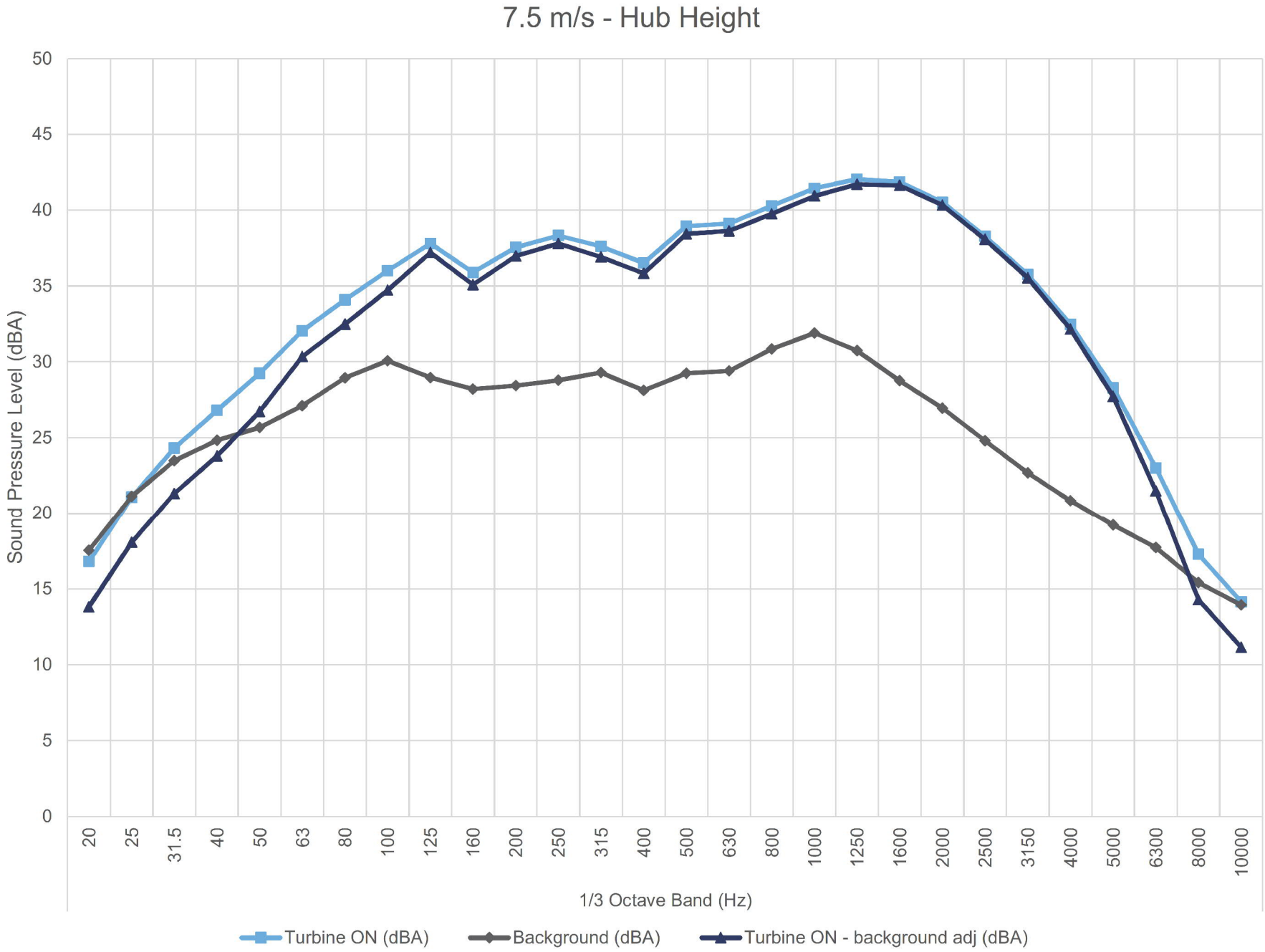

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Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 7.5 m/s

Figure C.06

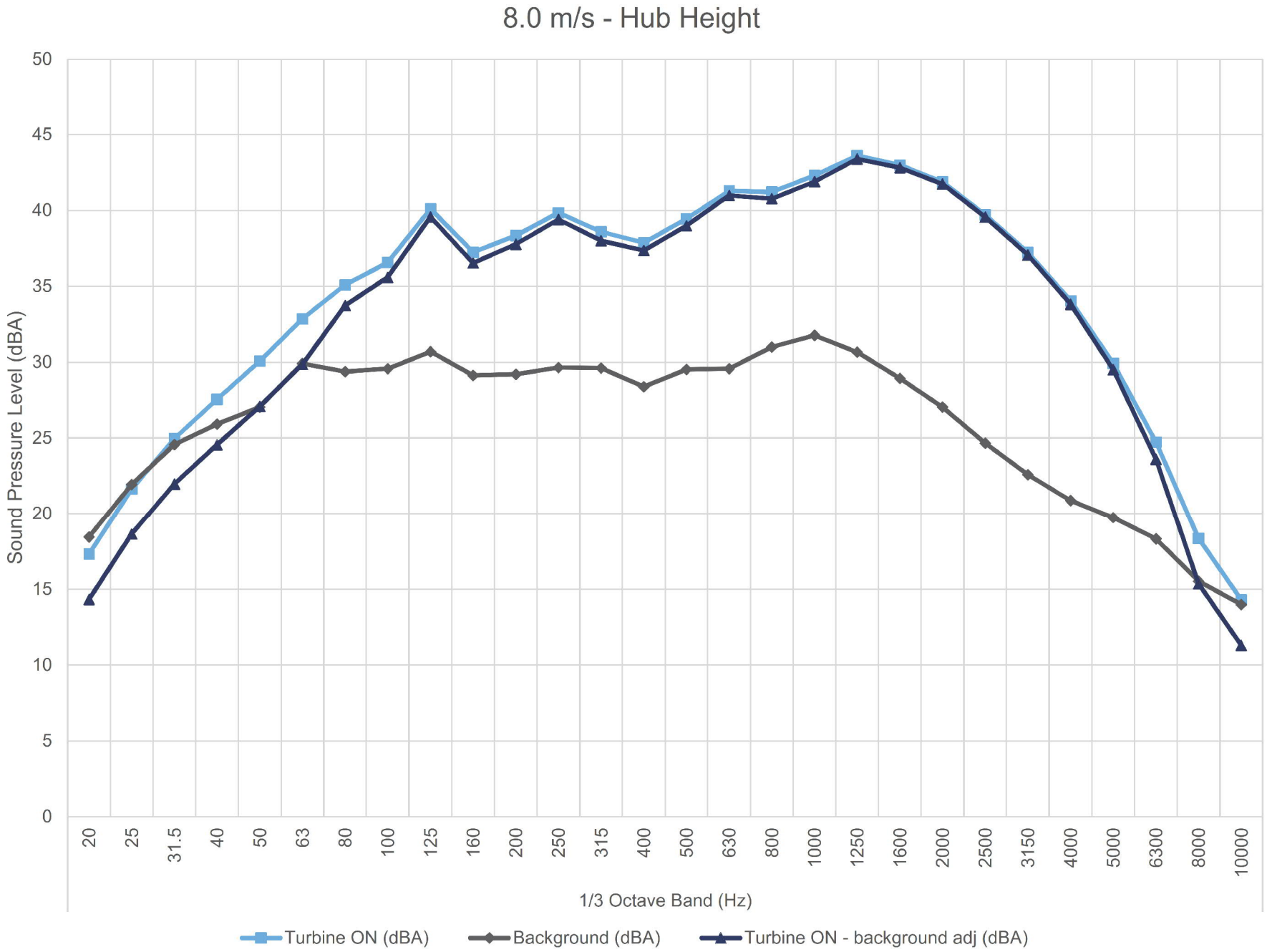

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Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 8 m/s

Figure C.07

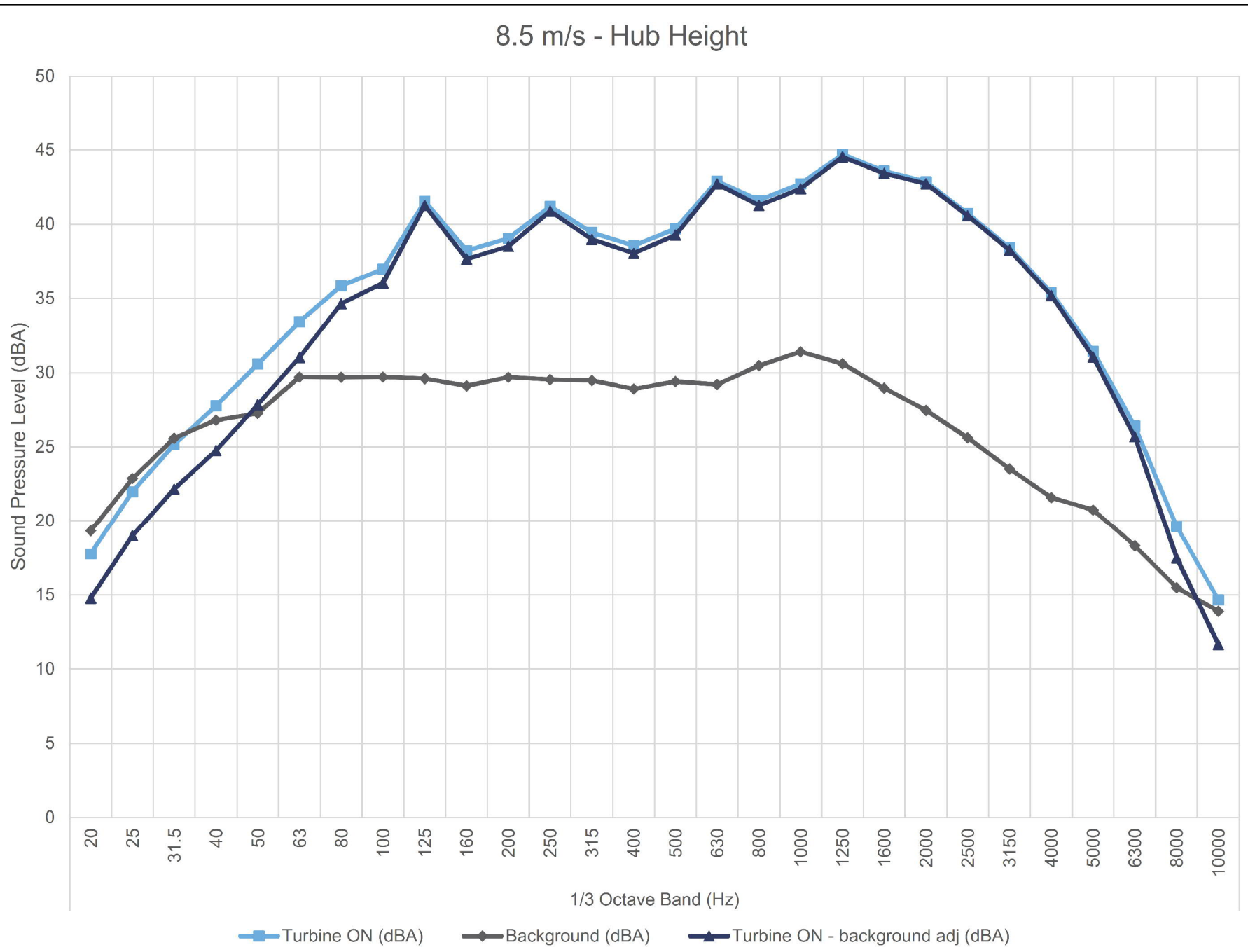

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Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 8.5 m/s

Figure C.08

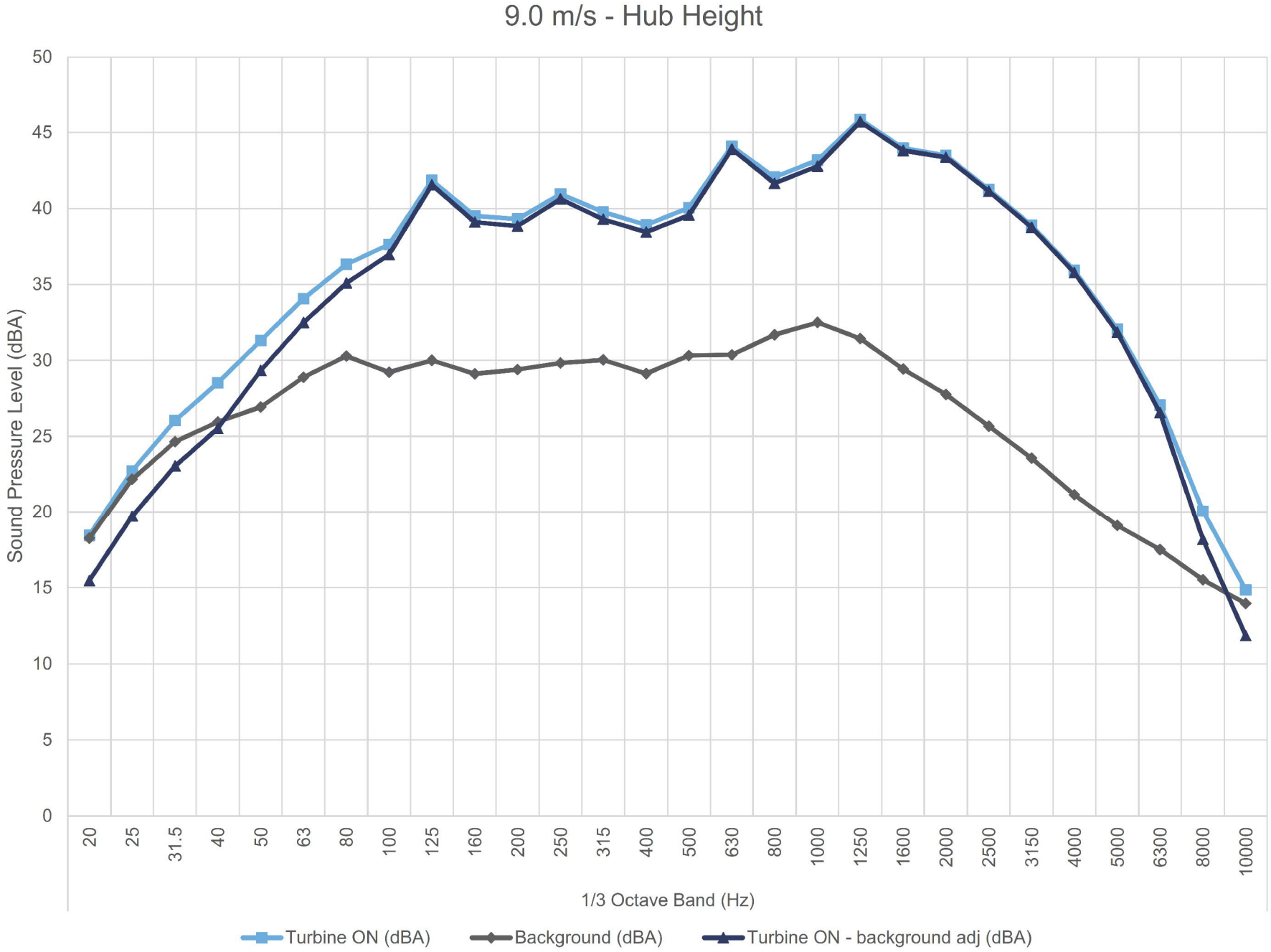

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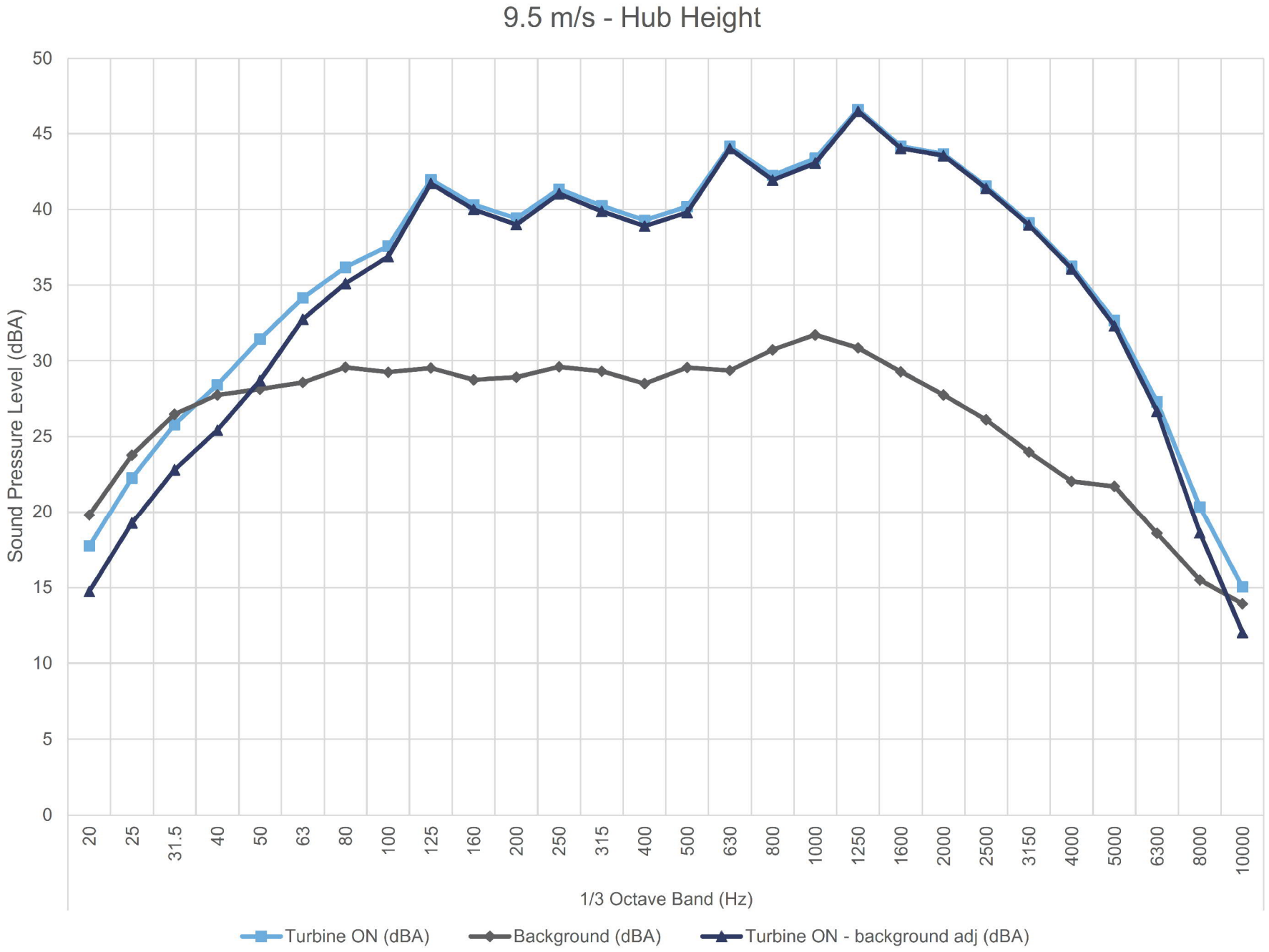
Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 9 m/s

Figure C.09



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Scale: NTS
Drawn by: KC
Reviewed by: PA
Date: Sept 25, 2017
Revision: 1

Project Name

Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0

Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 9.5 m/s

Figure C.10

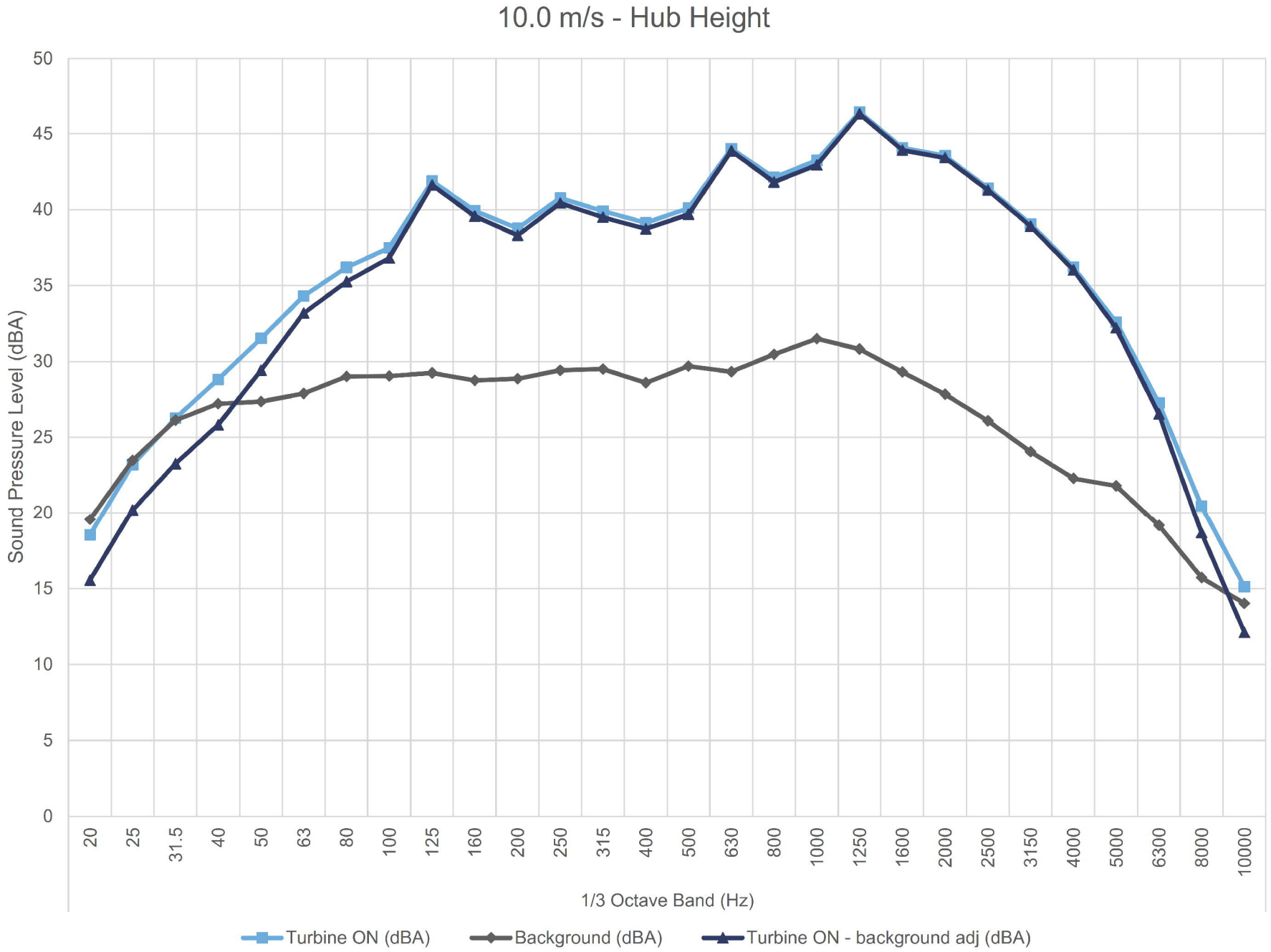

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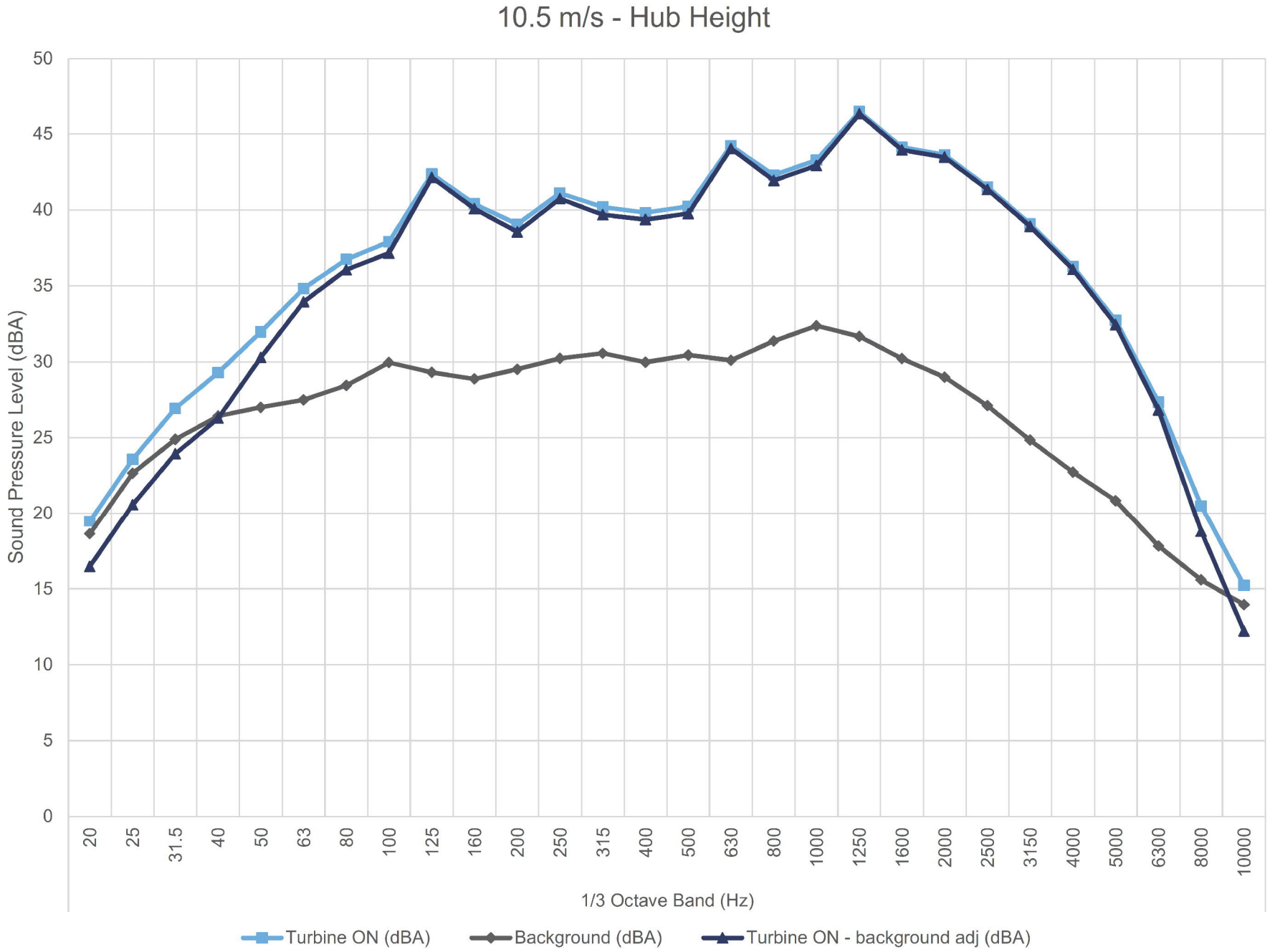
Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 10 m/s

Figure C.11



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of sound pressure spectrum in 1/3 Octave at 10.5 m/s

Figure C.12

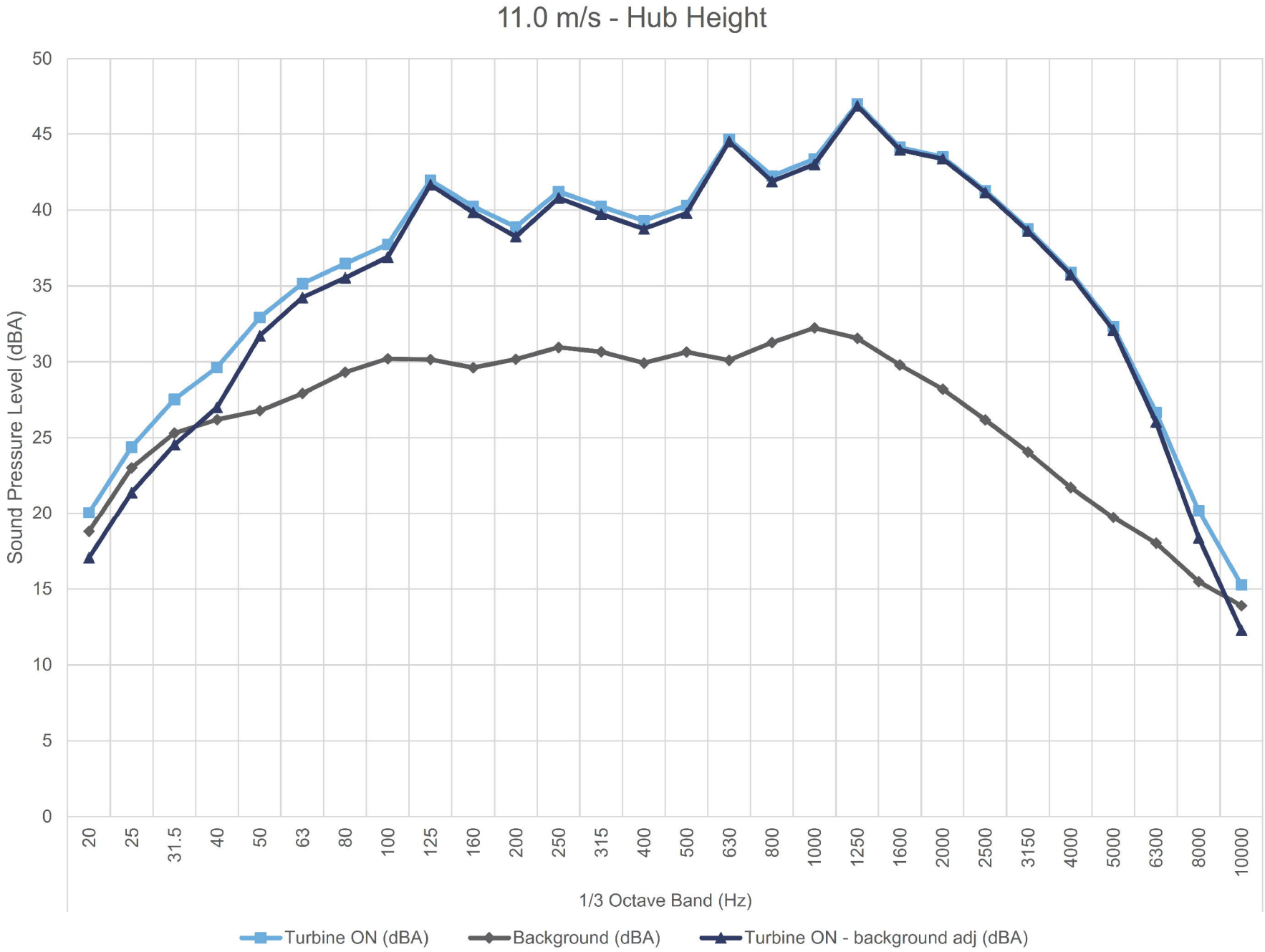


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Figure Title

Plot of sound pressure spectrum in 1/3 Octave at 11 m/s

Figure C.13

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

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 9/25/2017

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	
7.0	Turbine ON (dBA)	16.1	20.3	23.3	25.8	28.1	31.2	33.5	35.2	35.7	34.9	36.7	36.9	37.1	35.3	37.7	37.6	39.3	40.4	40.6	40.6	38.8	36.5	33.9	30.4	26.0	20.7	16.1	14.1	50.1
	Background (dBA)	17.9	21.5	24.1	25.5	26.4	32.1	28.6	28.8	29.4	28.7	28.8	28.8	28.7	28.0	28.7	28.7	30.8	31.0	29.8	27.7	25.7	23.8	21.8	21.5	21.6	18.7	15.4	13.9	41.9
	Turbine ON - background adj (dBA)	[13.1]	[17.3]	[20.3]	[22.8]	[25.1]	[28.2]	31.8	34.1	34.6	33.6	35.9	36.2	36.5	34.4	37.1	37.0	38.6	39.8	40.2	40.4	38.6	36.3	33.6	29.8	24.1	[17.7]	[13.1]	[11.1]	49.5
	Signal to noise (dB)	-1.8	-1.2	-0.8	0.2	1.7	-0.9	5.0	6.4	6.3	6.1	7.9	8.1	8.4	7.3	8.9	8.9	8.5	9.3	10.8	12.9	13.1	12.7	12.1	8.9	4.4	2.0	0.7	0.2	8.2
	Uncertainty (dB)	2.4	2.4	1.9	1.9	1.8	2.0	1.2	1.0	1.0	1.1	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.9	1.3	1.8	1.7	3.1	0.8
	PWL (dBA)	[62]	[66.2]	[69.2]	[71.6]	[74]	[77.1]	80.7	82.9	83.4	82.5	84.8	85.0	85.3	83.3	86.0	85.9	87.5	88.7	89.1	89.2	87.5	85.1	82.4	78.6	72.9	[66.5]	[62]	[60]	98.4
7.5	Turbine ON (dBA)	16.8	21.1	24.3	26.8	29.2	32.0	34.1	36.0	37.8	35.9	37.5	38.3	37.6	36.5	38.9	39.1	40.3	41.4	42.0	41.8	40.5	38.3	35.7	32.5	28.3	23.0	17.3	14.1	51.4
	Background (dBA)	17.5	21.1	23.5	24.8	25.7	27.1	28.9	30.1	29.0	28.2	28.4	28.8	29.3	28.1	29.2	29.4	30.8	31.9	30.7	28.8	26.9	24.8	22.7	20.8	19.2	17.7	15.4	13.9	41.9
	Turbine ON - background adj (dBA)	[13.8]	[18.1]	[21.3]	[23.8]	26.7	30.3	32.5	34.7	37.2	35.1	37.0	37.8	36.9	35.8	38.4	38.6	39.7	40.9	41.7	41.6	40.3	38.1	35.5	32.1	27.7	21.5	[14.3]	[11.1]	50.9
	Signal to noise (dB)	-0.7	0.0	0.8	2.0	3.6	4.9	5.1	5.9	8.8	7.7	9.1	9.5	8.3	8.4	9.7	9.7	9.4	9.5	11.3	13.1	13.6	13.5	13.1	11.6	9.1	5.3	1.9	0.2	9.5
	Uncertainty (dB)	2.3	2.3	1.8	1.8	1.5	1.2	1.2	1.1	0.9	0.9	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	1.2	1.7	3.0	0.8
	PWL (dBA)	[62.7]	[66.9]	[70.2]	[72.7]	75.6	79.2	81.3	83.6	86.0	83.9	85.8	86.7	85.8	84.7	87.3	87.5	88.6	89.8	90.6	90.5	89.2	86.9	84.4	81.0	76.6	70.3	[63.1]	[60]	99.8
8.0	Turbine ON (dBA)	17.3	21.6	25.0	27.6	30.1	32.9	35.1	36.6	40.1	37.3	38.3	39.8	38.6	37.9	39.5	41.3	41.2	42.3	43.6	43.0	41.9	39.7	37.2	34.0	29.9	24.7	18.4	14.3	52.7
	Background (dBA)	18.5	21.9	24.6	25.9	27.0	29.9	29.4	29.6	30.7	29.1	29.2	29.6	29.6	28.4	29.5	29.6	31.0	31.8	30.7	28.9	27.0	24.7	22.6	20.9	19.7	18.3	15.5	14.0	42.4
	Turbine ON - background adj (dBA)	[14.3]	[18.6]	[22]	[24.6]	27.1	[29.9]	33.7	35.6	39.6	36.5	37.8	39.4	38.0	37.4	39.0	41.0	40.8	41.9	43.4	42.8	41.7	39.6	37.1	33.8	29.5	23.6	[15.4]	[11.3]	52.3
	Signal to noise (dB)	-1.1	-0.3	0.4	1.6	3.0	2.9	5.7	7.0	9.4	8.1	9.1	10.2	9.0	9.5	9.9	11.7	10.2	10.5	12.9	14.0	14.8	15.0	14.6	13.2	10.2	6.4	2.8	0.3	10.3
	Uncertainty (dB)	2.3	2.3	1.9	1.9	1.8	1.8	1.1	1.0	0.9	0.9	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	0.9	1.0	1.7	3.0	0.7
	PWL (dBA)	[63.2]	[67.5]	[70.8]	[73.4]	76.0	[78.7]	82.6	84.5	88.4	85.4	86.6	88.3	86.9	86.2	87.8	89.8	89.6	90.8	92.2	91.7	90.6	88.4	85.9	82.7	78.4	72.5	[64.2]	[60.2]	101.2
8.5	Turbine ON (dBA)	17.8	22.0	25.2	27.8	30.6	33.4	35.9	37.0	41.5	38.2	39.0	41.2	39.4	38.5	39.7	42.9	41.6	42.7	44.7	43.6	42.8	40.7	38.4	35.4	31.4	26.4	19.6	14.7	53.6
	Background (dBA)	19.3	22.9	25.6	26.8	27.3	29.7	29.7	29.7	29.6	29.1	29.7	29.5	29.5	28.9	29.4	29.2	30.5	31.4	30.6	29.0	27.5	25.6	23.5	21.6	20.8	18.3	15.5	13.9	42.4
	Turbine ON - background adj (dBA)	[14.8]	[19]	[22.2]	[24.8]	27.9	31.0	34.7	36.0	41.3	37.6	38.5	40.9	39.0	38.0	39.3	42.7	41.3	42.4	44.5	43.4	42.7	40.6	38.3	35.2	31.1	25.7	17.5	[11.7]	53.3
	Signal to noise (dB)	-1.6	-0.9	-0.4	1.0	3.3	3.7	6.2	7.2	12.0	9.1	9.3	11.7	10.0	9.6	10.3	13.7	11.1	11.3	14.1	14.6	15.4	15.1	14.9	13.8	10.7	8.1	4.1	0.8	11.2
	Uncertainty (dB)	2.4	2.4	2.0	1.9	1.7	1.6	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.9	0.9	1.0	1.4	3.2	0.8
	PWL (dBA)	[63.6]	[67.8]	[71]	[73.6]	76.7	79.9	83.5	84.9	90.1	86.5	87.4	89.7	87.8	86.9	88.1	91.6	90.1	91.3	93.4	92.3	91.6	89.4	87.1	84.1	79.9	74.5	66.4	[60.5]	102.1
9.0	Turbine ON (dBA)	18.5	22.7	26.0	28.5	31.3	34.1	36.3	37.6	41.8	39.5	39.3	41.0	39.8	38.9	40.0	44.1	42.1	43.2	45.9	44.0	43.5	41.3	38.9	35.9	32.1	27.1	20.1	14.9	54.2
	Background (dBA)	18.3	22.2	24.6	26.0	26.9	28.9	30.3	29.2	30.0	29.1	29.4	29.8	30.0	29.1	30.3	30.4	31.7	32.5	31.4	29.4	27.8	25.7	23.6	21.2	19.1	17.5	15.5	14.0	42.7
	Turbine ON - background adj (dBA)	[15.5]	[19.7]	[23]	[25.5]	29.3	32.5	35.1	37.0	41.6	39.1	38.8	40.6	39.3	38.4	39.6	43.9	41.6	42.8	45.7	43.8	43.4	41.1	38.8	35.8	31.8	26.6	18.2	[11.9]	53.9
	Signal to noise (dB)	0.2	0.6	1.4	2.6	4.4	5.2	6.1	8.4	11.8	10.4	9.9	11.1	9.7	9.8	9.7	13.7	10.4	10.7	14.4	14.5	15.7	15.6	15.3	14.8	13.0	9.5	4.5	0.9	11.5
	Uncertainty (dB)	2.3	2.3	1.9	1.8	1.3	1.2	1.0	0.9	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	0.8	0.8	0.8	0.9	1.0	1.3	3.0	0.7
	PWL (dBA)	[64.3]	[68.6]	[71.9]	[74.4]	78.2	81.3	84.0	85.8	90.4	88.0	87.7	89.5	88.1	87.3	88.4	92.8	90.5	91.6	94.6	92.7	92.2	90.0	87.6	84.6	80.7	75.4	67.0	[60.7]	102.8

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

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 9/25/2017

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	
9.5	Turbine ON (dBA)	17.7	22.3	25.8	28.4	31.4	34.2	36.2	37.6	42.0	40.3	39.4	41.4	40.2	39.3	40.2	44.2	42.2	43.4	46.6	44.2	43.7	41.5	39.1	36.3	32.7	27.3	20.3	15.0	54.5
	Background (dBA)	19.8	23.8	26.5	27.7	28.1	28.6	29.6	29.3	29.5	28.7	28.9	29.6	29.3	28.5	29.6	29.4	30.7	31.7	30.9	29.3	27.8	26.1	24.0	22.0	21.7	18.6	15.5	13.9	42.5
	Turbine ON - background adj (dBA)	[14.7]	[19.3]	[22.8]	[25.4]	28.7	32.8	35.1	36.9	41.7	40.0	39.0	41.0	39.9	38.9	39.8	44.0	41.9	43.1	46.5	44.0	43.5	41.4	39.0	36.1	32.3	26.7	18.6	[12]	54.2
	Signal to noise (dB)	-2.1	-1.5	-0.7	0.7	3.3	5.6	6.6	8.3	12.4	11.6	10.5	11.7	10.9	10.8	10.6	14.8	11.5	11.6	15.7	14.9	15.9	15.4	15.1	14.2	11.0	8.7	4.8	1.1	12.0
	Uncertainty (dB)	2.4	2.4	2.0	2.0	1.7	1.2	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.2	3.1	0.8
	PWL (dBA)	[63.6]	[68.1]	[71.7]	[74.3]	77.6	81.6	84.0	85.7	90.6	88.9	87.9	89.9	88.7	87.8	88.7	92.9	90.8	91.9	95.3	92.9	92.4	90.3	87.8	84.9	81.2	75.5	67.5	[60.9]	103.1
10.0	Turbine ON (dBA)	18.5	23.2	26.3	28.8	31.5	34.3	36.2	37.5	41.9	39.9	38.8	40.8	39.9	39.1	40.1	44.0	42.1	43.2	46.4	44.1	43.5	41.4	39.0	36.2	32.6	27.3	20.4	15.1	54.3
	Background (dBA)	19.5	23.5	26.1	27.2	27.4	27.9	29.0	29.0	29.2	28.8	28.9	29.4	29.5	28.6	29.7	29.3	30.5	31.5	30.8	29.3	27.8	26.1	24.0	22.3	21.8	19.2	15.7	14.0	42.3
	Turbine ON - background adj (dBA)	[15.5]	[20.2]	[23.3]	[25.8]	29.4	33.2	35.3	36.8	41.6	39.6	38.3	40.4	39.5	38.7	39.7	43.9	41.8	42.9	46.3	43.9	43.4	41.3	38.9	36.0	32.2	26.5	18.7	[12.1]	54.1
	Signal to noise (dB)	-1.0	-0.3	0.1	1.6	4.2	6.4	7.2	8.4	12.6	11.2	9.9	11.3	10.4	10.5	10.4	14.7	11.7	11.7	15.6	14.8	15.7	15.3	15.0	13.9	10.8	8.1	4.7	1.1	12.0
	Uncertainty (dB)	2.4	2.4	2.0	1.9	1.4	1.1	1.0	0.9	0.8	0.9	0.8	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	0.9	1.0	1.2	3.1	0.8
	PWL (dBA)	[64.4]	[69.1]	[72.1]	[74.7]	78.3	82.0	84.1	85.7	90.5	88.4	87.2	89.3	88.4	87.6	88.5	92.7	90.7	91.8	95.2	92.8	92.3	90.2	87.8	84.9	81.1	75.4	67.5	[61]	102.9
10.5	Turbine ON (dBA)	19.5	23.6	26.9	29.3	32.0	34.8	36.7	37.9	42.4	40.4	39.1	41.1	40.2	39.8	40.2	44.2	42.3	43.3	46.5	44.1	43.6	41.5	39.1	36.3	32.7	27.3	20.5	15.2	54.5
	Background (dBA)	18.6	22.6	24.9	26.4	27.0	27.5	28.4	30.0	29.3	28.9	29.5	30.2	30.5	30.0	30.4	30.1	31.4	32.4	31.7	30.2	29.0	27.1	24.8	22.7	20.8	17.8	15.6	14.0	42.8
	Turbine ON - background adj (dBA)	[16.5]	[20.6]	[23.9]	[26.3]	30.3	33.9	36.1	37.1	42.1	40.1	38.6	40.7	39.7	39.4	39.8	44.0	41.9	42.9	46.3	43.9	43.5	41.3	38.9	36.1	32.4	26.8	18.8	[12.2]	54.2
	Signal to noise (dB)	0.8	0.9	2.0	2.9	5.0	7.3	8.3	8.0	13.1	11.5	9.6	10.9	9.6	9.9	9.8	14.1	10.9	10.9	14.8	13.9	14.6	14.4	14.3	13.5	11.9	9.5	4.9	1.3	11.7
	Uncertainty (dB)	2.6	2.5	2.1	2.1	1.3	1.0	1.0	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.3	3.2	0.8
	PWL (dBA)	[65.3]	[69.4]	[72.8]	[75.1]	79.1	82.8	84.9	86.0	91.0	88.9	87.4	89.6	88.5	88.2	88.6	92.9	90.8	91.8	95.2	92.8	92.3	90.2	87.8	84.9	81.3	75.7	67.6	[61.1]	103.1
11.0	Turbine ON (dBA)	20.1	24.4	27.5	29.6	32.9	35.1	36.5	37.7	42.0	40.2	38.9	41.2	40.2	39.3	40.3	44.7	42.2	43.4	47.0	44.1	43.5	41.3	38.8	35.9	32.3	26.7	20.2	15.3	54.6
	Background (dBA)	18.8	23.0	25.3	26.2	26.8	27.9	29.3	30.2	30.2	29.6	30.2	30.9	30.7	29.9	30.6	30.1	31.3	32.2	31.6	29.8	28.2	26.2	24.1	21.7	19.7	18.0	15.5	13.9	42.9
	Turbine ON - background adj (dBA)	[17.1]	[21.4]	[24.5]	27.0	31.7	34.2	35.5	36.9	41.7	39.8	38.2	40.8	39.7	38.8	39.8	44.5	41.9	43.0	46.9	44.0	43.4	41.1	38.6	35.7	32.1	26.0	18.4	[12.3]	54.3
	Signal to noise (dB)	1.3	1.4	2.2	3.4	6.1	7.2	7.2	7.5	11.8	10.6	8.7	10.3	9.6	9.4	9.6	14.5	11.0	11.1	15.4	14.3	15.3	15.1	14.7	14.2	12.6	8.6	4.7	1.4	11.6
	Uncertainty (dB)	2.5	2.6	2.2	1.9	1.2	1.0	1.0	1.0	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.8	0.9	1.2	2.9	0.7
	PWL (dBA)	[65.9]	[70.2]	[73.4]	75.9	80.6	83.1	84.4	85.8	90.5	88.7	87.1	89.6	88.6	87.6	88.6	93.4	90.7	91.9	95.7	92.8	92.2	90.0	87.5	84.6	80.9	74.9	67.2	[61.1]	103.1

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

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 9/25/2017

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	
5.0	Turbine ON (dBA)	15.9	20.1	23.1	25.6	27.9	31.0	33.4	34.9	35.9	34.6	36.6	36.9	36.9	35.3	37.7	37.8	39.2	40.3	40.7	40.6	38.8	36.6	34.0	30.5	26.2	20.9	16.3	14.1	50.1
	Background (dBA)	17.5	21.1	23.6	25.0	26.0	29.8	28.8	29.4	29.2	28.5	28.5	28.8	29.1	28.2	29.0	29.2	30.8	31.4	30.2	28.2	26.2	24.2	22.2	21.8	21.9	18.9	15.4	13.9	41.9
	Turbine ON - background adj (dBA)	[12.9]	[17.1]	[20.1]	[22.6]	[24.9]	[28]	31.5	33.5	34.9	33.4	35.9	36.2	36.1	34.4	37.0	37.1	38.5	39.7	40.2	40.4	38.6	36.3	33.7	29.9	24.2	[17.9]	[13.3]	[11.1]	49.5
	Signal to noise (dB)	-1.6	-1.1	-0.5	0.5	1.9	1.3	4.6	5.5	6.7	6.1	8.1	8.1	7.8	7.1	8.6	8.6	8.4	8.8	10.4	12.4	12.6	12.4	11.8	8.7	4.3	2.1	0.9	0.2	8.2
	Uncertainty (dB)	2.2	2.2	1.8	1.8	1.8	1.8	1.3	1.1	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.8	0.9	1.3	1.7	1.7	3.1	0.8
	PWL (dBA)	[61.8]	[65.9]	[69]	[71.4]	[73.8]	[76.9]	80.3	82.4	83.8	82.3	84.7	85.1	85.0	83.2	85.9	86.0	87.4	88.5	89.1	89.2	87.4	85.2	82.5	78.7	73.1	[66.8]	[62.2]	[60]	98.3
6.0	Turbine ON (dBA)	17.7	21.9	25.2	27.8	30.4	33.2	35.5	36.8	40.8	37.9	38.6	40.4	39.0	38.2	39.6	42.3	41.4	42.5	44.4	43.3	42.4	40.2	37.8	34.8	30.8	25.7	19.1	14.5	53.2
	Background (dBA)	18.5	22.1	24.7	26.0	26.8	29.3	29.6	29.4	30.0	28.9	29.3	29.5	29.5	28.6	29.5	29.5	30.8	31.7	30.7	29.0	27.3	25.2	23.0	21.1	20.0	18.2	15.5	13.9	42.3
	Turbine ON - background adj (dBA)	[14.7]	[18.9]	[22.2]	[24.8]	28.0	30.9	34.2	36.0	40.4	37.4	38.1	40.0	38.5	37.7	39.2	42.0	41.0	42.2	44.2	43.1	42.3	40.1	37.7	34.6	30.4	24.8	16.6	[11.5]	52.8
	Signal to noise (dB)	-0.8	-0.2	0.5	1.8	3.6	3.9	5.8	7.5	10.8	9.0	9.4	10.9	9.5	9.6	10.1	12.8	10.6	10.8	13.6	14.3	15.1	15.1	14.8	13.6	10.8	7.5	3.6	0.6	10.9
	Uncertainty (dB)	2.2	2.2	1.7	1.7	1.5	1.4	1.0	0.9	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	0.8	0.8	0.8	0.8	0.9	1.4	3.0	0.7
	PWL (dBA)	[63.5]	[67.8]	[71.1]	[73.7]	76.8	79.8	83.0	84.8	89.3	86.2	87.0	88.8	87.4	86.6	88.0	90.9	89.9	91.0	93.0	92.0	91.1	89.0	86.6	83.4	79.3	73.7	65.4	[60.4]	101.7
7.0	Turbine ON (dBA)	18.5	22.9	26.3	28.8	31.6	34.4	36.4	37.7	42.0	40.2	39.2	41.1	40.1	39.4	40.2	44.1	42.2	43.3	46.5	44.1	43.6	41.4	39.0	36.2	32.6	27.2	20.4	15.1	54.5
	Background (dBA)	19.6	23.5	26.2	27.3	27.7	28.6	29.3	29.2	29.5	28.9	29.1	29.7	29.7	28.8	29.9	29.6	30.8	31.8	31.0	29.3	27.8	26.0	24.0	22.1	21.5	18.6	15.6	14.0	42.5
	Turbine ON - background adj (dBA)	[15.5]	[19.9]	[23.3]	[25.8]	29.4	33.1	35.5	37.1	41.8	39.9	38.8	40.8	39.7	39.0	39.8	44.0	41.9	43.0	46.4	44.0	43.5	41.3	38.9	36.0	32.2	26.6	18.6	[12.1]	54.2
	Signal to noise (dB)	-1.1	-0.6	0.2	1.5	3.9	5.8	7.1	8.5	12.5	11.3	10.1	11.4	10.4	10.6	10.3	14.5	11.4	11.5	15.5	14.8	15.8	15.4	15.1	14.1	11.1	8.6	4.7	1.1	12.0
	Uncertainty (dB)	2.3	2.3	1.9	1.9	1.5	1.1	1.0	0.9	0.8	0.9	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	1.3	3.2	0.8
	PWL (dBA)	[64.4]	[68.8]	[72.2]	[74.7]	78.2	81.9	84.3	85.9	90.6	88.7	87.6	89.7	88.6	87.9	88.6	92.8	90.8	91.8	95.2	92.8	92.3	90.2	87.8	84.9	81.1	75.4	67.4	[60.9]	103.0
8.0	Turbine ON (dBA)	19.6	23.9	27.2	29.3	32.2	34.9	36.4	37.6	41.7	40.2	38.7	41.0	40.1	39.3	40.4	44.4	42.4	43.5	47.0	44.2	43.7	41.5	38.9	36.0	32.4	26.9	20.3	15.3	54.6
	Background (dBA)	19.2	23.0	25.4	26.8	27.4	28.1	29.4	30.0	29.6	29.1	29.7	30.3	30.5	29.7	30.5	30.3	31.4	32.3	31.6	30.1	28.7	26.8	24.6	22.0	19.8	17.6	15.4	13.8	42.9
	Turbine ON - background adj (dBA)	[16.6]	[20.9]	[24.2]	[26.3]	30.5	33.9	35.5	36.7	41.5	39.8	38.2	40.6	39.6	38.8	39.9	44.2	42.0	43.1	46.9	44.1	43.5	41.4	38.8	35.8	32.1	26.3	18.6	[12.3]	54.3
	Signal to noise (dB)	0.4	0.9	1.8	2.5	4.9	6.8	7.0	7.5	12.2	11.0	9.0	10.7	9.6	9.6	9.9	14.1	11.0	11.2	15.3	14.2	15.0	14.7	14.3	14.0	12.6	9.3	4.9	1.4	11.7
	Uncertainty (dB)	2.5	2.5	2.1	2.1	1.4	1.0	1.0	0.9	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	0.8	0.8	0.8	0.8	0.9	1.1	2.9	0.7
	PWL (dBA)	[65.4]	[69.8]	[73.1]	[75.1]	79.4	82.7	84.3	85.6	90.3	88.7	87.0	89.5	88.4	87.6	88.7	93.0	90.8	92.0	95.7	92.9	92.4	90.2	87.6	84.7	81.0	75.2	67.5	[61.1]	103.1

Table C.03 Type B measurement uncertainty summary

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 Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement Report ID: 14462.00.T03.RP5

Created on: 11/6/2017

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	
7.0	Turbine ON	6.98	190	Average (dBA)	16.1	20.3	23.3	25.7	28.1	31.2	33.5	35.2	35.6	34.8	36.7	36.9	37.1	35.3	37.6	37.6	39.2	40.3	40.5	40.6	38.8	36.4	33.8	30.3	25.9	20.6	16.1	14.1	50.1
				Uncertainty A (dB)	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
	Background	7.02	72	Average (dBA)	18.0	21.6	24.1	25.6	26.4	32.3	28.5	28.8	29.4	28.7	28.8	28.8	28.7	28.0	28.7	28.7	30.8	31.0	29.8	27.8	25.8	23.8	21.8	21.4	21.5	18.6	15.4	13.9	41.9
				Uncertainty A (dB)	0.7	0.7	0.7	0.7	0.6	0.9	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.3	0.1	0.1		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.3	1.3	1.1	1.1	1.0	1.2	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	0.9	0.8	1.4		
7.5	Turbine ON	7.47	160	Average (dBA)	16.8	21.0	24.3	26.7	29.2	32.0	34.0	36.0	37.6	35.8	37.5	38.2	37.5	36.4	38.9	38.9	40.2	41.4	41.9	41.8	40.4	38.2	35.6	32.3	28.2	22.9	17.2	14.1	51.3
				Uncertainty A (dB)	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
	Background	7.51	84	Average (dBA)	17.5	21.1	23.5	24.8	25.7	26.9	29.0	30.1	28.9	28.2	28.4	28.8	29.3	28.1	29.3	29.4	30.8	31.9	30.8	28.8	27.0	24.8	22.7	20.8	19.1	17.7	15.4	13.9	41.9
				Uncertainty A (dB)	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.2	1.2	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	1.4		
8.0	Turbine ON	7.96	99	Average (dBA)	17.3	21.6	25.0	27.5	30.0	32.8	35.0	36.5	40.0	37.2	38.3	39.7	38.5	37.8	39.4	41.2	41.2	42.3	43.5	42.9	41.8	39.6	37.1	33.9	29.8	24.6	18.3	14.3	52.6
				Uncertainty A (dB)	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.1	1.1	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
	Background	8.01	98	Average (dBA)	18.5	22.0	24.6	26.0	27.1	30.0	29.4	29.6	30.7	29.2	29.2	29.7	29.6	28.4	29.5	29.6	31.0	31.8	30.7	28.9	27.0	24.7	22.6	20.9	19.8	18.3	15.5	14.0	42.4
				Uncertainty A (dB)	0.7	0.7	0.7	0.7	0.6	0.6	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.2	1.2	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	1.4		
8.5	Turbine ON	8.50	65	Average (dBA)	17.8	22.0	25.2	27.8	30.6	33.4	35.9	37.0	41.5	38.2	39.0	41.2	39.4	38.5	39.7	42.9	41.6	42.7	44.7	43.6	42.8	40.7	38.4	35.4	31.4	26.4	19.6	14.7	53.6
				Uncertainty A (dB)	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.1		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.1	1.1	0.8	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	0.8	0.8	0.8	0.8	0.9	0.8	1.4		
	Background	8.48	96	Average (dBA)	19.4	22.9	25.6	26.9	27.3	29.7	29.7	29.7	29.6	29.1	29.7	29.5	29.4	28.9	29.4	29.2	30.4	31.4	30.6	28.9	27.4	25.6	23.5	21.6	20.8	18.3	15.5	13.9	42.4
				Uncertainty A (dB)	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.1	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.2	1.2	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.7	0.8	0.9	0.9	0.8	0.9	0.8	0.8	1.4		
9.0	Turbine ON	8.95	36	Average (dBA)	18.5	22.8	26.1	28.5	31.3	34.0	36.3	37.6	41.8	39.4	39.3	40.9	39.7	38.9	40.0	44.1	42.0	43.2	45.8	44.0	43.5	41.2	38.9	35.9	32.0	27.0	20.0	14.8	54.2
				Uncertainty A (dB)	0.5	0.4	0.4	0.2	0.2	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	0.2	0.1	0.1	0.1	0.2	0.3	0.4	0.5	0.4	0.1		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.4		
	Background	8.98	71	Average (dBA)	18.2	22.1	24.6	25.9	26.9	28.9	30.3	29.2	30.0	29.1	29.4	29.8	30.1	29.2	30.3	30.4	31.7	32.5	31.5	29.4	27.8	25.6	23.5	21.1	19.0	17.5	15.5	14.0	42.7
				Uncertainty A (dB)	0.6	0.6	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.2	1.2	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.8	1.4		
9.5	Turbine ON	9.49	51	Average (dBA)	17.7	22.2	25.8	28.4	31.4	34.2	36.2	37.6	42.0	40.3	39.4	41.4	40.2	39.3	40.2	44.2	42.3	43.4	46.6	44.2	43.7	41.5	39.1	36.3	32.7	27.3	20.3	15.0	54.5
				Uncertainty A (dB)	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.1	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
	Background	9.49	71	Average (dBA)	19.8	23.8	26.5	27.8	28.2	28.6	29.6	29.3	29.5	28.7	28.9	29.6	29.3	28.5	29.6	29.4	30.8	31.7	30.9	29.3	27.8	26.1	24.0	22.0	21.7	18.6	15.5	13.9	42.5
				Uncertainty A (dB)	0.8	0.8	0.8	0.8	0.7	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.3	0.1	0.0		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.3	1.3	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.8	1.4		
10.0	Turbine ON	9.98	39	Average (dBA)	18.5	23.2	26.2	28.8	31.5	34.3	36.2	37.5	41.9	39.9	38.8	40.8	39.9	39.1	40.1	44.0	42.1	43.2	46.4	44.1	43.5	41.4	39.0	36.2	32.6	27.3	20.4	15.1	54.3
				Uncertainty A (dB)	0.4	0.4	0.4	0.3	0.2	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	0.1	0.2	0.2	0.2	0.1		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.1	1.1	0.9	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
	Background	9.96	61	Average (dBA)	19.6	23.5	26.2	27.3	27.4	27.9	29.1	29.0	29.2	28.7	28.8	29.4	29.4	28.5	29.6	29.3	30.4	31.4	30.7	29.2	27.7	26.0	24.0	22.3	21.9	19.3	15.7	14.0	42.3
				Uncertainty A (dB)	0.6	0.7	0.7	0.7	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.1	0.1		
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4		
				Combined Uncertainty (dB)	1.2	1.2	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	1.0	0.9	0.8	1.4		

Table C.04 Detailed measurement uncertainty at hub height

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/6/2017

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	10.50	49	Average (dBA)	19.5	23.6	26.9	29.3	31.9	34.8	36.7	37.9	42.4	40.4	39.1	41.1	40.2	39.8	40.2	44.2	42.3	43.3	46.5	44.1	43.6	41.5	39.1	36.3	32.7	27.3	20.5	15.2	54.5
				Uncertainty A (dB)	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.1	1.1	0.9	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
	Background	10.49	29	Average (dBA)	18.6	22.6	24.9	26.4	27.0	27.5	28.4	29.9	29.3	28.9	29.5	30.2	30.5	30.0	30.4	30.1	31.4	32.4	31.7	30.2	29.0	27.1	24.8	22.7	20.9	17.8	15.6	14.0	42.8
				Uncertainty A (dB)	0.8	0.9	0.9	0.9	0.8	0.6	0.4	0.6	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.3	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.3	1.4	1.2	1.2	1.1	1.0	0.9	1.0	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.9	0.8	0.9	0.9	1.0	1.1	1.0	1.0	1.0	0.9	0.8	1.4	
11.0	Turbine ON	10.94	33	Average (dBA)	20.1	24.5	27.6	29.7	33.1	35.2	36.5	37.8	42.1	40.3	39.0	41.3	40.3	39.3	40.2	44.7	42.2	43.3	47.0	44.1	43.5	41.2	38.7	35.9	32.4	26.7	20.1	15.3	54.6
				Uncertainty A (dB)	0.6	0.5	0.5	0.4	0.5	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.2	1.1	0.9	0.9	0.9	0.9	0.9	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
	Background	10.99	13	Average (dBA)	18.8	23.0	25.3	26.2	26.8	27.9	29.3	30.2	30.2	29.6	30.2	31.0	30.7	29.9	30.7	30.1	31.3	32.2	31.5	29.8	28.2	26.2	24.0	21.7	19.7	18.0	15.5	13.9	42.9
				Uncertainty A (dB)	1.1	1.3	1.2	1.3	1.0	1.0	1.0	1.0	0.8	0.9	1.1	1.1	1.1	1.2	1.1	1.1	1.1	0.9	1.0	1.0	1.0	1.0	0.9	0.8	0.8	0.6	0.1	0.1	
				Uncertainty B (dB)	1.0	1.0	0.8	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	0.8	0.8	0.8	0.8	0.8	0.8	1.4	
				Combined Uncertainty (dB)	1.5	1.6	1.5	1.5	1.3	1.2	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.2	1.1	1.1	1.0	0.8	1.4	

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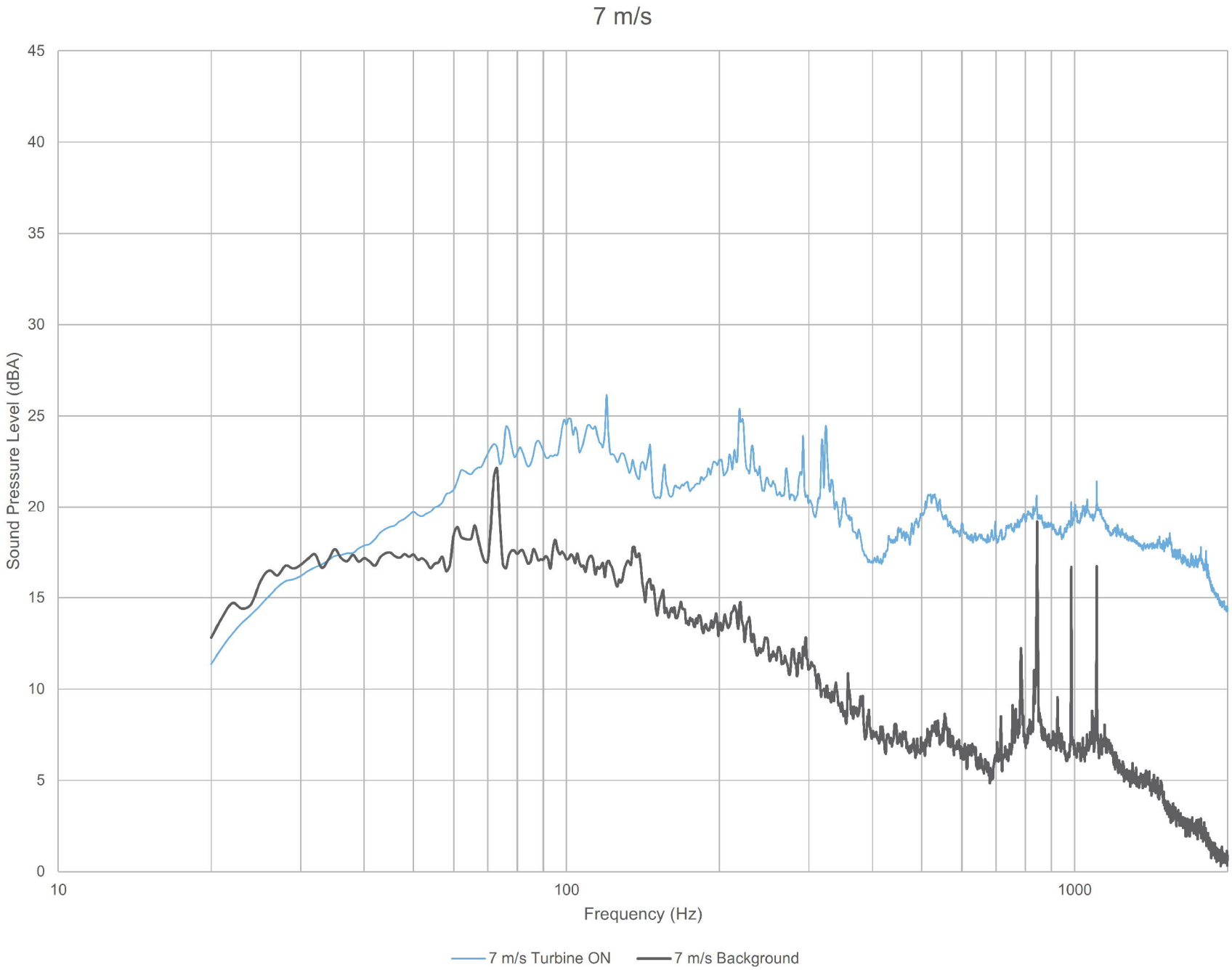
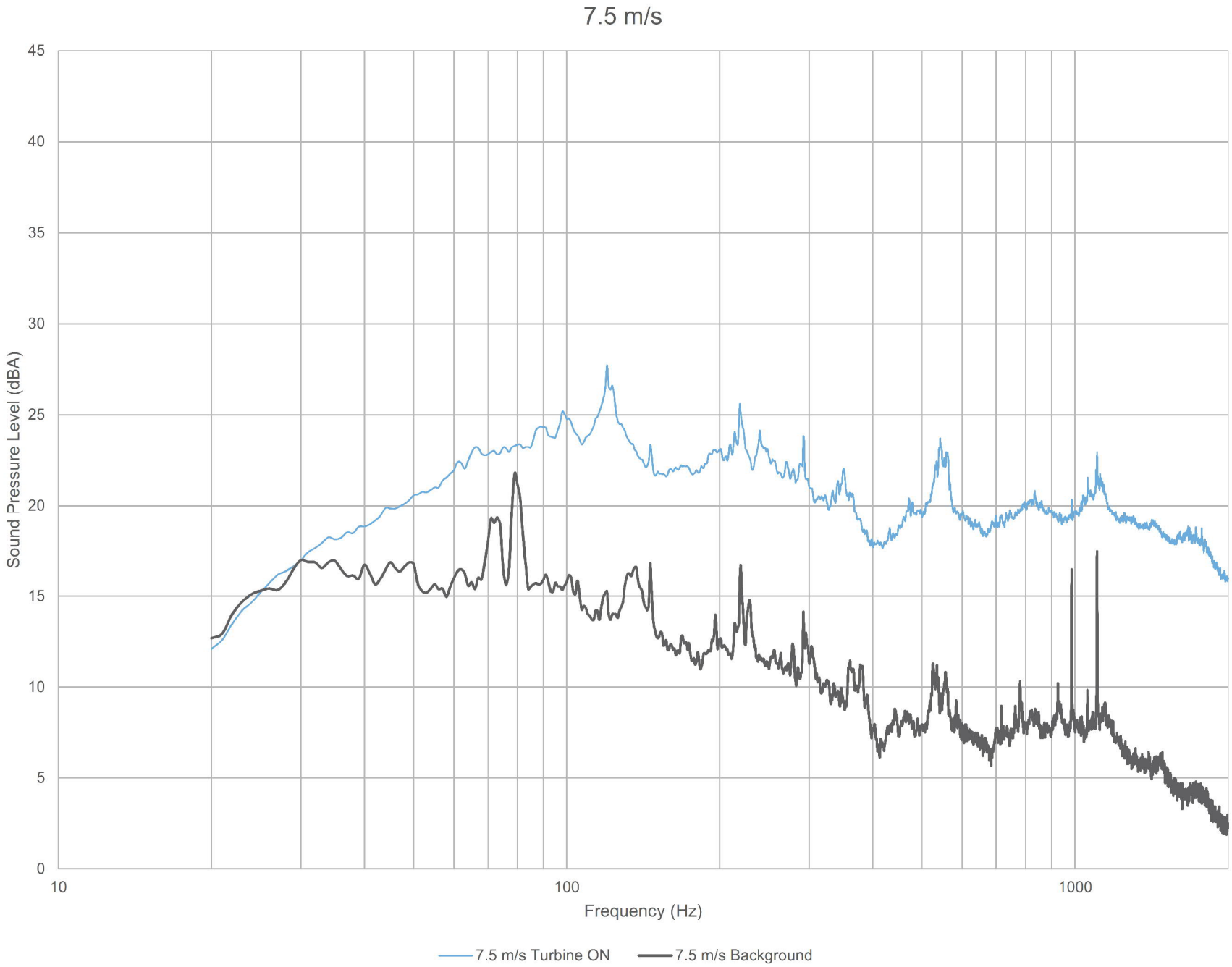
Appendix D
Tonality Assessment



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of narrow band spectra – Turbine ON vs. Background at 7 m/s

Figure D.01



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Project ID: 14462.00.T03.RP5

Scale: NTS
Drawn by: KC
Reviewed by: PA
Date: Sept 25, 2017
Revision: 1

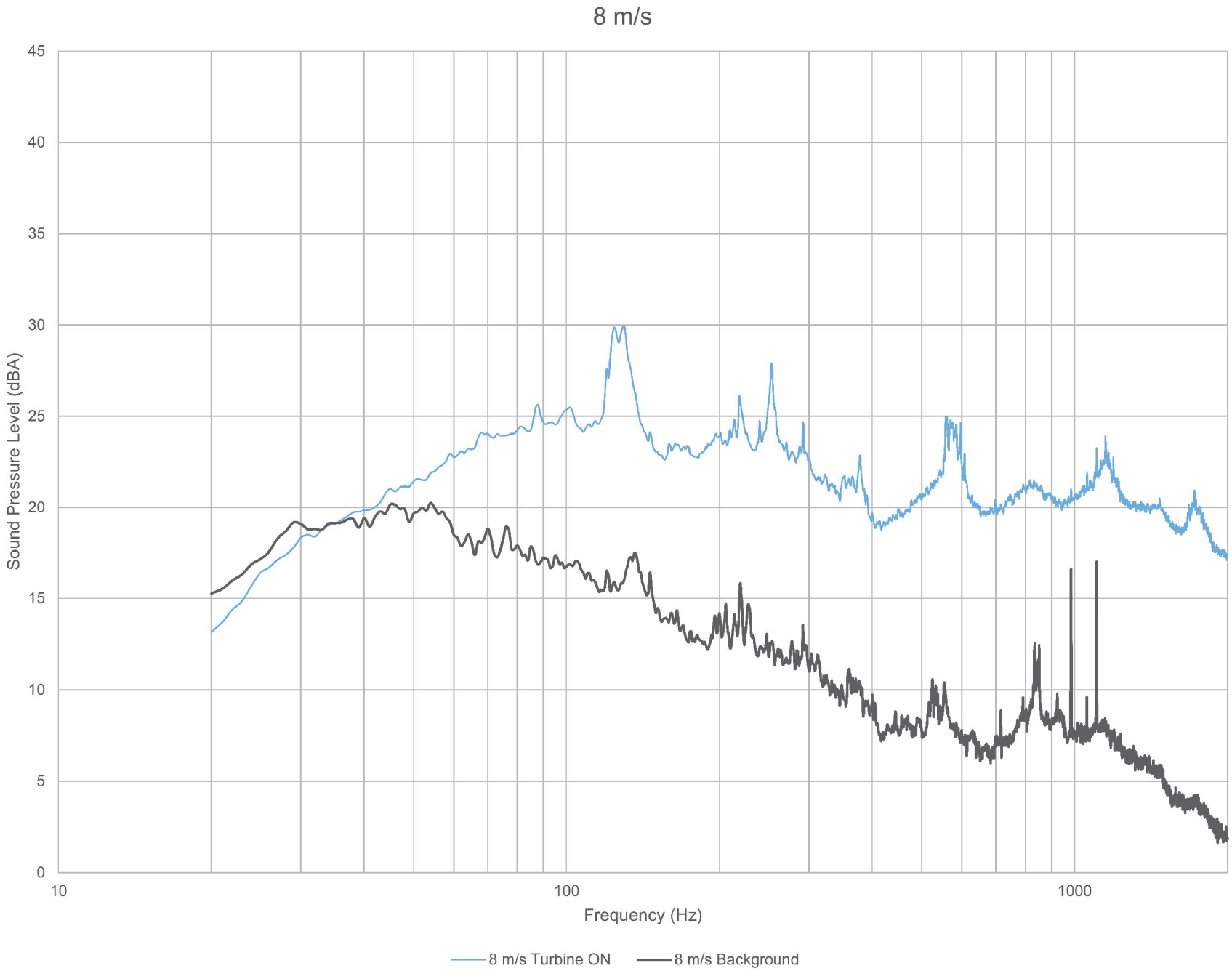
Project Name

Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0

Figure Title

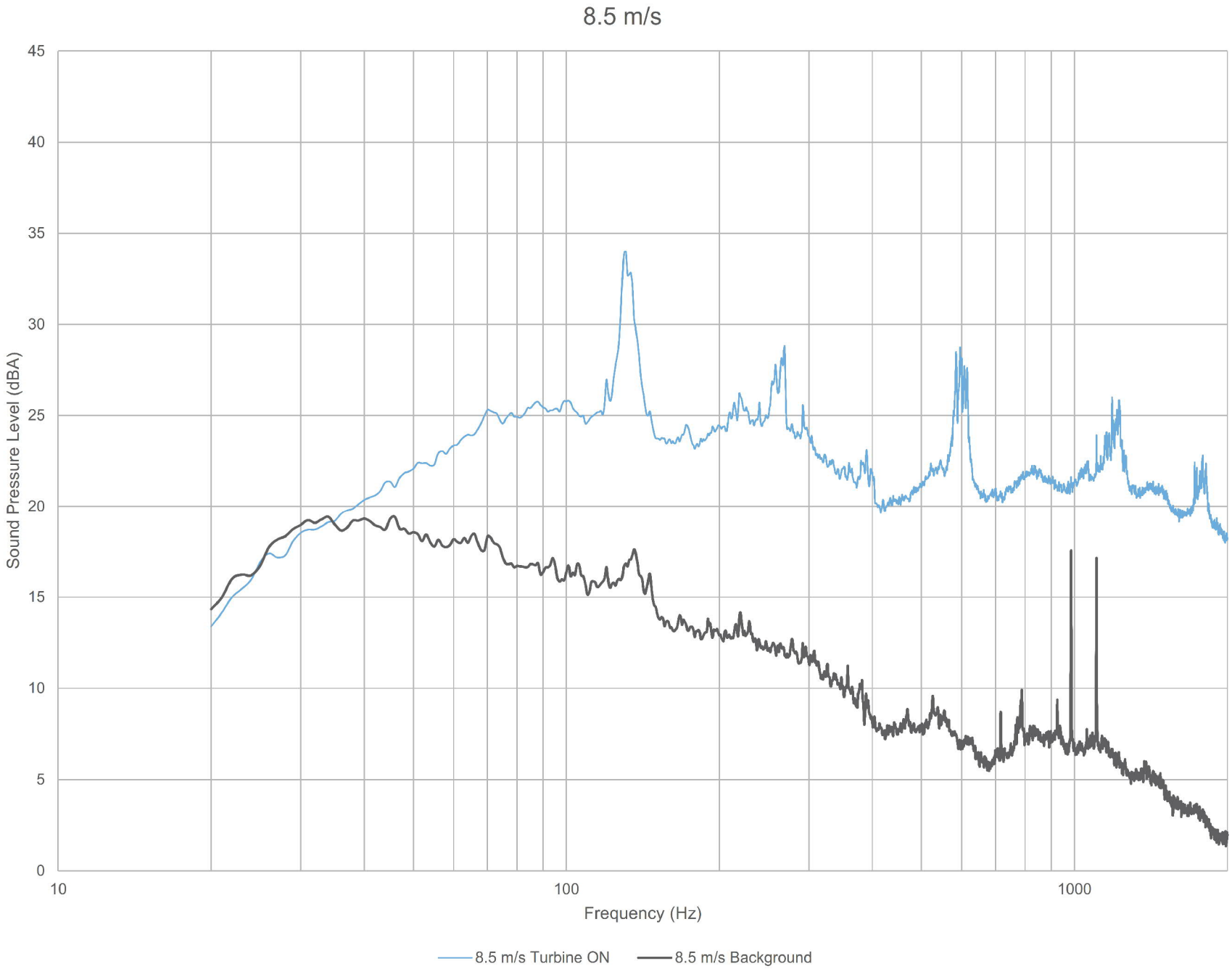
Plot of narrow band spectra – Turbine ON vs. Background at 7.5 m/s

Figure D.02



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of narrow band spectra – Turbine ON vs. Background at 8 m/s

Figure D.03



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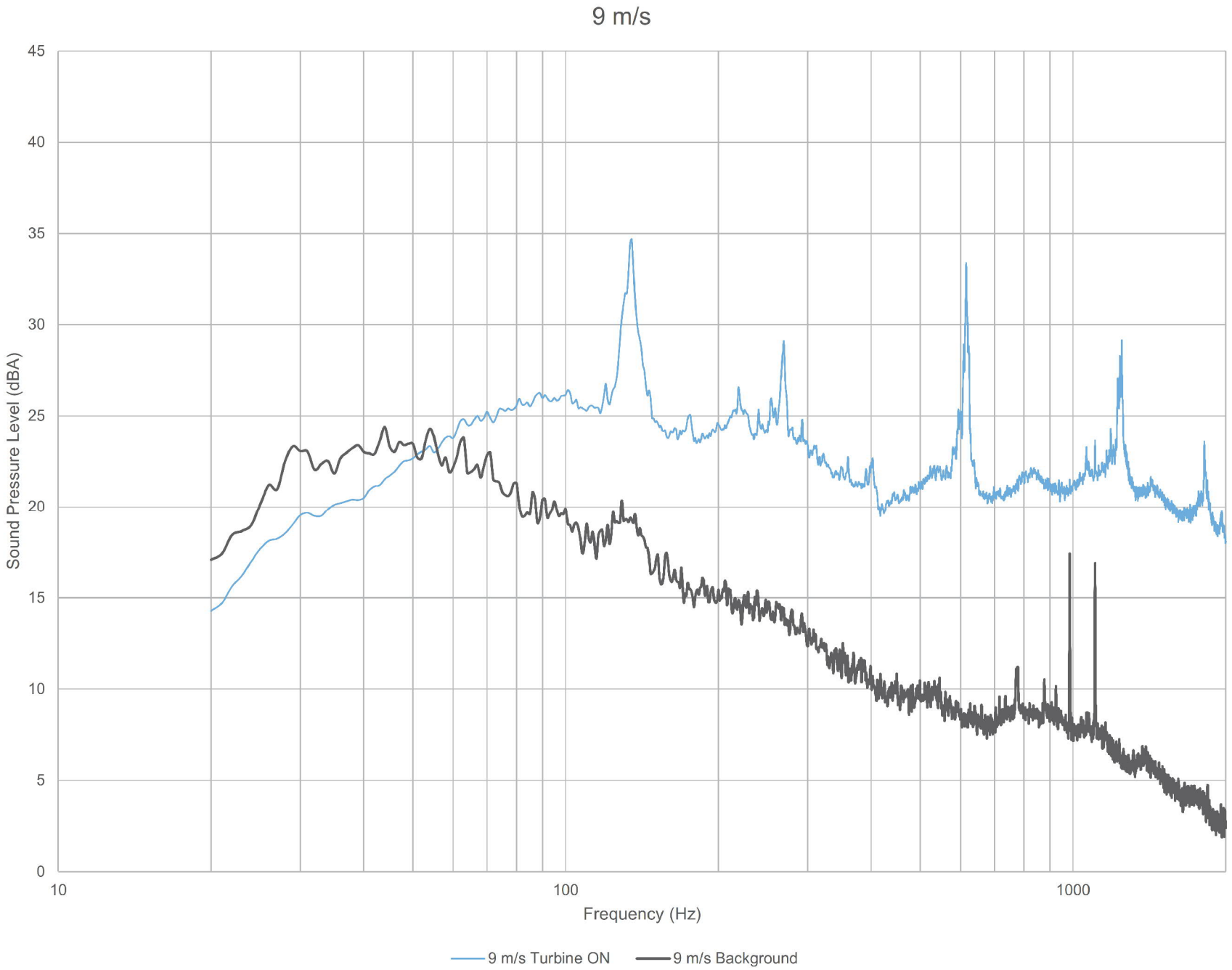
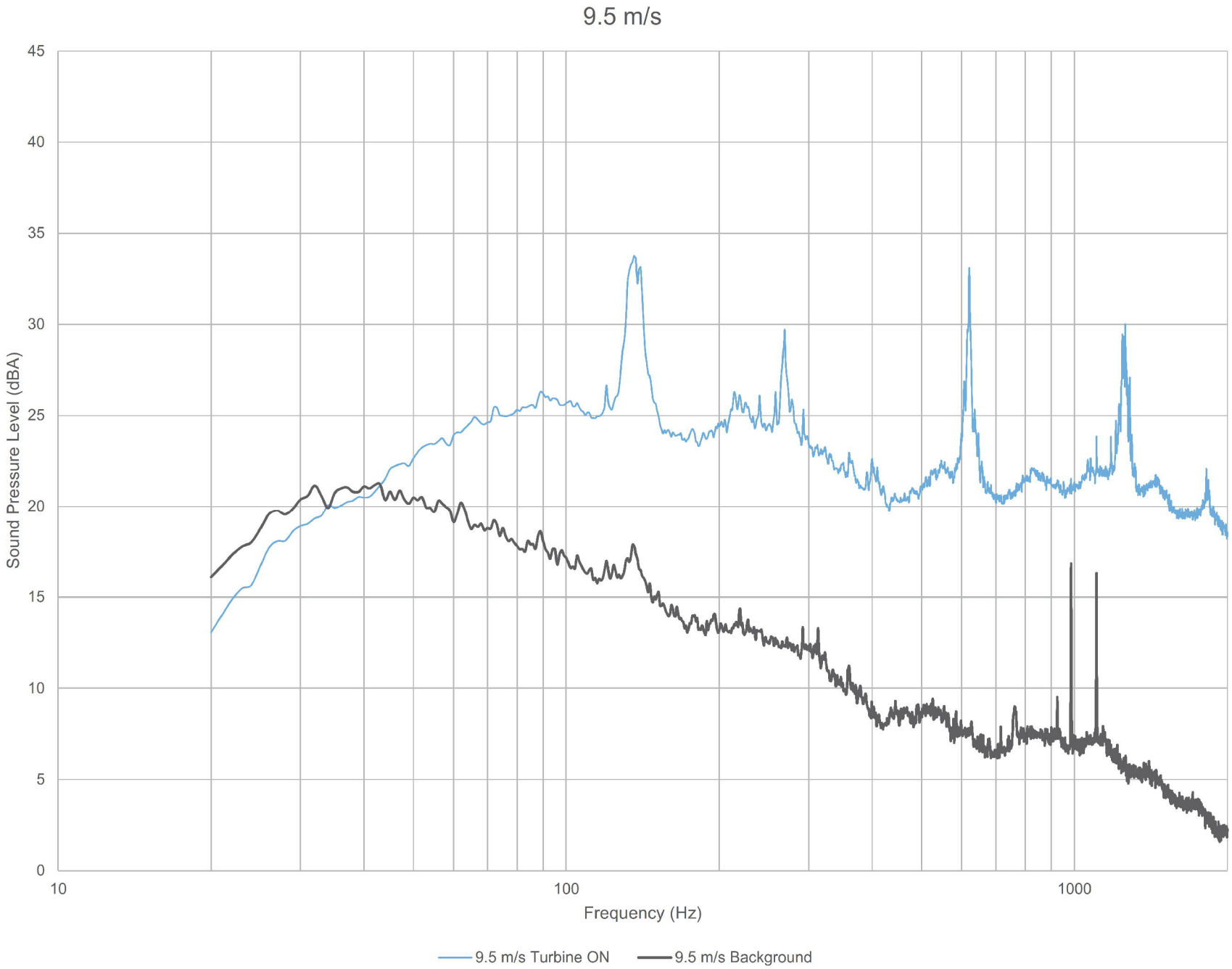
Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0
	Figure Title Plot of narrow band spectra – Turbine ON vs. Background at 8.5 m/s

Figure D.04



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of narrow band spectra – Turbine ON vs. Background at 9 m/s

Figure D.05



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Date: Sept 25, 2017
Revision: 1

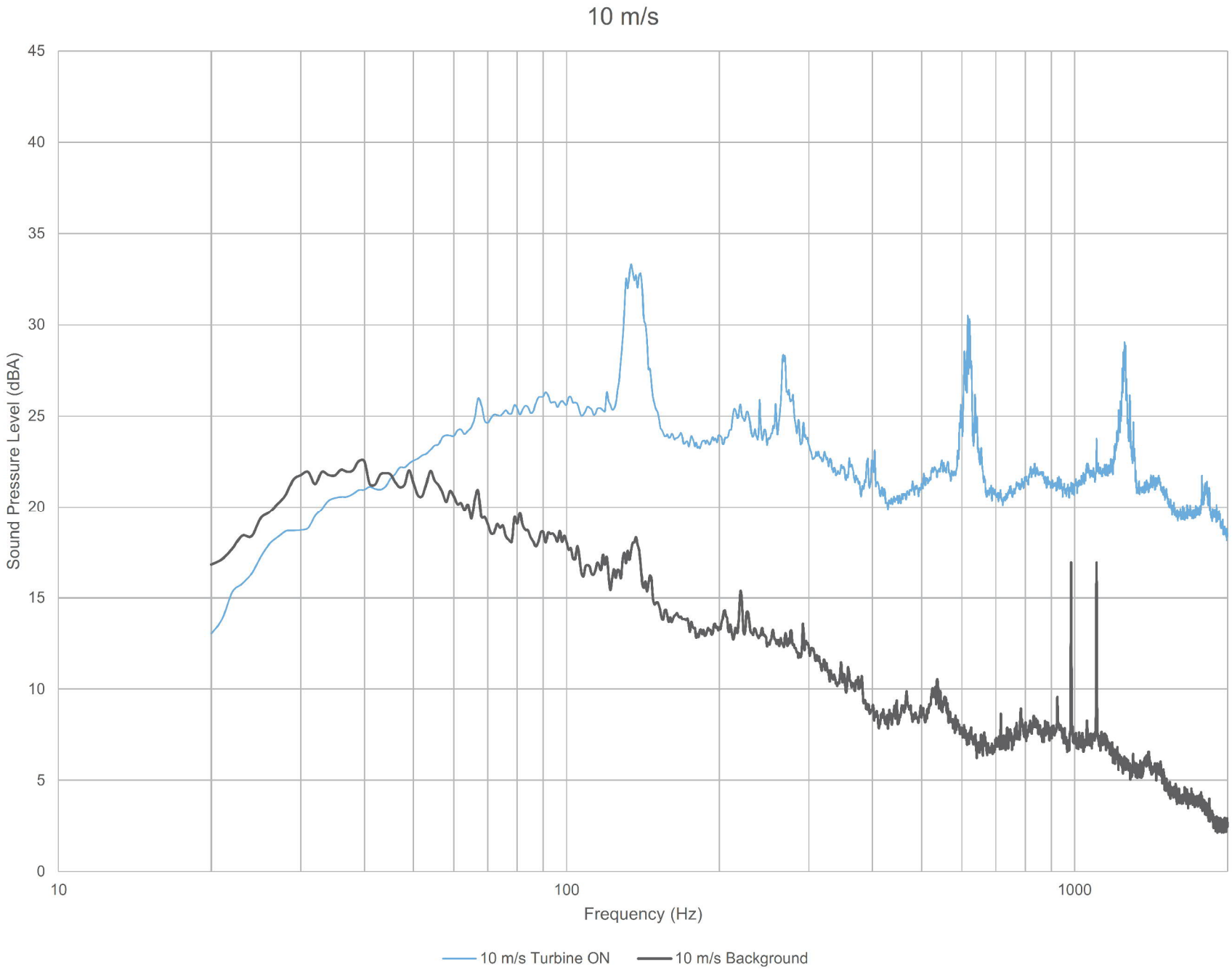
Project Name

Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0

Figure Title

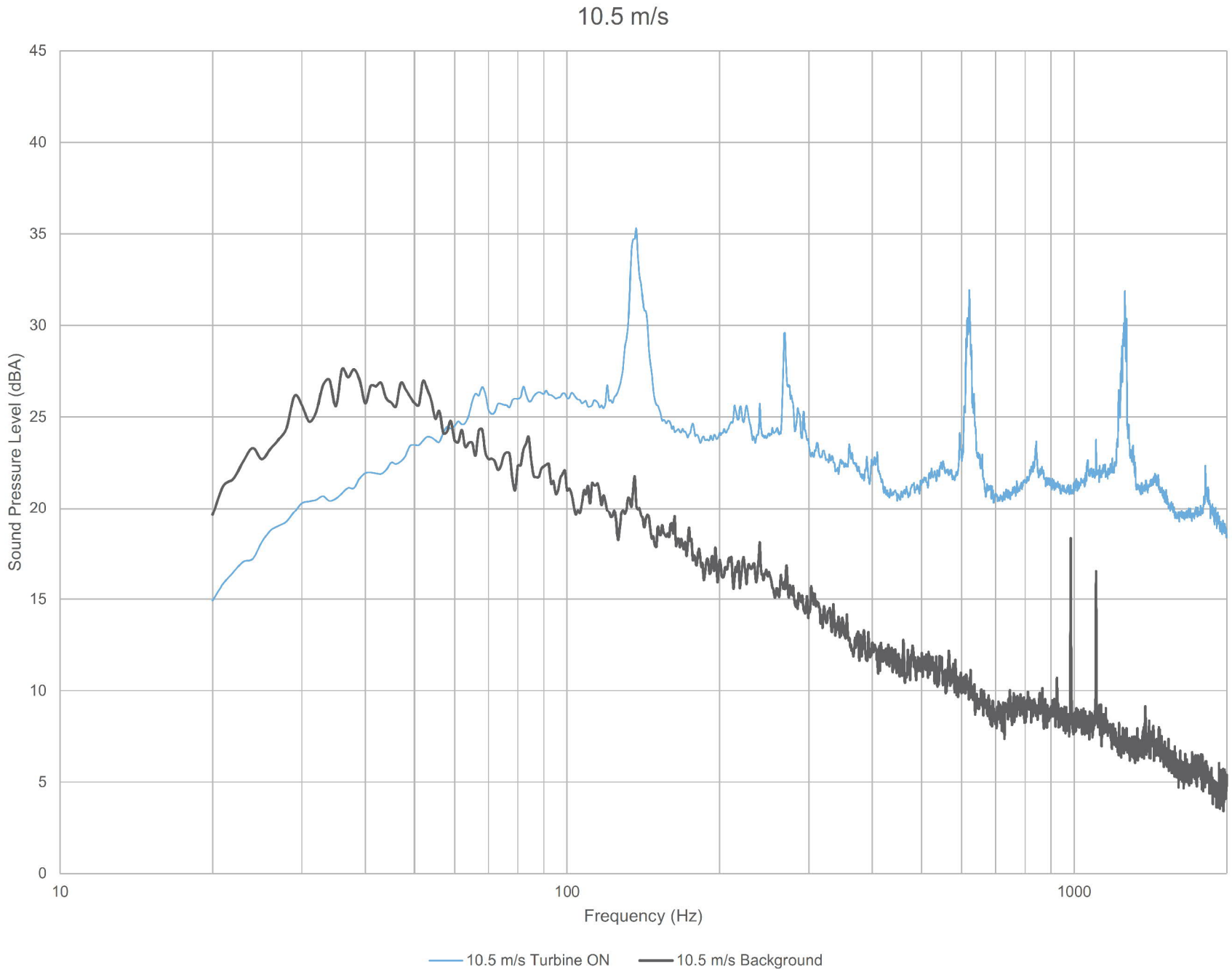
Plot of narrow band spectra – Turbine ON vs. Background at 9.5 m/s

Figure D.06



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of narrow band spectra – Turbine ON vs. Background at 10 m/s

Figure D.07



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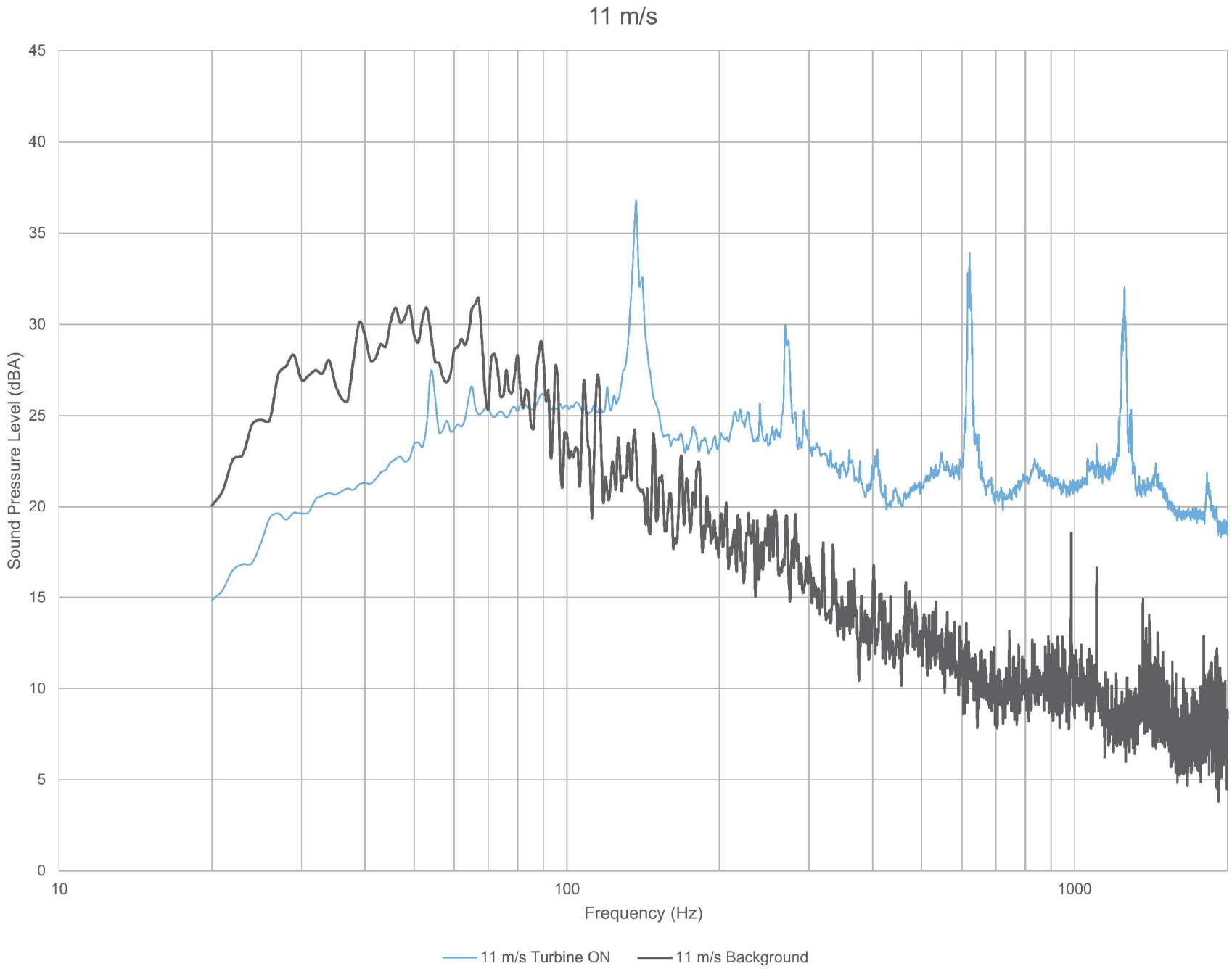
Project ID: 14462.00.T03.RP5	**Project Name**
Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0
	Figure Title Plot of narrow band spectra – Turbine ON vs. Background at 10.5 m/s

Figure D.08



aercoustics	Project ID: 14462.00.T03.RP5 Scale: NTS Drawn by: KC Reviewed by: PA Date: Sept 25, 2017 Revision: 1	**Project Name** Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Edition 3.0 **Figure Title** Plot of narrow band spectra – Turbine ON vs. Background at 11 m/s

Figure D.09

Table D.01 Tonality Assessment Table - 7 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
767	58			22.4	40.6	30.6	-10.1	-2.0	-8.1
460	61			23.4	41.7	33.2	-8.5	-2.0	-6.5
457	62			22.2	40.5	37.6	-2.8	-2.0	-0.8
763	63			21.3	39.6	31.1	-8.5	-2.0	-6.5
1195	66			19.8	38.1	30.0	-8.1	-2.0	-6.1
1377	67			19.8	38.0	33.7	-4.3	-2.0	-2.3
1376	68			20.5	38.7	29.8	-9.0	-2.0	-7.0
1313	68			19.6	37.8	26.3	-11.5	-2.0	-9.5
845	69			21.9	40.2	33.2	-6.9	-2.0	-4.9
766	69			22.9	41.1	33.9	-7.2	-2.0	-5.2
301	70			22.8	41.0	29.3	-11.7	-2.0	-9.7
300	70			21.6	39.9	34.6	-5.3	-2.0	-3.3
1312	70			19.0	37.2	29.2	-8.0	-2.0	-6.0
934	70			21.0	39.3	37.9	-1.4	-2.0	0.6
1210	70			19.9	38.1	31.3	-6.8	-2.0	-4.8
933	71			20.0	38.2	40.1	1.9	-2.0	3.9
299	71			22.6	40.8	35.1	-5.8	-2.0	-3.7
765	71			23.4	41.6	31.6	-10.0	-2.0	-8.0
844	72			21.4	39.6	35.1	-4.5	-2.0	-2.5
764	72			22.5	40.8	32.3	-8.5	-2.0	-6.5
298	72			23.0	41.2	32.9	-8.3	-2.0	-6.3
932	73			19.9	38.2	36.7	-1.4	-2.0	0.6
1083	73			20.9	39.1	28.2	-11.0	-2.0	-9.0
752	73			21.2	39.5	32.9	-6.6	-2.0	-4.6
1271	73			18.2	36.5	29.7	-6.8	-2.0	-4.8
751	75			22.4	40.7	34.0	-6.7	-2.0	-4.7
843	75			23.0	41.3	32.8	-8.5	-2.0	-6.5
745	75			21.4	39.6	29.9	-9.7	-2.0	-7.7
744	76			22.4	40.7	33.9	-6.8	-2.0	-4.7
537	76			21.0	39.2	43.8	4.6	-2.0	6.6
995	77			21.8	40.0	33.5	-6.5	-2.0	-4.5
1345	77			20.5	38.8	31.7	-7.1	-2.0	-5.1
536	78			22.3	40.5	38.3	-2.2	-2.0	-0.2
743	79			23.5	41.7	30.0	-11.7	-2.0	-9.7
852	81			22.7	40.9	35.1	-5.8	-2.0	-3.8
1456	81			22.8	41.1	31.2	-9.8	-2.0	-7.8
1378	82			20.2	38.5	37.6	-0.9	-2.0	1.1
1141	87			21.8	40.1	28.4	-11.6	-2.0	-9.6
1519	104			22.4	40.7	45.8	5.1	-2.0	7.1
Average	73						-3.8	-2.0	-1.8

Table D.02 Tonality Assessment Table - 7.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
No Reportable Tones									

Table D.03 Tonality Assessment Table - 8 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
No Reportable Tones									

Table D.04 Tonality Assessment Table - 8.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
317	127			24.8	43.1	35.3	-7.8	-2.0	-5.8
307	127			26.4	44.7	37.4	-7.3	-2.0	-5.3
978	128			23.4	41.7	35.8	-5.9	-2.0	-3.8
977	128			23.0	41.3	38.2	-3.1	-2.0	-1.1
1648	129			23.5	41.8	43.1	1.4	-2.0	3.4
333	129			27.2	45.5	33.5	-11.9	-2.0	-9.9
334	129			26.8	45.1	35.2	-9.9	-2.0	-7.9
1716	130			24.7	43.0	39.1	-3.9	-2.0	-1.9
979	130			24.3	42.6	40.4	-2.3	-2.0	-0.2
1939	130			24.2	42.5	36.4	-6.1	-2.0	-4.1
1935	130			24.4	42.7	35.8	-6.9	-2.0	-4.9
1784	130			25.2	43.5	37.7	-5.8	-2.0	-3.8
1946	130			24.0	42.3	41.8	-0.6	-2.0	1.5
335	130			26.2	44.5	43.6	-0.9	-2.0	1.1
306	130			27.5	45.8	39.3	-6.5	-2.0	-4.5
1831	130			24.0	42.3	32.0	-10.3	-2.0	-8.3
1910	130			24.2	42.5	41.9	-0.6	-2.0	1.4
1786	130			24.8	43.1	42.5	-0.6	-2.0	1.4
336	130			26.3	44.6	41.4	-3.2	-2.0	-1.2
1623	130			25.0	43.3	36.8	-6.5	-2.0	-4.5
1740	130			24.6	42.9	39.3	-3.6	-2.0	-1.6
1744	130			24.7	43.0	37.9	-5.1	-2.0	-3.1
1785	130			25.5	43.8	39.2	-4.6	-2.0	-2.6
971	131			25.1	43.4	42.2	-1.2	-2.0	0.8
1010	131			24.3	42.6	41.4	-1.3	-2.0	0.8
332	131			25.7	44.0	45.0	1.0	-2.0	3.0
1481	131			25.5	43.8	39.5	-4.3	-2.0	-2.3
1919	131			23.8	42.1	40.2	-1.9	-2.0	0.2
1964	131			25.7	44.0	38.5	-5.4	-2.0	-3.4
1817	131			25.8	44.1	39.3	-4.8	-2.0	-2.8
1854	131			25.4	43.7	36.3	-7.4	-2.0	-5.4
1918	131			24.5	42.8	38.0	-4.8	-2.0	-2.8
787	131			25.7	44.0	41.8	-2.2	-2.0	-0.2
969	131			24.4	42.7	38.7	-4.1	-2.0	-2.0
1911	131			25.1	43.4	40.9	-2.5	-2.0	-0.5
981	132			24.7	43.0	40.2	-2.8	-2.0	-0.8
990	132			24.0	42.3	40.4	-1.9	-2.0	0.1
1646	133			26.3	44.6	36.1	-8.5	-2.0	-6.5
1739	133			24.7	43.0	39.6	-3.4	-2.0	-1.4
1801	133			24.6	42.9	38.0	-4.9	-2.0	-2.9
1500	133			25.8	44.1	37.2	-6.9	-2.0	-4.8
1174	133			25.7	44.0	39.8	-4.2	-2.0	-2.2
1808	133			24.5	42.8	39.4	-3.3	-2.0	-1.3
987	133			25.9	44.2	33.7	-10.5	-2.0	-8.5
1944	133			24.0	42.3	39.2	-3.1	-2.0	-1.1
837	133			25.1	43.4	40.7	-2.7	-2.0	-0.6
1546	133			25.4	43.7	39.7	-4.0	-2.0	-2.0
314	134			26.0	44.3	43.0	-1.3	-2.0	0.7
1793	134			26.6	44.9	37.7	-7.2	-2.0	-5.2
1852	134			26.0	44.3	42.4	-1.9	-2.0	0.1
1868	134			24.9	43.2	39.8	-3.4	-2.0	-1.4
1549	134			24.4	42.7	39.2	-3.6	-2.0	-1.5
1550	134			23.9	42.2	37.8	-4.4	-2.0	-2.4
1945	134			25.3	43.6	38.3	-5.3	-2.0	-3.3
1501	134			25.5	43.8	35.7	-8.1	-2.0	-6.1
1869	134			24.2	42.5	39.6	-2.9	-2.0	-0.9
1975	135			24.1	42.4	37.9	-4.5	-2.0	-2.5
1947	135			25.2	43.5	36.7	-6.8	-2.0	-4.7
1647	135			26.4	44.7	41.6	-3.1	-2.0	-1.1
1853	135			25.2	43.5	41.3	-2.2	-2.0	-0.2
Average	131						-3.5	-2.0	-1.5

Table D.04 Tonality Assessment Table - 8.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1623	572			21.1	40.3	37.7	-2.6	-2.4	-0.2
1878	572			21.0	40.1	32.3	-7.8	-2.4	-5.4
307	574			25.5	44.6	40.5	-4.2	-2.4	-1.8
333	578			25.3	44.5	43.6	-0.9	-2.4	1.5
1784	583			21.5	40.6	35.0	-5.6	-2.4	-3.2
317	584			24.6	43.8	40.6	-3.1	-2.4	-0.7
334	584			24.7	43.9	45.7	1.8	-2.4	4.2
336	585			25.6	44.7	46.2	1.5	-2.4	3.8
1648	585			22.3	41.5	37.5	-4.0	-2.4	-1.6
978	585			21.2	40.3	38.2	-2.2	-2.4	0.2
314	587			26.2	45.3	42.0	-3.3	-2.4	-0.9
977	587			21.6	40.7	34.1	-6.7	-2.4	-4.3
1786	587			21.9	41.1	35.1	-6.0	-2.4	-3.6
335	591			25.2	44.4	43.9	-0.5	-2.4	1.9
1910	592			21.5	40.7	35.2	-5.5	-2.4	-3.1
1946	593			21.3	40.5	35.4	-5.1	-2.4	-2.7
1801	595			21.7	40.9	35.4	-5.5	-2.4	-3.0
1869	595			22.0	41.1	34.1	-7.0	-2.4	-4.6
1740	595			21.1	40.3	36.6	-3.7	-2.4	-1.3
306	597			25.0	44.2	43.7	-0.4	-2.4	2.0
1911	599			21.2	40.4	35.6	-4.8	-2.4	-2.4
990	599			21.6	40.8	35.3	-5.5	-2.4	-3.1
332	600			25.4	44.6	47.2	2.6	-2.4	5.0
971	600			22.1	41.3	38.8	-2.5	-2.4	-0.1
1785	601			21.4	40.6	30.9	-9.8	-2.4	-7.4
Average	589						-2.5	-2.4	-0.1

Table D.05 Tonality Assessment Table - 9 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1532	129			25.4	43.7	38.5	-5.2	-2.0	-3.2
1506	129			25.7	44.0	38.6	-5.4	-2.0	-3.3
1733	130			26.1	44.3	35.7	-8.6	-2.0	-6.6
1524	130			26.6	44.9	34.7	-10.2	-2.0	-8.2
1525	133			26.4	44.7	36.1	-8.6	-2.0	-6.6
1771	133			24.7	42.9	40.8	-2.2	-2.0	-0.1
1857	134			25.8	44.1	39.5	-4.6	-2.0	-2.6
1330	134			25.8	44.1	38.0	-6.1	-2.0	-4.1
1969	134			25.1	43.4	38.9	-4.5	-2.0	-2.5
970	134			25.2	43.5	39.8	-3.7	-2.0	-1.7
1881	134			25.7	44.0	41.2	-2.7	-2.0	-0.7
980	134			25.0	43.3	39.5	-3.8	-2.0	-1.8
791	134			26.1	44.4	41.3	-3.1	-2.0	-1.0
310	134			27.9	46.2	44.3	-1.9	-2.0	0.1
1666	134			25.1	43.4	37.9	-5.5	-2.0	-3.5
1787	134			25.8	44.1	39.2	-4.9	-2.0	-2.8
1715	134			25.8	44.1	39.7	-4.4	-2.0	-2.4
1553	135			25.4	43.7	41.1	-2.6	-2.0	-0.6
983	135			25.1	43.4	38.4	-5.1	-2.0	-3.1
1807	135			25.0	43.3	40.6	-2.7	-2.0	-0.7
792	135			26.5	44.8	35.4	-9.3	-2.0	-7.3
1958	135			25.7	44.0	41.0	-3.0	-2.0	-1.0
982	135			24.7	43.0	39.3	-3.6	-2.0	-1.6
1925	135			24.9	43.2	39.6	-3.6	-2.0	-1.6
1959	135			24.9	43.2	40.0	-3.3	-2.0	-1.2
1772	135			25.7	44.0	39.5	-4.5	-2.0	-2.5
1924	135			24.4	42.7	37.5	-5.2	-2.0	-3.2
1331	135			24.2	42.5	40.7	-1.8	-2.0	0.3
1927	135			24.6	42.9	38.3	-4.6	-2.0	-2.6
838	136			25.1	43.4	38.7	-4.6	-2.0	-2.6
1966	136			25.4	43.7	35.7	-8.0	-2.0	-6.0
989	136			25.3	43.6	40.3	-3.3	-2.0	-1.3
1858	136			26.4	44.7	36.8	-7.9	-2.0	-5.8
1070	137			26.2	44.4	40.7	-3.7	-2.0	-1.7
Average	134						-4.3	-2.0	-2.3

Table D.05 Tonality Assessment Table - 9 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1771	597			21.0	40.2	40.7	0.4	-2.4	2.8
1924	606			21.9	41.1	30.1	-11.0	-2.4	-8.6
1666	613			23.6	42.8	30.8	-12.0	-2.4	-9.6
1927	614			21.2	40.4	41.1	0.7	-2.4	3.1
1787	614			22.5	41.7	34.6	-7.1	-2.4	-4.7
970	614			22.0	41.2	39.8	-1.3	-2.4	1.1
791	614			22.1	41.4	42.6	1.2	-2.4	3.7
1330	615			22.0	41.2	40.7	-0.6	-2.4	1.9
1553	615			21.1	40.4	40.8	0.5	-2.4	2.9
838	615			22.0	41.2	41.0	-0.2	-2.4	2.2
1070	615			22.2	41.5	40.0	-1.5	-2.4	0.9
792	616			22.1	41.4	43.2	1.8	-2.4	4.2
1715	616			21.4	40.6	40.4	-0.2	-2.4	2.3
980	616			21.9	41.1	44.0	2.9	-2.4	5.3
1772	616			21.3	40.6	40.1	-0.5	-2.4	2.0
1969	617			22.1	41.4	39.0	-2.3	-2.4	0.1
1506	617			22.6	41.9	37.6	-4.3	-2.4	-1.9
1857	617			21.2	40.5	40.4	0.0	-2.4	2.4
982	617			22.0	41.3	41.9	0.6	-2.4	3.1
983	618			22.2	41.4	43.7	2.3	-2.4	4.7
310	618			26.6	45.8	44.4	-1.4	-2.4	1.0
1331	619			22.1	41.3	40.0	-1.3	-2.4	1.1
1524	619			22.0	41.3	28.1	-13.2	-2.4	-10.8
1959	619			21.9	41.1	38.8	-2.4	-2.4	0.1
989	620			21.8	41.1	44.3	3.2	-2.4	5.6
1958	622			22.0	41.3	42.2	0.9	-2.4	3.3
1807	623			21.4	40.7	42.0	1.3	-2.4	3.7
1966	624			21.5	40.8	35.6	-5.1	-2.4	-2.7
1925	624			21.4	40.7	41.7	1.1	-2.4	3.5
1858	624			21.8	41.0	40.9	-0.2	-2.4	2.3
1881	628			22.9	42.2	29.3	-12.9	-2.4	-10.4
Average	617						-0.5	-2.4	2.0

Table D.05 Tonality Assessment Table - 9 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1807	1241			21.9	43.0	40.6	-2.4	-3.0	0.6
1958	1245			22.0	43.1	41.3	-1.8	-3.0	1.2
1070	1245			23.1	44.2	32.6	-11.5	-3.0	-8.5
1924	1246			22.1	43.1	35.6	-7.5	-3.0	-4.5
1858	1246			22.0	43.0	40.4	-2.7	-3.0	0.4
1506	1247			22.0	43.0	35.0	-8.0	-3.0	-5.0
1969	1248			22.9	43.9	45.1	1.2	-3.0	4.2
1536	1248			22.0	43.1	36.5	-6.6	-3.0	-3.6
1966	1248			21.7	42.8	42.4	-0.4	-3.0	2.6
1524	1251			21.7	42.8	31.0	-11.7	-3.0	-8.7
1881	1252			22.6	43.7	40.3	-3.4	-3.0	-0.3
1925	1254			22.8	43.9	43.0	-0.9	-3.0	2.2
1666	1290			22.9	44.1	29.3	-14.8	-3.1	-11.7
Average	1251						-3.4	-3.0	-0.3

Table D.06 Tonality Assessment Table - 9.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1783	129			24.8	43.0	40.7	-2.4	-2.0	-0.3
1934	131			25.1	43.4	40.0	-3.4	-2.0	-1.4
1795	132			24.8	43.1	43.0	-0.1	-2.0	1.9
1621	132			25.5	43.8	41.4	-2.4	-2.0	-0.4
1504	132			25.6	43.9	39.0	-5.0	-2.0	-3.0
1704	132			25.7	44.0	41.0	-3.0	-2.0	-0.9
1653	132			23.2	41.5	43.5	2.0	-2.0	4.0
1705	133			25.8	44.0	40.3	-3.8	-2.0	-1.8
1732	134			24.9	43.2	39.6	-3.6	-2.0	-1.6
1851	134			25.4	43.7	40.2	-3.4	-2.0	-1.4
1545	134			25.9	44.2	43.8	-0.4	-2.0	1.6
1759	134			24.6	42.8	40.4	-2.4	-2.0	-0.4
1638	134			25.2	43.5	41.9	-1.7	-2.0	0.3
1933	134			24.5	42.8	39.6	-3.2	-2.0	-1.1
1634	135			26.3	44.6	41.1	-3.6	-2.0	-1.6
790	135			25.5	43.8	36.7	-7.1	-2.0	-5.1
1893	135			24.0	42.3	37.5	-4.8	-2.0	-2.8
1789	135			26.7	45.0	40.9	-4.1	-2.0	-2.1
1830	135			25.9	44.2	38.5	-5.7	-2.0	-3.7
1597	135			24.7	43.0	41.9	-1.1	-2.0	0.9
1650	136			24.6	42.9	40.9	-2.0	-2.0	0.0
1561	136			25.2	43.4	43.5	0.1	-2.0	2.1
1842	136			24.6	42.9	40.7	-2.2	-2.0	-0.2
1877	136			26.0	44.3	34.5	-9.8	-2.0	-7.8
988	136			26.6	44.9	38.5	-6.4	-2.0	-4.4
1530	136			24.9	43.2	40.9	-2.3	-2.0	-0.3
1612	136			27.1	45.4	39.8	-5.6	-2.0	-3.6
1598	136			25.0	43.3	41.1	-2.2	-2.0	-0.2
1654	137			24.4	42.7	43.3	0.6	-2.0	2.6
1886	137			23.9	42.2	39.0	-3.2	-2.0	-1.2
1743	137			24.8	43.1	37.8	-5.3	-2.0	-3.3
1736	137			25.0	43.3	42.4	-0.8	-2.0	1.2
1885	137			23.7	42.0	35.7	-6.2	-2.0	-4.2
1806	137			25.7	44.0	41.8	-2.2	-2.0	-0.2
1930	137			23.9	42.1	40.9	-1.2	-2.0	0.8
1678	138			26.2	44.5	36.2	-8.3	-2.0	-6.3
1608	139			25.4	43.7	43.8	0.1	-2.0	2.2
1607	139			25.9	44.2	41.7	-2.5	-2.0	-0.5
1791	139			28.0	46.3	42.8	-3.5	-2.0	-1.5
1722	139			26.0	44.3	39.6	-4.6	-2.0	-2.6
1952	139			25.6	43.9	37.6	-6.2	-2.0	-4.2
1539	140			24.0	42.3	40.8	-1.5	-2.0	0.5
1652	140			23.2	41.5	40.7	-0.9	-2.0	1.2
1724	140			26.4	44.7	42.1	-2.6	-2.0	-0.6
1723	140			26.2	44.5	41.0	-3.5	-2.0	-1.5
1558	141			24.7	43.0	41.9	-1.1	-2.0	0.9
1503	141			26.6	44.9	35.2	-9.7	-2.0	-7.7
1823	141			25.9	44.2	39.5	-4.7	-2.0	-2.7
1554	142			26.4	44.7	40.3	-4.4	-2.0	-2.4
1882	143			25.9	44.2	35.4	-8.8	-2.0	-6.7
Average	136						-2.7	-2.0	-0.7

Table D.06 Tonality Assessment Table - 9.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1783	592			21.5	40.7	38.0	-2.6	-2.4	-0.2
1851	597			22.6	41.7	35.4	-6.4	-2.4	-4.0
1934	606			22.1	41.3	39.3	-2.0	-2.4	0.4
1933	606			21.3	40.5	39.9	-0.7	-2.4	1.7
1638	607			22.1	41.3	39.1	-2.2	-2.4	0.2
1653	607			21.3	40.5	38.8	-1.8	-2.4	0.6
1704	607			22.4	41.6	37.9	-3.7	-2.4	-1.3
1795	607			22.0	41.2	38.5	-2.7	-2.4	-0.3
1621	608			21.8	41.0	40.0	-1.0	-2.4	1.4
1705	612			22.0	41.3	38.6	-2.7	-2.4	-0.3
1732	613			21.9	41.2	41.0	-0.2	-2.4	2.2
1530	615			22.1	41.3	42.7	1.4	-2.4	3.8
1893	616			22.0	41.2	44.0	2.7	-2.4	5.2
1545	616			22.0	41.3	39.8	-1.4	-2.4	1.0
1759	616			22.5	41.7	40.4	-1.3	-2.4	1.1
1724	617			23.0	42.2	38.4	-3.8	-2.4	-1.4
1830	618			21.3	40.5	42.1	1.5	-2.4	3.9
1504	619			22.7	42.0	40.1	-1.9	-2.4	0.5
1650	620			22.3	41.6	39.7	-1.9	-2.4	0.6
790	620			22.1	41.3	45.1	3.8	-2.4	6.3
1789	620			21.6	40.8	43.4	2.6	-2.4	5.0
1654	620			22.0	41.2	39.4	-1.8	-2.4	0.6
1885	620			22.5	41.7	43.9	2.2	-2.4	4.6
1952	620			22.9	42.1	29.5	-12.6	-2.4	-10.1
1612	621			22.7	42.0	40.0	-2.0	-2.4	0.4
1877	621			22.7	42.0	39.6	-2.4	-2.4	0.1
1597	621			22.0	41.2	43.4	2.2	-2.4	4.6
988	621			22.2	41.4	44.6	3.2	-2.4	5.6
1598	621			22.3	41.5	44.1	2.6	-2.4	5.0
1886	621			21.8	41.1	44.7	3.7	-2.4	6.1
1736	621			23.2	42.5	37.7	-4.7	-2.4	-2.3
1842	621			23.1	42.4	40.2	-2.2	-2.4	0.3
1561	622			21.6	40.8	43.3	2.5	-2.4	4.9
1634	622			22.1	41.3	42.6	1.3	-2.4	3.7
1652	622			22.7	41.9	35.0	-6.9	-2.4	-4.5
1607	622			22.2	41.4	43.8	2.4	-2.4	4.8
Average	615						0.0	-2.4	2.5

Table D.06 Tonality Assessment Table - 9.5 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1743	1249			21.8	42.9	40.8	-2.0	-3.0	1.0
1561	1249			22.2	43.2	44.1	0.8	-3.0	3.9
1598	1250			22.5	43.6	46.2	2.7	-3.0	5.7
1893	1251			22.2	43.3	44.3	0.9	-3.0	4.0
1930	1253			23.0	44.1	41.2	-3.0	-3.0	0.1
1791	1253			22.5	43.6	42.6	-0.9	-3.0	2.1
1634	1254			22.5	43.6	41.9	-1.7	-3.0	1.3
1723	1259			23.0	44.1	45.2	1.2	-3.0	4.2
1654	1259			22.5	43.6	45.5	1.9	-3.0	4.9
1724	1259			22.9	43.9	41.9	-2.1	-3.0	1.0
1607	1260			22.6	43.7	44.9	1.2	-3.0	4.3
1759	1261			22.3	43.4	42.7	-0.7	-3.0	2.3
1842	1261			23.0	44.1	39.5	-4.5	-3.0	-1.5
1612	1262			22.3	43.4	44.6	1.2	-3.0	4.2
1722	1263			23.2	44.3	44.1	-0.2	-3.0	2.9
1678	1263			22.5	43.6	42.2	-1.4	-3.0	1.6
1885	1267			22.7	43.8	46.3	2.4	-3.0	5.5
1825	1273			22.5	43.7	37.2	-6.5	-3.1	-3.4
1608	1273			22.9	44.1	42.8	-1.2	-3.1	1.8
1539	1284			21.8	43.0	42.2	-0.9	-3.1	2.2
1652	1285			22.4	43.6	41.0	-2.6	-3.1	0.5
1558	1286			22.2	43.4	42.1	-1.3	-3.1	1.7
1823	1287			22.6	43.8	38.3	-5.5	-3.1	-2.4
1503	1296			22.9	44.1	33.4	-10.7	-3.1	-7.7
1554	1297			23.3	44.5	42.2	-2.3	-3.1	0.7
1882	1316			22.4	43.7	33.7	-10.0	-3.1	-6.9
1736	1320			23.6	44.9	35.8	-9.1	-3.1	-6.0
Average	1270						-0.9	-3.0	2.1

Table D.07 Tonality Assessment Table - 10 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1849	129			24.8	43.1	42.5	-0.6	-2.0	1.4
1622	131			25.0	43.3	41.5	-1.9	-2.0	0.1
1738	131			25.7	44.0	43.6	-0.3	-2.0	1.7
1768	131			25.8	44.1	41.1	-2.9	-2.0	-0.9
1767	131			26.0	44.3	40.4	-3.9	-2.0	-1.9
1529	132			25.2	43.5	36.1	-7.4	-2.0	-5.3
1907	132			24.3	42.6	39.9	-2.7	-2.0	-0.7
1828	133			24.6	42.9	40.4	-2.5	-2.0	-0.4
1839	133			24.2	42.5	41.1	-1.4	-2.0	0.6
1610	133			25.6	43.9	40.8	-3.1	-2.0	-1.1
1773	134			24.9	43.2	39.9	-3.3	-2.0	-1.3
1640	134			27.4	45.7	41.4	-4.3	-2.0	-2.3
1782	134			25.7	44.0	39.3	-4.7	-2.0	-2.7
1838	134			25.0	43.3	40.8	-2.5	-2.0	-0.5
313	135			27.7	46.0	46.6	0.6	-2.0	2.6
1542	135			26.0	44.3	40.2	-4.2	-2.0	-2.1
1818	136			26.4	44.7	39.7	-5.0	-2.0	-3.0
1602	136			25.2	43.5	42.2	-1.3	-2.0	0.7
1655	137			24.5	42.8	41.8	-1.0	-2.0	1.0
1932	137			24.8	43.1	38.7	-4.4	-2.0	-2.4
1692	137			24.7	43.0	38.6	-4.4	-2.0	-2.4
1848	137			24.8	43.1	40.1	-3.0	-2.0	-1.0
1691	137			24.7	43.0	40.9	-2.1	-2.0	-0.1
1888	137			23.5	41.8	33.1	-8.6	-2.0	-6.6
1576	138			24.7	43.0	42.1	-0.9	-2.0	1.1
1824	139			24.9	43.2	31.1	-12.1	-2.0	-10.0
1526	139			25.4	43.7	38.6	-5.1	-2.0	-3.1
1557	140			25.3	43.6	44.7	1.0	-2.0	3.0
1693	140			26.0	44.3	41.1	-3.2	-2.0	-1.2
1512	141			26.2	44.5	35.9	-8.7	-2.0	-6.6
1874	141			25.9	44.2	42.6	-1.6	-2.0	0.4
1937	141			26.2	44.5	37.8	-6.7	-2.0	-4.7
1712	141			25.7	44.0	41.7	-2.3	-2.0	-0.3
1883	141			24.3	42.6	38.4	-4.1	-2.0	-2.1
1505	142			25.7	44.0	37.1	-6.9	-2.0	-4.9
1535	143			26.0	44.3	39.2	-5.1	-2.0	-3.1
1953	143			25.1	43.4	38.3	-5.1	-2.0	-3.1
1649	143			24.3	42.6	42.7	0.1	-2.0	2.1
Average	137						-2.8	-2.0	-0.8

Table D.07 Tonality Assessment Table - 10 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1849	593			22.0	41.2	38.7	-2.5	-2.4	-0.1
1738	597			21.8	40.9	41.2	0.3	-2.4	2.7
1622	598			21.7	40.9	38.1	-2.8	-2.4	-0.4
1768	600			21.9	41.1	36.5	-4.5	-2.4	-2.1
1907	606			21.7	41.0	38.9	-2.1	-2.4	0.4
1691	607			22.5	41.7	38.3	-3.4	-2.4	-1.0
1767	607			21.9	41.1	38.6	-2.5	-2.4	-0.1
1839	608			21.8	41.0	41.3	0.3	-2.4	2.8
1828	608			21.6	40.8	42.4	1.6	-2.4	4.0
1640	612			21.9	41.1	39.8	-1.3	-2.4	1.2
1773	615			23.1	42.3	34.6	-7.8	-2.4	-5.4
313	616			26.0	45.2	45.8	0.5	-2.4	2.9
1782	616			21.8	41.1	42.0	0.9	-2.4	3.3
1932	616			22.3	41.5	40.3	-1.2	-2.4	1.2
1692	616			21.9	41.1	39.6	-1.5	-2.4	0.9
1540	620			22.5	41.7	40.6	-1.2	-2.4	1.3
1874	620			23.3	42.6	33.3	-9.3	-2.4	-6.9
1838	621			21.8	41.0	40.8	-0.2	-2.4	2.3
1602	621			22.1	41.3	41.6	0.2	-2.4	2.7
1818	621			21.5	40.7	42.7	2.0	-2.4	4.4
1529	621			21.9	41.1	40.2	-0.9	-2.4	1.5
1512	621			22.6	41.8	42.1	0.3	-2.4	2.7
1610	622			22.5	41.8	41.7	-0.1	-2.4	2.3
1693	622			22.7	42.0	33.4	-8.6	-2.4	-6.2
1712	622			23.1	42.3	37.1	-5.2	-2.4	-2.7
1655	623			22.6	41.9	35.6	-6.3	-2.4	-3.8
1649	623			22.7	41.9	37.4	-4.5	-2.4	-2.1
1888	625			22.0	41.2	40.1	-1.1	-2.4	1.3
1542	626			22.2	41.5	43.3	1.9	-2.4	4.3
1848	627			22.2	41.5	42.7	1.2	-2.4	3.6
1576	627			22.1	41.3	40.2	-1.1	-2.4	1.3
Average	615						-1.1	-2.4	1.3

Table D.07 Tonality Assessment Table - 10 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1818	1242			21.8	42.8	42.0	-0.8	-3.0	2.2
1838	1243			21.9	42.9	39.6	-3.3	-3.0	-0.3
1610	1243			22.7	43.8	41.0	-2.8	-3.0	0.2
1602	1247			22.3	43.4	45.1	1.8	-3.0	4.8
1848	1247			22.7	43.7	41.4	-2.3	-3.0	0.7
1888	1248			22.2	43.3	44.1	0.9	-3.0	3.9
1540	1249			23.1	44.2	32.5	-11.7	-3.0	-8.6
1542	1251			22.7	43.8	42.9	-0.9	-3.0	2.1
1693	1252			23.2	44.2	42.3	-1.9	-3.0	1.1
1932	1255			23.5	44.6	42.4	-2.2	-3.0	0.9
1655	1258			21.9	43.0	39.2	-3.8	-3.0	-0.8
1576	1259			22.8	43.9	46.2	2.3	-3.0	5.3
1691	1259			22.0	43.1	37.4	-5.7	-3.0	-2.6
1692	1261			22.5	43.6	42.9	-0.7	-3.0	2.3
1712	1261			23.4	44.5	42.7	-1.7	-3.0	1.3
1526	1263			23.7	44.8	36.9	-7.9	-3.0	-4.8
1953	1265			22.5	43.6	34.5	-9.2	-3.0	-6.1
1824	1266			22.4	43.6	38.9	-4.7	-3.0	-1.7
1557	1284			22.9	44.0	43.1	-0.9	-3.1	2.1
1883	1287			22.2	43.4	40.8	-2.6	-3.1	0.5
1937	1291			22.1	43.3	34.7	-8.6	-3.1	-5.6
1535	1306			23.0	44.3	37.1	-7.2	-3.1	-4.1
1505	1306			23.8	45.0	40.6	-4.3	-3.1	-1.3
1773	1311			22.9	44.2	37.1	-7.1	-3.1	-4.0
1649	1314			23.6	44.9	36.5	-8.4	-3.1	-5.3
Average	1267						-2.5	-3.0	0.6

Table D.08 Tonality Assessment Table - 10.5 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1703	130			25.8	44.1	40.3	-3.8	-2.0	-1.8
1713	133			25.9	44.2	43.2	-0.9	-2.0	1.1
1582	133			26.4	44.7	42.3	-2.4	-2.0	-0.3
1603	133			27.6	45.9	36.2	-9.7	-2.0	-7.7
1701	134			25.7	44.0	40.8	-3.2	-2.0	-1.1
1543	134			27.9	46.2	42.8	-3.4	-2.0	-1.4
1811	134			25.5	43.8	36.6	-7.2	-2.0	-5.2
1909	134			25.2	43.5	40.7	-2.8	-2.0	-0.8
1837	134			23.4	41.7	40.1	-1.6	-2.0	0.4
1702	134			25.4	43.7	40.9	-2.9	-2.0	-0.9
1687	134			24.2	42.4	42.0	-0.5	-2.0	1.5
1683	134			25.0	43.3	41.1	-2.2	-2.0	-0.2
1840	135			24.5	42.8	40.4	-2.4	-2.0	-0.4
1805	135			26.3	44.6	42.6	-1.9	-2.0	0.1
1604	135			26.2	44.5	41.5	-3.0	-2.0	-1.0
1562	135			27.0	45.3	43.0	-2.3	-2.0	-0.3
1735	135			26.1	44.4	39.3	-5.1	-2.0	-3.1
1770	135			24.9	43.2	42.4	-0.9	-2.0	1.1
1756	136			26.1	44.4	38.8	-5.6	-2.0	-3.5
1900	136			24.8	43.1	37.4	-5.7	-2.0	-3.7
1633	136			24.6	42.9	43.1	0.2	-2.0	2.2
1943	136			24.9	43.2	40.2	-2.9	-2.0	-0.9
1672	136			25.8	44.1	38.6	-5.5	-2.0	-3.5
1798	136			25.6	43.9	42.5	-1.4	-2.0	0.6
1635	136			24.4	42.7	42.7	0.0	-2.0	2.0
1685	137			25.8	44.1	39.1	-5.0	-2.0	-3.0
1584	137			27.9	46.2	40.7	-5.6	-2.0	-3.5
1568	137			25.3	43.6	42.9	-0.7	-2.0	1.3
1575	137			28.4	46.7	41.3	-5.4	-2.0	-3.3
1797	137			24.7	43.0	41.8	-1.2	-2.0	0.8
1639	137			25.2	43.5	42.6	-0.9	-2.0	1.2
1570	137			25.9	44.2	42.9	-1.3	-2.0	0.7
1615	138			26.0	44.3	39.7	-4.6	-2.0	-2.6
1587	138			24.0	42.3	39.4	-2.9	-2.0	-0.8
1926	138			25.0	43.3	36.0	-7.3	-2.0	-5.3
1583	138			26.8	45.1	43.0	-2.1	-2.0	-0.1
1684	138			25.3	43.6	38.9	-4.6	-2.0	-2.6
1669	139			25.6	43.9	36.5	-7.5	-2.0	-5.5
1586	139			26.0	44.3	41.8	-2.4	-2.0	-0.4
1572	139			26.8	45.1	43.1	-2.0	-2.0	0.0
1876	140			26.0	44.3	37.4	-6.9	-2.0	-4.9
1578	141			25.4	43.7	42.5	-1.2	-2.0	0.8
1884	141			24.4	42.7	39.2	-3.6	-2.0	-1.6
1774	143			27.0	45.3	40.5	-4.8	-2.0	-2.7
1523	143			27.0	45.3	39.1	-6.2	-2.0	-4.2
1677	143			25.4	43.7	38.9	-4.7	-2.0	-2.7
1708	143			26.0	44.3	42.2	-2.1	-2.0	-0.1
1810	144			25.6	43.9	42.5	-1.4	-2.0	0.6
1538	144			26.2	44.5	40.7	-3.8	-2.0	-1.8
Average	137						-2.9	-2.0	-0.9

Table D.08 Tonality Assessment Table - 10.5 m/s

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)
1703	594			22.3	41.5	41.8	0.3	-2.4	2.7
1702	595			21.9	41.1	38.8	-2.3	-2.4	0.1
1603	607			22.2	41.4	39.9	-1.5	-2.4	0.9
1582	608			21.9	41.1	41.2	0.2	-2.4	2.6
1837	612			21.5	40.7	42.6	1.9	-2.4	4.3
1683	613			21.0	40.2	44.5	4.3	-2.4	6.7
1701	615			21.6	40.8	42.6	1.7	-2.4	4.2
1543	615			22.5	41.7	38.5	-3.2	-2.4	-0.8
1770	616			22.0	41.2	42.1	0.9	-2.4	3.3
1735	616			24.3	43.5	39.2	-4.3	-2.4	-1.9
1687	616			21.6	40.8	40.8	0.0	-2.4	2.4
1578	617			23.5	42.8	33.0	-9.7	-2.4	-7.3
1604	617			21.9	41.1	41.3	0.1	-2.4	2.6
1805	618			22.2	41.5	43.1	1.6	-2.4	4.0
1562	618			22.8	42.0	40.8	-1.2	-2.4	1.2
1909	619			23.0	42.2	42.9	0.6	-2.4	3.1
1523	619			23.6	42.9	35.6	-7.3	-2.4	-4.9
1672	620			21.7	41.0	40.0	-0.9	-2.4	1.5
1926	620			21.4	40.6	38.2	-2.4	-2.4	0.0
1797	620			22.2	41.4	42.0	0.6	-2.4	3.0
1633	621			22.1	41.3	42.9	1.6	-2.4	4.0
1708	621			23.2	42.4	39.5	-2.9	-2.4	-0.5
1635	621			22.0	41.3	45.2	3.9	-2.4	6.4
1943	621			21.3	40.5	41.1	0.6	-2.4	3.0
1840	621			21.6	40.9	42.7	1.9	-2.4	4.3
1584	622			22.2	41.5	41.0	-0.5	-2.4	2.0
1572	622			22.3	41.5	40.0	-1.5	-2.4	0.9
1798	623			22.2	41.4	43.4	2.0	-2.4	4.5
1713	623			22.5	41.8	40.2	-1.6	-2.4	0.8
1639	624			21.4	40.7	40.3	-0.4	-2.4	2.1
Average	616						0.2	-2.4	2.6

Table D.08 Tonality Assessment Table - 10.5 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1684	627			21.9	41.1	36.3	-4.8	-2.4	-2.4
1575	627			22.1	41.4	39.0	-2.3	-2.4	0.1
1568	627			22.2	41.4	39.9	-1.6	-2.4	0.9
1615	627			22.7	41.9	38.1	-3.9	-2.4	-1.4
1756	629			22.5	41.7	34.9	-6.8	-2.4	-4.4
1587	632			22.0	41.3	39.0	-2.3	-2.4	0.2
1586	634			23.0	42.3	37.5	-4.8	-2.4	-2.4
1876	635			22.7	42.0	39.2	-2.8	-2.4	-0.3
1900	635			22.2	41.5	40.3	-1.2	-2.4	1.2
1583	635			22.0	41.2	39.2	-2.0	-2.4	0.4
1884	636			22.1	41.4	40.7	-0.7	-2.4	1.7
1669	637			22.2	41.5	37.6	-3.8	-2.4	-1.4
1677	639			22.5	41.8	31.0	-10.8	-2.5	-8.4
1774	659			22.8	42.1	33.1	-9.0	-2.5	-6.5
1810	659			23.5	42.8	29.7	-13.1	-2.5	-10.7
Average	636						-3.6	-2.4	-1.1

Table D.08 Tonality Assessment Table - 10.5 m/s

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1568	1259			22.4	43.5	45.4	2.0	-3.0	5.0
1797	1259			21.8	42.9	42.7	-0.3	-3.0	2.8
1562	1259			23.4	44.5	41.4	-3.1	-3.0	-0.1
1756	1259			22.8	43.9	44.3	0.4	-3.0	3.4
1684	1260			22.3	43.4	43.1	-0.3	-3.0	2.7
1575	1260			22.9	44.0	47.1	3.1	-3.0	6.2
1810	1260			24.0	45.1	33.5	-11.5	-3.0	-8.5
1615	1260			23.5	44.6	46.4	1.8	-3.0	4.9
1584	1260			22.9	44.0	46.9	2.9	-3.0	5.9
1572	1261			23.0	44.1	44.3	0.2	-3.0	3.2
1587	1261			22.7	43.8	45.8	1.9	-3.0	5.0
1811	1262			22.9	44.0	37.4	-6.6	-3.0	-3.6
1713	1262			23.4	44.5	43.6	-0.9	-3.0	2.1
1735	1263			24.0	45.1	33.2	-11.9	-3.0	-8.8
1926	1263			21.9	43.0	42.0	-1.0	-3.0	2.1
1900	1269			22.5	43.7	44.4	0.7	-3.0	3.8
1583	1269			22.4	43.6	45.6	2.0	-3.0	5.0
1669	1269			22.5	43.6	42.5	-1.1	-3.0	2.0
1586	1269			22.8	43.9	43.9	0.0	-3.0	3.0
1876	1270			23.2	44.4	44.9	0.6	-3.0	3.6
1884	1270			23.2	44.3	42.1	-2.2	-3.0	0.9
1578	1291			23.8	45.0	33.2	-11.8	-3.1	-8.7
1538	1303			23.1	44.3	32.6	-11.7	-3.1	-8.6
1708	1309			23.6	44.8	30.0	-14.8	-3.1	-11.8
1774	1321			22.7	44.0	36.2	-7.8	-3.1	-4.7
Average	1270						-0.6	-3.0	2.4

Table D.09 Tonality Assessment Table - 11 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1892	135			23.0	41.3	37.8	-3.6	-2.0	-1.5
1780	135			25.3	43.6	42.2	-1.4	-2.0	0.6
1700	135			24.2	42.5	41.0	-1.5	-2.0	0.5
1699	135			27.5	45.8	36.2	-9.6	-2.0	-7.6
1779	135			26.5	44.8	38.4	-6.4	-2.0	-4.3
1765	135			27.0	45.3	42.2	-3.1	-2.0	-1.1
1613	136			26.8	45.1	42.0	-3.1	-2.0	-1.0
1841	136			25.0	43.3	39.4	-3.9	-2.0	-1.9
1564	137			24.1	42.4	39.9	-2.4	-2.0	-0.4
1651	137			24.6	42.9	40.5	-2.5	-2.0	-0.4
1591	137			25.6	43.9	43.4	-0.5	-2.0	1.5
1686	137			25.0	43.2	38.7	-4.5	-2.0	-2.5
1754	137			25.8	44.1	44.6	0.6	-2.0	2.6
1905	137			23.1	41.4	38.5	-2.9	-2.0	-0.9
1566	137			24.8	43.1	40.9	-2.2	-2.0	-0.2
1938	137			26.2	44.5	36.7	-7.8	-2.0	-5.8
1528	137			25.9	44.2	35.5	-8.7	-2.0	-6.6
1581	137			25.6	43.9	40.9	-3.0	-2.0	-0.9
1923	137			24.6	42.9	39.8	-3.1	-2.0	-1.1
1845	137			23.0	41.3	40.3	-1.0	-2.0	1.0
1636	137			25.8	44.1	44.7	0.6	-2.0	2.6
1781	137			25.5	43.7	37.7	-6.1	-2.0	-4.0
1777	137			25.3	43.6	42.5	-1.1	-2.0	0.9
1766	137			26.2	44.5	42.0	-2.6	-2.0	-0.6
1891	137			23.1	41.4	35.6	-5.8	-2.0	-3.7
1592	137			25.1	43.4	40.4	-3.0	-2.0	-1.0
1690	138			24.7	43.0	40.5	-2.5	-2.0	-0.5
1563	139			25.0	43.3	42.6	-0.7	-2.0	1.3
1707	141			26.4	44.7	38.2	-6.5	-2.0	-4.5
1836	141			23.9	42.2	36.2	-6.1	-2.0	-4.0
1559	141			26.1	44.5	43.0	-1.5	-2.0	0.6
1609	141			25.5	43.8	42.4	-1.4	-2.0	0.6
1794	143			27.5	45.8	42.7	-3.1	-2.0	-1.1
Average	137						-2.7	-2.0	-0.7

Table D.09 Tonality Assessment Table - 11 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1780	607			22.0	41.2	42.4	1.2	-2.4	3.6
1700	613			21.9	41.1	44.3	3.2	-2.4	5.6
1779	616			21.7	40.9	44.2	3.2	-2.4	5.7
1765	616			21.7	40.9	44.4	3.4	-2.4	5.9
1699	616			22.1	41.4	44.9	3.5	-2.4	6.0
1923	616			22.5	41.7	35.6	-6.1	-2.4	-3.7
1686	616			21.9	41.2	42.1	0.9	-2.4	3.3
1707	616			24.0	43.2	33.6	-9.6	-2.4	-7.2
1892	617			21.4	40.6	43.0	2.4	-2.4	4.8
1938	620			22.4	41.6	38.8	-2.8	-2.4	-0.4
1905	620			22.0	41.2	41.7	0.5	-2.4	2.9
1777	621			22.0	41.2	40.3	-0.9	-2.4	1.5
1841	621			21.8	41.1	42.6	1.5	-2.4	3.9
1528	621			21.8	41.0	41.5	0.4	-2.4	2.9
1591	621			22.5	41.7	44.9	3.2	-2.4	5.7
1581	621			22.2	41.4	43.7	2.2	-2.4	4.7
1613	622			22.0	41.2	41.4	0.2	-2.4	2.6
1891	622			22.1	41.4	42.3	0.9	-2.4	3.3
1781	623			22.1	41.3	39.9	-1.4	-2.4	1.1
1766	623			21.9	41.2	45.3	4.1	-2.4	6.5
1566	623			21.7	41.0	43.6	2.6	-2.4	5.0
1754	623			22.6	41.9	40.5	-1.4	-2.4	1.1
1794	625			23.2	42.5	38.6	-3.9	-2.4	-1.5
1564	626			22.2	41.4	40.3	-1.2	-2.4	1.3
1592	627			22.1	41.4	39.8	-1.5	-2.4	0.9
1845	627			21.7	41.0	41.0	0.0	-2.4	2.5
1636	627			22.0	41.2	43.3	2.0	-2.4	4.5
1563	627			22.4	41.7	37.0	-4.7	-2.4	-2.2
1690	627			22.2	41.4	36.9	-4.5	-2.4	-2.1
1609	638			23.3	42.6	30.0	-12.5	-2.5	-10.1
Average	621						0.7	-2.4	3.1

Table D.09 Tonality Assessment Table - 11 m/s

Project: Jericho Wind Energy Centre- Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 11/1/2017

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)
1905	1243			22.1	43.2	45.3	2.1	-3.0	5.1
1841	1243			22.1	43.2	39.6	-3.6	-3.0	-0.6
1779	1243			22.1	43.1	39.3	-3.8	-3.0	-0.8
1613	1247			21.9	43.0	42.7	-0.3	-3.0	2.7
1581	1252			22.1	43.2	44.6	1.4	-3.0	4.5
1591	1252			23.0	44.1	46.6	2.5	-3.0	5.5
1564	1252			22.5	43.6	44.6	1.0	-3.0	4.1
1592	1253			22.3	43.4	43.0	-0.3	-3.0	2.7
1794	1253			24.6	45.6	38.8	-6.8	-3.0	-3.8
1566	1253			22.0	43.0	45.0	1.9	-3.0	5.0
1707	1254			23.4	44.4	33.7	-10.7	-3.0	-7.7
1766	1254			22.8	43.8	43.3	-0.6	-3.0	2.5
1636	1254			22.4	43.5	44.4	0.9	-3.0	4.0
1754	1254			22.7	43.7	41.5	-2.3	-3.0	0.8
1845	1254			21.9	43.0	39.9	-3.1	-3.0	0.0
1563	1256			22.6	43.7	43.3	-0.4	-3.0	2.7
1923	1257			22.9	44.0	43.4	-0.6	-3.0	2.4
1777	1259			21.8	42.9	44.0	1.1	-3.0	4.1
1781	1260			22.8	43.9	43.9	0.0	-3.0	3.0
1690	1262			22.2	43.3	45.9	2.6	-3.0	5.6
1938	1264			22.5	43.6	43.7	0.0	-3.0	3.1
1891	1264			22.4	43.5	46.1	2.6	-3.0	5.6
1609	1267			23.3	44.4	41.3	-3.1	-3.0	-0.1
1836	1291			21.8	43.0	36.8	-6.2	-3.1	-3.2
1559	1292			23.0	44.2	39.2	-5.0	-3.1	-1.9
Average	1257						-0.3	-3.0	2.8

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Appendix E
Measurement Data

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1			994	294.8	285.1	1.7	13.1	7.8	5.4	29	99.4	30
2			1160	294.8	285.1	1.8	13.8	8.4	4.8	29	99.4	30
3			1400	294.8	285.1	2.0	14.6	9.2	4.5	29	99.4	30
4			1561	294.8	285.1	2.0	15.0	9.3	3.6	29	99.4	30
5			1353	294.8	285.1	2.3	14.8	8.6	4.1	29	99.4	30
6			1205	294.8	285.1	1.6	14.2	8.1	3.6	29	99.4	30
7			1125	294.8	285.1	1.2	13.8	6.8	3.9	29	99.4	30
8			1014	294.8	285.1	1.2	13.5	7.3	3.5	29	99.4	30
9			968	294.8	285.1	1.2	13.1	7.4	3.5	29	99.4	30
10			1034	294.8	285.1	1.2	13.4	7.5	4.0	29	99.4	30
11			1080	294.8	285.1	1.2	13.6	8.2	3.9	29	99.4	30
12			1108	294.8	285.1	1.2	13.7	7.8	3.8	29	99.4	30
13			1040	294.8	285.1	1.2	13.6	7.9	3.9	29	99.4	30
14			874	294.8	285.1	1.2	12.8	6.7	2.9	29	99.4	30
15			790	294.8	285.1	1.2	12.3	6.5	3.0	29	99.4	30
16			741	294.8	286.9	1.2	12.1	6.7	2.9	29	99.4	30
17			759	294.8	294.4	1.2	12.1	7.0	4.2	29	99.4	30
18			895	294.8	297.7	0.8	12.7	8.0	5.1	29	99.4	30
19			957	294.8	297.7	1.0	13.1	7.7	5.7	29	99.4	30
20			842	294.8	297.7	1.2	12.7	6.7	4.9	29	99.4	30
21			786	294.8	297.7	1.2	12.3	7.2	3.6	29	99.4	30
22			695	294.8	297.7	1.2	12.0	6.0	5.5	29	99.4	30
23			522	294.8	297.7	1.5	10.9	5.3	5.7	28	99.4	30
24			411	294.8	297.7	1.5	10.0	4.8	4.7	28	99.4	30
25			371	294.8	297.7	1.8	9.7	4.8	4.1	28	99.4	30
26			303	294.8	297.7	1.8	9.5	5.2	4.6	28	99.4	30
27			285	294.8	297.7	1.8	9.5	5.0	3.8	28	99.4	30
28			376	294.8	297.7	1.8	9.7	4.9	4.3	28	99.4	30
29			424	294.8	297.7	1.8	10.1	5.6	4.3	28	99.4	30
30			464	294.8	297.7	1.9	10.4	6.0	3.4	28	99.4	30
31			608	294.8	297.7	2.0	10.2	6.3	3.1	28	99.4	30
32			613	294.8	297.7	2.0	10.1	7.0	3.0	28	99.4	30
33			620	294.8	297.7	2.0	10.1	6.4	2.9	28	99.4	30
34			679	294.8	297.7	2.0	10.3	7.2	3.2	28	99.4	30
35			683	294.8	297.7	2.0	10.5	7.2	2.2	28	99.4	31
36			607	294.8	297.7	1.9	10.2	6.3	1.5	28	99.4	32
37			469	294.8	297.7	0.8	10.3	6.3	2.7	28	99.4	32
38			558	294.8	297.7	0.8	11.0	5.9	2.4	28	99.4	32
39			586	294.8	297.7	1.0	11.2	6.2	1.3	28	99.4	32
40			551	294.8	297.7	1.1	11.1	5.9	2.3	28	99.4	32
41			437	294.8	297.7	1.4	10.3	5.7	3.8	28	99.4	31
42			304	294.8	297.7	1.6	9.7	5.3	2.1	28	99.4	31
43			196	294.8	297.7	1.9	9.5	4.9	4.4	28	99.4	31
44			209	294.8	297.7	2.1	9.5	4.8	4.3	28	99.4	31
45			221	294.8	297.7	2.1	9.5	5.2	3.2	28	99.4	31
46			324	294.8	294.6	1.7	9.5	6.0	3.5	28	99.4	31
47			307	294.8	287.1	1.2	9.5	5.2	3.8	28	99.4	31
48			398	294.8	279.9	1.1	9.7	5.9	4.3	28	99.4	31
49			537	294.8	276.3	0.6	10.7	7.5	3.5	28	99.4	31
50			703	294.8	276.3	0.7	11.8	7.3	3.2	28	99.4	31
51			676	294.8	276.3	1.2	11.8	6.3	5.8	28	99.4	31
52			593	294.8	276.3	1.3	11.2	6.0	4.9	28	99.4	31
53			625	294.8	276.3	0.9	11.4	7.2	3.8	29	99.4	31
54			567	294.8	276.3	1.2	11.2	5.5	4.4	29	99.4	31
55			486	294.8	276.3	1.3	10.6	6.3	4.5	29	99.4	31
56			422	294.8	276.3	1.2	10.2	5.4	3.8	29	99.4	31
57			320	294.8	276.3	1.5	9.7	5.2	3.3	29	99.4	31
58			375	294.8	276.3	1.3	9.7	6.2	3.9	29	99.4	31
59			437	294.8	276.3	0.9	10.3	5.9	4.5	29	99.4	31
60			409	294.8	276.3	1.2	10.0	5.5	6.1	29	99.4	31
61			393	294.8	276.3	1.1	9.9	4.6	5.9	29	99.4	31
62			452	294.8	276.3	0.9	10.1	6.6	3.7	29	99.4	31
63			604	294.8	276.3	0.7	11.2	6.4	3.7	29	99.4	31
64			656	294.8	276.3	1.0	11.7	5.8	4.6	29	99.4	31
65			648	294.8	276.3	1.1	11.6	6.7	4.2	29	99.4	31
66			576	294.8	276.3	1.2	11.3	6.6	5.3	29	99.4	31
67			426	294.8	276.3	1.6	10.2	4.7	5.7	29	99.4	31
68			377	294.8	276.3	1.2	9.7	4.8	4.6	29	99.4	31
69			373	294.8	276.3	1.1	9.7	5.0	3.2	29	99.4	31
70			390	294.8	276.3	1.0	9.8	4.7	4.0	29	99.4	31
71			467	294.8	276.3	0.8	10.3	6.3	4.0	29	99.4	31
72			554	294.8	276.3	0.8	10.9	6.5	4.5	29	99.4	31
73			647	294.8	276.3	0.8	11.5	6.6	4.4	29	99.4	31
74			708	294.8	276.3	0.9	11.9	7.2	4.4	29	99.4	31
75			689	294.8	276.3	1.1	11.8	6.7	4.7	29	99.4	31
76			647	294.8	274.6	1.1	11.6	5.9	5.0	29	99.4	31
77			643	294.8	273.4	1.1	11.5	6.0	4.5	29	99.4	30
78			752	294.8	273.4	1.0	11.9	7.0	5.2	29	99.4	30
79			811	294.8	273.4	1.0	12.1	7.5	5.7	29	99.4	30
80			680	294.8	273.4	1.5	11.7	6.2	7.7	29	99.4	30
81			757	294.8	273.4	0.9	12.1	8.4	7.8	29	99.4	30
82			752	294.8	273.4	1.2	12.0	6.7	6.0	29	99.4	30
83			965	294.8	273.4	0.8	12.9	9.1	5.5	29	99.4	30
84			1321	294.8	273.4	0.2	14.3	10.1	6.1	29	99.4	30
85			1263	294.8	274.9	1.5	14.5	8.2	7.1	29	99.4	30
86			1208	294.8	274.5	1.4	14.0	8.0	7.0	29	99.4	30
87			1513	294.8	273.4	0.1	14.8	8.0	5.4	29	99.4	30
88			1455	294.8	273.4	0.4	14.9	8.9	3.6	29	99.4	30

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
89			1172	294.8	273.4	1.6	14.2	7.8	5.6	29	99.4	30
90			1069	294.8	273.4	1.2	13.6	7.9	5.9	29	99.4	30
91			959	294.8	273.4	1.2	13.2	6.3	4.7	29	99.4	30
92			796	294.8	273.4	1.3	12.4	6.3	4.6	29	99.4	30
93			735	294.8	273.4	1.2	12.1	7.2	2.9	29	99.4	30
94			723	294.8	273.4	1.1	12.0	7.1	4.1	29	99.4	30
95			693	294.8	273.4	1.1	11.9	6.4	3.2	29	99.4	30
96			637	294.8	273.4	1.1	11.5	6.1	3.0	29	99.4	30
97			642	294.8	273.4	1.1	11.5	7.3	4.1	29	99.4	30
98			612	294.8	273.4	1.1	11.4	6.5	5.5	29	99.4	30
99			535	294.8	274.1	1.2	10.9	5.9	4.7	29	99.4	30
100			479	294.8	276.3	1.2	10.5	5.2	4.3	29	99.4	30
101			535	294.8	276.3	0.9	10.7	6.2	3.9	29	99.4	30
102			606	294.8	276.3	0.9	11.3	6.3	3.3	29	99.4	30
103			602	294.8	276.2	1.1	11.3	5.8	4.0	29	99.4	30
104			594	294.8	273.4	1.1	11.3	6.1	5.4	29	99.4	30
105			516	294.8	273.4	1.3	10.8	5.4	4.9	29	99.4	30
106			413	294.8	273.4	1.4	10.2	5.2	4.8	29	99.4	30
107			388	294.8	273.4	1.2	9.8	4.4	5.2	29	99.4	30
108			461	294.8	273.4	1.0	10.3	6.1	6.9	29	99.4	30
109			487	294.8	273.4	3.1	10.7	5.8	5.9	29	99.4	30
110			464	294.8	273.4	3.4	10.5	5.8	5.7	29	99.4	30
111			576	294.8	273.4	3.4	11.1	5.8	5.2	29	99.4	30
112			765	294.8	273.4	3.4	12.2	6.4	4.5	29	99.4	30
113			784	294.8	273.4	3.4	12.5	6.7	4.9	29	99.4	30
114			707	294.8	273.4	3.5	12.1	6.6	6.1	29	99.4	30
115			595	294.8	273.4	5.3	11.5	7.5	7.4	29	99.4	30
116			557	294.8	273.4	5.3	11.2	6.0	7.3	29	99.4	30
117			576	294.8	272.3	5.3	11.3	6.2	7.1	29	99.4	30
118			645	294.8	267.7	5.3	11.8	8.3	5.4	29	99.4	30
119			654	294.8	267.5	5.3	11.8	6.4	4.9	29	99.4	30
120			718	294.8	267.5	5.2	12.1	6.8	5.1	29	99.4	30
121			1128	294.8	267.5	3.0	12.3	7.5	6.7	29	99.4	30
122			1171	294.8	267.5	2.5	12.2	8.4	5.9	29	99.4	30
123			1173	294.8	267.5	2.7	12.2	7.6	4.7	29	99.4	30
124			1117	294.8	267.5	2.6	12.1	7.7	5.0	29	99.4	30
125			1005	294.8	267.5	2.5	11.6	7.6	4.1	29	99.4	31
126			951	294.8	267.5	2.5	11.4	7.6	3.2	29	99.4	31
127			794	294.8	267.5	1.1	11.8	6.7	5.2	29	99.4	31
128			849	294.8	267.5	0.9	12.6	6.6	7.5	29	99.4	31
129			880	294.8	267.5	1.0	12.7	6.2	5.8	29	99.4	31
130			980	294.8	267.5	1.0	13.1	7.5	5.0	29	99.4	31
131			997	294.8	267.5	1.0	13.3	7.5	5.9	29	99.4	31
132			950	294.8	267.5	1.1	13.1	8.0	4.9	29	99.4	30
133			1008	294.8	267.5	1.5	12.4	7.7	4.8	29	99.4	30
134			818	294.8	267.5	1.5	11.4	7.0	4.6	29	99.4	30
135			662	294.8	267.5	1.5	10.7	6.8	4.3	29	99.4	30
136			552	294.8	267.5	1.5	10.1	6.4	3.9	29	99.4	30
137			371	294.8	267.5	1.5	9.6	5.3	3.8	29	99.4	31
138			311	294.8	267.5	1.8	9.5	4.4	3.5	29	99.4	31
139			300	294.8	267.5	3.3	9.5	4.6	3.3	29	99.4	31
140			389	294.8	267.5	3.3	9.8	4.8	4.8	29	99.4	31
141			434	294.8	267.5	3.3	10.2	5.2	4.5	29	99.4	31
142			583	294.8	267.5	3.3	11.1	7.0	6.0	29	99.4	31
143			713	294.8	267.5	3.3	12.1	6.8	5.9	29	99.4	31
144			674	294.8	267.5	3.6	11.9	6.0	4.7	29	99.4	31
145			557	294.8	267.5	4.9	11.3	6.2	6.9	29	99.4	31
146			544	294.8	267.5	4.9	11.2	6.8	5.9	29	99.4	31
147			571	294.8	267.5	4.9	11.4	7.0	6.7	29	99.4	31
148			591	294.8	267.5	4.9	11.5	6.6	6.2	29	99.4	31
149			596	294.8	267.5	4.9	11.5	7.5	7.4	29	99.4	31
150			611	294.8	267.5	4.5	11.6	7.1	7.5	29	99.4	31
151			745	294.8	267.5	1.4	12.0	6.9	9.0	29	99.4	31
152			703	294.8	267.5	1.2	12.0	6.3	8.9	29	99.4	31
153			644	294.8	267.5	1.2	11.5	5.1	7.1	29	99.4	31
154			657	294.8	267.5	1.0	11.6	5.8	7.1	29	99.4	31
155			694	294.8	267.5	1.0	11.7	5.4	6.4	29	99.4	30
156			996	294.8	267.5	0.7	12.9	8.1	5.7	29	99.4	30
157			1239	294.8	267.5	0.4	14.2	9.9	6.3	29	99.4	30
158			1173	294.8	267.5	1.3	14.1	8.5	6.0	29	99.4	30
159			1164	294.8	267.5	1.1	13.9	7.7	4.7	29	99.4	30
160			1083	294.8	267.5	1.1	13.7	7.2	3.8	29	99.4	30
161			926	294.8	267.5	1.2	13.1	6.8	3.5	29	99.4	31
162			773	294.8	267.5	1.3	12.3	6.4	5.3	28	99.4	31
163			714	294.8	267.5	1.2	11.9	6.8	4.9	28	99.4	31
164			888	294.8	267.5	0.9	12.5	7.4	3.7	28	99.4	31
165			1144	294.8	267.5	1.0	13.8	8.5	6.3	28	99.4	31
166			1011	294.8	267.5	1.9	13.6	5.7	4.8	28	99.4	31
167			763	294.8	267.5	1.9	12.3	6.1	4.2	28	99.4	30
168			765	294.8	267.5	1.9	12.1	7.6	4.0	28	99.4	30
169			867	294.8	267.5	1.9	12.6	8.0	4.6	28	99.4	30
170			986	294.8	267.5	1.9	13.1	7.5	5.8	28	99.4	30
171			1034	294.8	267.5	2.1	13.5	7.9	5.4	28	99.4	30
172			883	294.8	267.5	2.5	13.0	6.6	5.6	28	99.4	30
173			656	294.8	267.5	2.5	11.8	5.8	4.7	29	99.4	30
174			464	294.8	267.5	2.5	10.5	4.9	4.5	29	99.4	30
175			305	294.8	267.5	2.5	9.7	4.5	3.9	29	99.4	30
176			242	294.8	267.5	2.5	9.5	4.2	5.4	29	99.4	30

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
177			321	294.8	267.5	2.1	9.5	4.9	5.9	29	99.4	30
178			373	294.8	267.5	1.1	9.7	5.7	5.0	29	99.4	30
179			394	294.8	267.5	1.0	9.9	5.1	4.3	29	99.4	30
180			390	294.8	267.5	1.1	9.9	6.0	4.8	29	99.4	30
181			334	294.8	267.5	1.3	9.6	4.6	4.6	29	99.4	30
182			386	294.8	267.5	1.1	9.7	5.8	5.3	29	99.4	30
183			456	294.8	267.5	0.8	10.3	5.9	5.7	29	99.4	30
184			498	294.8	267.5	1.0	10.6	6.1	5.0	29	99.4	30
185			545	294.8	267.5	0.9	11.0	7.2	4.9	29	99.4	30
186			605	294.8	267.5	1.0	11.2	6.2	4.8	29	99.4	30
187			795	294.8	267.5	0.8	12.1	7.7	4.0	29	99.4	30
188			948	294.8	267.5	0.8	13.0	8.4	3.9	29	99.4	30
189			1032	294.8	267.5	1.0	13.4	8.2	4.5	29	99.4	30
190			1059	294.8	269.6	1.0	13.5	7.3	5.7	29	99.4	30
191			1220	294.8	273.4	0.8	14.1	8.7	7.3	29	99.4	31
192			1302	294.8	273.4	0.8	14.5	8.0	6.3	29	99.4	31
193			1094	294.8	273.4	3.6	14.0	7.7	5.4	29	99.4	31
194			924	294.8	273.3	4.0	13.2	7.0	5.1	29	99.4	31
195			878	294.8	273.3	4.0	13.0	7.0	4.8	29	99.4	31
196			875	294.8	273.3	4.0	12.9	7.7	7.0	29	99.4	31
197			877	294.8	273.3	4.0	13.0	8.0	6.8	29	99.4	30
198			415	267.5	273.4	1.0	10.0	6.0	4.9	29	99.4	30
199			435	267.5	273.4	1.0	10.2	6.0	4.6	29	99.4	30
200			414	267.5	273.4	1.1	10.1	5.7	4.0	29	99.4	30
201			390	267.5	273.4	1.2	9.8	5.0	4.6	29	99.4	30
202			285	267.5	273.4	1.4	9.5	5.1	4.7	28	99.4	31
203			256	267.5	273.4	1.7	9.5	4.7	5.2	28	99.4	31
204			341	267.5	275.9	1.4	9.5	5.3	7.4	28	99.4	31
205			316	267.5	276.3	1.2	9.5	5.6	4.7	28	99.4	31
206			344	267.5	276.3	1.3	9.5	5.8	6.9	28	99.4	31
207			427	267.5	276.3	0.9	9.9	5.5	5.8	28	99.4	31
208			526	267.5	276.3	0.8	10.8	6.6	4.6	28	99.4	31
209			646	267.5	276.3	0.8	11.4	7.0	3.8	28	99.4	31
210			671	267.5	276.3	1.0	11.8	6.6	4.6	28	99.4	31
211			545	267.5	276.3	1.4	11.1	5.2	4.3	28	99.4	31
212			438	267.5	276.3	1.4	10.2	5.0	4.1	28	99.4	31
213			456	267.5	276.3	0.9	10.3	6.6	4.2	28	99.4	31
214			453	267.5	276.3	1.1	10.4	5.1	5.5	28	99.4	32
215			381	267.5	276.3	1.5	9.9	5.2	5.4	28	99.4	32
216			483	267.5	276.3	0.8	10.4	6.7	4.2	28	99.4	32
217			634	267.5	276.3	0.7	11.4	6.9	3.5	28	99.4	32
218			704	267.5	276.3	0.9	11.9	7.4	3.4	28	99.4	32
219			659	267.5	276.3	1.1	11.7	7.0	3.1	28	99.4	32
220			624	267.5	276.3	1.2	11.4	6.6	3.3	29	99.4	31
221			540	267.5	276.3	1.3	11.0	6.0	4.5	29	99.4	31
222			466	267.5	276.3	1.3	10.4	5.2	5.3	29	99.4	31
223			436	267.5	276.3	1.1	10.3	5.3	5.5	29	99.4	31
224			443	267.5	276.3	1.1	10.2	5.6	5.6	29	99.4	31
225			571	267.5	276.3	0.8	10.9	7.9	5.7	29	99.4	31
226			649	267.5	276.3	0.9	11.7	7.3	6.4	29	99.4	31
227			587	267.5	276.3	1.3	11.2	6.2	5.7	29	99.4	31
228			782	267.5	276.3	0.8	11.9	7.2	5.1	29	99.4	31
229			1086	267.5	275.4	0.6	13.5	7.7	5.9	29	99.4	31
230			1298	267.5	269.6	0.9	14.4	7.9	4.3	29	99.4	31
231			1162	267.5	264.6	1.5	14.1	7.1	4.5	29	99.4	31
232			905	267.5	264.6	1.4	13.0	5.6	5.3	29	99.4	31
233			856	267.5	264.6	1.4	12.6	6.4	6.2	29	99.4	31
234			888	267.5	264.6	1.8	11.7	6.6	5.1	29	99.4	31
235			705	267.5	264.6	1.8	10.8	6.4	4.5	29	99.4	31
236			613	267.5	264.6	1.8	10.5	6.3	5.7	29	99.4	31
237			620	267.5	264.6	1.9	11.3	6.2	5.5	29	99.4	31
238			714	267.5	264.6	1.9	11.9	5.6	6.3	29	99.4	31
239			717	267.5	264.6	1.5	12.0	5.5	6.0	29	99.4	31
240			778	267.5	264.6	1.1	12.1	6.4	4.4	29	99.4	31
241			1135	267.5	264.6	0.4	13.5	7.8	4.8	29	99.4	31
242			1274	267.5	264.6	0.8	14.4	7.4	4.9	29	99.4	31
243			1147	267.5	264.6	1.4	14.0	7.0	3.4	29	99.4	31
244			946	267.5	264.6	1.4	13.2	5.8	5.1	29	99.4	31
245			874	267.5	264.6	1.5	12.7	6.6	5.5	29	99.4	31
246			892	267.5	264.6	2.0	11.7	5.3	4.7	29	99.4	31
247			733	267.5	264.6	2.0	10.8	6.1	3.6	29	99.4	31
248			592	267.5	264.6	2.0	10.1	6.6	4.7	29	99.4	31
249			467	267.5	264.6	2.0	9.6	5.0	4.5	29	99.4	31
250			316	267.5	264.6	2.0	9.5	5.1	3.4	29	99.4	31
251			276	267.5	264.6	1.8	9.5	4.5	3.5	29	99.4	31
252			411	267.5	264.6	1.1	9.8	5.2	3.9	29	99.4	31
253			524	267.5	264.6	0.7	10.7	7.0	4.5	29	99.4	31
254			625	267.5	264.6	0.8	11.4	8.1	3.8	29	99.4	31
255			603	267.5	264.6	1.2	11.5	6.8	4.1	29	99.4	31
256			480	267.5	264.6	1.5	10.6	4.7	4.7	29	99.4	31
257			363	267.5	264.6	1.4	9.9	5.1	5.4	29	99.4	31
258			199	267.5	264.6	2.1	9.5	4.5	4.4	29	99.4	31
259			206	267.5	264.6	2.1	9.5	4.4	5.3	29	99.4	31
260			216	267.5	264.6	2.1	9.5	4.0	6.0	29	99.4	31
261			288	267.5	264.6	1.9	9.5	4.5	4.3	29	99.4	31
262			253	267.5	264.6	1.6	9.5	4.4	4.3	29	99.4	30
263			156	267.5	264.6	2.2	9.5	3.5	3.4	29	99.4	30
264			107	267.5	264.6	2.8	9.5	3.9	2.8	29	99.4	30

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
265			101	267.5	264.6	3.5	9.5	4.1	2.8	29	99.4	30
266			130	267.5	264.6	3.5	9.5	3.8	3.1	29	99.4	30
267	5.6	46.8	417	49.0	36.6	5.0	9.8	5.8	5.5	4	99.9	69
268	5.5	46.3	398	49.0	36.6	5.0	9.6	5.7	4.0	4	99.9	69
269	5.5	46.5	410	49.0	36.6	5.0	9.8	6.3	4.9	4	99.9	69
270	5.4	47.0	386	49.0	36.6	5.0	9.7	5.6	6.2	4	99.9	69
271	5.2	46.2	334	49.0	36.6	5.0	9.5	5.5	5.6	4	99.9	69
272	5.5	46.6	392	49.0	36.6	5.0	9.6	6.2	4.5	4	99.9	69
273	5.3	46.8	364	49.0	36.6	5.0	9.6	5.4	5.7	4	99.9	70
274	5.2	46.5	318	49.0	36.6	5.0	9.5	4.8	5.7	4	99.9	70
275	5.4	46.4	373	49.0	36.6	5.0	9.5	4.4	4.0	4	99.9	70
276	5.5	46.5	414	49.0	36.6	5.0	9.7	5.6	4.1	4	99.9	70
277	5.6	46.8	423	49.0	36.6	5.0	9.9	6.4	6.2	4	99.9	70
278	5.3	46.7	359	49.0	36.6	5.0	9.6	5.1	5.8	4	99.9	70
279	5.6	46.7	418	49.0	36.6	5.0	9.8	6.0	4.5	4	99.9	69
280	5.7	47.4	459	49.0	36.6	5.0	10.2	6.9	3.6	4	99.9	69
281	5.7	47.4	459	49.0	36.6	5.0	10.0	6.0	4.1	4	99.9	69
282	5.6	48.2	436	49.0	39.5	5.0	9.9	5.8	4.0	4	99.9	69
283	5.3	48.2	358	49.0	46.3	5.0	9.6	6.3	3.7	4	99.9	69
284	4.8	46.5	245	49.0	48.3	5.0	9.5	5.0	4.2	4	99.9	69
285	4.5	46.2	181	49.0	48.3	5.0	9.5	4.6	4.8	4	99.9	69
286	4.7	46.1	218	49.0	48.3	5.0	9.5	5.1	5.5	4	99.9	69
287	4.7	45.7	227	49.0	48.3	5.0	9.5	5.4	5.0	4	99.9	69
288	4.6	45.8	214	49.0	48.3	5.0	9.5	5.3	4.5	4	99.9	69
289	4.9	45.8	261	49.0	48.3	5.0	9.5	5.1	5.1	4	99.9	69
290	5.2	46.8	339	49.0	48.3	5.0	9.5	5.2	5.8	4	99.9	69
291	5.7	46.5	450	49.0	48.3	5.0	10.1	6.1	4.7	4	99.9	69
292	6.3	48.0	626	49.0	48.3	5.0	11.3	6.6	4.5	4	99.9	69
293	6.6	48.7	712	49.0	48.3	5.0	11.6	6.0	4.1	4	99.9	69
294	6.7	48.7	743	49.0	48.3	5.0	11.7	6.3	6.4	4	99.9	69
295	7.1	49.4	869	49.0	48.2	5.0	12.4	7.2	7.1	4	99.9	69
296	7.4	52.1	987	49.0	43.6	5.0	12.9	7.4	6.3	4	99.9	69
297	7.3	51.2	945	49.0	42.4	5.0	12.7	6.7	5.2	4	99.9	69
298	7.0	50.7	833	49.0	42.4	5.0	12.1	6.4	5.3	4	99.9	69
299	7.0	50.0	825	49.0	42.4	5.0	12.2	6.8	5.0	4	99.9	69
300	7.1	50.1	860	49.0	42.4	5.0	12.3	7.2	6.2	4	99.9	69
301	7.1	50.2	878	49.0	42.4	5.0	12.4	7.3	5.9	4	99.9	69
302	7.0	50.2	838	49.0	42.4	5.0	12.2	7.2	7.2	4	99.9	69
303	6.8	49.7	761	49.0	42.4	5.0	11.7	6.8	7.7	4	99.9	69
304	7.2	50.0	919	49.0	42.4	5.0	12.5	8.3	8.2	4	99.9	69
305	8.2	52.5	1265	49.0	42.4	5.0	14.0	9.0	7.8	4	99.9	69
306	8.4	54.3	1318	49.0	42.4	0.7	14.2	8.7	6.9	4	99.9	69
307	8.3	53.0	1286	49.0	42.4	1.5	13.9	8.3	7.5	4	99.9	69
308			1569	49.0	42.4	0.4	14.8	9.1	7.2	4	99.9	69
309			1617	49.0	42.4	1.6	15.1	8.4	6.7	4	99.9	68
310	8.8	55.4	1420	49.0	42.4	1.7	14.5	8.6	5.9	4	99.9	68
311	7.9	53.5	1161	49.0	42.4	1.4	13.5	7.5	6.5	4	99.9	68
312	7.9	51.9	1181	49.0	42.4	0.8	13.6	8.0	6.4	4	99.9	68
313	9.8	53.8	1521	49.0	42.4	0.0	14.7	9.8	8.1	4	99.9	68
314	8.6	54.8	1376	49.0	42.4	1.9	14.4	8.2	6.8	4	99.9	68
315	8.0	53.2	1222	49.0	42.4	1.5	13.7	8.2	5.7	4	99.9	68
316	8.2	52.5	1259	49.0	42.4	0.6	13.9	8.4	7.3	4	99.9	68
317	8.3	53.2	1290	49.0	42.4	0.8	14.1	7.9	6.5	4	99.9	68
318	7.8	52.6	1160	49.0	42.4	1.4	13.6	6.5	7.0	4	99.9	68
319	7.3	51.2	947	49.0	42.4	1.4	12.6	6.7	7.4	4	99.9	68
320	7.5	50.5	1017	49.0	42.4	0.9	13.0	8.5	6.7	4	99.9	68
321	7.8	52.2	1139	49.0	42.4	1.0	13.5	8.4	6.8	4	99.9	69
322	7.6	52.0	1048	49.0	42.4	1.3	13.1	6.5	6.8	4	99.9	69
323	7.0	51.0	856	49.0	42.4	1.5	12.2	5.7	6.0	4	99.9	69
324	6.6	49.3	721	49.0	42.4	1.4	11.6	6.1	5.1	4	99.9	69
325	6.5	49.1	687	49.0	42.4	1.1	11.4	5.4	5.6	4	99.9	69
326	7.0	49.8	847	49.0	42.4	0.8	12.2	7.8	5.9	4	99.9	69
327	7.6	51.5	1048	49.0	42.4	0.9	13.2	7.9	5.1	4	99.9	69
328	7.7	52.2	1117	49.0	42.4	1.1	13.4	7.3	6.3	4	99.9	69
329	7.8	52.5	1137	49.0	42.4	1.1	13.5	8.0	7.7	4	99.9	69
330	7.8	52.5	1143	49.0	42.4	1.1	13.5	7.7	7.9	4	99.9	69
331	8.2	53.0	1258	49.0	42.4	0.9	13.9	9.6	7.0	4	99.9	69
332	8.6	54.1	1380	49.0	42.4	0.7	14.4	8.8	6.9	4	99.9	68
333	8.3	53.9	1297	49.0	42.4	1.5	14.0	8.2	6.6	4	99.9	68
334	8.3	53.4	1295	49.0	42.4	1.1	14.0	9.4	5.8	4	99.9	68
335	8.5	53.7	1358	49.0	42.4	0.9	14.3	8.8	6.2	4	99.9	68
336	8.4	54.0	1331	49.0	42.4	1.3	14.2	8.2	7.5	4	99.9	68
337	7.9	53.5	1179	49.0	42.4	1.3	13.6	7.4	7.0	4	99.9	68
338	7.6	52.1	1052	49.0	42.4	1.2	13.1	7.6	7.2	4	99.9	68
339	7.6	51.5	1048	49.0	42.4	1.1	13.1	7.4	6.3	4	99.9	68
340	7.4	51.5	978	49.0	42.4	1.1	12.8	6.6	5.5	4	99.9	68
341	7.2	50.8	895	49.0	42.4	1.1	12.5	7.4	5.0	4	99.9	68
342	6.9	50.5	804	49.0	42.4	1.1	12.0	7.4	4.5	4	99.9	68
343	6.5	49.5	687	49.0	42.4	1.2	11.4	6.9	4.7	4	99.9	68
344	6.1	47.9	561	49.0	42.4	1.4	10.6	5.8	6.0	4	99.9	68
345	5.8	47.7	489	49.0	42.4	1.2	10.2	5.8	6.4	4	99.9	69
346	6.0	48.1	518	49.0	42.4	1.0	10.6	6.3	5.4	4	99.9	69
347	5.9	47.6	511	49.0	42.4	1.3	10.3	5.6	4.8	4	99.9	69
348	5.7	46.9	463	49.0	42.4	1.2	10.0	6.4	4.3	4	99.9	69
349	5.8	47.3	484	49.0	42.4	1.0	10.3	6.1	4.5	4	99.9	69
350	6.0	48.0	528	49.0	42.4	1.0	10.6	6.1	4.6	4	99.9	69
351	5.9	47.6	514	49.0	42.4	1.3	10.4	5.8	3.7	4	99.9	70
352	5.8	47.3	480	49.0	42.4	1.1	10.2	6.0	4.6	4	99.9	70

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
353	5.9	47.1	493	49.0	42.4	1.0	10.4	6.3	4.2	4	99.9	70
354	5.5	47.1	411	49.0	42.4	1.6	9.9	5.9	4.6	4	99.9	70
355	5.0	46.4	283	49.0	42.4	1.7	9.5	4.9	4.5	4	99.9	70
356	4.8	46.3	246	49.0	42.4	1.9	9.5	5.2	5.2	4	99.9	70
357	4.7	45.9	231	49.0	42.4	2.2	9.5	5.6	5.7	4	99.9	70
358	5.3	46.6	363	49.0	42.4	1.8	9.5	6.3	5.5	4	99.9	70
359	5.5	46.1	399	49.0	42.4	1.2	9.5	6.3	7.6	4	99.9	70
360	5.5	46.7	393	49.0	42.4	1.1	9.7	5.3	7.0	4	99.9	70
361	5.5	46.6	407	49.0	42.4	1.1	9.7	5.5	6.9	4	99.9	70
362	5.7	46.5	465	49.0	42.4	0.8	10.2	5.9	7.1	4	99.9	70
363	6.4	48.1	640	49.0	42.4	0.7	11.3	7.3	6.9	4	99.9	68
364	7.1	49.1	885	49.0	42.4	0.7	12.5	7.5	6.2	4	99.9	68
365	7.5	50.9	1013	49.0	42.4	1.0	13.1	7.7	6.7	4	99.9	68
366	7.3	51.0	949	49.0	42.4	1.1	12.7	7.4	5.9	4	99.9	68
367	6.9	50.1	819	49.0	42.4	1.2	12.1	6.8	5.5	4	99.9	68
368	6.6	49.3	723	49.0	42.4	1.2	11.6	6.4	6.0	4	99.9	68
369	6.7	49.2	729	49.0	42.4	1.0	11.7	6.5	5.1	4	99.9	69
370	6.7	49.5	739	49.0	42.4	1.0	11.7	6.7	4.3	4	99.9	69
371	6.6	49.0	700	49.0	42.4	1.2	11.5	6.6	4.5	4	99.9	69
372	6.4	48.4	651	49.0	42.4	1.1	11.2	6.5	5.1	4	99.9	69
373	6.2	47.6	590	49.0	42.4	1.2	10.9	6.2	5.2	4	99.9	69
374	6.0	47.6	532	49.0	42.4	1.2	10.5	5.9	4.5	4	99.9	69
375	6.0	47.1	535	49.0	42.4	1.0	10.5	6.2	4.2	4	99.9	70
376	6.3	48.1	610	49.0	42.4	0.9	11.2	7.0	4.5	4	99.9	70
377	6.3	48.3	628	49.0	42.4	1.1	11.1	5.8	5.3	4	99.9	70
378	6.1	48.6	550	49.0	42.4	1.3	10.6	5.3	5.8	4	99.9	70
379	5.4	48.2	385	49.0	42.4	1.8	9.8	5.9	5.9	4	99.9	70
380	5.7	47.1	446	49.0	42.4	1.0	10.0	6.1	5.3	4	99.9	70
381	6.0	48.3	536	49.0	42.4	0.9	10.7	5.9	5.8	4	99.9	70
382	6.1	48.3	573	49.0	42.4	1.1	10.9	6.2	5.2	4	99.9	70
383	6.0	48.3	523	49.0	42.4	1.3	10.4	5.9	5.6	4	99.9	70
384	5.7	47.8	452	49.0	42.4	1.3	10.0	5.9	5.2	4	99.9	70
385	5.6	47.2	424	49.0	42.4	1.1	9.8	5.7	6.3	4	99.9	70
386	5.7	46.8	443	49.0	42.4	1.0	10.0	6.0	6.0	4	99.9	70
387	5.7	47.2	464	49.0	42.4	1.0	10.2	5.9	5.6	4	99.9	70
388	5.9	47.7	491	49.0	42.4	1.0	10.3	6.3	4.8	4	99.9	70
389	6.1	47.4	558	49.0	42.4	0.9	10.8	6.4	4.9	4	99.9	70
390	6.2	48.1	587	49.0	42.4	1.1	10.9	6.6	4.9	4	99.9	70
391	5.6	47.8	424	49.0	42.4	1.8	10.1	6.1	4.7	4	99.9	70
392	4.5	45.5	190	49.0	42.4	2.4	9.5	4.8	4.4	4	99.9	70
393	5.0	46.6	272	49.0	42.4	2.3	9.5	5.3	5.4	4	99.9	70
394	5.4	46.2	384	49.0	42.4	1.4	9.6	6.4	3.9	4	99.9	70
395	6.0	46.8	536	49.0	42.4	0.7	10.6	6.6	4.1	4	99.9	70
396	6.7	49.0	758	49.0	42.4	0.7	12.0	7.3	5.3	4	99.9	70
397	6.9	49.9	796	49.0	42.4	1.2	12.0	6.4	6.6	4	99.9	70
398	6.5	48.5	673	49.0	42.4	1.4	11.3	6.0	6.2	4	99.9	70
399	6.2	47.6	585	49.0	42.4	1.2	10.8	7.2	6.1	4	99.9	70
400	6.0	47.2	515	49.0	42.4	1.5	10.4	5.7	6.3	4	99.9	70
401	5.6	46.4	438	49.0	42.4	1.3	9.8	5.3	5.5	4	99.9	70
402	5.8	47.1	481	49.0	42.4	0.8	10.3	6.3	6.3	4	99.9	70
403	6.1	47.5	564	49.0	42.4	1.0	10.8	6.6	6.4	4	99.9	70
404	6.3	47.8	605	49.0	42.4	1.0	11.1	5.1	5.9	4	99.9	70
405	6.2	48.4	589	49.0	42.4	1.2	10.9	6.0	6.0	4	99.9	70
406	6.1	47.8	572	49.0	42.4	1.1	10.8	5.7	6.2	4	99.9	70
407	6.3	47.4	605	49.0	42.4	1.0	11.0	6.9	5.8	4	99.9	70
408	6.3	48.1	622	49.0	42.4	1.1	11.1	6.1	5.3	4	99.9	70
409	6.3	47.9	610	49.0	42.4	1.1	11.0	6.3	5.1	4	99.9	70
410	6.2	48.0	599	49.0	42.4	1.1	11.0	6.1	5.5	4	99.9	70
411	6.2	47.7	593	49.0	42.4	1.1	10.9	6.4	5.5	4	99.9	70
412	6.3	47.8	625	49.0	42.4	1.0	11.1	6.2	4.1	4	99.9	70
413	6.3	48.9	613	49.0	42.4	1.4	11.1	5.2	4.1	4	99.9	70
414	5.8	46.9	481	49.0	42.4	1.6	10.0	5.1	4.6	4	99.9	70
415	5.7	46.7	456	49.0	42.4	0.9	10.1	6.3	6.0	4	99.9	70
416	6.0	47.5	536	49.0	42.4	0.9	10.6	5.8	5.8	4	99.9	70
417	6.2	48.0	577	49.0	42.4	1.0	10.9	6.3	5.0	4	99.9	70
418	6.1	47.3	552	49.0	42.4	1.2	10.6	5.5	4.7	4	99.9	70
419	5.9	47.3	499	49.0	42.4	1.2	10.3	5.4	5.4	4	99.9	70
420	5.7	47.5	442	49.0	42.4	1.4	9.9	4.8	5.2	4	99.9	70
421	5.5	45.9	414	49.0	42.4	1.1	9.8	5.4	5.6	4	99.9	70
422	5.6	46.2	423	49.0	42.4	1.0	9.9	5.1	4.1	4	99.9	70
423	5.5	47.1	393	49.0	42.4	1.2	9.7	5.0	3.6	4	99.9	69
424	5.0	46.3	280	49.0	42.4	1.6	9.5	5.6	4.9	4	99.9	69
425	4.7	46.3	226	49.0	42.4	2.0	9.5	4.6	5.5	4	99.9	69
426	5.1	45.9	311	49.0	42.4	2.1	9.6	4.8	6.1	4	99.9	69
427	5.6	46.3	436	49.0	42.4	1.1	9.9	5.4	7.9	4	99.9	69
428	6.2	47.2	582	49.0	42.4	0.7	11.0	7.2	7.2	4	99.9	69
429	6.6	48.6	709	49.0	42.4	1.0	11.6	6.7	6.7	4	99.9	69
430	6.8	49.3	790	49.0	42.4	0.9	12.0	6.8	5.1	4	99.9	69
431	7.0	49.6	846	49.0	42.4	1.0	12.3	6.9	5.1	4	99.9	69
432	7.1	50.3	890	49.0	42.4	1.0	12.5	6.9	4.3	4	99.9	69
433	7.2	50.9	910	49.0	42.4	1.0	12.5	6.7	4.9	4	99.9	69
434	7.4	50.9	980	49.0	42.4	1.0	12.9	7.4	5.6	4	99.9	69
435	7.3	51.4	955	49.0	42.4	1.2	12.7	6.5	5.5	4	99.9	70
436	7.0	50.2	833	49.0	42.4	1.3	12.1	6.3	5.2	4	99.9	70
437	6.9	49.4	806	49.0	42.4	1.1	12.1	7.1	4.8	4	99.9	70
438	6.9	49.9	795	49.0	42.4	1.0	12.0	7.0	5.1	4	99.9	70
439	6.5	49.4	696	49.0	42.4	1.2	11.4	6.5	4.7	4	99.9	70
440	6.2	48.4	574	49.0	42.4	1.4	10.7	6.0	4.6	4	99.9	70

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
441	5.9	48.4	504	49.0	42.4	1.2	10.3	5.8	4.4	4	99.9	70
442	5.9	47.9	492	49.0	42.4	1.0	10.3	6.1	3.6	4	99.9	70
443	5.9	47.9	501	49.0	42.4	1.1	10.4	5.8	3.6	4	99.9	70
444	5.8	47.8	480	49.0	42.4	1.2	10.2	5.5	3.8	4	99.9	70
445	5.9	47.8	495	49.0	42.4	1.0	10.4	6.7	3.1	4	99.9	70
446	6.2	48.4	581	49.0	42.4	0.9	10.9	6.3	4.0	4	99.9	70
447	6.3	48.8	625	49.0	42.4	1.1	11.1	6.2	4.6	4	99.9	70
448	6.1	48.6	558	49.0	42.4	1.3	10.7	5.4	5.7	4	99.9	70
449	5.9	47.4	493	49.0	42.4	1.2	10.2	5.5	6.2	4	99.9	70
450	5.7	47.2	455	49.0	42.4	1.2	10.0	5.8	5.9	4	99.9	70
451	5.5	46.9	416	49.0	42.4	1.2	9.7	5.3	5.4	4	99.9	70
452	5.9	47.3	505	49.0	42.4	0.7	10.5	6.5	5.4	4	99.9	70
453	6.3	48.0	623	49.0	42.4	1.0	11.2	6.1	5.9	4	99.9	70
454	6.4	48.0	659	49.0	42.4	1.0	11.3	6.4	5.9	4	99.9	70
455	6.7	49.0	731	49.0	42.4	0.9	11.8	7.8	7.5	4	99.9	70
456	6.7	49.4	745	49.0	42.4	1.1	11.7	6.1	7.0	4	99.9	70
457	6.9	49.8	806	49.0	42.4	1.0	12.0	7.5	6.1	4	99.9	70
458	7.4	51.1	990	49.0	42.4	0.8	13.0	7.6	5.8	4	99.9	70
459	7.5	51.4	1042	49.0	42.4	1.1	13.2	7.1	5.3	4	99.9	69
460	7.0	51.2	837	49.0	42.4	1.6	12.1	6.2	5.0	4	99.9	69
461	6.3	48.4	611	49.0	42.4	1.5	10.8	6.1	5.2	4	99.9	69
462	6.1	47.6	559	49.0	42.4	1.0	10.7	7.0	4.7	4	99.9	69
463	6.4	48.1	638	49.0	42.4	0.9	11.3	7.3	5.4	4	99.9	69
464	6.4	48.4	638	49.0	42.4	1.2	11.2	6.4	4.8	4	99.9	69
465	6.2	47.9	580	49.0	42.4	1.2	10.8	6.5	5.2	4	99.9	70
466	6.0	47.2	529	49.0	42.4	1.2	10.5	6.4	4.4	4	99.9	70
467	5.8	46.9	478	49.0	42.4	1.2	10.2	6.0	4.6	4	99.9	70
468	5.7	46.5	442	49.0	42.4	1.2	9.9	6.0	3.6	4	99.9	70
469	5.6	46.4	432	49.0	42.4	1.0	9.9	6.4	4.7	4	99.9	70
470	5.6	46.5	427	49.0	42.4	1.1	9.8	5.4	4.3	4	99.9	70
471	5.0	45.3	281	49.0	42.4	1.6	9.5	6.2	4.5	4	99.9	70
472	4.2	45.8	132	49.0	42.4	2.2	9.5	5.1	4.4	4	99.9	70
473	4.0	45.9	101	49.0	42.4	3.0	9.5	4.1	4.2	4	99.9	70
474	4.1	46.0	115	49.0	42.4	3.5	9.5	4.4	3.9	4	99.9	70
475	4.2	45.3	129	49.0	42.4	3.5	9.5	4.7	6.1	4	99.9	70
476	4.6	45.9	212	49.0	42.4	3.0	9.5	4.6	5.8	4	99.9	70
477	4.8	45.9	250	49.0	42.4	2.2	9.5	5.7	4.6	4	99.9	69
478	4.8	45.8	239	49.0	42.4	2.2	9.5	5.4	3.9	4	99.9	69
479	4.6	45.7	210	49.0	42.4	2.2	9.5	5.3	4.1	4	99.9	69
480	5.0	46.4	273	49.0	42.4	2.2	9.5	4.8	4.5	4	99.9	69
481	5.5	46.1	398	49.0	42.4	1.7	9.6	6.2	4.7	4	99.9	69
482	5.4	46.6	387	49.0	42.4	1.1	9.6	5.8	4.2	4	99.9	69
483	5.1	46.8	312	49.0	42.4	1.4	9.5	5.8	4.5	4	99.9	70
484	5.0	46.4	275	49.0	42.4	1.7	9.5	5.2	3.5	4	99.9	70
485	5.1	45.7	316	49.0	42.4	1.7	9.5	5.4	3.2	4	99.9	70
486	5.0	46.2	285	49.0	42.4	1.6	9.5	5.4	3.7	4	99.9	70
487	5.4	46.1	379	49.0	42.4	1.5	9.6	5.6	4.4	4	99.9	70
488	5.5	46.8	401	49.0	42.4	1.0	9.9	5.7	3.9	4	99.9	70
489	5.0	46.0	275	49.0	42.4	1.9	9.6	5.4	4.1	4	99.9	70
490	4.5	45.2	197	49.0	42.4	2.3	9.5	4.7	4.1	4	99.9	70
491	4.3	45.1	146	49.0	42.4	2.5	9.5	3.9	4.7	4	99.9	70
492	4.4	45.5	170	49.0	42.4	2.4	9.5	4.2	4.3	4	99.9	70
493	4.5	45.1	185	49.0	42.4	2.4	9.5	5.2	4.6	4	99.9	70
494	4.8	45.3	249	49.0	42.4	2.4	9.5	4.7	4.9	4	99.9	70
495	5.1	45.8	302	49.0	42.4	2.1	9.5	4.4	3.7	4	99.9	69
496	5.3	46.1	364	49.0	42.4	1.4	9.5	5.3	4.2	4	99.9	69
497	5.4	45.7	379	49.0	42.4	1.2	9.5	5.0	4.0	4	99.9	69
498	5.3	46.4	359	49.0	42.4	1.1	9.5	5.5	3.6	4	99.9	69
499	5.1	46.1	306	49.0	42.4	1.3	9.5	5.4	3.0	4	99.9	69
500	4.8	46.0	238	49.0	42.4	1.7	9.5	5.8	2.5	4	99.9	69
501	4.6	45.7	207	49.0	42.4	2.2	9.5	4.7	2.3	4	99.9	69
502	4.6	45.8	216	49.0	42.4	2.1	9.5	4.8	1.9	4	99.9	69
503	4.2	46.3	131	49.0	42.4	2.4	9.5	4.8	3.0	4	99.9	69
504	4.0	46.1	100	49.0	42.4	3.3	9.5	4.9	3.2	4	99.9	69
505	4.1	45.4	111	49.0	42.4	3.5	9.5	4.4	3.3	4	99.9	69
506	4.2	45.7	134	49.0	42.4	3.5	9.5	5.0	2.8	4	99.9	69
507	4.4	45.9	163	49.0	42.4	3.5	9.5	4.2	4.6	4	99.9	69
508	4.4	45.2	169	49.0	42.4	2.9	9.5	5.1	5.5	4	99.9	69
509	4.3	45.6	144	49.0	42.4	2.7	9.5	4.7	5.2	4	99.9	69
510	4.4	45.8	166	49.0	42.4	3.2	9.5	4.3	4.6	4	99.9	69
511	5.2	45.9	319	49.0	42.4	2.3	9.6	5.3	5.0	4	99.9	69
512	5.2	46.3	327	49.0	42.4	1.3	9.5	5.0	4.5	4	99.9	69
513	4.6	45.9	213	49.0	42.4	1.7	9.5	4.9	3.1	4	99.9	69
514	5.3	45.9	357	49.0	42.4	1.9	9.6	5.1	2.8	4	99.9	69
515	5.5	46.2	396	49.0	42.4	1.1	9.8	5.6	3.3	4	99.9	69
516	5.5	46.7	403	49.0	42.4	1.2	9.7	5.3	4.4	4	99.9	69
517	5.1	46.0	302	49.0	42.4	1.4	9.5	4.6	6.3	4	99.9	69
518	4.8	45.9	249	49.0	42.4	1.7	9.5	5.3	5.7	4	99.9	68
519	4.6	46.0	201	49.0	42.4	2.2	9.5	4.3	4.2	4	99.9	68
520	5.0	45.8	282	49.0	42.4	2.2	9.5	5.0	4.0	4	99.9	68
521	5.5	46.4	400	49.0	42.4	1.3	9.6	6.1	4.7	4	99.9	68
522	5.8	46.8	467	49.0	42.4	0.9	10.2	6.9	4.8	4	99.9	68
523	6.4	47.6	656	49.0	42.4	0.6	11.3	6.8	4.6	4	99.9	68
524	7.1	50.0	860	49.0	42.4	0.9	12.5	7.5	4.8	4	99.9	68
525	6.8	50.2	786	49.0	42.4	1.5	11.9	6.5	4.9	4	99.9	70
526	6.3	48.1	613	49.0	42.4	1.4	10.9	5.8	5.3	4	99.9	70
527	6.0	47.4	534	49.0	42.4	1.2	10.5	5.6	5.0	4	99.9	70
528	6.1	47.6	548	49.0	42.4	1.0	10.7	6.0	6.8	4	99.9	70

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (·C)	Pressure (kPa)	Relative Humidity (%)
529	6.3	48.0	635	49.0	42.4	0.9	11.3	7.0	7.0	4	99.9	70
530	6.7	49.0	744	49.0	42.4	0.9	11.8	6.7	6.7	4	99.9	70
531	7.0	49.7	824	49.0	42.4	1.0	12.2	6.3	5.9	4	99.9	69
532	7.0	50.1	840	49.0	42.4	1.1	12.2	7.0	5.8	4	99.9	69
533	7.0	50.2	839	49.0	42.4	1.1	12.2	7.0	5.2	4	99.9	69
534	7.0	50.0	823	49.0	42.4	1.1	12.1	6.6	5.7	4	99.9	69
535	6.9	49.9	801	49.0	42.4	1.1	12.0	7.7	6.0	4	99.9	69
536	6.9	50.2	813	49.0	42.4	1.1	12.1	7.7	5.8	4	99.9	69
537	7.0	51.3	823	49.0	42.4	1.1	12.2	7.1	5.6	4	99.9	69
538	6.7	51.2	748	49.0	42.4	1.2	11.7	6.9	6.3	4	99.9	69
539	6.3	50.5	612	49.0	42.4	1.4	10.9	6.0	5.9	4	99.9	69
540	5.8	49.0	489	49.0	42.4	1.4	10.1	5.2	5.3	4	99.9	69
541	5.6	48.1	428	49.0	42.4	1.1	9.8	5.4	5.1	4	99.9	69
542	5.7	48.3	453	49.0	42.4	0.9	10.1	5.5	4.9	4	99.9	69
543	5.9	48.2	510	49.0	42.4	0.9	10.5	6.2	5.0	4	99.9	68
544	6.0	48.1	516	49.0	42.4	1.2	10.4	5.5	4.5	4	99.9	68
545	5.8	47.7	472	49.0	42.4	1.3	10.1	5.6	5.3	4	99.9	68
546	5.7	47.0	449	49.0	42.4	1.1	10.0	5.9	6.4	4	99.9	68
547	5.9	46.8	491	49.0	42.4	0.9	10.4	6.0	5.2	4	99.9	68
548	6.0	47.6	521	49.0	42.4	1.1	10.5	5.6	4.5	4	99.9	68
549	6.0	47.3	526	49.0	42.4	1.0	10.6	6.3	3.6	4	99.9	68
550	6.0	47.1	517	49.0	42.4	1.1	10.5	6.4	3.6	4	99.9	68
551	5.7	46.9	456	49.0	42.4	1.4	10.0	5.6	3.8	4	99.9	68
552	5.4	46.9	367	49.0	42.4	1.3	9.6	5.4	3.6	4	99.9	68
553	4.9	45.3	263	49.0	42.4	1.5	9.5	5.1	6.0	4	99.9	68
554	5.1	45.4	300	49.0	42.4	1.7	9.5	5.1	6.8	4	99.9	68
555	5.0	46.4	283	49.0	42.4	1.7	9.5	5.2	7.0	4	99.9	69
556	4.8	46.2	244	49.0	42.4	1.8	9.5	5.2	5.7	4	99.9	69
557	4.4	45.7	163	49.0	42.4	2.3	9.5	4.5	4.6	4	99.9	69
558	4.3	45.6	156	49.0	42.4	2.4	9.5	4.2	4.7	4	99.9	69
559	4.1	46.0	123	49.0	42.4	2.9	9.5	4.3	6.4	4	99.9	69
560	4.1	46.1	120	49.0	42.4	3.6	9.5	3.6	6.0	4	99.9	69
561	4.5	45.2	189	49.0	42.4	3.2	9.5	4.9	5.9	4	99.9	69
562	4.9	46.0	264	49.0	42.4	2.3	9.5	6.0	5.9	4	99.9	69
563	5.4	46.1	388	49.0	42.4	1.7	9.6	5.7	5.8	4	99.9	69
564	5.9	46.4	496	49.0	42.4	0.7	10.4	6.4	5.0	4	99.9	69
565	6.4	48.3	665	49.0	42.4	0.8	11.5	7.1	4.5	4	99.9	69
566	6.7	49.1	743	49.0	42.4	1.0	11.8	6.8	5.4	4	99.9	69
567	6.6	49.4	724	49.0	42.4	1.2	11.6	6.4	5.2	4	99.9	70
568	6.5	49.2	679	49.0	42.4	1.2	11.4	6.4	5.1	4	99.9	70
569	6.4	48.3	654	49.0	42.4	1.1	11.3	6.1	7.0	4	99.9	70
570	6.4	48.0	640	49.0	42.4	1.1	11.2	6.4	6.7	4	99.9	70
571	6.3	48.4	623	49.0	42.4	1.1	11.1	6.5	5.7	4	99.9	70
572	6.3	48.3	607	49.0	42.4	1.1	11.0	6.5	4.6	4	99.9	70
573	6.2	48.0	578	49.0	42.4	1.2	10.9	6.2	4.8	4	99.9	70
574	5.9	47.5	510	49.0	42.4	1.4	10.3	5.6	4.5	4	99.9	70
575	5.6	46.8	437	49.0	42.4	1.2	9.9	5.7	4.4	4	99.9	70
576	5.2	45.5	328	49.0	42.4	1.4	9.6	5.1	4.1	4	99.9	70
577	4.8	45.7	239	49.0	42.4	1.7	9.5	5.2	5.0	4	99.9	70
578	4.6	45.4	216	49.0	42.4	2.2	9.5	5.5	5.4	4	99.9	70
579	4.5	45.7	194	49.0	42.4	2.2	9.5	4.6	4.8	4	99.9	71
580	4.5	46.1	186	49.0	42.4	2.5	9.5	5.0	5.1	4	99.9	71
581	4.5	46.1	181	49.0	42.4	2.5	9.5	5.0	5.5	4	99.9	71
582	4.4	45.6	172	49.0	42.4	2.4	9.5	4.6	4.8	4	99.9	71
583	4.3	46.5	143	49.0	42.4	2.6	9.5	5.0	4.6	4	99.9	71
584	4.7	47.2	223	49.0	42.4	2.7	9.5	4.8	6.0	4	99.9	71
585	5.4	46.4	380	49.0	42.4	1.7	9.6	5.3	6.4	4	99.9	70
586	5.7	46.9	454	49.0	42.4	0.9	10.2	6.3	6.4	4	99.9	70
587	5.5	47.0	412	49.0	42.4	1.6	9.9	5.0	6.7	4	99.9	70
588	5.3	46.7	343	49.0	42.4	1.4	9.6	4.7	6.3	4	99.9	70
589	5.4	46.3	368	49.0	42.4	1.3	9.6	5.6	7.0	4	99.9	70
590	5.5	46.3	403	49.0	42.4	1.0	9.7	6.2	7.1	4	99.9	70
591	5.7	47.0	449	49.0	42.4	0.9	10.1	6.0	7.5	4	99.9	70
592	6.1	47.7	544	49.0	42.4	0.8	10.7	6.8	6.0	4	99.9	70
593	6.4	48.0	653	49.0	42.4	0.9	11.4	7.7	6.1	4	99.9	70
594	6.5	48.6	694	49.0	42.4	1.0	11.5	6.1	5.9	4	99.9	70
595	6.4	48.7	641	49.0	42.4	1.2	11.2	6.0	6.0	4	99.9	70
596	6.2	47.9	592	49.0	42.4	1.2	10.9	6.4	6.4	4	99.9	70
597	6.3	48.4	609	49.0	42.4	1.0	11.1	6.4	6.0	4	99.9	69
598	6.4	48.3	638	49.0	42.4	1.0	11.2	6.3	5.4	4	99.9	69
599	6.5	48.4	671	49.0	42.4	1.0	11.4	6.9	6.3	4	99.9	69
600	6.6	48.7	705	49.0	42.4	1.0	11.6	6.5	5.9	4	99.9	69
601	6.5	49.0	671	49.0	42.4	1.2	11.3	5.6	4.7	4	99.9	69
602	6.1	48.1	569	49.0	42.4	1.4	10.7	6.1	5.6	4	99.9	70
603	5.4	47.0	376	49.0	42.4	1.7	9.8	5.2	6.8	4	99.9	70
604	4.4	45.9	162	49.0	42.4	2.5	9.5	4.8	6.6	4	99.9	70
605	4.7	45.5	229	49.0	42.4	2.3	9.5	4.6	5.5	4	99.9	70
606	4.8	45.1	243	49.0	42.4	2.2	9.5	4.4	5.5	4	99.9	70
607	5.5	46.0	415	49.0	42.4	1.6	9.6	5.1	5.2	4	99.9	70
608	6.0	46.8	532	49.0	42.4	0.7	10.7	8.0	6.0	4	99.9	70
609	6.4	48.0	658	49.0	42.4	1.0	11.4	6.8	5.9	4	99.9	69
610	6.4	48.9	636	49.0	42.4	1.3	11.1	6.4	6.0	4	99.9	69
611	6.2	47.4	583	49.0	42.4	1.2	10.8	6.9	4.8	4	99.9	69
612	6.1	47.7	557	49.0	42.4	1.2	10.7	7.3	5.1	4	99.9	69
613	6.2	47.3	575	49.0	42.4	1.0	10.8	5.9	4.7	4	99.9	69
614	6.4	47.7	643	49.0	42.4	0.9	11.3	6.0	6.1	4	99.9	69
615	6.5	48.2	689	49.0	42.4	1.0	11.5	6.6	6.5	4	99.9	69
616	6.6	48.6	714	49.0	42.4	1.0	11.6	6.9	5.3	4	99.9	69

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (·C)	Pressure (kPa)	Relative Humidity (%)
617	6.5	48.3	690	49.0	42.4	1.2	11.4	6.4	5.0	4	99.9	69
618	6.3	48.1	617	49.0	42.4	1.2	11.0	5.4	4.6	4	99.9	69
619	6.1	47.4	557	49.0	42.4	1.2	10.7	6.8	4.5	4	99.9	69
620	6.0	47.5	517	49.0	42.4	1.2	10.4	5.8	5.5	4	99.9	69
621	5.8	47.1	483	49.0	42.4	1.1	10.3	5.6	5.3	4	99.9	69
622	5.5	46.7	414	49.0	42.4	1.6	9.8	5.1	5.4	4	99.9	69
623	5.8	46.5	467	49.0	42.4	0.8	10.2	6.2	6.2	4	99.9	69
624	6.0	47.6	534	49.0	42.4	1.1	10.7	6.0	5.2	4	99.9	69
625	5.9	46.8	499	49.0	42.4	1.2	10.3	5.8	5.2	4	99.9	69
626	5.8	47.3	472	49.0	42.4	1.1	10.2	5.5	5.3	4	99.9	69
627	5.7	47.5	456	49.0	42.4	1.2	10.0	5.9	4.5	4	99.9	70
628	5.6	46.6	433	49.0	42.4	1.1	9.9	5.7	3.5	4	99.9	70
629	5.4	46.2	386	49.0	42.4	1.3	9.7	5.6	4.7	4	99.9	70
630	4.9	46.2	264	49.0	42.4	1.7	9.5	5.0	5.6	4	99.9	70
631	5.2	46.3	319	49.0	42.4	1.8	9.5	5.7	5.2	4	99.9	70
632	5.5	46.3	392	49.0	42.4	1.3	9.6	6.1	4.1	4	99.9	70
633	5.1	46.6	304	49.0	42.4	1.4	9.5	5.1	4.6	4	99.9	71
634			100	30.0	48.3	14.4	7.7	7.1	7.4	7	99.9	64
635			100	30.0	48.3	16.5	8.8	7.4	8.5	7	99.9	64
636			100	30.0	48.3	14.9	9.6	7.5	6.6	7	99.9	64
637			100	30.0	48.3	13.2	9.6	5.8	7.4	7	99.9	64
638			100	30.0	48.3	13.8	9.7	5.9	7.5	7	99.9	64
639			100	30.0	48.3	9.9	9.6	4.8	8.0	7	99.9	64
640			153	30.0	48.3	7.2	11.0	4.9	7.1	7	99.9	64
641			170	30.0	48.3	10.5	11.5	6.0	6.5	7	99.9	64
642			166	30.0	48.3	11.4	11.2	6.2	5.0	7	99.9	64
643			378	30.0	48.3	9.7	10.6	6.2	4.7	7	99.9	64
644			720	30.0	48.3	4.7	10.1	6.5	7.2	7	99.9	64
645			725	30.0	48.2	1.5	11.8	8.4	7.8	7	99.9	64
646			1207	30.0	43.1	1.1	13.9	9.1	6.8	7	99.9	64
647			1291	30.0	36.3	2.1	14.1	6.2	6.5	7	99.9	64
648			1214	30.0	30.9	1.6	13.8	7.0	7.5	7	99.9	64
649			978	30.0	30.7	1.7	12.8	5.9	8.6	7	99.9	64
650			801	30.0	30.7	1.4	11.9	6.1	7.9	7	99.9	64
651			768	30.0	30.7	1.4	12.0	6.4	7.4	7	99.9	64
652			657	30.0	30.7	1.5	11.2	5.6	6.8	7	99.9	64
653			629	30.0	30.7	1.2	11.1	6.2	7.4	7	99.9	64
654			822	30.0	30.7	1.1	12.3	8.3	8.1	7	99.9	64
655			934	30.0	30.7	1.6	12.7	6.7	7.7	7	99.9	64
656			970	30.0	30.7	1.5	12.9	7.2	7.7	7	99.9	64
657			909	30.0	30.7	1.7	12.7	7.8	8.1	7	99.9	64
658			682	30.0	30.7	2.5	11.1	5.7	7.3	7	99.9	64
659			532	30.0	30.7	1.6	10.6	5.2	7.5	7	99.9	65
660			508	30.0	30.7	1.5	10.4	6.0	5.8	7	99.9	66
661			532	30.0	30.7	1.2	10.5	5.9	6.5	7	99.9	66
662			741	30.0	30.7	1.1	11.9	7.9	7.5	7	99.9	66
663			965	30.0	30.7	1.3	12.9	8.4	7.8	7	99.9	66
664			1124	30.0	30.7	1.5	13.5	7.4	7.0	7	99.9	66
665			1067	30.0	30.7	1.5	13.3	6.5	7.1	7	99.9	63
666			794	30.0	30.7	2.0	11.9	5.4	8.2	7	99.9	63
667			609	30.0	30.7	1.9	10.8	5.0	7.5	7	99.9	63
668			710	30.0	30.7	1.4	11.7	6.3	6.4	7	99.9	63
669			805	30.0	30.7	1.7	12.1	6.7	5.5	7	99.9	63
670			760	30.0	30.7	1.7	11.9	6.5	6.6	7	99.9	63
671			745	30.0	30.7	1.7	11.7	6.6	8.9	7	99.9	64
672			889	30.0	30.7	1.3	12.6	8.0	10.0	7	99.9	64
673			1028	30.0	30.7	1.5	13.1	7.3	8.9	7	99.9	64
674			1041	30.0	30.7	1.5	13.2	6.8	8.4	7	99.9	64
675			945	30.0	30.7	1.7	12.7	6.1	8.7	7	99.9	64
676			872	30.0	30.7	1.6	12.4	7.1	8.5	7	99.9	64
677			967	30.0	30.7	1.4	12.9	7.6	7.3	7	99.9	62
678			1184	30.0	30.7	0.7	13.7	8.7	8.5	7	99.9	62
679			1327	30.0	30.7	1.2	14.3	8.8	7.6	7	99.9	62
680			1367	30.0	30.7	1.4	14.4	8.1	7.8	7	99.9	62
681			1114	30.0	30.7	1.9	13.4	6.5	6.9	7	99.9	62
682			868	30.0	30.7	1.4	12.2	6.7	6.8	7	99.9	62
683			825	30.0	30.7	0.9	12.2	6.4	7.2	7	99.9	64
684			884	30.0	30.7	0.9	12.5	7.4	6.3	7	99.9	64
685			868	30.0	30.7	1.1	12.4	7.1	6.6	7	99.9	64
686			786	30.0	30.7	1.1	12.0	6.5	6.5	7	99.9	64
687			788	30.0	30.7	0.9	12.1	6.9	6.6	7	99.9	64
688			797	30.0	30.7	1.0	12.0	5.9	7.1	7	99.9	64
689			748	30.0	30.7	1.2	11.9	5.4	6.5	7	99.9	64
690			606	30.0	30.7	1.4	10.8	5.0	5.6	7	99.9	64
691			546	30.0	30.7	1.0	10.6	5.5	5.0	7	99.9	64
692			699	30.0	30.7	0.7	11.7	6.5	4.8	7	99.9	64
693			783	30.0	30.7	1.0	12.1	6.6	5.4	7	99.9	64
694			691	30.0	30.7	1.2	11.4	6.4	5.9	7	99.9	64
695			623	30.0	30.7	1.0	11.2	6.7	5.2	7	99.9	64
696			543	30.0	30.7	1.5	10.5	5.4	5.1	7	99.9	64
697			463	30.0	30.7	1.4	10.0	5.8	4.5	7	99.9	64
698			519	30.0	30.7	1.0	10.7	6.7	5.7	7	99.9	64
699			578	30.0	30.7	1.3	11.0	6.0	7.1	7	99.9	64
700			547	30.0	30.7	1.5	10.6	6.6	7.8	7	99.9	64
701			611	30.0	30.7	1.0	11.2	6.0	8.1	8	99.9	63
702			756	30.0	30.7	0.8	12.0	6.5	6.0	8	99.9	63
703			755	30.0	30.7	1.0	11.9	7.1	5.9	8	99.9	63
704			643	30.0	30.7	1.2	11.2	6.1	7.1	8	99.9	63

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
705			510	30.0	30.7	1.3	10.3	4.8	7.2	8	99.9	63
706			456	30.0	30.7	1.3	10.1	6.4	6.1	8	99.9	63
707			472	30.0	30.7	1.3	10.3	5.7	6.1	8	99.9	63
708			437	30.0	30.7	1.5	9.9	4.8	7.0	8	99.9	63
709			481	30.0	30.7	1.3	10.0	5.7	8.6	8	99.9	63
710			870	30.0	30.7	0.7	12.5	9.0	7.3	8	99.9	63
711			1286	30.0	30.7	0.7	14.2	8.2	7.7	8	99.9	63
712			1265	30.0	30.7	2.1	14.1	8.1	7.4	8	99.9	63
713			995	30.0	30.7	1.7	12.9	6.3	7.4	8	99.9	63
714			933	30.0	30.7	0.9	12.6	7.7	7.3	8	99.9	63
715			1114	30.0	30.7	0.7	13.6	8.8	6.3	8	99.9	63
716			1045	30.0	30.7	1.5	13.2	6.5	5.8	8	99.9	63
717			817	30.0	30.7	1.4	12.0	6.5	5.7	8	99.9	63
718			681	30.0	30.7	1.2	11.3	6.4	7.5	8	99.9	63
719	6.5	48.7	694	30.0	30.7	0.9	11.6	6.4	6.7	8	99.9	62
720	6.5	48.8	678	30.0	30.7	1.1	11.5	6.6	7.2	8	99.9	62
721	6.2	47.9	579	30.0	30.7	1.3	10.8	5.4	7.2	8	99.9	62
722	6.0	46.7	536	30.0	30.7	1.2	10.6	6.0	8.2	8	99.9	62
723	6.3	47.4	612	30.0	30.7	1.0	11.2	6.7	6.3	8	99.9	62
724	6.7	48.6	740	30.0	30.7	0.8	11.8	7.3	6.2	8	99.9	62
725	6.8	49.3	777	30.0	30.7	1.1	12.1	6.8	6.3	8	100.0	62
726	6.6	48.9	724	30.0	30.7	1.1	11.5	5.7	9.2	8	100.0	62
727	6.8	48.9	779	30.0	30.7	0.8	12.1	7.0	7.9	8	100.0	62
728	6.8	49.3	775	30.0	30.7	1.1	11.9	6.2	8.1	8	100.0	62
729	6.9	50.0	818	30.0	30.7	0.7	12.2	6.6	7.6	8	100.0	62
730	7.1	50.6	867	30.0	30.7	0.7	12.4	7.3	8.3	8	100.0	62
731	7.1	50.4	886	30.0	30.7	0.6	12.5	7.4	8.1	7	100.0	62
732	7.1	50.2	879	30.0	30.7	0.6	12.4	7.5	7.7	7	100.0	62
733	7.2	50.6	899	30.0	30.7	0.6	12.5	7.0	7.4	7	100.0	62
734	7.4	51.1	1004	30.0	30.7	0.5	13.0	7.2	8.1	7	100.0	62
735	7.4	50.7	1005	30.0	30.7	1.0	13.0	6.5	8.7	7	100.0	62
736	7.3	51.6	965	30.0	30.7	0.5	12.8	7.1	7.9	7	100.0	62
737	7.2	51.5	919	30.0	30.7	0.6	12.6	6.0	7.0	7	99.9	63
738	6.8	49.6	768	30.0	30.7	1.0	11.7	5.8	6.1	7	99.9	63
739	6.7	49.8	744	30.0	30.7	0.5	11.8	7.7	6.6	7	99.9	63
740	7.0	50.4	847	30.0	30.7	0.5	12.4	6.6	7.5	7	99.9	63
741	6.9	50.5	795	30.0	30.7	0.9	12.1	6.4	6.6	7	99.9	63
742	6.5	49.3	687	30.0	30.7	0.9	11.2	6.4	6.4	7	99.9	63
743	6.8	50.0	764	30.0	30.7	0.4	12.0	6.6	8.8	7	99.9	63
744	7.0	51.1	853	30.0	30.7	0.6	12.4	6.6	7.6	7	99.9	63
745	6.8	50.6	788	30.0	30.7	0.8	11.9	6.2	8.3	7	99.9	63
746	6.7	49.6	743	30.0	30.7	0.6	11.8	6.9	8.6	7	99.9	63
747	6.9	50.4	799	30.0	30.7	0.5	12.1	7.5	7.9	7	99.9	63
748	7.3	50.8	946	30.0	30.7	0.5	12.8	7.5	9.3	7	99.9	63
749	7.5	51.9	1046	30.0	30.7	0.5	13.2	7.5	9.8	7	99.9	62
750	7.4	51.9	993	30.0	30.7	1.0	13.0	6.6	6.5	7	99.9	62
751	7.0	51.1	843	30.0	30.7	0.9	12.2	6.3	6.8	7	99.9	62
752	6.8	50.4	798	30.0	30.7	0.7	12.0	6.7	8.0	7	99.9	62
753	7.4	51.2	970	30.0	30.7	0.3	12.9	7.0	7.8	7	99.9	62
754	7.8	52.9	1127	30.0	30.7	0.7	13.6	6.5	7.3	7	99.9	62
755	7.7	52.4	1116	30.0	30.7	1.4	13.4	7.6	7.7	7	99.9	64
756	7.4	52.0	988	30.0	30.7	1.4	12.9	6.6	7.2	7	99.9	64
757	7.2	50.6	919	30.0	30.7	0.7	12.4	7.2	6.6	7	99.9	64
758	7.4	51.8	981	30.0	30.7	0.6	13.1	7.1	6.9	7	99.9	64
759	6.9	51.2	796	30.0	30.7	1.3	11.9	5.2	5.7	7	99.9	64
760	6.2	48.8	585	30.0	30.7	0.9	10.7	5.3	6.1	7	99.9	64
761	6.2	48.0	580	30.0	30.7	0.7	10.9	7.1	6.6	7	99.9	64
762	6.4	49.8	666	30.0	30.7	0.7	11.5	6.6	6.5	7	99.9	64
763	6.8	50.5	784	30.0	30.7	0.4	12.0	6.9	6.2	7	99.9	64
764	7.0	51.2	841	30.0	30.7	0.8	12.3	6.5	7.5	7	99.9	64
765	6.8	51.1	769	30.0	30.7	1.2	11.8	6.2	6.9	7	99.9	64
766	6.9	50.3	807	30.0	30.7	0.8	12.2	8.4	6.6	7	99.9	64
767	6.8	50.8	770	30.0	30.7	1.3	11.9	6.7	6.3	7	99.9	64
768	6.3	49.9	624	30.0	30.7	1.3	11.0	5.8	7.4	7	99.9	63
769	6.1	49.3	573	30.0	30.7	1.0	10.9	6.5	7.5	7	99.9	63
770	6.1	48.9	568	30.0	30.7	1.3	10.8	7.2	8.9	7	99.9	63
771	6.2	48.5	594	30.0	30.7	1.2	11.0	6.2	9.0	7	99.9	63
772	6.5	48.8	696	30.0	30.7	0.8	11.6	7.3	8.2	7	99.9	63
773	6.9	50.0	819	30.0	30.7	0.8	12.2	7.4	7.9	7	100.0	63
774	7.1	50.9	862	30.0	30.7	1.0	12.5	6.9	8.9	7	100.0	63
775	6.7	50.2	732	30.0	30.7	1.3	11.6	7.0	7.8	7	100.0	63
776	6.3	48.9	611	30.0	30.7	1.1	10.9	6.5	7.6	7	100.0	63
777	6.5	48.8	691	30.0	30.7	0.6	11.6	7.5	7.0	7	100.0	63
778	6.7	50.0	754	30.0	30.7	1.1	11.9	7.6	6.6	7	100.0	63
779	6.3	48.7	634	30.0	30.7	1.3	11.0	5.9	6.3	7	100.0	63
780	6.3	48.8	625	30.0	30.7	0.8	11.2	7.1	8.0	7	100.0	63
781	6.5	50.0	678	30.0	33.5	1.4	11.5	6.2	6.4	7	100.0	63
782	6.5	49.8	682	30.0	36.5	1.4	11.3	5.5	7.7	7	100.0	63
783	7.3	50.3	959	30.0	36.5	1.0	12.8	6.6	6.7	7	100.0	63
784			1508	30.0	36.5	0.6	14.6	8.4	6.6	7	100.0	63
785			1649	30.0	36.5	2.3	15.3	8.6	6.5	7	100.0	63
786			1574	30.0	36.5	2.5	15.0	8.8	6.3	7	100.0	63
787	8.7	54.4	1392	30.0	36.5	1.3	14.5	7.8	6.0	7	100.0	63
788	7.8	53.3	1122	30.0	36.5	1.7	13.4	7.0	5.5	7	100.0	63
789	8.0	51.9	1225	30.0	36.5	0.7	13.7	9.7	6.8	7	100.0	63
790	9.4	54.5	1594	30.0	36.5	0.4	14.9	9.4	7.5	7	100.0	63
791	9.1	54.7	1493	30.0	36.5	2.1	14.8	8.8	7.1	7	100.0	63
792	8.8	55.1	1423	30.0	36.5	1.6	14.6	8.8	5.7	7	100.0	63

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
793	7.8	53.5	1141	30.0	36.5	1.9	13.4	7.6	5.2	7	100.0	63
794	7.6	51.8	1080	30.0	36.5	1.3	13.3	7.0	5.9	7	100.0	63
795	8.2	53.0	1275	30.0	36.5	0.5	14.1	8.9	5.5	7	100.0	63
796	8.0	54.4	1227	30.0	36.5	1.7	13.9	7.4	5.9	7	100.0	63
797	7.3	52.0	944	30.0	36.5	1.7	12.6	6.5	7.2	7	100.0	62
798	7.0	50.3	848	30.0	36.5	1.0	12.3	6.6	6.9	7	100.0	62
799	7.3	50.8	956	30.0	36.5	0.9	12.8	6.7	7.2	7	100.0	62
800	7.7	51.4	1097	30.0	36.5	1.0	13.5	7.8	7.6	7	100.0	62
801	7.3	51.6	945	30.0	36.5	1.7	12.6	5.9	8.5	7	100.0	62
802	6.7	49.8	742	30.0	36.5	1.2	11.7	6.5	9.0	7	100.0	62
803	6.3	49.3	631	30.0	36.5	1.3	11.1	5.5	7.8	7	100.0	62
804	6.1	47.7	570	30.0	36.5	1.1	10.8	6.2	5.8	7	100.0	62
805	6.4	48.5	644	30.0	36.5	1.0	11.3	6.8	6.2	7	100.0	62
806	6.6	49.6	726	30.0	36.5	0.9	11.7	7.6	5.7	7	100.0	62
807	7.3	49.5	943	30.0	36.5	0.8	12.7	7.9	4.7	7	100.0	62
808	8.1	52.2	1238	30.0	36.5	0.9	14.0	8.1	6.0	7	100.0	62
809	7.8	53.5	1158	30.0	36.5	1.8	13.6	8.0	6.0	7	100.0	63
810	7.3	51.0	967	30.0	36.5	1.5	12.8	7.7	5.6	7	100.0	63
811	7.0	50.2	847	30.0	36.5	1.2	12.2	7.6	6.6	7	100.0	63
812	6.8	49.9	778	30.0	36.5	1.2	12.0	7.2	6.0	7	100.0	63
813	6.5	49.3	673	30.0	36.5	1.2	11.3	6.5	5.8	7	100.0	63
814	6.0	48.0	534	30.0	36.5	1.4	10.4	5.7	4.8	7	100.0	63
815	5.7	47.3	442	30.0	36.5	1.4	9.9	5.1	4.5	8	100.0	63
816	5.5	46.9	414	30.0	36.5	1.4	9.8	5.1	5.4	8	100.0	63
817	5.9	47.6	492	30.0	36.5	1.1	10.4	6.6	5.4	8	100.0	63
818	6.4	48.4	637	30.0	36.5	1.1	11.4	6.7	3.7	8	100.0	63
819	6.3	48.2	605	30.0	36.5	1.4	11.0	5.7	3.3	8	100.0	63
820	5.7	47.6	458	30.0	36.5	1.6	9.9	5.6	4.6	8	100.0	63
821	5.5	47.3	414	30.0	36.5	1.3	9.8	6.1	5.7	8	100.0	62
822	6.0	48.1	517	30.0	36.5	1.0	10.6	7.7	6.4	8	100.0	62
823	6.8	49.2	775	30.0	36.5	0.6	12.0	8.7	6.0	8	100.0	62
824	7.4	52.0	995	30.0	36.5	0.8	13.1	6.2	5.3	8	100.0	62
825	7.4	51.7	1005	30.0	36.5	1.2	13.0	6.8	5.2	8	100.0	62
826	7.2	51.8	902	30.0	36.5	1.9	12.6	6.6	5.2	8	100.0	62
827	6.8	50.0	762	30.0	36.5	2.0	11.7	6.4	5.3	8	100.0	61
828	7.0	49.4	844	30.0	36.5	1.4	12.3	7.4	6.9	8	100.0	61
829	7.4	51.0	981	30.0	36.5	1.6	13.0	7.9	6.6	8	100.0	61
830	7.2	51.1	894	30.0	36.5	1.9	12.5	6.6	8.4	8	100.0	61
831	6.8	50.0	762	30.0	36.5	1.9	11.8	6.5	7.9	8	100.0	61
832	7.1	49.6	890	30.0	36.5	1.4	12.4	6.8	5.6	8	100.0	61
833	7.8	52.5	1154	30.0	36.5	1.3	13.8	8.2	5.5	8	100.0	61
834	7.4	52.1	988	30.0	36.5	1.9	12.8	6.0	6.4	8	100.0	61
835	7.2	50.8	912	30.0	36.5	1.6	12.5	6.7	6.7	8	100.0	61
836	7.8	51.6	1132	30.0	36.5	1.3	13.5	7.2	6.9	8	100.0	61
837	8.7	53.1	1396	30.0	36.5	0.8	14.5	8.1	6.2	8	100.0	61
838	9.0	54.3	1483	30.0	36.5	1.3	14.8	9.4	5.3	8	100.0	61
839	8.2	53.9	1264	30.0	36.5	2.0	14.0	7.9	5.6	8	100.0	61
840	7.5	52.0	1024	30.0	36.5	1.5	13.0	6.9	4.5	8	100.0	62
841	7.0	50.5	848	30.0	36.5	1.9	12.2	5.8	6.2	8	100.0	62
842	6.8	49.9	778	30.0	36.5	1.8	12.0	6.4	6.2	8	100.0	62
843	6.8	50.5	781	30.0	36.5	1.7	11.9	6.8	5.6	8	100.0	62
844	7.0	50.2	825	30.0	36.5	1.6	12.2	7.3	6.7	8	100.0	62
845	7.2	50.2	928	30.0	36.5	1.5	12.6	8.8	6.4	8	100.0	60
846	7.7	51.9	1101	30.0	36.5	1.4	13.4	7.6	6.3	8	100.0	60
847	7.8	53.1	1135	30.0	36.5	1.6	13.6	7.1	4.7	8	100.0	60
848	7.5	52.3	1020	30.0	36.5	1.5	13.0	7.3	5.5	8	100.0	60
849	7.1	51.7	873	30.0	36.5	2.0	12.3	5.6	6.0	8	100.0	60
850	7.0	50.6	831	30.0	36.5	1.7	12.2	8.5	5.8	8	100.0	60
851	7.1	50.7	862	30.0	36.5	1.6	12.4	7.9	6.3	8	100.0	59
852	7.0	50.5	829	30.0	36.5	1.8	12.2	6.9	5.0	8	100.0	59
853	6.7	50.5	756	30.0	36.5	1.8	11.9	6.6	6.2	8	100.0	59
854	6.4	49.1	636	30.0	36.6	1.9	11.1	6.8	6.4	8	100.0	59
855	6.0	48.4	517	30.0	36.6	2.0	10.4	5.9	5.7	8	100.0	59
856	5.5	47.6	407	30.0	36.6	1.6	9.7	5.8	5.5	8	100.0	59
857	5.5	47.4	409	30.0	36.6	1.6	9.6	5.5	5.4	8	100.0	60
858	5.7	46.7	463	30.0	36.6	1.0	10.2	7.1	5.5	8	100.0	61
859	6.1	48.0	558	30.0	36.6	1.2	10.8	6.6	5.6	8	100.0	61
860	6.3	48.2	609	30.0	36.6	1.3	11.1	6.1	6.7	8	100.0	61
861	6.7	48.7	742	30.0	36.5	1.4	11.8	7.4	7.8	8	100.0	61
862	7.5	50.9	1024	30.0	36.5	1.3	13.2	8.5	7.6	8	100.0	61
863	7.8	52.3	1131	30.0	36.5	1.5	13.6	7.2	6.7	8	100.0	55
864	7.4	51.8	972	30.0	36.5	1.8	12.8	5.6	7.5	8	100.0	55
865	7.3	50.4	933	30.0	36.5	1.6	12.7	6.7	6.6	8	100.0	55
866	7.3	50.9	958	30.0	36.5	1.6	12.9	7.4	5.0	8	100.0	55
867	6.9	51.0	811	30.0	36.5	2.0	12.0	6.0	4.4	8	100.0	55
868	6.3	49.3	608	30.0	36.6	2.2	10.8	4.9	6.0	8	100.0	55
869	6.0	47.9	530	30.0	36.6	1.6	10.6	6.4	6.0	8	100.0	58
870	6.2	48.2	577	30.0	36.6	1.3	10.9	6.5	5.4	8	100.0	59
871	6.5	48.4	689	30.0	36.5	1.5	11.6	7.5	5.0	8	100.0	59
872	6.9	49.1	803	30.0	36.5	2.0	12.1	6.8	4.5	8	100.0	59
873	7.2	50.4	916	30.0	36.5	1.9	12.6	7.5	4.6	8	100.0	59
874	7.6	51.6	1076	30.0	36.5	1.9	13.4	7.1	3.1	8	100.0	59
875	7.5	52.1	1040	30.0	36.5	1.6	13.2	7.5	4.0	8	100.0	60
876	7.5	50.9	1023	30.0	36.5	1.9	13.0	8.0	4.9	8	100.0	60
877	7.8	51.6	1151	30.0	36.5	1.6	13.6	8.2	5.0	8	100.0	60
878	8.1	52.8	1254	30.0	36.5	1.1	14.0	8.4	5.4	8	100.0	60
879	8.0	53.5	1210	30.0	36.5	1.7	13.9	7.7	6.9	8	100.0	60
880	7.3	52.1	960	30.0	36.5	1.9	12.7	7.4	6.7	8	100.0	60

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (kPa)	Relative Humidity (%)
881	6.7	49.4	735	30.0	36.6	2.4	11.6	5.9	5.7	8	100.0	60
882	6.6	48.5	708	30.0	36.5	2.0	11.6	6.1	5.0	8	100.0	60
883	6.7	49.1	752	30.0	36.5	2.0	11.9	6.1	4.8	8	100.0	60
884	7.0	49.1	825	30.0	36.5	1.9	12.1	7.6	3.8	8	100.0	60
885	7.6	50.9	1067	30.0	36.5	1.7	13.3	8.3	5.2	8	100.0	60
886	7.9	52.7	1190	30.0	36.5	1.8	13.8	7.5	5.1	8	100.0	60
887	7.4	52.0	980	30.0	36.5	1.9	12.8	6.1	5.8	8	100.0	58
888	6.8	50.2	783	30.0	36.5	2.2	11.9	5.1	6.3	8	100.0	58
889	6.4	48.6	666	30.0	36.6	2.3	11.4	6.1	5.9	8	100.0	58
890	6.0	48.2	540	30.0	36.6	2.6	10.4	5.7	5.1	8	100.0	58
891	5.6	47.3	431	30.0	36.6	1.6	9.9	4.9	5.5	8	100.0	58
892	5.7	47.5	449	30.0	36.6	1.2	10.1	6.2	5.2	8	100.0	58
893	6.0	47.7	525	30.0	36.6	1.2	10.5	7.1	5.0	8	100.0	58
894	6.4	48.5	656	30.0	36.5	1.8	11.6	7.7	6.0	8	100.0	58
895	6.3	48.7	623	30.0	36.6	2.5	11.0	5.1	6.4	8	100.0	58
896	5.8	47.7	484	30.0	36.6	2.2	10.1	5.7	7.4	8	100.0	58
897	5.8	47.5	483	30.0	36.6	1.2	10.4	6.5	7.1	8	100.0	58
898	6.0	47.8	540	30.0	36.6	1.3	10.7	6.0	6.6	8	100.0	58
899	6.0	48.2	542	30.0	36.6	1.4	10.7	5.6	6.0	8	100.0	58
900	6.1	47.8	566	30.0	36.6	1.3	10.6	6.1	5.8	8	100.0	58
901	6.6	49.3	727	30.0	36.5	1.5	11.9	7.5	7.2	8	100.0	58
902	6.6	49.5	716	30.0	36.5	2.5	11.6	6.6	7.5	8	100.0	58
903	6.1	48.0	562	30.0	36.6	2.3	10.6	6.7	6.7	8	100.0	58
904	6.3	48.5	627	30.0	36.6	1.4	11.3	7.8	7.2	8	100.0	58
905	6.9	49.8	803	30.0	36.5	1.8	12.1	6.9	7.0	8	100.0	57
906	7.0	50.5	833	30.0	36.5	2.1	12.3	7.3	6.2	8	100.0	57
907	6.5	49.3	694	30.0	36.6	2.3	11.4	5.5	7.1	8	100.0	57
908	6.0	48.3	524	30.0	36.6	2.5	10.3	5.6	6.9	8	100.0	57
909	5.7	47.0	453	30.0	36.6	1.4	10.2	6.6	6.3	8	100.0	57
910	5.8	46.8	472	30.0	36.6	1.4	10.1	6.2	7.2	8	100.0	57
911	6.2	47.4	587	30.0	36.6	1.1	11.0	7.2	8.4	7	100.0	59
912	7.1	49.4	860	30.0	36.5	1.6	12.5	7.8	6.4	7	100.0	59
913	7.4	51.1	984	30.0	36.5	1.9	13.0	7.5	6.2	7	100.0	59
914	7.3	50.7	950	30.0	36.5	2.0	12.8	7.0	7.4	7	100.0	59
915	6.9	50.7	802	30.0	36.5	2.4	12.0	6.0	7.2	7	100.0	59
916	6.5	48.3	668	30.0	36.6	2.2	11.3	6.4	4.7	7	100.0	59
917	6.4	48.4	649	30.0	36.6	2.0	11.4	7.5	4.6	7	100.0	58
918	6.2	48.1	586	30.0	36.6	2.3	10.8	5.5	5.1	7	100.0	58
919	6.3	47.3	613	30.0	36.6	1.4	10.9	6.8	7.4	7	100.0	58
920	7.7	50.9	1104	30.0	36.5	1.5	13.4	8.5	8.3	7	100.0	58
921	8.7	54.4	1404	30.0	36.5	1.2	14.6	8.7	8.3	7	100.0	58
922	7.7	53.7	1094	30.0	36.5	2.4	13.2	6.8	7.6	7	100.0	58
923	7.5	51.1	1011	30.0	36.5	1.3	13.0	6.6	6.5	7	100.0	57
924	7.5	50.8	1017	30.0	36.5	1.4	13.1	6.5	6.0	7	100.0	57
925	7.2	51.4	906	30.0	36.5	1.4	12.5	6.4	5.4	7	100.0	57
926	6.9	49.5	794	30.0	36.5	1.4	12.0	6.3	5.4	7	100.0	57
927	6.6	49.1	700	30.0	36.6	1.4	11.5	6.7	4.8	7	100.0	57
928	6.3	48.5	621	30.0	36.6	1.5	11.1	6.6	4.7	7	100.0	57
929	6.2	48.4	577	30.0	36.6	1.4	10.9	6.2	5.0	7	100.0	59
930	6.1	48.0	557	30.0	36.6	1.4	10.7	6.3	6.1	7	100.0	59
931	6.3	48.1	616	30.0	36.6	1.1	11.1	7.3	7.0	7	100.0	59
932	6.8	49.3	782	30.0	36.5	1.1	12.1	6.6	6.4	7	100.0	59
933	7.0	51.7	840	30.0	36.5	1.4	12.3	6.1	7.0	7	100.0	59
934	6.9	51.4	809	30.0	36.5	1.4	12.1	7.0	7.3	7	100.0	59
935	6.6	50.8	723	30.0	36.5	1.5	11.6	6.0	8.1	7	100.0	58
936	6.3	49.0	623	30.0	36.6	1.6	11.0	6.4	7.0	7	100.0	58
937	6.3	48.1	628	30.0	36.6	1.2	11.2	6.5	7.3	7	100.0	58
938	6.4	48.8	656	30.0	36.6	1.4	11.4	7.0	6.9	7	100.0	58
939	6.0	48.5	519	30.0	36.6	1.9	10.4	6.2	7.8	7	100.0	58
940	5.4	47.2	388	30.0	36.6	1.8	9.7	5.5	7.1	7	100.0	58
941	5.8	47.1	486	30.0	36.6	1.1	10.3	7.3	6.7	7	100.0	59
942	6.6	49.5	704	30.0	36.5	1.1	11.8	8.1	6.1	7	100.0	59
943	6.7	50.9	758	30.0	36.5	1.5	11.9	7.5	5.7	7	100.0	59
944	6.5	50.6	691	30.0	36.6	1.5	11.5	6.4	6.1	7	100.0	59
945	6.4	49.7	645	30.0	36.6	1.5	11.3	5.8	7.0	7	100.0	59
946	6.0	48.3	532	30.0	36.6	1.8	10.4	6.4	8.0	7	100.0	59
947	5.6	47.3	422	30.0	36.6	1.6	9.7	5.4	6.9	7	100.0	61
948	5.8	48.0	483	30.0	36.6	1.0	10.4	5.8	6.0	7	100.0	61
949	6.5	49.2	678	30.0	36.6	0.9	11.5	7.4	5.9	7	100.0	61
950	7.0	49.7	855	30.0	36.5	1.1	12.4	7.9	7.5	7	100.0	61
951	7.4	50.4	976	30.0	36.5	1.2	12.9	7.5	7.4	7	100.0	61
952	7.7	51.5	1090	30.0	36.5	1.2	13.4	8.0	8.2	7	100.0	61
953	7.7	51.9	1096	30.0	36.5	1.4	13.4	6.7	8.3	8	100.0	58
954	7.6	51.2	1081	30.0	36.5	1.4	13.3	7.0	7.1	8	100.0	57
955	7.9	51.5	1164	30.0	36.5	1.2	13.6	7.7	6.2	8	100.0	57
956	8.0	52.8	1211	30.0	36.5	1.3	13.9	7.4	5.9	8	100.0	57
957	7.9	52.3	1192	30.0	36.5	1.4	13.7	8.0	5.4	8	100.0	57
958	8.0	52.7	1229	30.0	36.5	1.2	13.9	8.4	7.4	8	100.0	57
959	7.9	52.1	1176	30.0	36.5	1.5	13.7	7.6	5.7	8	100.0	58
960	7.6	51.5	1065	30.0	36.5	1.4	13.2	7.5	5.6	8	100.0	58
961	7.4	51.2	990	30.0	36.5	1.4	13.0	7.2	6.6	8	100.0	58
962	7.1	50.3	864	30.0	36.5	1.6	12.3	6.2	5.8	8	100.0	58
963	6.5	49.0	695	30.0	36.6	1.7	11.4	6.1	5.4	8	100.0	58
964	6.1	47.8	570	30.0	36.6	1.6	10.6	5.5	5.2	8	100.0	58
965	6.4	47.5	658	30.0	36.6	1.0	11.3	7.2	7.1	8	100.0	59
966	7.2	50.2	928	30.0	36.5	1.0	12.8	7.6	6.6	8	100.0	59
967	7.6	51.2	1057	30.0	36.5	1.3	13.2	7.6	7.4	8	100.0	59
968	7.9	51.7	1170	30.0	36.5	1.3	13.7	7.5	7.2	8	100.0	59

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (kPa)	Relative Humidity (%)
969	8.5	52.5	1359	30.0	36.5	1.2	14.3	8.7	8.3	8	100.0	59
970	9.0	54.2	1466	30.0	36.5	1.4	14.8	8.8	6.5	8	100.0	59
971	8.7	54.3	1410	30.0	36.5	1.8	14.5	8.8	6.3	8	100.0	58
972	8.2	53.8	1262	30.0	36.5	1.7	14.0	7.1	7.0	8	100.0	58
973	7.6	51.9	1051	30.0	36.5	1.6	13.1	7.2	6.6	8	100.0	58
974	7.4	51.1	975	30.0	36.5	1.3	12.9	8.0	6.8	8	100.0	58
975	7.4	51.2	999	30.0	36.5	1.3	12.9	7.6	6.6	8	100.0	58
976	7.9	51.7	1160	30.0	36.5	1.0	13.7	7.9	6.6	8	100.0	58
977	8.3	52.6	1289	30.0	36.5	1.3	14.1	8.3	6.5	8	100.0	57
978	8.3	53.0	1299	30.0	36.5	1.7	14.1	7.8	6.9	8	100.0	57
979	8.6	53.0	1380	30.0	36.5	1.1	14.4	8.3	7.0	8	100.0	57
980	9.1	54.4	1488	30.0	36.5	1.2	14.8	8.8	7.8	8	100.0	57
981	8.7	54.1	1412	30.0	36.5	1.8	14.5	7.8	8.1	8	100.0	57
982	8.9	53.5	1446	30.0	36.5	1.1	14.6	8.2	7.5	8	100.0	57
983	8.9	54.6	1458	30.0	36.5	1.2	14.7	9.2	7.2	8	100.0	56
984	8.0	53.4	1198	30.0	36.5	2.1	13.6	7.7	7.3	8	100.0	56
985	7.7	51.9	1117	30.0	36.5	1.4	13.5	6.9	8.5	8	100.0	56
986	7.8	51.7	1125	30.0	36.5	1.4	13.4	7.5	9.6	8	100.0	56
987	8.7	52.3	1409	30.0	36.5	0.6	14.3	9.5	9.1	8	100.0	56
988	9.4	55.0	1600	30.0	36.6	1.2	15.0	9.3	7.4	8	100.0	56
989	9.2	55.0	1502	30.0	36.6	2.1	14.8	9.0	7.7	8	100.0	57
990	8.6	53.7	1371	30.0	36.5	1.7	14.4	7.8	6.4	8	100.0	57
991	7.9	52.4	1161	30.0	36.5	1.6	13.6	7.6	6.4	8	100.0	57
992	7.7	51.5	1094	30.0	36.5	1.4	13.3	7.6	6.2	8	100.0	57
993	7.6	52.0	1079	30.0	36.5	1.4	13.3	7.0	7.4	8	100.0	57
994	7.3	51.1	963	30.0	36.5	1.4	12.8	6.0	6.8	8	100.0	57
995	7.1	50.1	885	30.0	36.6	1.4	12.4	5.9	6.5	7	100.0	57
996	6.9	51.0	816	30.0	36.6	1.6	12.2	6.3	5.0	7	100.0	58
997	6.4	48.7	636	30.0	36.6	1.9	10.9	5.4	4.6	7	100.0	58
998	6.3	48.2	632	30.0	36.6	1.1	11.3	6.3	4.2	7	100.0	58
999	6.6	49.3	714	30.0	36.6	1.3	11.7	7.9	5.2	7	100.0	58
1000	6.4	49.1	651	30.0	36.6	1.6	11.2	6.3	5.8	7	100.0	58
1001	6.2	48.7	588	30.0	36.6	1.4	10.9	5.8	6.0	7	100.0	58
1002	6.4	48.6	640	30.0	36.6	1.2	11.3	7.1	5.5	8	100.0	58
1003	6.5	49.9	668	30.0	36.6	1.5	11.5	5.9	7.0	8	100.0	58
1004	6.2	49.9	601	30.0	36.6	1.5	10.9	6.2	6.1	8	100.0	58
1005	6.2	49.1	583	30.0	36.6	1.3	10.9	5.8	6.9	8	100.0	58
1006	6.6	49.3	704	30.0	36.6	1.0	11.7	7.6	6.6	8	100.0	58
1007	7.2	49.6	899	30.0	36.6	1.1	12.6	7.7	6.8	8	100.0	58
1008	7.6	50.9	1071	30.0	36.5	1.1	13.3	7.0	6.3	8	100.0	57
1009	8.2	52.2	1258	30.0	36.6	1.2	14.0	8.3	5.3	8	100.0	57
1010	8.6	53.7	1365	30.0	36.6	1.3	14.5	8.2	7.7	8	100.0	57
1011	7.8	53.1	1139	30.0	36.5	2.0	13.5	6.5	8.5	8	100.0	57
1012	7.3	50.6	944	30.0	36.6	1.6	12.6	6.1	7.2	8	100.0	57
1013	7.3	50.9	958	30.0	36.6	1.2	12.9	7.3	7.5	8	100.0	57
1014	7.3	51.1	959	30.0	36.5	1.4	12.8	7.1	7.0	7	100.0	58
1015	7.1	51.1	894	30.0	36.6	1.5	12.5	6.1	7.3	7	100.0	58
1016	7.0	50.0	828	30.0	36.6	1.4	12.2	7.1	7.5	7	100.0	58
1017	6.7	49.3	744	30.0	36.6	1.4	11.8	6.2	6.8	7	100.0	58
1018	6.4	48.6	651	30.0	36.6	1.4	11.3	6.2	5.7	7	100.0	58
1019	6.2	48.0	596	30.0	36.6	1.5	10.9	6.6	5.5	7	100.0	58
1020	6.1	47.5	567	30.0	36.6	1.3	10.9	5.7	5.4	7	100.0	59
1021	6.1	47.6	567	30.0	36.6	1.4	10.8	6.2	5.6	7	100.0	60
1022	6.2	47.9	581	30.0	36.6	1.3	10.9	6.4	5.8	7	100.0	60
1023	6.3	47.9	618	30.0	36.6	1.3	11.1	6.6	7.6	7	100.0	60
1024	6.6	48.6	702	30.0	36.6	1.2	11.6	6.7	6.9	7	100.0	60
1025	6.8	49.9	785	30.0	36.6	1.3	12.1	6.9	6.1	7	100.0	60
1026	6.8	49.6	776	30.0	36.6	1.4	12.0	7.1	6.7	8	100.0	59
1027	6.6	49.0	705	30.0	36.6	1.5	11.6	6.1	6.5	8	100.0	59
1028	6.4	48.5	658	30.0	36.6	1.5	11.3	6.3	5.4	8	100.0	59
1029	6.4	48.4	643	30.0	36.6	1.4	11.3	5.5	5.4	8	100.0	59
1030	6.2	48.7	586	30.0	36.6	1.5	10.9	6.4	6.0	8	100.0	59
1031	5.9	47.8	507	30.0	36.6	1.6	10.4	5.9	5.0	8	100.0	59
1032	5.6	46.9	420	30.0	36.6	1.6	9.8	5.0	5.9	8	100.0	58
1033	5.4	46.2	390	30.0	36.6	1.4	9.6	5.9	6.5	8	100.0	57
1034	5.2	46.2	339	30.0	36.6	1.5	9.5	5.8	6.7	8	100.0	57
1035	5.3	45.9	355	30.0	36.6	1.7	9.5	5.3	6.0	8	100.0	57
1036	5.9	46.4	499	30.0	36.6	1.2	10.2	6.6	6.9	8	100.0	57
1037	6.8	49.1	784	30.0	36.6	1.0	12.1	8.1	8.2	8	100.0	57
1038	7.7	50.9	1091	30.0	36.5	1.1	13.5	8.1	8.1	8	100.0	56
1039	7.7	51.9	1112	30.0	36.5	1.4	13.5	7.5	6.8	8	100.0	56
1040	7.3	51.0	961	30.0	36.6	1.6	12.8	6.5	5.5	8	100.0	56
1041	6.7	50.2	742	30.0	36.6	1.8	11.6	6.1	5.8	8	100.0	56
1042	6.6	48.3	702	30.0	36.6	1.2	11.5	7.3	6.4	8	100.0	56
1043	7.1	49.9	867	30.0	36.6	1.1	12.5	6.9	7.2	8	100.0	56
1044	7.2	50.6	917	30.0	36.6	1.3	12.7	6.4	5.8	8	100.0	55
1045	6.8	50.4	786	30.0	36.6	1.7	11.9	5.9	4.1	8	100.0	55
1046	6.1	49.6	549	30.0	36.6	2.0	10.5	5.3	4.2	8	100.0	55
1047	5.5	47.7	412	30.0	36.6	1.7	9.7	5.2	5.4	8	100.0	55
1048	5.5	46.9	392	30.0	36.6	1.4	9.6	5.0	6.8	8	100.0	55
1049	5.5	47.5	401	30.0	36.6	1.3	9.7	5.1	7.3	8	100.0	55
1050	5.6	47.9	430	30.0	36.6	1.2	10.0	6.4	5.7	8	100.0	57
1051	5.8	47.5	489	30.0	36.6	1.2	10.5	6.8	5.8	8	100.0	57
1052	5.7	47.7	464	30.0	36.6	1.7	10.1	5.4	5.7	8	100.0	57
1053	5.5	46.9	393	30.0	36.6	1.6	9.7	6.1	8.1	8	100.0	57
1054	5.6	46.7	425	30.0	36.6	1.2	9.9	5.9	7.3	8	100.0	57
1055	5.9	47.1	514	30.0	36.6	1.1	10.6	6.1	6.6	8	100.0	57
1056	6.2	47.8	586	30.0	36.6	1.3	11.0	6.3	7.0	8	100.0	57

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1057	6.4	47.7	638	30.0	36.6	1.2	11.3	6.0	5.1	8	100.0	57
1058	6.7	48.6	742	30.0	36.6	1.2	11.9	6.6	4.3	8	100.0	57
1059	6.6	49.4	728	30.0	36.6	1.6	11.7	6.0	7.2	8	100.0	57
1060	6.3	48.4	614	30.0	36.6	1.5	11.0	6.1	8.4	8	100.0	57
1061	6.2	47.9	586	30.0	36.6	1.3	10.8	6.0	7.2	8	100.0	57
1062	6.6	48.7	710	30.0	36.6	1.0	11.8	7.2	7.3	8	100.0	55
1063	6.8	49.4	771	30.0	36.6	1.4	12.0	6.7	6.9	8	100.1	55
1064	6.5	48.6	669	30.0	36.6	1.6	11.3	6.5	7.1	8	100.1	55
1065	6.4	47.9	641	30.0	36.6	1.3	11.1	6.7	7.4	8	100.1	55
1066	7.3	49.3	955	30.0	36.6	1.1	12.8	9.4	5.4	8	100.1	55
1067	8.1	52.6	1252	30.0	36.6	1.1	14.1	7.7	4.5	8	100.1	55
1068	8.2	52.5	1260	30.0	36.6	2.1	13.9	7.7	4.7	7	100.1	55
1069			1509	30.0	36.6	1.0	14.7	9.0	5.0	7	100.1	55
1070	9.2	55.0	1497	30.0	36.6	1.6	14.8	8.6	6.1	7	100.1	55
1071	7.9	53.5	1172	30.0	36.6	2.1	13.6	7.5	4.8	7	100.1	55
1072	7.5	51.4	1012	30.0	36.6	1.5	13.0	7.3	6.0	7	100.1	55
1073	7.5	51.1	1019	30.0	36.6	1.2	13.1	7.6	5.9	7	100.1	55
1074	7.3	51.1	939	30.0	36.6	1.5	12.7	6.7	5.3	7	100.1	57
1075	6.7	49.9	742	30.0	36.6	1.9	11.7	5.4	5.5	7	100.1	57
1076	6.1	48.1	549	30.0	36.6	1.7	10.5	5.9	7.0	7	100.1	57
1077	5.8	47.3	474	30.0	36.6	1.5	10.2	5.5	5.8	7	100.1	57
1078	5.6	46.6	439	30.0	36.6	1.4	9.9	6.3	6.0	7	100.1	57
1079	6.0	47.0	526	30.0	36.6	1.0	10.6	6.3	6.6	7	100.1	57
1080	6.5	49.2	681	30.0	36.6	1.2	11.6	6.1	6.9	7	100.1	57
1081	6.8	49.0	765	30.0	36.6	1.2	11.9	6.6	6.3	7	100.1	57
1082	7.2	49.8	899	30.0	36.6	1.1	12.6	7.1	5.5	7	100.1	57
1083	7.1	50.6	868	30.0	36.6	1.6	12.4	6.8	5.2	7	100.1	57
1084	6.7	49.1	746	30.0	36.6	1.5	11.7	6.7	6.2	7	100.1	57
1085	6.7	48.8	752	30.0	36.6	1.2	11.9	6.6	5.7	7	100.1	57
1086	6.7	49.4	756	30.0	36.6	1.3	11.9	6.4	7.0	7	100.1	57
1087	6.4	50.0	656	30.0	36.6	1.7	11.2	6.7	6.9	7	100.1	57
1088	6.0	48.5	532	30.0	36.6	1.6	10.5	6.5	6.1	7	100.1	57
1089	5.5	47.6	409	30.0	36.6	1.7	9.8	6.6	5.3	7	100.1	57
1090	5.2	46.0	333	30.0	36.6	1.7	9.6	5.6	5.3	7	100.1	57
1091	5.0	46.6	276	30.0	36.6	1.8	9.5	4.7	4.7	7	100.1	57
1092	5.2	46.4	339	30.0	36.6	1.8	9.5	6.0	4.6	7	100.1	58
1093	5.4	46.3	381	30.0	36.6	1.4	9.6	5.8	4.2	7	100.1	58
1094	5.5	46.3	399	30.0	36.6	1.3	9.7	6.2	5.4	7	100.1	58
1095	5.7	47.2	463	30.0	36.6	1.1	10.3	6.2	5.5	7	100.1	58
1096	6.2	47.9	579	30.0	36.6	1.1	11.0	6.3	6.1	7	100.1	58
1097	6.4	49.1	658	30.0	36.6	1.3	11.4	6.7	5.9	7	100.1	58
1098	6.5	49.1	688	30.0	36.6	1.3	11.6	6.9	7.3	8	100.1	57
1099	6.4	48.8	644	30.0	36.6	1.6	11.2	6.6	7.5	8	100.1	57
1100	6.0	47.7	525	30.0	36.6	1.6	10.4	5.7	7.2	8	100.1	57
1101	5.6	47.0	416	30.0	36.6	1.6	9.8	5.4	6.2	8	100.1	57
1102	5.3	46.5	342	30.0	36.6	1.6	9.5	6.0	5.9	8	100.1	57
1103	5.1	46.2	312	30.0	36.6	1.6	9.5	5.1	5.2	8	100.1	57
1104	5.2	46.4	341	30.0	36.6	1.7	9.5	5.7	5.0	8	100.1	56
1105	5.4	46.2	371	30.0	36.6	1.5	9.5	5.8	5.5	8	100.1	56
1106	4.8	46.4	238	30.0	36.6	1.7	9.5	4.5	5.2	8	100.1	56
1107	5.3	46.2	353	30.0	36.6	1.9	9.5	4.7	6.1	8	100.1	56
1108	5.5	46.8	399	30.0	36.6	1.3	9.8	6.3	6.3	8	100.1	56
1109	5.3	46.9	352	30.0	36.6	1.8	9.7	5.2	6.5	8	100.1	56
1110	5.5	47.4	406	30.0	36.6	1.5	9.8	5.9	7.1	8	100.1	54
1111	5.8	47.4	480	30.0	36.6	1.1	10.5	6.1	6.5	8	100.1	54
1112	5.7	47.3	447	30.0	36.6	1.8	10.0	5.1	5.4	8	100.1	54
1113	5.5	46.4	414	30.0	36.6	1.5	9.7	6.3	4.9	8	100.1	54
1114	5.7	46.3	452	30.0	36.6	1.1	10.3	6.8	8.6	8	100.1	54
1115	5.6	47.6	440	30.0	36.6	1.8	10.0	4.8	8.4	8	100.1	54
1116	5.6	46.4	416	30.0	36.6	1.4	9.7	6.2	6.6	7	100.1	51
1117	5.8	46.8	490	30.0	36.6	1.0	10.6	6.9	6.9	7	100.1	51
1118	6.1	47.5	554	30.0	36.6	1.4	10.7	5.8	7.0	7	100.1	51
1119	6.2	47.3	581	30.0	36.6	1.3	11.0	6.4	7.4	7	100.1	51
1120	6.2	47.8	588	30.0	36.6	1.6	10.9	5.6	5.4	7	100.1	51
1121	6.0	47.8	523	30.0	36.6	1.6	10.5	5.8	5.7	7	100.1	51
1122	5.9	47.0	492	30.0	36.6	1.5	10.3	6.7	6.4	7	100.1	54
1123	5.9	47.3	501	30.0	36.6	1.4	10.4	6.9	7.5	7	100.1	54
1124	6.1	47.7	547	30.0	36.6	1.2	10.8	6.6	7.8	7	100.1	54
1125	6.3	48.1	612	30.0	36.6	1.3	11.1	6.2	6.5	7	100.1	54
1126	6.3	48.4	615	30.0	36.6	1.5	11.1	6.7	6.0	7	100.1	54
1127	6.1	47.8	561	30.0	36.6	1.6	10.7	6.6	5.4	7	100.1	54
1128	5.8	47.2	478	30.0	36.6	1.7	10.1	5.5	5.5	7	100.1	55
1129	5.4	46.4	387	30.0	36.6	1.7	9.6	5.5	6.0	7	100.1	55
1130	5.5	46.5	404	30.0	36.6	1.3	9.8	5.9	5.7	7	100.1	55
1131	5.6	47.1	422	30.0	36.6	1.5	9.9	6.3	6.1	7	100.1	55
1132	5.2	46.6	323	30.0	36.6	2.0	9.6	5.4	7.1	7	100.1	55
1133	5.4	47.0	377	30.0	36.6	1.6	9.6	5.1	7.6	7	100.1	55
1134	5.2	46.9	331	30.0	36.6	1.6	9.5	5.2	5.9	7	100.1	56
1135	5.1	46.9	309	30.0	36.6	1.7	9.5	5.6	6.9	7	100.1	56
1136	5.6	46.1	427	30.0	36.6	1.6	9.7	5.1	6.9	7	100.1	56
1137	6.1	47.8	548	30.0	36.6	1.1	10.8	7.1	7.3	7	100.1	56
1138	6.4	48.6	663	30.0	36.6	1.4	11.5	6.5	7.6	7	100.1	56
1139	6.4	48.3	641	30.0	36.6	1.6	11.2	5.6	7.2	7	100.1	56
1140	6.5	48.7	686	30.0	36.6	1.2	11.5	7.1	6.6	7	100.1	53
1141	6.9	49.5	800	30.0	36.6	1.3	12.2	7.8	7.4	7	100.1	53
1142	6.7	49.6	740	30.0	36.6	1.7	11.7	6.6	8.0	7	100.1	53
1143	6.3	48.7	632	30.0	36.6	1.6	11.2	6.0	7.7	7	100.1	53
1144	5.9	47.8	499	30.0	36.6	1.9	10.3	5.7	7.4	7	100.1	53

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1145	5.3	47.0	361	30.0	36.6	2.0	9.7	5.0	7.2	7	100.1	53
1146	5.6	47.0	427	30.0	36.6	1.3	10.0	6.2	7.1	7	100.1	54
1147	5.8	47.3	479	30.0	36.6	1.5	10.3	6.0	5.2	7	100.1	54
1148	5.7	47.8	450	30.0	36.6	1.6	10.1	5.5	3.9	7	100.1	54
1149	5.2	46.5	323	30.0	36.6	2.0	9.6	5.3	5.6	7	100.1	54
1150	5.2	46.1	334	30.0	36.6	1.9	9.6	5.5	6.9	7	100.1	54
1151	5.4	46.2	376	30.0	36.6	1.5	9.6	5.0	6.7	7	100.1	54
1152	5.5	46.2	405	30.0	36.6	1.3	9.8	5.4	5.9	7	100.1	55
1153	5.8	46.8	466	30.0	36.6	1.2	10.3	6.2	5.3	7	100.1	55
1154	6.1	47.5	555	30.0	36.6	1.2	10.8	6.5	6.2	7	100.1	55
1155	6.2	47.6	600	30.0	36.6	1.4	11.1	7.1	6.9	7	100.1	55
1156	5.9	47.6	498	30.0	36.6	2.0	10.4	5.5	5.7	7	100.1	55
1157	5.5	46.6	395	30.0	36.6	1.9	9.7	5.7	6.5	7	100.1	55
1158	5.5	46.6	412	30.0	36.6	1.4	9.8	6.2	6.1	7	100.1	54
1159	5.7	47.4	461	30.0	38.4	1.4	10.2	6.1	6.0	7	100.1	54
1160	5.8	48.7	468	30.0	42.4	1.5	10.3	5.3	5.1	7	100.1	54
1161	5.4	47.2	390	30.0	42.4	1.9	9.7	4.6	6.5	7	100.1	54
1162	5.0	46.0	292	30.0	42.4	1.8	9.5	5.1	6.0	7	100.1	54
1163	4.6	46.1	209	30.0	42.4	2.2	9.5	4.8	5.2	7	100.1	54
1164	4.7	46.3	225	30.0	42.4	2.5	9.5	4.9	5.5	8	100.1	54
1165	5.0	46.5	284	30.0	42.4	2.5	9.5	5.7	5.8	8	100.1	54
1166	5.1	46.4	303	30.0	42.4	2.1	9.5	5.2	5.7	8	100.1	54
1167	5.2	46.2	323	30.0	42.4	2.0	9.5	4.5	4.4	8	100.1	54
1168	5.4	46.4	390	30.0	42.4	1.6	9.6	5.5	6.2	8	100.1	54
1169	5.4	46.8	391	30.0	42.4	1.5	9.8	6.2	8.6	8	100.1	54
1170	4.7	46.8	226	30.0	42.4	2.4	9.5	5.7	6.5	8	100.1	52
1171	4.7	46.4	227	30.0	42.4	2.5	9.5	5.3	5.2	8	100.1	52
1172	5.8	47.3	489	30.0	42.4	2.1	9.8	6.4	6.9	8	100.1	52
1173	7.3	48.9	970	30.0	42.4	1.4	12.1	9.8	6.7	8	100.1	52
1174	8.6	52.5	1372	30.0	42.4	1.0	14.5	8.4	7.4	8	100.1	52
1175	7.8	53.2	1149	30.0	42.4	2.5	13.6	5.8	6.6	8	100.1	52
1176	6.8	49.9	774	30.0	42.4	1.9	11.7	5.3	6.4	8	100.1	53
1177	6.2	48.0	604	30.0	42.4	1.5	10.9	5.8	6.4	8	100.1	53
1178	6.0	47.6	542	30.0	42.4	1.4	10.7	5.8	6.3	8	100.1	53
1179	5.8	47.1	477	30.0	42.4	1.5	10.1	5.5	5.5	8	100.1	53
1180	5.5	46.8	404	30.0	42.4	1.5	9.8	5.0	6.4	8	100.1	53
1181	4.7	46.7	221	30.0	42.4	2.4	9.5	5.2	7.0	8	100.1	53
1182	4.6	46.3	207	30.0	42.4	2.4	9.5	4.6	5.5	8	100.1	53
1183	5.3	46.2	358	30.0	42.4	2.1	9.6	6.0	6.6	8	100.1	53
1184	5.8	46.9	476	30.0	42.4	1.0	10.4	6.9	7.3	8	100.1	53
1185	6.4	47.7	649	30.0	42.4	1.0	11.3	6.5	8.1	8	100.1	53
1186	6.8	49.2	784	30.0	42.4	1.1	12.1	6.4	7.3	8	100.1	53
1187	7.0	49.2	838	30.0	42.4	1.3	12.2	7.6	7.2	8	100.1	53
1188	7.3	50.3	939	30.0	42.4	1.1	12.8	8.3	5.7	8	100.1	53
1189	7.3	51.1	962	30.0	42.4	1.4	12.9	7.1	5.0	8	100.1	53
1190	6.9	49.9	803	30.0	42.4	1.6	12.0	6.4	5.9	8	100.1	53
1191	6.7	49.0	746	30.0	42.4	1.3	11.7	7.2	7.0	8	100.1	53
1192	7.3	49.6	951	30.0	42.4	0.9	12.8	7.0	7.0	8	100.1	53
1193	7.8	51.8	1128	30.0	42.4	1.2	13.6	8.3	6.5	8	100.1	53
1194	7.4	51.7	980	30.0	42.4	1.7	12.8	6.1	5.7	8	100.1	50
1195	6.8	49.7	761	30.0	42.4	1.6	11.8	6.5	6.3	8	100.1	50
1196	6.4	48.5	664	30.0	42.4	1.5	11.3	6.3	6.9	8	100.1	50
1197	6.4	47.7	663	30.0	42.4	1.2	11.4	6.6	6.9	8	100.1	50
1198	6.5	47.8	669	30.0	42.4	1.3	11.4	6.6	6.6	8	100.1	50
1199	6.5	47.9	686	30.0	42.4	1.3	11.5	6.8	5.8	8	100.1	50
1200	6.8	49.0	761	30.0	42.4	1.2	12.0	7.8	7.2	8	100.1	52
1201	6.7	48.9	742	30.0	42.4	1.5	11.7	6.4	6.1	8	100.1	52
1202	6.9	49.2	802	30.0	42.4	1.1	12.1	6.4	6.5	8	100.1	52
1203	7.2	50.0	923	30.0	42.4	1.2	12.8	7.3	6.4	8	100.1	52
1204	7.0	50.2	832	30.0	42.4	1.6	12.2	5.8	5.9	8	100.1	52
1205	6.6	48.7	705	30.0	42.4	1.6	11.5	6.5	5.6	8	100.1	52
1206	7.0	49.3	840	30.0	42.4	1.1	12.2	7.8	4.9	8	100.1	50
1207	7.8	51.4	1129	30.0	42.4	1.0	13.6	7.7	5.8	8	100.1	50
1208	7.8	52.1	1137	30.0	42.4	1.5	13.6	7.7	6.0	8	100.1	50
1209	7.5	51.0	1008	30.0	42.4	1.5	13.0	8.2	6.9	8	100.1	50
1210	7.2	50.3	895	30.0	42.4	1.4	12.5	6.2	6.9	8	100.1	50
1211	6.7	49.6	745	30.0	42.4	1.6	11.7	6.4	6.3	8	100.1	50
1212	6.3	48.5	626	30.0	42.4	1.5	11.1	6.5	6.6	8	100.1	52
1213	6.2	47.7	581	30.0	42.4	1.3	10.9	6.6	6.4	8	100.1	52
1214	6.1	47.4	543	30.0	42.4	1.4	10.6	6.0	5.8	8	100.1	52
1215	5.8	47.1	489	30.0	42.4	1.4	10.2	5.7	6.9	8	100.1	52
1216	6.0	47.2	529	30.0	42.4	1.1	10.6	6.9	6.3	8	100.1	52
1217	6.5	48.3	684	30.0	42.4	1.0	11.6	6.6	7.4	8	100.1	52
1218	7.1	49.2	885	30.0	42.4	1.0	12.6	7.3	7.7	8	100.1	52
1219	7.3	50.3	936	30.0	42.4	1.4	12.8	7.3	6.3	8	100.1	52
1220	6.9	50.4	820	30.0	42.4	1.4	12.1	7.0	6.7	8	100.1	52
1221	6.4	48.8	664	30.0	42.4	1.5	11.3	6.0	6.7	8	100.1	52
1222	6.0	47.5	526	30.0	42.4	1.6	10.4	5.6	6.4	8	100.1	52
1223	5.6	46.9	436	30.0	42.4	1.4	9.9	5.7	7.1	8	100.1	52
1224	5.6	46.1	419	30.0	42.4	1.3	9.8	6.4	6.4	8	100.1	47
1225	5.8	46.5	466	30.0	42.4	1.0	10.3	6.5	6.7	8	100.1	47
1226	6.3	47.2	607	30.0	42.4	1.0	11.1	7.7	6.0	8	100.1	47
1227	6.8	48.5	770	30.0	42.4	1.0	12.0	8.1	5.5	8	100.1	47
1228	7.4	50.3	1008	30.0	42.4	0.9	13.1	8.0	3.6	8	100.1	47
1229	8.0	52.1	1204	30.0	42.4	1.3	13.9	8.6	4.7	8	100.1	47
1230	7.8	52.5	1157	30.0	42.4	1.4	13.6	6.8	5.2	8	100.1	51
1231	7.4	52.0	1005	30.0	42.4	1.5	13.0	7.1	5.8	8	100.1	52
1232	6.7	51.1	740	30.0	42.4	2.0	11.5	6.4	6.5	8	100.1	52

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1233	5.9	48.1	500	30.0	42.4	1.8	10.2	5.2	5.6	8	100.1	52
1234	5.5	46.6	406	30.0	42.4	1.5	9.7	5.5	5.9	8	100.1	52
1235	5.5	46.6	407	30.0	42.4	1.2	9.8	5.7	5.4	8	100.1	52
1236	5.8	46.8	480	30.0	42.4	1.0	10.4	6.5	5.5	8	100.1	52
1237	6.5	47.6	676	30.0	42.4	0.9	11.5	7.5	5.7	8	100.1	52
1238	7.3	50.1	965	30.0	42.4	0.9	13.0	7.6	5.8	8	100.1	52
1239	7.4	51.5	985	30.0	42.4	1.5	13.0	6.8	4.9	8	100.1	52
1240	6.7	49.9	746	30.0	42.4	1.7	11.7	6.2	6.1	8	100.1	52
1241	6.1	48.6	570	30.0	42.4	1.7	10.6	5.2	6.5	8	100.1	52
1242	5.9	46.7	511	30.0	42.4	1.3	10.5	6.3	6.0	8	100.1	51
1243	6.0	47.6	537	30.0	42.4	1.2	10.7	5.8	6.6	8	100.1	50
1244	6.0	47.6	526	30.0	42.4	1.3	10.6	5.9	6.4	8	100.1	50
1245	5.7	47.3	458	30.0	42.4	1.6	10.0	5.9	6.9	8	100.1	50
1246	5.5	46.3	398	30.0	42.4	1.5	9.7	5.7	7.1	8	100.1	50
1247	5.7	46.7	449	30.0	42.4	1.0	10.2	5.9	6.3	8	100.1	50
1248	6.0	47.2	523	30.0	42.4	1.2	10.6	6.2	6.5	8	100.1	50
1249	6.0	47.2	527	30.0	42.4	1.4	10.5	5.6	6.8	8	100.1	50
1250	6.1	47.1	559	30.0	42.4	1.1	10.8	6.3	7.0	8	100.1	50
1251	6.6	48.3	718	30.0	42.4	1.0	11.7	7.8	5.8	8	100.1	50
1252	7.2	49.7	924	30.0	42.4	1.0	12.8	8.7	6.3	8	100.1	50
1253	7.3	50.6	968	30.0	42.4	1.3	12.9	7.6	6.7	8	100.1	50
1254	7.1	50.1	861	30.0	42.4	1.5	12.3	6.4	5.9	8	100.1	50
1255	6.9	49.1	814	30.0	42.4	1.3	12.1	6.6	6.5	8	100.1	50
1256	6.9	49.4	805	30.0	42.4	1.2	12.1	7.3	5.7	8	100.1	50
1257	6.8	49.7	776	30.0	42.4	1.2	12.0	6.8	5.6	8	100.1	50
1258	6.6	49.3	728	30.0	42.4	1.4	11.7	6.4	4.5	8	100.1	50
1259	6.6	48.3	727	30.0	42.4	1.2	11.7	6.6	4.5	8	100.1	50
1260	6.9	49.1	806	30.0	42.4	1.2	12.2	6.8	4.9	8	100.1	50
1261	6.7	49.2	754	30.0	42.4	1.5	11.8	6.7	4.7	8	100.1	50
1262	6.3	48.3	622	30.0	42.4	1.6	11.0	6.5	4.6	8	100.1	50
1263	6.0	47.8	537	30.0	42.4	1.5	10.5	6.3	5.7	8	100.1	50
1264	6.0	47.4	541	30.0	42.4	1.2	10.8	6.2	6.3	8	100.1	50
1265	6.1	47.8	551	30.0	42.4	1.4	10.7	5.6	5.8	8	100.1	50
1266	6.0	47.8	527	30.0	42.4	1.3	10.5	5.8	6.1	8	100.1	50
1267	6.2	47.7	602	30.0	42.4	1.0	11.1	6.0	5.5	8	100.1	50
1268	7.0	49.3	838	30.0	42.4	0.9	12.3	6.7	5.4	8	100.1	50
1269	7.5	50.7	1019	30.0	42.4	1.2	13.2	7.4	5.4	8	100.1	50
1270	7.4	51.7	971	30.0	42.4	1.4	12.9	7.0	5.4	8	100.1	50
1271	6.9	49.4	803	30.0	42.4	1.6	12.0	6.5	7.4	8	100.1	50
1272	6.5	48.5	693	30.0	42.4	1.4	11.5	6.9	7.2	8	100.1	49
1273	6.4	48.0	654	30.0	42.4	1.4	11.3	6.9	6.1	8	100.1	48
1274	6.3	48.4	630	30.0	42.4	1.4	11.2	6.3	6.7	8	100.1	48
1275	6.2	47.9	592	30.0	42.4	1.5	10.9	6.1	6.4	8	100.1	48
1276	6.0	47.5	534	30.0	42.4	1.5	10.6	6.4	7.3	8	100.1	48
1277	5.4	46.7	387	30.0	42.4	1.9	9.8	5.5	7.4	8	100.1	48
1278	5.2	45.9	335	30.0	42.4	1.8	9.6	4.8	7.2	8	100.1	48
1279	5.4	45.6	387	30.0	42.4	1.3	9.6	5.8	7.4	8	100.1	48
1280	5.4	45.8	378	30.0	42.4	1.4	9.6	5.0	8.4	8	100.1	48
1281	5.6	46.2	436	30.0	42.4	1.0	10.1	6.5	7.2	8	100.1	48
1282	6.0	46.8	540	30.0	42.4	1.2	10.7	5.6	6.0	8	100.1	48
1283	6.4	47.7	655	30.0	42.4	1.0	11.5	7.4	6.2	8	100.1	48
1284	6.9	49.4	818	30.0	42.4	1.1	12.2	8.2	5.9	8	100.1	50
1285	7.0	50.2	844	30.0	42.4	1.4	12.3	6.9	7.2	8	100.1	51
1286	6.7	49.3	748	30.0	42.4	1.5	11.8	7.0	7.3	8	100.1	51
1287	6.5	48.3	670	30.0	42.4	1.4	11.4	6.9	6.3	8	100.1	51
1288	6.3	47.9	635	30.0	42.4	1.4	11.2	6.9	7.3	8	100.1	51
1289	6.1	47.6	547	30.0	42.4	1.6	10.6	6.2	7.8	8	100.1	51
1290	5.8	46.9	486	30.0	42.4	1.3	10.2	5.7	7.6	8	100.1	48
1291	5.9	46.9	512	30.0	42.4	1.2	10.5	5.5	6.3	8	100.1	48
1292	6.0	46.6	528	30.0	42.4	1.2	10.6	6.2	6.6	8	100.1	48
1293	6.1	47.1	570	30.0	42.4	1.2	10.9	7.1	6.9	8	100.1	48
1294	6.3	48.1	634	30.0	42.4	1.2	11.3	6.5	7.1	8	100.1	48
1295	6.6	47.9	724	30.0	42.4	1.1	11.7	6.9	7.3	8	100.1	48
1296	7.1	49.5	889	30.0	42.4	1.0	12.6	7.8	7.0	8	100.1	50
1297	7.3	50.3	956	30.0	42.4	1.3	12.9	7.4	7.3	8	100.1	50
1298	7.4	50.7	997	30.0	42.4	1.2	12.9	6.4	7.2	8	100.1	50
1299	8.0	51.4	1202	30.0	42.4	0.9	13.9	8.8	7.4	8	100.1	50
1300	7.8	51.9	1144	30.0	42.4	1.4	13.6	7.1	6.4	8	100.1	50
1301	7.3	50.7	946	30.0	42.4	1.5	12.7	6.4	7.2	8	100.1	50
1302	6.8	49.0	769	30.0	42.4	1.6	11.8	6.2	8.1	8	100.1	50
1303	6.5	48.3	692	30.0	42.4	1.4	11.5	6.6	7.8	8	100.1	50
1304	6.9	49.0	811	30.0	42.4	1.0	12.2	8.1	7.7	8	100.1	50
1305	7.1	50.5	858	30.0	42.4	1.5	12.4	6.6	6.9	8	100.1	50
1306	6.9	49.1	793	30.0	42.4	1.5	12.0	6.4	6.1	8	100.1	50
1307	6.6	48.5	716	30.0	42.4	1.4	11.6	6.2	7.0	8	100.1	50
1308	6.6	48.9	709	30.0	42.4	1.2	11.7	6.4	6.7	8	100.1	50
1309	6.7	48.4	740	30.0	42.4	1.2	11.8	7.0	6.3	8	100.1	49
1310	6.7	49.3	751	30.0	42.4	1.2	11.9	6.2	6.4	8	100.1	49
1311	6.7	49.0	754	30.0	42.4	1.2	12.0	7.2	7.4	8	100.1	49
1312	6.8	49.0	763	30.0	42.4	1.2	11.9	6.7	6.9	8	100.1	49
1313	6.8	49.5	790	30.0	42.4	1.2	12.0	6.4	8.1	8	100.1	49
1314	7.2	50.0	902	30.0	42.4	1.2	12.6	7.4	7.2	8	100.1	47
1315	7.4	50.2	983	30.0	42.4	1.2	13.0	6.4	7.4	8	100.1	47
1316	7.5	50.7	1027	30.0	42.4	1.2	13.1	7.2	6.8	8	100.1	47
1317	7.7	51.2	1120	30.0	42.4	1.2	13.5	7.2	6.7	8	100.1	47
1318	7.5	52.2	1029	30.0	42.4	1.5	13.1	7.2	8.2	8	100.1	47
1319	7.1	50.3	886	30.0	42.4	1.5	12.3	6.8	9.0	8	100.1	47
1320	7.4	50.2	982	30.0	42.4	1.0	13.0	7.1	8.3	8	100.1	43

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1321	7.9	51.3	1197	30.0	42.4	0.8	13.8	7.6	6.9	8	100.1	42
1322	8.1	52.5	1234	30.0	42.4	1.3	14.0	7.0	7.4	8	100.1	42
1323	7.5	51.9	1030	30.0	42.4	1.6	13.1	7.0	6.9	8	100.1	42
1324	6.9	49.7	817	30.0	42.4	1.7	12.0	7.3	7.5	8	100.1	42
1325	6.7	48.4	734	30.0	42.4	1.3	11.8	7.5	7.5	8	100.1	42
1326	6.6	48.5	714	30.0	42.4	1.4	11.6	6.4	5.6	8	100.1	45
1327	6.5	48.0	668	30.0	42.4	1.4	11.3	6.5	5.9	8	100.1	45
1328	6.5	48.1	690	30.0	42.4	1.2	11.5	6.7	6.6	8	100.1	45
1329	7.4	49.2	970	30.0	42.4	1.1	12.8	8.2	7.8	8	100.1	45
1330	9.0	52.8	1467	30.0	42.4	0.7	14.6	9.4	6.9	8	100.1	45
1331	8.9	54.2	1441	30.0	42.4	2.0	14.7	7.4	6.4	8	100.1	45
1332	8.0	52.9	1207	30.0	42.4	2.1	13.7	6.6	7.0	8	100.1	41
1333	7.7	51.3	1096	30.0	42.4	1.4	13.4	8.0	7.7	8	100.1	40
1334	7.5	50.8	1043	30.0	42.4	1.4	13.2	6.5	7.9	8	100.1	40
1335	7.2	50.3	926	30.0	42.4	1.4	12.7	7.2	7.0	8	100.1	40
1336	6.7	49.2	739	30.0	42.4	1.8	11.6	5.9	6.3	8	100.1	40
1337	6.2	47.8	579	30.0	42.4	1.6	10.8	5.9	5.2	8	100.1	40
1338	5.8	47.0	482	30.0	42.4	1.6	10.2	6.3	4.6	8	100.1	43
1339	5.5	46.2	416	30.0	42.4	1.5	9.7	5.5	4.1	8	100.1	43
1340	5.6	46.0	416	30.0	42.4	1.3	9.8	6.0	5.1	8	100.1	43
1341	6.1	47.1	545	30.0	42.4	0.9	10.8	6.7	4.0	8	100.1	43
1342	6.9	48.6	817	30.0	42.4	0.9	12.3	8.1	4.1	8	100.1	43
1343	7.7	50.8	1091	30.0	42.4	1.1	13.5	7.4	5.2	8	100.1	43
1344	7.6	51.1	1077	30.0	42.4	1.5	13.4	6.2	4.9	8	100.1	46
1345	7.0	49.9	855	30.0	42.4	1.8	12.2	5.6	4.9	8	100.1	46
1346	6.6	48.6	717	30.0	42.4	1.5	11.6	6.6	5.4	8	100.1	46
1347	6.4	48.2	649	30.0	42.4	1.5	11.3	6.9	4.1	8	100.1	46
1348	6.1	47.7	543	30.0	42.4	1.6	10.6	5.8	4.2	8	100.1	46
1349	5.7	46.7	447	30.0	42.4	1.6	9.9	6.0	5.0	8	100.1	46
1350	5.3	46.2	364	30.0	42.4	1.5	9.6	5.6	4.5	8	100.1	45
1351	5.4	46.0	371	30.0	42.4	1.5	9.6	4.8	5.0	8	100.1	45
1352	5.4	46.0	388	30.0	42.4	1.3	9.6	5.6	5.2	8	100.1	45
1353	5.6	46.5	430	30.0	42.4	1.2	9.9	5.8	5.7	8	100.1	45
1354	6.2	47.4	589	30.0	42.4	1.1	11.2	7.6	5.2	8	100.1	45
1355	6.5	48.4	673	30.0	42.4	1.5	11.5	6.5	5.0	8	100.1	45
1356	6.1	47.5	548	30.0	42.4	1.8	10.5	5.6	4.8	8	100.1	48
1357	5.3	46.0	365	30.0	42.4	1.9	9.7	5.2	4.6	8	100.1	48
1358	5.2	45.5	338	30.0	42.4	1.7	9.6	5.6	4.4	8	100.1	48
1359	5.5	46.1	400	30.0	42.4	1.3	9.7	5.2	4.2	8	100.1	48
1360	5.7	46.7	448	30.0	42.4	1.2	10.1	5.9	3.7	8	100.1	48
1361	6.0	47.0	537	30.0	42.4	1.1	10.7	6.2	5.4	8	100.1	48
1362	6.6	48.4	703	30.0	42.4	1.0	11.7	7.4	8.4	8	100.1	45
1363	7.2	50.0	925	30.0	42.4	1.0	12.7	8.5	9.0	8	100.1	44
1364	7.2	51.2	919	30.0	42.4	1.6	12.7	7.1	7.7	8	100.1	44
1365	6.6	49.3	728	30.0	42.4	1.7	11.6	5.8	6.4	8	100.1	44
1366	6.2	48.1	579	30.0	42.4	1.6	10.8	6.1	7.1	8	100.1	44
1367	5.4	47.2	373	30.0	42.4	2.2	9.9	5.4	7.8	8	100.1	44
1368	4.9	46.0	255	30.0	42.4	2.6	9.5	6.0	8.1	8	100.1	41
1369	5.4	46.0	381	30.0	42.4	1.8	9.6	6.5	7.3	8	100.1	41
1370	5.3	45.9	362	30.0	42.4	1.5	9.5	5.5	7.3	8	100.1	41
1371	5.7	46.2	444	30.0	42.4	1.2	9.9	6.4	7.2	8	100.1	41
1372	6.0	47.1	537	30.0	42.4	1.0	10.8	6.9	7.1	8	100.1	41
1373	6.3	48.0	625	30.0	42.4	1.2	11.2	6.9	8.6	8	100.1	41
1374	6.4	47.6	660	30.0	42.4	0.9	11.5	7.4	6.3	8	100.1	42
1375	7.0	49.5	828	30.0	42.4	1.2	12.3	7.9	6.0	8	100.1	42
1376	7.0	49.7	836	30.0	42.4	1.4	12.3	6.7	6.0	8	100.1	43
1377	7.0	49.3	829	30.0	42.4	1.5	12.2	7.6	7.2	8	100.1	43
1378	6.9	49.7	797	30.0	42.4	1.5	12.1	6.1	7.4	8	100.1	43
1379	6.4	48.6	653	30.0	42.4	1.8	11.2	6.6	7.1	8	100.1	43
1380	5.7	47.7	454	30.0	42.4	1.9	10.1	5.5	6.1	8	100.1	43
1381	5.3	47.1	357	30.0	42.4	1.9	9.6	4.5	5.1	8	100.1	42
1382	5.4	46.8	367	30.0	42.4	1.5	9.5	6.5	5.0	8	100.1	40
1383	5.5	45.9	414	30.0	42.4	1.4	9.6	6.0	5.1	8	100.1	40
1384	5.8	47.6	476	30.0	42.4	1.0	10.4	7.1	5.1	8	100.1	40
1385	6.0	47.7	533	30.0	42.4	1.4	10.6	6.0	5.7	8	100.1	40
1386	6.2	47.6	584	30.0	42.4	1.2	10.9	6.9	7.1	8	100.1	40
1387	6.9	48.8	797	30.0	42.4	0.9	12.1	7.5	6.3	8	100.1	40
1388	7.3	51.2	955	30.0	42.4	1.3	13.0	7.1	5.6	8	100.1	40
1389	6.9	49.9	818	30.0	42.4	1.7	12.1	5.5	5.7	8	100.1	40
1390	6.4	48.9	641	30.0	42.4	1.6	11.1	6.2	6.1	8	100.1	40
1391	6.2	48.0	581	30.0	42.4	1.4	10.9	6.2	5.2	8	100.1	40
1392	6.5	48.3	683	30.0	42.4	1.0	11.6	7.8	4.9	8	100.1	40
1393	6.9	49.4	798	30.0	42.4	1.3	12.2	7.5	5.3	8	100.1	41
1394	6.6	49.2	713	30.0	42.4	1.7	11.5	7.1	5.5	8	100.1	43
1395	6.3	48.4	608	30.0	42.4	1.5	11.1	6.6	5.8	8	100.1	43
1396			566	30.0	47.2	1.4	10.8	6.6	5.7	8	100.1	43
1397			534	30.0	54.1	1.5	10.6	6.5	5.2	8	100.1	43
1398			472	30.0	57.1	1.5	10.2	5.1	4.7	8	100.1	43
1399			400	30.0	57.1	1.6	9.7	5.4	5.3	8	100.1	43
1400			368	30.0	57.1	1.5	9.5	5.7	5.3	8	100.1	44
1401			292	30.0	57.1	1.5	9.5	5.2	5.0	8	100.1	44
1402			331	30.0	57.1	1.7	9.5	4.9	5.2	8	100.1	44
1403			412	30.0	57.1	1.4	9.7	4.9	4.5	8	100.1	44
1404			546	30.0	57.1	0.9	10.9	6.6	4.8	8	100.1	44
1405			686	30.0	57.1	1.2	11.6	7.4	5.0	8	100.1	43
1406			745	30.0	57.1	1.3	11.8	7.1	4.6	8	100.1	43
1407			833	30.0	57.0	1.2	12.3	6.4	4.7	8	100.1	43
1408			919	30.0	57.0	1.2	12.6	6.5	5.3	8	100.1	43

Table E.01 Measurement data - Turbine ON

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1409			976	30.0	57.0	1.2	12.9	6.6	7.1	8	100.1	43
1410			974	30.0	57.0	1.2	12.9	6.9	7.3	8	100.1	43
1411			1038	30.0	57.0	1.2	13.2	7.9	5.9	8	100.1	41
1412			1088	30.0	57.0	1.2	13.4	8.0	6.6	9	100.1	39
1413			1258	30.0	57.0	0.9	14.0	8.0	6.6	9	100.1	39
1414			1534	30.0	57.1	0.5	14.9	8.7	7.6	9	100.1	39
1415			1283	30.0	57.0	2.4	14.1	7.5	8.1	9	100.1	39
1416			958	30.0	57.0	1.8	12.7	6.3	6.9	9	100.1	39
1417			743	30.0	57.1	1.7	11.6	6.0	5.2	9	100.1	39
1418			785	30.0	57.1	1.3	11.9	6.8	5.9	9	100.1	38
1419			1065	30.0	57.0	1.1	13.4	8.8	5.0	9	100.1	38
1420			1111	30.0	57.0	1.5	13.5	7.6	5.9	9	100.1	38
1421			919	30.0	57.0	1.7	12.5	6.7	5.6	9	100.1	38
1422			745	30.0	57.1	1.6	11.7	6.5	5.4	9	100.1	38
1423			706	30.0	57.1	1.4	11.5	7.9	5.7	9	100.1	39
1424			914	30.0	57.0	1.0	12.6	7.9	5.9	9	100.1	39
1425			1295	30.0	57.0	0.5	14.2	8.4	6.3	9	100.1	39
1426			1540	30.0	57.1	1.5	15.0	8.4	7.2	9	100.1	39
1427			1505	30.0	57.1	1.8	14.8	9.1	6.8	9	100.1	39
1428			1616	30.0	57.1	1.8	15.1	8.6	6.3	9	100.1	39
1429			1643	30.0	57.1	3.2	15.4	8.4	7.8	9	100.1	38
1430			1517	30.0	57.1	2.9	14.7	7.8	8.1	9	100.1	37
1431			1182	30.0	57.0	1.5	13.6	7.1	8.8	9	100.1	37
1432			1038	30.0	57.0	1.5	13.1	6.9	8.8	9	100.1	37
1433			999	30.0	57.0	1.4	12.9	6.5	7.8	9	100.1	37
1434			1149	30.0	57.0	1.1	13.7	8.5	7.3	9	100.1	37
1435			1093	30.0	57.0	1.6	13.4	7.0	6.4	9	100.1	38
1436			888	30.0	57.1	1.7	12.4	6.5	6.6	8	100.1	39
1437			795	30.0	57.1	1.4	12.1	6.7	6.3	8	100.1	39
1438			687	30.0	57.1	1.7	11.3	5.6	7.8	8	100.1	39
1439			737	30.0	57.1	1.1	11.7	7.9	7.5	8	100.1	39
1440			968	30.0	57.0	1.1	13.0	6.9	7.9	8	100.1	39
1441			968	30.0	57.1	1.5	12.8	6.0	7.0	8	100.1	39
1442			976	30.0	57.1	1.3	12.8	7.7	6.5	8	100.1	39
1443			1205	30.0	57.1	0.9	13.8	7.9	6.7	8	100.1	39
1444	6.0	47.3	535	57.0	57.1	1.1	10.7	6.6	7.1	8	100.1	39
1445	6.2	47.6	582	57.0	57.1	1.3	11.0	5.2	8.9	8	100.1	39
1446	6.2	47.6	586	57.0	57.1	1.4	11.0	6.1	6.1	8	100.1	39
1447	5.9	46.8	510	57.0	57.1	1.7	10.4	5.7	5.0	8	100.1	40
1448	5.7	46.4	456	57.0	57.1	1.3	10.0	5.7	6.1	8	100.1	40
1449	5.9	46.9	509	57.0	57.1	1.2	10.6	6.3	6.8	8	100.1	40
1450	5.9	46.5	499	57.0	57.1	1.5	10.3	5.6	7.2	8	100.1	40
1451	5.8	46.9	470	57.0	57.1	1.4	10.2	6.0	7.2	8	100.1	40
1452	5.9	46.7	502	57.0	57.1	1.2	10.5	6.2	8.6	8	100.1	40
1453	6.2	47.4	586	57.0	57.1	1.1	11.0	6.9	7.6	8	100.1	41
1454	6.6	48.2	703	57.0	57.1	1.1	11.7	7.8	6.4	8	100.1	41
1455	6.9	48.9	793	57.0	57.1	1.2	12.1	7.7	5.2	8	100.1	41
1456	6.9	49.6	798	57.0	57.1	1.6	12.1	7.2	7.2	8	100.1	41
1457	6.7	49.7	735	57.0	57.1	1.6	11.7	5.7	7.7	8	100.1	41
1458	6.4	48.6	663	57.0	57.1	1.5	11.3	6.5	8.0	8	100.1	41
1459	6.2	48.3	590	57.0	57.1	1.6	10.9	6.4	7.9	8	100.1	40
1460	6.1	47.2	552	57.0	57.1	1.3	10.7	5.7	6.8	8	100.1	40
1461	6.4	47.5	638	57.0	57.1	1.0	11.2	6.9	8.0	8	100.1	40
1462	6.9	50.0	802	57.0	57.1	1.2	12.3	7.3	7.8	8	100.1	40
1463	6.9	50.7	809	57.0	57.1	2.5	12.1	6.7	7.3	8	100.1	40
1464	6.5	48.5	686	57.0	57.1	1.5	11.4	6.4	8.6	8	100.1	41
1465	6.7	48.5	733	57.0	57.1	1.0	11.8	6.8	8.4	8	100.1	41
1466	7.0	49.7	841	57.0	57.1	1.0	12.4	7.1	8.0	8	100.1	41
1467	7.0	49.6	852	57.0	57.1	1.3	12.4	7.4	9.4	8	100.1	41
1468	6.7	49.0	748	57.0	57.1	1.6	11.8	6.1	8.0	8	100.1	41
1469	6.3	48.0	620	57.0	57.1	1.6	11.0	6.7	8.1	8	100.1	41
1470	6.4	47.9	649	57.0	57.1	1.2	11.2	5.9	7.9	8	100.1	40
1471	6.8	49.2	790	57.0	57.1	1.2	12.2	7.0	6.0	8	100.1	39
1472	6.7	48.7	738	57.0	57.1	1.6	11.7	6.6	6.5	8	100.1	39
1473	6.4	48.2	644	57.0	57.1	1.4	11.2	6.5	7.5	8	100.1	39
1474	6.3	47.5	610	57.0	57.1	1.5	11.1	6.3	7.9	8	100.1	39
1475	6.0	47.0	535	57.0	57.1	1.6	10.5	5.7	6.7	8	100.1	39
1476	5.8	46.8	489	57.0	57.1	1.4	10.4	5.8	5.6	8	100.1	40
1477			1557	262.0	262.0	1.9	14.6	7.2	6.2	24	99.3	51
1478	7.9	53.3	1178	262.0	262.0	1.1	13.9	7.4	6.7	24	99.3	51
1479	7.9	52.2	1177	262.0	262.0	0.9	14.0	8.4	6.0	24	99.3	51
1480	8.0	52.4	1220	262.0	262.0	1.1	14.1	7.6	5.8	24	99.3	51
1481	8.3	53.3	1305	262.0	262.0	0.9	14.5	9.0	7.0	24	99.3	51
1482	7.7	53.1	1112	262.0	262.0	1.8	13.7	6.7	5.8	24	99.3	51
1483	6.7	50.4	735	262.0	262.0	2.1	11.5	5.1	5.5	24	99.3	51
1484	6.2	47.7	599	262.0	262.0	0.9	11.3	5.7	5.3	24	99.3	51
1485	6.8	50.0	765	262.0	262.0	0.5	12.3	6.2	5.6	24	99.3	51
1486	7.3	51.4	943	262.0	262.0	2.5	13.5	7.6	5.1	24	99.3	51
1487	7.8	52.1	1138	262.0	262.0	4.8	14.0	8.1	6.4	24	99.3	51
1488	7.7	51.9	1120	262.0	262.0	2.0	13.3	7.0	5.3	24	99.3	51
1489	7.1	50.4	880	262.0	262.0	1.1	12.7	6.9	5.7	24	99.3	51
1490	6.9	49.8	809	262.0	262.0	1.2	12.3	5.7	5.2	24	99.3	51
1491	6.9	49.6	817	262.0	262.0	1.0	12.4	7.2	4.6	24	99.3	51
1492	7.0	50.4	844	262.0	262.0	1.2	12.6	6.6	4.8	24	99.3	51
1493	6.6	49.1	700	262.0	262.0	1.5	11.6	6.0	4.8	24	99.3	51
1494	6.0	47.6	531	262.0	262.0	1.5	10.6	6.3	5.1	24	99.3	51
1495	5.5	46.7	407	262.0	262.0	1.4	9.8	5.1	8.2	24	99.3	51
1496	5.5	46.0	392	262.0	262.0	1.0	9.8	5.2	7.8	24	99.3	51

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1497	5.9	47.1	498	262.0	262.0	0.7	10.8	6.4	7.1	24	99.3	51
1498	6.8	48.5	783	262.0	262.0	0.8	12.3	6.8	7.7	24	99.3	50
1499	8.0	51.6	1213	262.0	262.0	0.9	14.3	7.9	7.3	24	99.3	50
1500	8.6	53.5	1371	262.0	262.0	1.9	14.7	8.0	6.5	24	99.3	50
1501	8.7	53.9	1394	262.0	262.0	1.4	14.8	7.5	7.1	24	99.3	50
1502			1563	262.0	262.0	1.4	15.0	8.7	7.5	24	99.3	50
1503	9.6	54.7	1597	262.0	262.0	2.7	15.3	9.6	6.2	24	99.3	50
1504	9.3	53.7	1576	262.0	262.0	1.3	14.8	9.2	6.6	24	99.3	50
1505	10.2	55.1	1654	262.0	262.0	3.1	15.6	10.1	6.8	24	99.3	50
1506	8.8	54.6	1427	262.0	262.0	2.1	14.5	8.3	7.0	24	99.3	50
1507	7.8	52.8	1151	262.0	262.0	1.1	13.9	6.9	7.2	24	99.3	50
1508	7.5	51.7	1022	262.0	262.0	1.3	13.3	6.7	6.1	24	99.3	50
1509	7.5	51.6	1030	262.0	262.0	1.0	13.4	7.7	6.3	25	99.3	51
1510	7.7	51.7	1094	262.0	262.0	1.0	13.6	7.9	5.8	25	99.3	51
1511	8.1	52.5	1254	262.0	262.0	0.9	14.3	8.8	4.5	25	99.3	51
1512	9.9	54.4	1575	262.0	262.0	1.3	15.1	9.9	6.2	25	99.3	51
1513			1510	262.0	262.0	2.5	15.0	8.4	9.0	25	99.3	51
1514	7.5	52.7	1038	262.0	262.0	1.7	13.3	6.0	9.6	25	99.3	51
1515	6.7	50.3	732	262.0	262.0	1.6	11.8	6.2	9.5	25	99.3	50
1516	6.1	51.9	571	262.0	262.0	1.5	10.8	5.0	6.4	25	99.3	50
1517	6.1	49.7	548	262.0	262.0	0.9	11.0	5.0	5.8	25	99.3	50
1518			697	262.0	262.0	0.8	11.9	5.9	7.3	25	99.3	50
1519	7.1	51.4	865	262.0	262.0	0.9	12.7	6.6	8.0	25	99.3	50
1520	7.3	51.8	969	262.0	262.0	0.9	13.2	6.8	6.9	25	99.3	50
1521	7.3	50.8	959	262.0	262.0	1.1	13.0	6.6	5.6	25	99.3	50
1522	7.8	51.5	1134	262.0	262.0	0.7	13.8	7.7	4.0	25	99.3	50
1523	10.4	54.7	1644	262.0	262.0	1.7	15.4	10.3	5.0	25	99.3	50
1524	9.2	54.8	1500	262.0	262.0	3.8	14.8	9.0	6.2	25	99.3	50
1525	8.9	52.6	1457	262.0	262.0	1.3	14.5	9.7	5.6	25	99.3	50
1526	10.1	54.9	1633	262.0	262.0	6.3	15.6	10.0	6.6	25	99.3	50
1527	12.1	54.2	1614	262.0	262.0	7.3	15.3	12.0	6.4	25	99.3	50
1528	10.8	53.8	1611	262.0	262.0	6.6	15.1	10.7	7.6	25	99.3	50
1529	10.2	54.4	1598	262.0	262.0	5.0	14.8	10.1	7.2	25	99.3	50
1530	9.6	53.7	1621	262.0	262.0	4.0	14.7	9.5	8.4	25	99.3	50
1531			1618	262.0	262.0	3.6	14.7	8.4	7.1	25	99.3	50
1532	8.8	53.6	1417	262.0	262.0	1.3	14.3	8.9	7.6	25	99.3	50
1533			1585	262.0	262.0	0.9	15.0	8.2	9.3	25	99.3	50
1534			1545	262.0	262.0	1.0	15.1	8.2	10.3	25	99.3	50
1535	10.0	54.5	1654	262.0	262.0	2.3	15.6	10.0	8.3	25	99.3	50
1536	9.1	54.5	1487	262.0	262.0	3.2	14.8	7.7	7.8	25	99.3	50
1537	9.1	54.2	1485	262.0	262.0	0.5	14.6	8.9	8.1	25	99.3	50
1538	10.4	55.4	1673	262.0	262.0	5.4	15.8	10.3	6.1	25	99.3	50
1539	9.6	54.8	1617	262.0	262.0	7.7	15.5	9.5	5.8	25	99.3	50
1540	10.2	53.9	1597	262.0	262.0	6.4	15.1	10.1	5.2	25	99.3	50
1541			1564	262.0	262.0	3.2	14.3	7.7	4.7	25	99.3	50
1542	9.9	54.5	1642	262.0	264.4	4.2	15.0	9.8	4.0	25	99.3	50
1543	10.4	54.4	1614	262.0	271.4	3.8	14.8	10.3	4.8	25	99.3	50
1544			1616	262.0	276.6	2.1	14.6	8.8	5.0	25	99.3	50
1545	9.7	54.4	1620	262.0	276.6	1.6	14.8	9.6	4.5	25	99.3	51
1546	8.5	54.4	1355	262.0	276.6	1.3	14.6	8.3	4.2	25	99.3	51
1547	8.1	53.4	1251	262.0	276.6	1.4	14.2	7.5	4.0	25	99.3	51
1548	7.9	52.3	1184	262.0	276.6	1.1	14.0	7.1	4.0	25	99.3	51
1549	8.6	52.6	1372	262.0	276.6	0.5	14.5	10.1	4.2	25	99.3	51
1550	8.3	53.9	1308	262.0	276.6	1.5	14.5	6.4	4.3	25	99.3	51
1551	8.2	52.2	1280	262.0	276.6	1.2	14.1	8.2	4.8	25	99.3	50
1552			1630	262.0	276.6	0.3	15.1	8.3	4.8	25	99.3	50
1553	8.9	54.6	1450	262.0	276.6	1.7	14.9	8.1	4.8	25	99.3	50
1554	9.5	54.7	1615	262.0	276.6	1.6	15.3	9.4	6.7	25	99.3	50
1555			1625	262.0	276.6	2.9	15.3	8.6	6.7	25	99.3	50
1556			1625	262.0	276.6	2.7	15.3	9.2	5.9	25	99.3	50
1557	9.8	55.1	1640	262.0	276.6	4.2	15.5	9.7	5.5	25	99.3	50
1558	9.4	54.8	1632	262.0	276.6	5.4	15.5	9.4	6.1	25	99.3	50
1559	10.9	54.4	1626	262.0	276.6	6.3	15.5	10.9	7.1	25	99.3	50
1560			1586	262.0	276.6	4.8	14.9	8.9	6.8	25	99.3	50
1561	9.4	54.4	1626	262.0	276.6	4.6	15.1	9.3	6.3	25	99.3	50
1562	10.4	54.6	1636	262.0	276.6	5.2	15.2	10.3	5.0	25	99.3	50
1563	11.2	55.1	1631	262.0	276.6	6.7	15.3	11.1	5.7	25	99.3	50
1564	10.8	54.3	1623	262.0	276.6	6.2	15.2	10.8	4.4	25	99.3	50
1565	11.6	54.6	1632	262.0	276.6	7.5	15.4	11.5	4.6	25	99.3	50
1566	10.8	54.5	1612	262.0	276.6	6.8	15.1	10.7	5.4	25	99.3	50
1567			1611	262.0	276.6	6.0	14.9	8.0	5.3	25	99.3	50
1568	10.4	54.1	1639	262.0	276.6	6.4	15.2	10.3	5.6	25	99.3	50
1569	12.9	54.8	1626	262.0	276.6	6.6	15.1	12.8	6.0	25	99.3	50
1570	10.5	55.4	1625	262.0	276.6	6.5	15.1	10.4	5.4	25	99.3	50
1571			1600	262.0	276.6	4.9	14.7	8.6	7.3	25	99.3	50
1572	10.5	54.6	1640	262.0	276.6	5.7	15.1	10.4	6.7	25	99.3	50
1573			1594	262.0	276.6	4.3	14.6	8.0	5.7	25	99.3	50
1574			1652	262.0	276.6	5.6	15.3	8.3	6.0	25	99.3	50
1575	10.5	55.2	1630	262.0	276.6	6.3	15.2	10.4	4.7	25	99.3	50
1576	10.1	55.1	1626	262.0	276.6	6.6	15.2	10.0	4.1	25	99.3	50
1577			1595	262.0	276.6	4.8	14.7	8.6	4.2	25	99.3	50
1578	10.4	54.5	1652	262.0	276.6	7.4	15.5	10.3	4.0	25	99.3	50
1579	11.8	54.6	1600	262.0	276.6	8.0	15.0	11.7	4.9	25	99.3	50
1580	11.6	54.5	1626	262.0	276.6	7.2	15.1	11.6	4.6	25	99.3	50
1581	11.2	54.9	1617	262.0	276.6	7.5	15.0	11.1	4.6	25	99.3	50
1582	10.7	54.6	1608	262.0	276.6	5.7	14.7	10.6	6.3	25	99.3	50
1583	10.5	54.5	1649	262.0	276.6	6.8	15.2	10.5	5.9	25	99.3	50
1584	10.4	55.2	1626	262.0	276.6	7.6	15.2	10.3	6.1	25	99.3	50

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1585			1605	262.0	276.6	5.9	14.8	8.6	5.7	25	99.3	50
1586	10.3	54.9	1645	262.0	276.6	7.7	15.3	10.2	6.5	25	99.3	50
1587	10.4	54.8	1627	262.0	276.6	8.8	15.2	10.3	7.9	25	99.3	50
1588	11.5	54.8	1622	262.0	276.6	9.3	15.3	11.4	8.5	25	99.3	50
1589			1600	262.0	276.6	7.2	14.7	8.9	9.8	25	99.3	50
1590			1630	262.0	276.6	6.5	14.9	8.9	9.5	25	99.3	50
1591	10.9	55.3	1636	262.0	276.6	7.3	15.1	10.8	8.3	25	99.3	50
1592	11.1	54.8	1638	262.0	276.6	7.9	15.2	11.0	6.9	25	99.3	50
1593	11.3	54.3	1632	262.0	276.6	9.2	15.3	11.2	9.0	25	99.3	50
1594	11.6	54.6	1621	262.0	276.6	9.0	15.2	11.5	8.8	25	99.3	50
1595	11.8	54.8	1622	262.0	276.6	9.1	15.1	11.7	8.1	25	99.3	50
1596	11.3	54.5	1617	262.0	276.6	7.7	14.9	11.2	6.7	25	99.3	50
1597	9.6	53.9	1627	262.0	276.6	7.1	14.9	9.6	6.3	25	99.3	50
1598	9.7	54.2	1635	262.0	276.6	6.9	15.0	9.7	4.4	25	99.3	50
1599	12.0	54.9	1640	262.0	276.6	7.7	15.2	11.9	3.8	25	99.3	51
1600	11.6	54.9	1634	262.0	276.6	9.2	15.3	11.5	6.0	25	99.3	51
1601	12.3	55.3	1613	262.0	276.6	8.5	15.0	12.2	5.2	25	99.3	51
1602	10.1	55.1	1628	262.0	276.6	7.9	15.1	10.0	5.7	25	99.3	51
1603	10.4	54.1	1605	262.0	276.6	7.1	14.8	10.3	5.9	25	99.3	51
1604	10.4	55.0	1629	262.0	276.6	5.9	14.9	10.4	5.9	25	99.3	51
1605			1627	262.0	276.6	5.6	14.9	9.1	5.2	25	99.3	51
1606			1634	262.0	276.6	5.4	15.0	7.5	6.3	25	99.3	51
1607	9.5	54.5	1642	262.0	276.6	5.6	15.1	9.5	6.2	25	99.3	51
1608	9.3	55.3	1645	262.0	276.6	7.3	15.4	9.3	8.0	25	99.3	51
1609	11.0	55.1	1637	262.0	276.6	8.9	15.5	10.9	6.8	25	99.3	51
1610	10.0	54.9	1592	262.0	276.6	7.6	14.9	10.0	6.2	25	99.3	51
1611			1633	262.0	276.6	7.3	15.1	9.0	7.6	25	99.3	51
1612	9.6	55.0	1617	262.0	276.6	7.8	15.0	9.5	6.0	25	99.3	51
1613	10.8	55.1	1626	262.0	276.6	6.8	15.0	10.7	5.5	25	99.3	51
1614			1632	262.0	276.6	6.8	15.0	8.5	6.4	25	99.3	51
1615	10.7	55.0	1633	262.0	276.6	8.7	15.3	10.6	7.9	25	99.3	51
1616	11.9	55.3	1628	262.0	276.6	9.3	15.3	11.8	7.9	25	99.3	51
1617	13.4	54.6	1628	262.0	276.6	10.4	15.3	13.3	8.1	25	99.3	51
1618	14.6	55.4	1622	262.0	276.6	11.3	15.2	14.5	6.2	25	99.3	51
1619	12.6	56.5	1614	262.0	276.6	10.1	14.9	12.5	5.5	25	99.3	51
1620	11.5	55.7	1623	262.0	276.6	7.8	14.8	11.4	6.5	25	99.3	51
1621	9.5	54.5	1614	262.0	276.6	6.5	14.7	9.4	7.8	25	99.3	51
1622	9.8	53.7	1608	262.0	276.6	4.1	14.4	9.7	7.5	25	99.3	51
1623	8.6	53.0	1374	262.0	276.6	1.1	14.0	7.9	6.2	25	99.3	51
1624			1612	262.0	276.6	1.7	15.2	9.1	7.6	25	99.3	51
1625			1553	262.0	276.6	5.9	15.2	8.9	9.3	25	99.3	51
1626			1534	262.0	276.6	2.9	14.4	9.2	9.0	25	99.3	51
1627			1630	262.0	276.6	1.9	14.8	9.0	7.8	25	99.3	51
1628	12.4	54.5	1665	262.0	276.6	8.0	15.7	12.3	7.8	25	99.3	51
1629	12.3	55.5	1599	262.0	276.6	8.6	15.2	12.2	8.6	25	99.3	51
1630	12.2	54.8	1625	262.0	276.6	9.2	15.3	12.1	8.4	25	99.3	51
1631	12.6	55.0	1626	262.0	276.6	10.6	15.3	12.5	9.7	25	99.3	51
1632	11.4	54.7	1603	262.0	276.6	9.5	14.9	11.3	9.3	25	99.3	51
1633	10.6	53.7	1632	262.0	276.6	7.9	15.0	10.6	7.9	25	99.3	51
1634	9.6	55.1	1621	262.0	276.6	7.8	14.9	9.6	6.5	25	99.3	51
1635	10.7	54.9	1629	262.0	276.6	7.6	15.0	10.7	6.9	25	99.3	51
1636	11.1	54.6	1629	262.0	276.6	8.0	15.1	11.0	7.1	25	99.3	51
1637	11.4	55.0	1636	262.0	276.6	8.5	15.2	11.3	6.7	25	99.3	51
1638	9.3	55.1	1595	262.0	276.6	6.8	14.7	9.2	5.1	25	99.3	51
1639	10.6	54.1	1631	262.0	276.6	6.7	15.0	10.6	5.3	25	99.3	51
1640	10.0	53.6	1610	262.0	276.6	5.8	14.7	9.9	5.0	25	99.3	51
1641			1607	262.0	276.6	3.6	14.5	8.6	7.8	25	99.3	51
1642			1614	262.0	276.6	2.1	14.5	8.6	8.3	24	99.3	51
1643	8.0	52.8	1218	262.0	276.6	1.2	14.1	8.0	6.2	24	99.3	51
1644	7.8	52.3	1139	262.0	276.6	1.2	13.8	7.4	7.7	24	99.3	51
1645	7.7	51.4	1088	262.0	276.6	1.1	13.6	6.6	7.9	24	99.3	51
1646	8.5	52.0	1338	262.0	276.6	0.5	14.2	8.5	6.6	24	99.3	51
1647	8.7	55.1	1411	262.0	276.6	0.8	14.7	6.9	7.0	24	99.3	52
1648	8.5	52.7	1354	262.0	276.6	1.9	14.4	8.0	4.5	24	99.3	52
1649	10.2	54.4	1677	262.0	276.6	3.1	15.7	10.1	5.0	24	99.3	52
1650	9.7	54.5	1600	262.0	276.6	3.9	15.2	9.6	4.4	24	99.3	52
1651	10.9	54.6	1637	262.0	276.6	4.0	15.4	10.8	4.7	24	99.3	52
1652	9.4	54.1	1617	262.0	276.6	5.3	15.3	9.3	5.5	24	99.3	52
1653	9.3	53.6	1582	262.0	276.6	2.9	14.7	9.2	4.9	24	99.3	51
1654	9.7	53.4	1636	262.0	276.6	2.6	15.0	9.6	4.7	24	99.3	51
1655	9.8	54.8	1585	262.0	276.6	3.0	14.8	9.7	4.5	24	99.3	51
1656	7.9	53.0	1183	262.0	276.6	1.2	13.9	7.3	4.3	24	99.3	51
1657	7.7	51.6	1089	262.0	276.6	1.1	13.5	6.2	4.4	24	99.3	51
1658	7.6	51.5	1069	262.0	276.6	1.0	13.6	7.8	4.6	24	99.3	51
1659	7.3	51.2	965	262.0	276.6	1.1	13.0	6.1	6.0	24	99.3	52
1660	7.2	50.2	895	262.0	276.5	1.1	12.8	6.9	6.0	24	99.3	52
1661	6.8	50.7	776	262.0	271.3	1.5	12.1	6.9	6.3	24	99.3	52
1662	6.4	49.7	654	262.0	265.5	1.2	11.4	6.9	6.7	24	99.3	52
1663	6.6	48.8	722	262.0	264.9	0.8	12.0	7.0	6.9	24	99.3	52
1664	7.1	49.8	881	262.0	264.9	0.9	12.8	7.0	8.0	24	99.3	52
1665	7.4	50.8	1000	262.0	264.9	0.9	13.2	7.4	8.5	25	99.3	52
1666	9.0	52.4	1474	262.0	264.9	1.2	14.6	10.5	7.2	25	99.3	51
1667			1640	262.0	264.9	3.8	15.3	9.1	6.9	25	99.3	51
1668			1619	262.0	264.9	3.1	15.1	8.0	8.3	25	99.3	51
1669	10.5	54.2	1638	262.0	264.9	3.3	15.3	10.4	8.0	25	99.3	51
1670			1511	262.0	264.9	2.4	14.5	8.3	6.6	25	99.3	51
1671	8.1	52.7	1252	262.0	264.9	0.8	14.2	8.8	6.7	25	99.3	52
1672	10.7	53.7	1528	262.0	264.9	0.2	14.9	10.6	7.8	25	99.3	52

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1673	7.9	53.8	1194	262.0	264.9	2.0	14.0	6.0	5.5	25	99.3	52
1674	7.2	50.5	907	262.0	264.9	1.4	12.6	6.7	5.0	25	99.3	52
1675	7.3	51.1	961	262.0	264.9	0.8	13.2	6.3	5.3	25	99.3	52
1676	8.6	52.1	1361	262.0	264.9	0.6	14.3	9.0	5.9	25	99.3	52
1677	10.5	54.5	1670	262.0	264.9	4.7	15.7	10.4	6.7	25	99.3	52
1678	9.3	54.3	1610	262.0	264.9	5.5	15.3	9.3	5.3	25	99.3	52
1679	12.5	54.4	1643	262.0	264.9	9.1	15.8	12.4	5.5	25	99.3	52
1680	13.0	55.3	1603	262.0	264.9	9.8	15.3	12.9	7.5	25	99.3	52
1681	12.4	54.1	1613	262.0	264.9	8.6	15.1	12.3	6.9	25	99.3	52
1682	12.0	54.1	1614	262.0	264.9	7.4	14.8	11.9	8.1	25	99.3	52
1683	10.3	54.0	1628	262.0	264.9	6.3	14.9	10.3	6.4	25	99.3	51
1684	10.6	54.0	1647	262.0	264.9	7.2	15.2	10.5	5.7	24	99.3	51
1685	10.7	54.1	1626	262.0	264.9	7.4	15.1	10.6	5.3	24	99.3	51
1686	11.0	54.3	1614	262.0	265.1	6.4	15.0	10.9	7.1	24	99.3	51
1687	10.7	54.3	1619	262.0	270.5	5.3	14.8	10.6	7.3	24	99.3	51
1688			1634	262.0	273.7	5.3	15.0	9.0	5.5	24	99.3	51
1689	11.4	55.1	1640	262.0	273.7	5.9	15.2	11.3	5.9	24	99.3	52
1690	11.0	54.4	1635	262.0	273.7	6.2	15.2	10.9	6.4	24	99.3	52
1691	9.9	54.6	1603	262.0	273.7	5.4	14.9	9.9	6.3	24	99.3	52
1692	10.2	53.7	1637	262.0	273.7	5.3	15.1	10.2	4.9	24	99.3	52
1693	9.9	54.4	1643	262.0	273.7	6.7	15.3	9.8	4.2	24	99.3	52
1694	12.3	54.9	1630	262.0	273.7	8.9	15.4	12.2	4.1	24	99.3	52
1695	11.8	54.4	1621	262.0	273.7	9.1	15.3	11.7	5.9	24	99.3	52
1696	13.0	54.6	1628	262.0	273.7	10.3	15.3	12.9	8.5	24	99.3	52
1697	11.8	54.7	1611	262.0	273.7	9.6	15.0	11.7	8.2	24	99.3	52
1698	11.7	54.2	1625	262.0	273.7	8.7	15.0	11.7	7.1	24	99.3	52
1699	10.9	54.6	1621	262.0	273.7	7.7	14.9	10.8	5.6	24	99.3	52
1700	10.8	54.5	1624	262.0	273.7	6.9	14.9	10.7	5.3	24	99.3	52
1701	10.7	54.4	1626	262.0	273.7	6.0	14.9	10.7	5.9	24	99.3	52
1702	10.3	54.1	1610	262.0	273.7	4.5	14.7	10.2	6.2	24	99.3	52
1703	10.5	53.8	1628	262.0	273.7	2.9	14.7	10.4	6.3	24	99.3	52
1704	9.6	54.3	1623	262.0	273.7	3.0	14.7	9.5	6.1	24	99.3	52
1705	9.6	54.2	1576	262.0	273.7	1.5	14.6	9.5	6.0	24	99.3	52
1706	8.0	53.7	1222	262.0	273.7	1.4	14.1	10.0	7.0	24	99.3	52
1707	11.2	53.4	1527	262.0	273.7	1.0	14.7	11.1	5.0	24	99.3	52
1708	10.6	55.5	1656	262.0	273.7	4.7	15.6	10.6	8.7	24	99.3	52
1709			1599	262.0	273.7	4.2	15.0	7.8	9.2	24	99.3	52
1710			1570	262.0	273.7	1.9	14.6	7.0	8.6	24	99.3	52
1711			1629	262.0	273.7	1.0	14.8	8.3	7.3	24	99.3	52
1712	10.0	54.5	1665	262.0	273.7	3.2	15.3	9.9	8.0	24	99.3	52
1713	10.3	55.2	1598	262.0	273.7	4.0	15.1	10.2	7.2	24	99.3	52
1714			1536	262.0	273.7	0.7	14.5	8.6	6.6	24	99.3	52
1715	8.8	54.7	1417	262.0	273.7	0.4	14.8	8.2	8.8	24	99.3	52
1716	8.3	53.5	1296	262.0	273.7	1.9	14.4	5.7	8.1	24	99.3	52
1717	7.8	52.2	1124	262.0	273.7	1.3	13.7	6.4	6.2	24	99.3	52
1718	7.7	51.9	1119	262.0	273.7	1.0	13.7	6.5	6.7	24	99.3	52
1719	7.8	52.5	1160	262.0	273.7	1.0	14.0	6.2	7.0	24	99.3	52
1720	7.8	51.6	1137	262.0	273.7	1.2	13.5	6.7	7.7	24	99.3	52
1721			1659	262.0	273.7	2.4	15.2	8.4	7.5	24	99.3	52
1722	9.7	54.3	1636	262.0	273.7	5.8	15.4	9.6	6.1	24	99.3	52
1723	9.3	55.3	1630	262.0	273.7	5.6	15.3	9.2	5.6	24	99.3	52
1724	9.3	54.9	1609	262.0	273.7	5.5	15.2	9.3	5.4	24	99.3	52
1725			1600	262.0	273.7	4.0	14.8	8.5	6.9	24	99.3	52
1726			1640	262.0	273.7	4.2	15.1	8.9	6.1	24	99.3	52
1727			1595	262.0	273.7	4.7	14.9	8.8	6.2	24	99.3	52
1728			1555	262.0	273.7	2.0	14.3	8.6	5.6	24	99.3	52
1729	12.1	54.5	1660	262.0	273.7	7.1	15.6	12.0	5.8	24	99.3	52
1730	11.7	54.6	1608	262.0	273.7	7.6	15.2	11.6	6.8	24	99.3	52
1731			1609	262.0	273.7	6.0	15.0	8.5	8.1	24	99.3	52
1732	9.6	54.3	1604	262.0	273.7	4.4	14.7	9.5	8.5	24	99.3	52
1733	8.8	53.6	1438	262.0	273.7	1.8	13.9	7.8	7.7	24	99.3	52
1734	7.5	52.8	1041	262.0	273.7	1.2	13.3	6.7	6.6	24	99.3	52
1735	10.5	53.4	1587	262.0	273.7	1.7	15.0	10.4	7.7	24	99.3	52
1736	9.6	55.0	1624	262.0	273.7	6.5	15.5	9.5	7.2	24	99.3	52
1737			1567	262.0	273.7	3.5	14.5	7.0	6.6	24	99.3	52
1738	9.8	54.2	1565	262.0	273.7	0.8	14.4	9.8	6.2	24	99.3	52
1739	8.4	54.0	1332	262.0	273.7	1.0	14.6	8.8	6.2	24	99.3	52
1740	8.3	52.8	1292	262.0	273.7	1.7	14.3	7.3	5.5	24	99.3	52
1741			1562	262.0	273.7	0.4	15.0	9.0	4.9	24	99.3	52
1742			1586	262.0	273.7	0.9	15.1	8.1	4.6	24	99.3	52
1743	9.3	53.7	1517	262.0	273.7	1.2	15.1	9.2	3.6	24	99.3	52
1744	8.3	53.7	1282	262.0	273.7	1.7	14.3	7.7	3.3	24	99.3	52
1745	7.5	51.5	1034	262.0	273.7	1.3	13.3	7.0	4.4	24	99.3	52
1746	7.5	50.9	1027	262.0	273.7	1.0	13.4	7.7	4.9	24	99.3	52
1747	7.6	51.7	1049	262.0	273.7	1.0	13.5	8.8	4.1	24	99.3	52
1748	7.3	51.2	950	262.0	273.7	1.3	12.9	6.9	5.2	24	99.3	52
1749	7.6	51.0	1055	262.0	273.7	0.8	13.5	7.3	6.6	24	99.3	52
1750	8.1	53.4	1250	262.0	273.7	0.9	14.5	8.9	7.3	24	99.3	52
1751	7.7	52.0	1088	262.0	273.7	1.8	13.3	6.9	8.6	24	99.3	52
1752	11.6	53.7	1624	262.0	273.7	6.2	15.2	11.5	7.4	24	99.3	52
1753	11.5	55.5	1576	262.0	273.7	9.1	14.9	11.4	6.0	24	99.3	52
1754	11.0	55.2	1625	262.0	273.7	8.2	15.1	10.9	6.1	24	99.3	52
1755	14.3	54.9	1630	262.0	273.7	9.9	15.2	14.2	5.4	24	99.3	52
1756	10.6	54.4	1627	262.0	273.7	10.1	15.2	10.5	8.2	24	99.3	52
1757	12.7	55.0	1614	262.0	273.7	9.6	15.0	12.6	9.5	24	99.3	52
1758	11.8	55.2	1624	262.0	273.7	8.7	15.0	11.7	7.6	24	99.3	52
1759	9.7	54.5	1629	262.0	273.7	8.0	15.0	9.7	7.4	24	99.3	52
1760	12.4	54.4	1634	262.0	273.7	9.4	15.2	12.3	8.7	24	99.3	52

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1761	13.6	54.6	1627	262.0	273.7	9.4	15.2	13.5	9.1	24	99.3	52
1762	12.4	54.7	1622	262.0	273.7	9.3	15.1	12.3	7.9	24	99.3	52
1763	14.0	55.0	1635	262.0	273.7	9.7	15.2	13.9	7.2	24	99.3	52
1764	12.7	54.5	1616	262.0	273.7	9.8	15.0	12.6	6.3	24	99.3	52
1765	10.9	54.1	1621	262.0	273.7	7.7	14.9	10.8	6.9	24	99.3	52
1766	11.2	55.0	1630	262.0	273.7	7.9	15.0	11.1	6.5	24	99.3	52
1767	10.0	54.5	1598	262.0	273.7	5.6	14.6	9.9	5.9	24	99.3	52
1768	10.1	53.4	1619	262.0	273.7	3.7	14.5	10.0	6.4	24	99.3	52
1769			1633	262.0	273.7	2.6	14.6	9.2	7.4	24	99.3	52
1770	10.3	54.5	1650	262.0	273.7	3.0	15.0	10.2	5.5	24	99.3	52
1771	9.1	53.8	1489	262.0	273.7	1.4	14.6	8.5	7.0	24	99.3	52
1772	8.8	54.1	1433	262.0	273.7	0.8	14.9	7.4	7.1	24	99.3	52
1773	9.9	53.6	1617	262.0	273.7	2.5	15.3	9.8	7.6	24	99.3	52
1774	10.7	54.8	1638	262.0	273.7	7.6	15.8	10.7	8.6	24	99.3	52
1775			1619	262.0	273.7	8.5	15.6	9.0	8.2	24	99.3	52
1776	12.3	55.0	1611	262.0	273.7	9.8	15.4	12.2	8.0	24	99.3	52
1777	11.1	55.1	1611	262.0	273.7	8.8	15.1	11.0	5.1	24	99.3	52
1778	11.3	54.4	1612	262.0	273.7	7.9	14.9	11.2	5.9	24	99.3	52
1779	11.1	54.4	1623	262.0	273.7	7.1	14.9	11.0	5.5	24	99.3	52
1780	11.1	54.0	1622	262.0	273.7	6.1	14.8	11.0	5.5	24	99.3	52
1781	10.8	54.3	1644	262.0	273.7	6.8	15.2	10.7	5.3	24	99.3	52
1782	10.0	54.4	1605	262.0	273.7	5.5	14.8	9.9	5.7	24	99.3	52
1783	9.5	53.8	1587	262.0	273.7	2.5	14.3	9.5	7.0	24	99.3	52
1784	8.4	53.3	1309	262.0	273.7	0.8	14.3	9.0	6.4	24	99.3	52
1785	8.3	53.4	1283	262.0	273.7	1.4	14.4	7.6	6.2	24	99.3	52
1786	8.4	53.2	1328	262.0	273.7	0.9	14.5	8.3	6.0	24	99.3	52
1787	8.8	54.2	1416	262.0	273.7	1.1	15.0	10.2	4.8	24	99.3	52
1788			1601	262.0	273.7	2.6	15.3	9.1	4.9	24	99.3	52
1789	9.3	54.2	1590	262.0	273.7	1.1	14.9	9.2	4.6	24	99.3	52
1790			1639	262.0	273.7	1.7	15.4	8.4	4.6	24	99.3	52
1791	9.5	56.3	1620	262.0	273.7	2.4	15.3	9.4	4.3	24	99.3	53
1792	8.3	55.8	1305	262.0	273.7	1.4	14.3	8.3	4.4	24	99.3	53
1793	8.7	53.6	1390	262.0	273.7	0.5	14.3	8.1	3.4	24	99.3	53
1794	10.8	56.2	1658	262.0	273.7	3.6	15.6	10.7	2.7	24	99.3	53
1795	9.6	55.1	1555	262.0	273.7	3.5	14.7	9.5	4.4	24	99.3	53
1796			1636	262.0	273.7	2.7	15.1	9.1	4.6	24	99.3	53
1797	10.4	55.7	1626	262.0	273.7	3.4	15.1	10.3	4.9	24	99.3	53
1798	10.3	54.4	1627	262.0	273.7	3.2	15.1	10.3	5.5	24	99.3	53
1799			1611	262.0	273.7	2.5	14.8	8.7	4.7	24	99.3	53
1800			1582	262.0	273.7	0.9	14.7	8.4	6.1	24	99.3	53
1801	8.4	54.0	1318	262.0	273.7	1.5	14.5	8.0	5.0	24	99.3	53
1802	8.0	52.7	1203	262.0	273.7	1.4	14.0	8.4	4.1	24	99.3	53
1803	7.6	52.0	1072	262.0	273.7	1.3	13.5	6.8	6.0	24	99.3	53
1804	7.9	51.7	1191	262.0	273.7	0.6	13.9	7.6	8.5	24	99.3	53
1805	10.5	54.7	1551	262.0	273.7	0.0	14.9	10.4	6.1	24	99.3	53
1806	9.5	54.8	1566	262.0	273.7	1.4	15.1	9.4	5.2	24	99.3	53
1807	8.9	54.5	1455	262.0	273.7	1.3	15.0	8.4	5.0	24	99.3	53
1808	8.4	53.7	1313	262.0	273.7	1.2	14.5	7.7	4.7	24	99.3	53
1809	7.9	52.4	1186	262.0	273.7	1.1	13.9	8.1	5.5	24	99.3	53
1810	10.7	53.7	1630	262.0	273.7	1.9	15.3	10.6	5.2	24	99.3	53
1811	10.5	55.0	1586	262.0	273.7	6.0	15.2	10.4	6.2	24	99.3	53
1812	8.2	53.2	1266	262.0	273.7	1.9	13.5	7.9	5.4	24	99.3	53
1813	7.2	50.9	912	262.0	273.7	1.1	12.8	7.2	4.7	24	99.3	53
1814	7.5	50.6	1014	262.0	273.7	0.9	13.4	7.9	5.6	24	99.3	53
1815	7.5	51.2	1040	262.0	273.7	1.2	13.4	6.0	5.9	24	99.3	53
1816	7.6	51.0	1057	262.0	273.7	1.0	13.5	6.5	5.5	24	99.3	52
1817	8.3	52.1	1298	262.0	273.7	0.5	14.3	9.5	5.2	24	99.3	52
1818	10.0	54.7	1563	262.0	273.7	0.7	15.0	9.9	6.4	24	99.3	52
1819			1593	262.0	273.7	1.9	15.3	8.7	6.3	24	99.3	52
1820			1632	262.0	273.7	2.5	15.5	8.2	5.8	24	99.3	52
1821			1571	262.0	273.7	1.5	15.0	8.6	7.4	24	99.3	52
1822			1631	262.0	268.9	0.8	15.3	7.2	7.6	24	99.3	52
1823	9.6	54.8	1628	262.0	264.9	1.1	15.6	9.5	6.4	24	99.3	52
1824	9.9	54.3	1624	262.0	264.9	1.4	15.4	9.8	5.4	24	99.3	52
1825	9.5	54.2	1639	262.0	264.9	2.5	15.5	9.4	8.2	24	99.3	52
1826			1631	262.0	264.9	4.6	15.6	8.7	6.3	24	99.3	52
1827			1589	262.0	264.9	3.4	15.0	8.6	7.0	24	99.3	52
1828	10.1	53.6	1600	262.0	264.9	1.2	14.8	10.0	6.8	24	99.3	52
1829			1642	262.0	264.9	2.7	15.2	8.4	6.1	24	99.3	52
1830	9.4	53.8	1616	262.0	264.9	1.9	14.9	9.3	5.7	24	99.3	52
1831	8.4	53.8	1321	262.0	264.9	1.3	14.3	7.5	4.1	24	99.3	52
1832	7.6	51.4	1067	262.0	264.9	1.2	13.4	6.4	4.8	24	99.3	52
1833	7.6	51.1	1065	262.0	264.9	1.1	13.5	7.3	5.2	24	99.3	53
1834	8.2	52.0	1276	262.0	264.9	0.8	14.2	7.9	4.9	24	99.3	53
1835	11.9	54.3	1667	262.0	264.9	4.9	15.7	11.8	4.8	24	99.3	53
1836	10.9	54.0	1618	262.0	264.9	7.8	15.6	10.9	4.9	24	99.3	53
1837	10.5	53.7	1615	262.0	273.7	6.5	14.9	10.4	6.0	24	99.2	54
1838	9.8	53.8	1620	262.0	273.7	5.9	14.9	9.7	5.3	24	99.2	54
1839	10.0	54.1	1615	262.0	273.7	4.5	14.7	9.9	4.8	24	99.2	55
1840	10.6	53.7	1637	262.0	273.7	4.0	14.9	10.5	6.0	24	99.2	55
1841	10.8	54.4	1639	262.0	273.7	4.4	15.1	10.7	5.0	24	99.2	55
1842	9.5	54.2	1660	262.0	273.7	5.9	15.4	9.4	5.7	24	99.2	55
1843	12.3	54.8	1634	262.0	273.7	9.4	15.6	12.2	5.5	24	99.2	55
1844	12.0	54.5	1606	262.0	273.7	8.3	15.2	11.9	6.6	24	99.2	55
1845	10.8	54.1	1617	262.0	273.7	8.2	15.1	10.7	7.6	24	99.2	54
1846	11.6	53.9	1622	262.0	273.7	7.4	15.0	11.5	7.9	24	99.2	54
1847			1592	262.0	273.7	5.9	14.6	8.8	7.3	24	99.2	54
1848	10.2	53.7	1641	262.0	273.7	5.9	15.0	10.1	6.0	24	99.2	54

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1849	9.9	54.2	1586	262.0	273.7	4.7	14.5	9.8	5.6	24	99.2	54
1850			1635	262.0	273.7	3.6	14.8	8.1	5.8	24	99.2	54
1851	9.4	54.8	1549	262.0	273.7	2.3	14.4	9.3	5.2	24	99.2	55
1852	8.5	53.5	1357	262.0	273.7	0.7	14.7	8.9	5.1	24	99.2	55
1853	8.7	54.7	1399	262.0	273.7	1.3	14.8	9.2	5.2	24	99.2	55
1854	8.5	54.0	1353	262.0	273.7	1.3	14.6	7.4	6.0	24	99.2	55
1855	8.1	53.3	1250	262.0	273.7	1.3	14.2	6.8	5.3	24	99.2	55
1856	8.2	52.3	1274	262.0	273.7	0.9	14.3	8.2	5.0	24	99.2	55
1857	8.8	53.6	1415	262.0	273.7	0.8	14.9	8.2	5.6	24	99.2	55
1858	9.0	54.3	1479	262.0	273.7	1.1	15.0	7.9	5.2	24	99.2	55
1859	8.1	54.0	1238	262.0	273.7	2.0	14.1	7.7	5.6	24	99.2	55
1860	7.5	51.6	1009	262.0	273.6	1.3	13.3	6.2	5.4	24	99.2	55
1861	7.1	50.7	893	262.0	273.6	1.2	12.7	6.5	4.4	24	99.2	55
1862	6.9	49.8	793	262.0	273.7	1.4	12.2	5.8	4.8	24	99.2	55
1863	6.6	49.4	705	262.0	273.7	1.1	11.8	4.9	5.6	24	99.2	55
1864	6.3	49.2	629	262.0	273.7	1.4	11.3	5.2	4.5	24	99.2	55
1865	6.4	48.0	639	262.0	273.7	1.1	11.2	6.8	4.8	24	99.2	55
1866	7.3	49.7	936	262.0	273.6	0.8	13.2	7.7	4.8	24	99.2	55
1867	7.9	52.0	1168	262.0	273.7	1.2	13.9	7.4	5.5	24	99.2	55
1868	8.5	52.8	1335	262.0	273.7	1.4	14.6	9.0	5.3	24	99.2	55
1869	8.3	53.8	1283	262.0	273.7	1.7	14.4	7.7	4.6	24	99.2	55
1870	7.4	52.3	1000	262.0	273.6	1.5	13.1	5.8	4.8	24	99.2	55
1871	7.1	49.9	867	262.0	273.6	1.1	12.6	7.0	5.4	24	99.2	55
1872	7.2	50.0	931	262.0	273.6	1.0	13.0	7.9	6.8	24	99.2	55
1873	7.8	51.1	1127	262.0	273.7	0.8	13.8	7.8	6.0	24	99.2	55
1874	9.9	53.9	1624	262.0	273.7	1.0	15.2	9.8	4.8	24	99.2	55
1875			1654	262.0	272.8	6.0	15.7	8.4	4.7	24	99.2	55
1876	10.6	55.0	1611	262.0	268.1	6.3	15.4	10.6	6.6	24	99.2	54
1877	9.3	54.9	1579	262.0	267.8	4.7	14.9	9.2	7.0	24	99.2	54
1878	8.3	53.3	1293	262.0	267.8	1.4	13.6	7.6	9.8	24	99.2	54
1879	7.7	51.4	1091	262.0	267.8	0.9	13.6	7.4	7.5	24	99.2	54
1880	8.1	52.6	1236	262.0	267.8	0.8	14.3	6.8	6.1	24	99.2	54
1881	8.9	52.8	1460	262.0	267.8	1.6	14.6	7.9	8.9	24	99.2	55
1882	9.6	55.3	1662	262.0	267.8	4.8	15.7	9.5	7.6	24	99.2	55
1883	9.8	53.7	1626	262.0	267.8	6.0	15.5	9.7	7.8	24	99.2	55
1884	10.6	54.6	1629	262.0	267.8	7.3	15.6	10.5	6.8	24	99.2	55
1885	9.5	55.0	1599	262.0	267.8	6.5	15.1	9.5	6.8	24	99.2	55
1886	9.4	54.4	1614	262.0	267.8	5.9	15.0	9.4	5.5	24	99.2	55
1887			1627	262.0	267.7	6.0	15.1	9.1	5.2	24	99.2	55
1888	9.9	54.4	1629	262.0	263.0	6.7	15.1	9.8	6.3	24	99.2	55
1889	12.2	54.5	1639	262.0	262.0	7.8	15.3	12.1	7.3	24	99.2	55
1890	11.4	55.0	1621	262.0	262.0	7.9	15.2	11.4	6.2	24	99.2	55
1891	10.8	54.8	1617	262.0	262.0	7.8	15.1	10.7	5.7	24	99.2	55
1892	10.8	54.1	1615	262.0	262.0	6.7	14.9	10.7	5.4	24	99.2	55
1893	9.3	53.9	1631	262.0	262.0	6.5	15.0	9.2	7.3	24	99.2	55
1894	12.0	54.4	1635	262.0	262.0	7.3	15.2	11.9	7.3	24	99.2	55
1895	12.0	54.3	1625	262.0	262.0	6.8	15.1	11.9	7.9	24	99.2	55
1896	11.3	54.5	1633	262.0	262.0	7.9	15.2	11.2	6.9	24	99.2	55
1897	11.3	54.1	1613	262.0	262.0	6.8	15.0	11.2	6.7	24	99.2	55
1898	11.3	54.2	1636	262.0	262.0	7.0	15.1	11.2	6.5	24	99.2	55
1899	12.2	54.7	1617	262.0	262.0	8.1	15.1	12.1	8.2	24	99.2	55
1900	10.6	54.4	1630	262.0	262.0	7.6	15.1	10.5	7.8	24	99.2	55
1901	11.8	55.0	1629	262.0	262.0	9.3	15.3	11.7	7.8	24	99.2	55
1902	11.5	53.9	1620	262.0	262.0	9.2	15.1	11.4	8.2	24	99.2	55
1903	12.4	54.3	1627	262.0	262.0	9.7	15.2	12.3	7.7	24	99.2	55
1904	11.6	54.0	1619	262.0	262.0	9.0	15.0	11.5	9.7	24	99.2	55
1905	10.9	54.0	1625	262.0	262.0	8.5	15.0	10.8	9.7	24	99.2	55
1906	11.5	54.3	1614	262.0	262.0	7.0	14.8	11.4	8.2	24	99.2	55
1907	10.0	53.7	1613	262.0	261.9	5.1	14.6	9.9	8.0	24	99.2	55
1908			1511	262.0	261.9	2.2	13.9	7.5	8.4	24	99.2	55
1909	10.3	54.3	1654	262.0	266.1	1.1	14.8	10.2	6.8	24	99.2	55
1910	8.7	54.4	1412	262.0	267.8	2.0	14.4	8.7	8.4	24	99.2	55
1911	8.3	53.0	1284	262.0	267.8	1.2	14.4	8.3	7.5	24	99.2	55
1912	7.7	52.8	1106	262.0	267.8	1.4	13.6	7.4	6.5	24	99.2	55
1913	7.2	50.7	928	262.0	267.8	1.3	12.9	7.4	6.2	24	99.2	55
1914	6.8	49.7	781	262.0	267.8	1.4	12.0	5.8	6.4	24	99.2	55
1915	6.7	49.8	757	262.0	267.8	1.0	12.2	5.9	6.5	24	99.2	55
1916	7.3	51.1	934	262.0	267.8	0.8	13.0	7.7	6.1	24	99.2	55
1917	7.9	51.7	1187	262.0	267.8	0.8	14.1	9.1	6.1	24	99.2	55
1918	8.4	53.1	1334	262.0	267.8	1.2	14.6	9.1	4.8	24	99.2	55
1919	8.4	53.7	1329	262.0	267.8	1.6	14.5	7.5	5.9	24	99.2	55
1920	8.1	52.4	1252	262.0	267.8	1.5	14.2	8.1	5.7	24	99.2	55
1921	7.8	52.0	1159	262.0	267.8	1.2	13.9	7.9	5.9	24	99.2	55
1922	8.1	51.6	1233	262.0	267.8	0.8	14.1	9.3	5.9	24	99.2	55
1923	10.8	53.9	1624	262.0	267.8	0.4	15.1	10.7	5.3	24	99.2	55
1924	8.8	54.3	1432	262.0	267.8	1.9	14.8	9.4	4.3	24	99.2	55
1925	9.2	53.2	1500	262.0	267.8	0.9	14.8	10.2	6.0	24	99.2	55
1926	10.3	54.7	1610	262.0	267.8	0.9	15.2	10.2	6.7	24	99.2	55
1927	9.0	53.8	1466	262.0	267.8	1.5	14.9	8.7	6.2	24	99.2	55
1928			1576	262.0	267.8	0.6	15.1	7.9	6.2	24	99.2	55
1929			1510	262.0	267.8	1.0	15.1	8.6	6.1	24	99.2	55
1930	9.5	54.2	1630	262.0	267.8	1.8	15.4	9.5	4.7	24	99.2	55
1931	11.3	54.6	1628	262.0	267.8	6.9	15.8	11.2	5.5	24	99.2	55
1932	9.9	54.4	1586	262.0	267.8	6.3	15.2	9.8	6.0	24	99.2	55
1933	9.3	54.4	1583	262.0	267.8	3.6	14.6	9.2	5.3	24	99.2	55
1934	9.4	53.8	1605	262.0	267.8	2.4	14.6	9.3	6.2	24	99.2	55
1935	8.7	53.0	1390	262.0	267.8	1.1	14.3	9.2	5.7	24	99.2	55
1936			1624	262.0	267.8	0.7	15.1	9.0	5.1	24	99.2	55

Table E.01 Measurement data - Turbine ON

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1937	10.0	54.8	1648	262.0	267.8	2.7	15.5	9.9	5.9	24	99.2	55
1938	11.0	54.6	1612	262.0	267.8	2.7	15.3	10.9	5.4	24	99.2	55
1939	8.6	54.1	1375	262.0	267.8	1.1	14.4	8.5	5.3	24	99.2	55
1940	7.5	52.2	1027	262.0	267.8	1.5	13.2	6.5	5.5	24	99.2	55
1941	7.3	50.4	935	262.0	267.8	1.1	12.9	8.5	5.2	24	99.2	55
1942	8.0	51.8	1216	262.0	267.8	0.4	14.1	7.7	6.2	24	99.2	55
1943	10.3	54.0	1587	262.0	267.8	0.5	15.0	10.2	4.3	24	99.2	55
1944	8.7	54.0	1398	262.0	267.8	1.9	14.8	9.2	4.4	24	99.2	55
1945	8.6	53.5	1383	262.0	267.8	1.0	14.8	8.8	4.8	24	99.2	55
1946	8.4	53.7	1313	262.0	267.8	1.0	14.4	8.2	5.2	24	99.2	55
1947	8.6	53.7	1386	262.0	267.8	0.4	14.8	10.7	5.0	24	99.2	55
1948	8.1	53.2	1240	262.0	267.8	1.5	14.1	6.9	5.8	24	99.2	55
1949	7.9	52.5	1175	262.0	267.8	1.0	13.9	9.1	5.6	24	99.2	55
1950	8.1	52.8	1238	262.0	267.8	0.7	14.3	9.7	4.2	24	99.2	55
1951	8.1	52.7	1255	262.0	267.8	1.2	14.2	7.3	5.0	24	99.2	55
1952	9.3	53.3	1572	262.0	267.8	0.8	15.1	9.2	3.7	24	99.2	55
1953	10.2	54.7	1644	262.0	267.8	4.4	15.7	10.2	4.0	24	99.2	55
1954			1527	262.0	267.8	2.9	14.7	7.8	5.5	24	99.2	55
1955	7.6	52.3	1059	262.0	267.8	1.3	13.4	7.6	6.7	24	99.2	55
1956	7.0	50.5	839	262.0	267.8	1.3	12.3	4.5	5.6	24	99.2	55
1957	7.3	51.1	954	262.0	267.8	0.9	13.0	7.0	4.2	24	99.2	55
1958	9.0	53.1	1473	262.0	267.8	0.1	14.8	8.7	3.1	24	99.2	55
1959	8.8	54.7	1425	262.0	267.8	1.7	14.8	7.7	5.4	24	99.2	56
1960	7.9	53.3	1197	262.0	267.8	1.8	14.0	7.5	5.5	24	99.2	56
1961	7.4	51.4	993	262.0	267.8	1.4	13.1	6.9	5.6	24	99.2	56
1962	7.3	50.4	962	262.0	267.8	1.0	13.1	7.7	5.3	24	99.2	56
1963	7.7	51.4	1120	262.0	267.8	0.9	13.7	7.6	5.2	24	99.2	56
1964	8.5	53.2	1357	262.0	267.8	0.7	14.6	8.1	5.3	24	99.2	56
1965			1509	262.0	267.8	1.3	15.0	9.1	7.3	24	99.2	55
1966	9.2	54.1	1503	262.0	267.8	1.4	15.1	8.8	7.0	24	99.2	55
1967	8.7	54.3	1404	262.0	267.8	1.2	14.8	8.5	6.5	24	99.2	55
1968			1535	262.0	267.8	0.6	14.9	8.5	5.4	24	99.2	55
1969	9.0	55.1	1480	262.0	267.8	0.9	15.0	10.0	4.5	24	99.2	55
1970	8.0	54.0	1204	262.0	267.8	1.8	14.0	6.1	3.8	24	99.2	55
1971	7.5	51.6	1022	262.0	267.8	1.2	13.2	5.7	4.1	24	99.2	55
1972	7.4	51.2	997	262.0	267.8	1.3	13.3	5.3	5.1	24	99.2	55
1973	7.0	49.9	830	262.0	267.8	1.6	12.2	5.2	5.9	24	99.2	55
1974	7.3	50.1	953	262.0	267.8	0.9	13.1	7.8	5.5	24	99.2	55
1975	8.6	52.5	1373	262.0	267.8	0.3	14.7	7.5	5.9	24	99.2	55
1976	8.2	53.4	1281	262.0	267.8	2.0	14.4	7.1	6.2	24	99.2	55
1977	7.6	51.6	1069	262.0	267.8	1.4	13.5	8.0	6.1	24	99.2	55
1978	7.2	50.3	922	262.0	267.8	1.3	12.9	7.4	5.3	24	99.2	55
1979	6.6	49.5	718	262.0	267.8	1.7	11.6	5.2	4.6	24	99.2	55
1980	6.0	47.2	534	262.0	267.8	1.4	10.7	6.0	4.9	24	99.2	55
1981	6.1	47.0	559	262.0	267.8	0.9	11.0	5.8	4.5	24	99.2	55
1982	7.0	48.7	837	262.0	267.8	0.7	12.7	8.0	3.7	24	99.2	55
1983	7.5	51.2	1013	262.0	267.8	1.2	13.4	7.2	3.7	24	99.2	55
1984	7.0	50.3	847	262.0	267.8	1.5	12.4	5.9	3.8	24	99.2	55
1985	6.6	48.9	723	262.0	267.8	1.2	11.9	6.2	3.5	24	99.2	55
1986	6.4	48.1	649	262.0	267.8	1.4	11.4	5.5	4.5	24	99.2	55
1987	6.3	47.6	610	262.0	267.8	1.0	11.3	6.7	5.2	24	99.2	55

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

Data Point #	Standardized Wind Speed	LAeq	Turbine Power Output (kW)	Reference Yaw Angle (°)	Yaw Angle (°)	Pitch Angle (°)	Rotor RPM	Nacelle Anemometer Wind Speed (m/s)	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)

Table E.02 Measurement data - Background

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

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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	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (·C)	Pressure (kPa)	Relative Humidity (%)
1			0.7	6.4	4	99.9	69
2			0.4	5.5	4	99.9	69
3			0.0	5.1	4	99.9	69
4			0.0	5.2	4	99.9	69
5			0.2	6.3	4	99.9	69
6			0.3	5.9	4	99.9	70
7			0.3	5.9	4	99.9	70
8			0.4	5.4	4	99.9	70
9			0.3	5.5	4	99.9	70
10			0.3	5.5	4	99.9	70
11			0.3	6.5	4	99.9	70
12			0.3	5.5	4	99.9	70
13			0.2	4.0	4	99.9	69
14			0.2	4.0	4	99.9	69
15			0.3	3.4	4	99.9	69
16			0.3	4.6	4	99.9	69
17			0.2	5.3	4	99.9	69
18			0.2	4.8	4	99.9	70
19			0.1	4.5	4	99.9	70
20			0.0	4.4	4	99.9	70
21			0.0	4.6	4	99.9	70
22			0.0	5.4	4	99.9	70
23			0.0	5.0	4	99.9	70
24			0.0	4.7	4	99.9	70
25			0.1	5.5	4	99.9	70
26			0.3	5.4	4	99.9	70
27			0.3	5.8	4	99.9	70
28			0.2	5.1	4	99.9	70
29			0.3	5.9	4	99.9	70
30			0.3	6.1	4	99.9	70
31			0.3	6.0	4	99.9	70
32			0.1	4.9	4	99.9	70
33			0.0	4.4	4	99.9	70
34			0.0	4.4	4	99.9	70
35			0.2	4.2	4	99.9	70
36			0.2	4.1	4	99.9	70
37			0.2	4.3	4	99.9	70
38			0.0	4.1	4	99.9	70
39			0.0	4.4	4	99.9	70
40			0.0	3.8	4	99.9	70
41			0.0	4.4	4	99.9	70
42			0.0	4.3	4	99.9	70
43			0.0	5.5	4	99.9	70
44			0.1	7.2	4	99.9	70
45			0.5	5.9	4	99.9	70
46			0.5	4.6	4	99.9	70
47			0.5	5.1	4	99.9	70
48			0.3	6.1	4	99.9	70
49			0.2	6.3	4	99.9	69
50			0.3	5.4	4	99.9	69
51			0.3	5.2	4	99.9	69
52			0.3	4.7	4	99.9	69
53			0.3	4.5	4	99.9	69
54			0.3	3.9	4	99.9	69
55			0.4	4.7	4	99.9	69
56			0.3	5.0	4	99.9	69
57			0.3	3.9	4	99.9	69
58			0.3	4.2	4	99.9	69
59			0.3	3.2	4	99.9	69
60			0.2	3.5	4	99.9	69
61			0.2	3.8	4	99.9	70
62			0.3	4.4	4	99.9	70
63			0.4	4.6	4	99.9	70
64			0.4	5.0	4	99.9	70
65			0.3	4.5	4	99.9	70
66			0.1	4.2	4	100.0	69
67			0.0	3.5	4	100.0	69
68			0.0	2.5	4	100.0	69
69			0.0	3.1	4	100.0	69
70			0.0	2.9	4	100.0	69
71			0.0	3.3	4	100.0	69
72			0.0	3.8	4	100.0	69
73			0.0	3.2	4	99.9	69
74			0.0	3.0	4	99.9	69
75			0.2	2.4	4	99.9	69
76			0.4	2.6	4	99.9	69
77			0.3	3.5	4	99.9	69
78			0.3	3.6	4	99.9	69
79			0.4	4.7	5	99.9	69
80			0.3	3.7	5	99.9	69
81			0.5	4.9	5	99.9	69
82			0.5	4.8	5	99.9	69
83			0.5	4.2	5	99.9	69

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (·C)	Pressure (kPa)	Relative Humidity (%)
84			0.4	4.2	5	99.9	69
85			0.5	3.7	5	99.9	68
86			0.6	4.9	5	99.9	68
87			0.6	3.9	5	99.9	68
88			0.6	5.1	5	99.9	68
89			0.5	5.7	5	99.9	68
90			0.6	4.2	5	100.0	67
91			0.5	3.5	5	100.0	66
92			0.4	5.6	5	100.0	66
93			0.3	6.2	5	100.0	66
94			0.2	5.6	5	100.0	66
95			0.4	7.0	5	100.0	66
96			0.4	7.3	5	100.0	66
97			0.4	6.2	5	99.9	66
98			0.4	5.3	5	99.9	66
99			0.3	4.7	5	99.9	66
100			0.0	4.5	5	99.9	66
101			0.0	4.6	5	99.9	66
102			0.1	5.7	4	99.9	66
103			0.4	6.8	4	99.9	66
104			0.4	7.1	4	99.9	66
105			0.3	6.9	4	99.9	66
106			0.3	7.1	4	99.9	66
107			0.2	6.6	4	99.9	66
108			0.2	6.9	4	99.9	66
109			0.2	6.4	4	99.9	67
110			0.2	5.9	4	99.9	67
111			0.2	6.8	4	99.9	67
112			0.3	6.8	4	99.9	67
113			0.3	5.9	4	99.9	67
114			0.3	5.5	4	99.9	66
115			0.2	4.9	4	99.9	66
116			0.2	3.9	4	99.9	66
117			0.1	3.6	4	99.9	66
118			0.0	6.3	4	99.9	66
119			0.0	5.6	4	99.9	66
120			0.0	5.6	4	99.9	66
121			0.0	5.1	4	99.9	67
122			0.0	5.0	4	99.9	67
123			0.0	4.3	4	99.9	67
124			0.2	4.5	4	99.9	67
125			0.2	4.7	4	99.9	67
126			0.2	4.0	4	99.9	68
127			0.3	3.4	4	99.9	68
128			0.4	3.8	4	99.9	68
129			0.4	4.5	4	99.9	68
130			0.3	4.9	4	99.9	68
131			0.4	5.4	4	99.9	68
132			0.3	5.4	4	99.9	68
133			0.3	3.5	4	99.9	68
134			0.3	3.4	4	99.9	68
135			0.3	4.5	4	99.9	68
136			0.4	5.0	4	99.9	68
137			0.6	4.0	4	99.9	68
138			0.5	4.2	4	99.9	68
139			0.5	4.7	4	99.9	68
140			0.5	4.7	4	99.9	68
141			0.6	5.7	4	99.9	68
142			0.6	6.3	4	99.9	68
143			0.6	6.3	4	99.9	68
144			0.6	5.3	4	99.9	68
145			0.4	4.7	4	99.9	67
146			0.3	5.7	4	99.9	67
147			0.3	4.8	4	99.9	67
148			0.2	4.8	4	99.9	67
149			0.2	5.1	4	99.9	67
150			0.2	5.7	4	99.9	67
151			0.1	6.6	4	99.9	68
152			0.0	6.7	4	99.9	68
153			0.0	5.7	4	99.9	68
154			0.0	5.1	4	99.9	68
155			0.1	4.6	4	100.0	68
156			0.3	4.7	4	100.0	68
157			0.3	4.9	4	100.0	67
158			0.3	4.8	4	100.0	67
159			0.3	5.4	4	100.0	67
160			0.2	5.8	4	100.0	67
161			0.2	4.6	4	100.0	67
162			0.1	5.3	4	100.0	67
163			0.0	6.2	4	100.0	68
164			0.1	6.0	4	100.0	68
165			0.5	4.4	4	100.0	68
166			0.5	4.2	4	100.0	68

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (·C)	Pressure (kPa)	Relative Humidity (%)
167			0.5	4.7	4	100.0	68
168			0.4	5.2	4	100.0	68
169			0.3	6.1	4	100.0	68
170			0.2	6.7	4	100.0	68
171			0.2	6.1	4	100.0	68
172			0.2	4.6	4	100.0	68
173			0.2	4.6	4	100.0	68
174			0.3	5.3	4	100.0	68
175			0.2	4.9	4	100.0	67
176			0.2	6.7	4	100.0	67
177			0.2	7.1	4	100.0	67
178			0.3	6.9	4	100.0	67
179			0.3	6.2	4	100.0	67
180			0.2	5.4	4	100.0	67
181			0.2	5.3	4	100.0	66
182			0.3	3.7	4	100.0	66
183			0.3	5.0	4	100.0	66
184			0.2	5.1	4	100.0	66
185			0.2	5.2	4	100.0	66
186			0.2	6.0	4	100.0	66
187			0.2	6.7	4	100.0	66
188			0.3	4.9	4	100.0	66
189			0.4	4.5	4	100.0	66
190			0.5	4.8	4	100.0	66
191			0.4	4.3	4	100.0	66
192			0.3	5.4	4	100.0	67
193			0.2	6.8	4	100.0	67
194			0.4	7.3	4	100.0	67
195			0.4	6.3	4	100.0	67
196			0.4	6.1	4	100.0	67
197			0.4	6.0	4	100.0	67
198			0.3	5.7	4	100.0	67
199			0.2	7.3	4	100.0	67
200			0.2	6.6	4	100.0	67
201			0.3	5.8	4	100.0	67
202			0.3	5.8	4	100.0	67
203			0.3	4.3	4	100.0	67
204			0.2	4.0	4	100.0	68
205			0.3	4.7	4	100.0	68
206			0.3	6.5	4	100.0	68
207			0.3	7.1	4	100.0	68
208			0.3	6.9	4	100.0	68
209			0.4	4.5	4	100.0	68
210			0.3	4.2	4	100.0	68
211			0.3	4.3	4	100.0	67
212			0.3	5.2	4	100.0	67
213			0.3	5.0	4	100.0	67
214			0.4	4.8	4	100.0	67
215			0.3	4.9	4	100.0	67
216			0.3	5.2	4	100.0	67
217			0.4	5.4	4	100.0	67
218			0.4	5.7	4	100.0	67
219			0.4	4.8	4	100.0	67
220			0.4	5.1	4	100.0	67
221			0.3	4.5	4	100.0	67
222			0.3	5.0	4	100.0	68
223			0.3	5.3	4	100.0	68
224			0.3	4.2	4	100.0	68
225			0.4	4.1	4	100.0	68
226			0.3	5.1	4	100.0	68
227			0.2	6.7	4	100.0	68
228			0.2	6.5	4	100.0	68
229			0.3	6.4	4	99.9	67
230			0.3	5.1	4	99.9	67
231			0.3	5.5	4	99.9	67
232			0.2	6.3	4	99.9	67
233			0.2	4.3	4	99.9	67
234			0.2	5.8	4	99.9	67
235			0.2	5.1	4	99.9	67
236			0.2	4.9	4	99.9	67
237			0.3	5.0	4	99.9	67
238			0.3	6.0	4	99.9	67
239			0.3	5.5	4	99.9	67
240			0.4	5.1	4	99.9	67
241			0.3	4.6	4	100.0	67
242			0.4	4.5	4	100.0	67
243			0.4	5.9	4	100.0	67
244			0.3	4.9	4	100.0	67
245			0.3	4.6	4	100.0	67
246			0.3	5.6	4	100.0	67
247			0.3	5.6	4	100.0	67
248			0.2	4.8	4	100.0	67
249			0.3	4.5	4	100.0	67

Table E.02 Measurement data - Background

Project: Jericho Wind Power Centre - Turbine T03 - 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	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
250			0.3	5.0	4	100.0	67
251			0.4	6.2	4	100.0	67
252			0.3	4.1	4	100.0	67
253			0.3	3.3	4	100.0	67
254			0.4	5.2	4	100.0	67
255			0.3	5.6	4	100.0	67
256			0.3	5.6	4	100.0	67
257			0.4	6.4	4	100.0	67
258			0.3	5.9	4	100.0	68
259			0.3	5.6	4	100.0	68
260			0.4	4.6	4	100.0	68
261			0.4	4.7	4	100.0	68
262			0.3	5.5	4	100.0	68
263			0.3	5.3	4	100.0	68
264			0.3	4.8	4	100.0	68
265			0.4	4.0	4	100.0	68
266			0.4	5.0	4	100.0	68
267			0.4	5.5	4	100.0	68
268			0.3	4.8	4	100.0	68
269			0.4	5.2	4	100.0	68
270			0.3	5.2	4	100.0	68
271			0.2	4.8	4	100.0	68
272			0.3	6.4	4	100.0	68
273			0.4	5.8	4	100.0	68
274			0.4	5.9	4	100.0	68
275			0.3	6.3	4	100.0	68
276			0.4	5.6	4	100.0	67
277			0.4	6.0	4	100.0	66
278			0.3	6.0	4	100.0	66
279			0.2	5.5	4	100.0	66
280			0.3	5.5	4	100.0	66
281			0.3	6.1	4	100.0	66
282			0.3	5.2	4	100.0	66
283			0.3	4.7	4	100.0	65
284			0.3	5.1	4	100.0	65
285			0.2	4.3	4	100.0	65
286			0.2	4.7	4	100.0	65
287			0.2	5.4	4	100.0	65
288			0.2	4.7	4	100.0	66
289			0.2	4.2	4	100.0	67
290			0.2	4.9	4	100.0	67
291			0.2	5.7	4	100.0	67
292			0.3	6.3	4	100.0	67
293			0.2	6.1	4	100.0	67
294			0.2	6.4	4	100.0	67
295			0.2	7.1	4	100.0	66
296			0.2	6.3	4	100.0	66
297			0.2	6.6	4	100.0	66
298			0.2	4.9	4	100.0	66
299			0.1	4.9	4	100.0	66
300			0.0	3.8	4	100.0	67
301			0.0	4.1	4	100.0	68
302			0.0	6.4	4	100.0	68
303			0.3	6.2	4	100.0	68
304			0.3	6.1	4	100.0	68
305			0.3	5.8	4	100.0	68
306			0.4	4.7	4	100.0	67
307			0.3	5.5	4	100.0	66
308			0.2	6.4	4	100.0	66
309			0.0	5.7	4	100.0	66
310			0.2	4.4	4	100.0	66
311			0.3	5.0	4	100.0	66
312			0.3	6.8	4	100.0	66
313			0.3	6.4	4	100.0	66
314			0.2	6.5	4	100.0	66
315			0.2	6.6	4	100.0	66
316			0.2	6.9	4	100.0	66
317			0.3	6.8	4	100.0	66
318			0.4	6.8	4	100.0	66
319			0.3	6.9	4	100.0	66
320			0.2	6.3	4	100.0	66
321			0.2	6.3	4	100.0	66
322			0.3	6.7	4	100.0	66
323			0.3	6.4	4	100.0	66
324			0.3	5.9	4	100.0	66
325			0.4	5.7	4	100.0	67
326			0.4	5.3	4	100.0	67
327			0.4	6.1	4	100.0	67
328			0.3	6.5	4	100.0	67
329			0.3	6.9	4	100.0	67
330			0.3	6.5	4	100.0	67
331	6.1	37.3	0.4	5.4	9	99.8	62
332	6.2	36.5	0.5	5.4	9	99.8	62

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
333	5.3	36.9	0.5	4.7	9	99.8	62
334	4.6	36.6	0.5	4.0	9	99.8	62
335	3.8	36.6	0.4	3.4	9	99.8	62
336	4.3	37.0	0.5	3.8	9	99.8	62
337	4.7	37.0	0.5	4.1	9	99.8	63
338	6.0	37.7	0.4	5.3	9	99.8	63
339	5.9	36.4	0.3	5.1	9	99.8	63
340	6.3	37.3	0.3	5.5	9	99.8	63
341	5.9	38.1	0.3	5.1	9	99.8	63
342	5.5	39.0	0.3	4.8	9	99.8	63
343	7.0	38.0	0.2	6.1	9	99.8	63
344	5.7	37.9	0.3	4.9	9	99.8	62
345	5.6	37.5	0.3	4.9	9	99.8	62
346	5.4	38.3	0.2	4.7	9	99.8	62
347	5.3	37.4	0.2	4.6	9	99.8	62
348	6.6	36.3	0.3	5.7	9	99.8	62
349	5.3	35.9	0.4	4.6	9	99.8	62
350	5.0	36.5	0.5	4.3	9	99.8	61
351	4.6	35.9	0.4	4.0	9	99.8	61
352	7.7	37.1	0.4	6.7	9	99.8	61
353	7.2	40.0	0.3	6.3	9	99.8	61
354	5.3	40.2	0.3	4.7	9	99.8	61
355	6.5	40.9	0.2	5.7	9	99.8	61
356	6.6	39.2	0.2	5.8	9	99.8	60
357	5.7	39.0	0.2	5.0	9	99.8	60
358	3.5	39.1	0.2	3.1	9	99.8	60
359	4.4	37.0	0.3	3.8	9	99.8	60
360	4.5	36.9	0.4	3.9	9	99.8	60
361	5.0	36.6	0.3	4.3	9	99.8	61
362	6.5	36.8	0.5	5.7	9	99.8	62
363	6.4	38.3	0.7	5.6	9	99.8	62
364	6.7	39.4	0.7	5.8	9	99.8	62
365	7.5	38.8	0.7	6.6	9	99.8	62
366	5.7	38.2	0.4	5.0	9	99.8	62
367	7.0	38.6	0.3	6.1	9	99.8	61
368	9.1	38.3	0.3	8.0	9	99.8	60
369	8.8	37.6	0.3	7.7	9	99.8	60
370	8.9	36.8	0.3	7.7	9	99.8	60
371	7.9	36.4	0.2	6.9	9	99.8	60
372	7.1	36.2	0.3	6.2	9	99.8	60
373	6.4	37.0	0.4	5.6	9	99.8	61
374	5.4	37.5	0.4	4.7	9	99.8	61
375	5.7	37.2	0.3	5.0	9	99.8	61
376	6.4	40.3	0.2	5.6	9	99.8	61
377	6.9	39.2	0.3	6.0	9	99.8	61
378	6.0	38.9	0.4	5.2	9	99.8	61
379	7.0	38.9	0.5	6.1	9	99.8	61
380	8.1	36.9	0.4	7.0	9	99.8	61
381	7.8	38.3	0.5	6.8	9	99.8	61
382	6.1	37.0	0.4	5.3	9	99.8	61
383	7.1	36.1	0.5	6.2	9	99.8	61
384	8.0	36.1	0.5	7.0	9	99.8	61
385	7.9	35.8	0.5	6.9	9	99.8	61
386	8.1	41.2	0.4	7.1	9	99.8	61
387	9.1	38.0	0.3	7.9	9	99.8	61
388	8.1	35.8	0.2	7.1	9	99.8	61
389	7.5	37.1	0.3	6.6	9	99.8	61
390	6.4	39.7	0.4	5.6	9	99.8	61
391	5.8	42.8	0.6	5.1	9	99.8	60
392	5.1	41.8	0.5	4.4	9	99.8	59
393	5.5	42.3	0.4	4.8	9	99.8	59
394	5.6	43.5	0.2	4.9	9	99.8	59
395	6.1	42.1	0.2	5.3	9	99.8	59
396	5.5	39.0	0.4	4.8	9	99.8	59
397	6.6	38.8	0.5	5.8	9	99.8	59
398	5.7	39.7	0.5	5.0	9	99.8	60
399	6.1	38.6	0.5	5.3	9	99.8	60
400	6.4	41.0	0.6	5.6	9	99.8	60
401	7.3	40.1	0.4	6.4	9	99.8	60
402	7.5	42.2	0.4	6.6	9	99.8	60
403	6.8	40.9	0.3	5.9	9	99.9	60
404	5.6	42.3	0.3	4.9	9	99.9	60
405	5.9	41.5	0.2	5.1	9	99.9	60
406	6.1	38.7	0.3	5.4	9	99.9	60
407	6.5	38.3	0.2	5.7	9	99.9	60
408	8.6	45.0	0.2	7.6	9	99.9	60
409	9.2	42.7	0.3	8.1	9	99.9	60
410	7.8	41.6	0.4	6.8	9	99.9	60
411	7.6	40.9	0.3	6.6	9	99.9	60
412	8.2	41.0	0.2	7.2	9	99.9	60
413	9.1	40.8	0.3	8.0	9	99.9	60
414	9.3	42.1	0.3	8.1	9	99.9	60
415	10.6	41.6	0.3	9.2	9	99.9	61

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
416	10.0	47.4	0.4	8.8	9	99.9	61
417	8.4	44.6	0.9	7.3	9	99.9	61
418	9.2	46.4	0.8	8.0	9	99.9	61
419	10.0	44.4	0.6	8.7	9	99.9	61
420	10.0	41.1	0.6	8.8	9	99.9	61
421	9.3	39.0	0.6	8.2	9	99.9	61
422	7.6	39.4	0.4	6.6	9	99.9	61
423	7.0	40.9	0.5	6.1	9	99.9	61
424	7.2	41.1	0.6	6.3	9	99.9	61
425	5.7	41.7	0.4	4.9	9	99.9	61
426	7.6	43.0	0.3	6.7	9	99.9	61
427	9.0	42.2	0.2	7.9	8	99.9	63
428	9.4	42.1	0.3	8.2	8	99.9	64
429	7.7	41.9	0.3	6.7	8	99.9	64
430	7.4	46.4	0.5	6.4	8	99.9	64
431	9.5	41.9	0.5	8.3	8	99.9	64
432	8.2	37.9	0.6	7.2	8	99.9	64
433	8.2	38.5	0.8	7.2	8	99.9	65
434	11.0	37.1	0.8	9.6	8	99.9	65
435	9.9	36.1	0.7	8.7	8	99.9	65
436	8.0	40.8	0.7	7.0	8	99.9	65
437	9.8	39.7	0.7	8.5	8	99.9	65
438	10.9	43.6	0.5	9.6	8	99.9	65
439	8.1	47.0	0.5	7.1	8	99.9	65
440	7.9	43.7	0.5	6.9	8	99.9	65
441	9.2	44.8	0.7	8.1	8	99.9	65
442	7.7	43.2	0.5	6.8	8	99.9	65
443	7.4	44.2	0.6	6.5	8	99.9	65
444	7.4	44.8	0.7	6.5	8	99.9	65
445	9.7	47.0	0.6	8.5	7	99.9	66
446	11.2	45.5	0.6	9.8	7	99.9	67
447	10.5	42.1	0.5	9.2	7	99.9	67
448	8.2	41.5	0.6	7.2	7	99.9	67
449	8.6	40.6	0.5	7.5	7	99.9	67
450	8.5	44.9	0.4	7.5	7	99.9	67
451	9.6	42.6	0.6	8.4	7	99.9	66
452	8.9	40.8	0.9	7.7	7	99.9	66
453	9.1	39.7	0.7	7.9	7	99.9	66
454	8.1	38.2	0.5	7.0	7	99.9	66
455	8.5	37.6	0.4	7.5	7	99.9	66
456	7.1	43.1	0.4	6.2	7	99.9	66
457	7.0	41.2	0.3	6.1	7	99.9	66
458	6.9	39.6	0.5	6.1	7	99.9	66
459	6.8	40.3	0.5	6.0	7	99.9	66
460	6.3	42.9	0.6	5.5	7	99.9	66
461	7.4	42.5	0.5	6.5	7	99.9	66
462	8.1	43.3	0.3	7.1	7	99.9	66
463	9.5	41.7	0.2	8.3	7	99.9	66
464	9.4	40.4	0.3	8.2	7	99.9	67
465	8.8	41.2	0.2	7.7	7	99.9	67
466	8.9	42.5	0.3	7.8	7	99.9	67
467	9.1	42.7	0.8	7.9	7	99.9	67
468	8.6	44.0	0.8	7.6	7	99.9	67
469	7.9	47.9	0.7	6.9	7	99.9	66
470	7.1	47.1	0.7	6.2	7	99.9	66
471	6.9	47.3	0.6	6.0	7	99.9	66
472	6.1	43.0	0.6	5.3	7	99.9	66
473	7.9	43.4	0.4	6.9	7	99.9	66
474	6.3	41.2	0.6	5.5	7	99.9	66
475	4.6	41.1	0.5	4.1	7	99.9	65
476	4.7	41.5	0.4	4.1	7	99.9	65
477	6.2	40.2	0.4	5.4	7	99.9	65
478	5.2	38.8	0.3	4.5	7	99.9	65
479	5.6	38.2	0.3	4.9	7	99.9	65
480	6.2	38.1	0.3	5.4	7	99.9	65
481	7.3	40.1	0.2	6.3	7	99.9	67
482	10.3	41.1	0.2	9.0	7	99.9	67
483	9.3	42.4	0.2	8.1	7	99.9	67
484	8.2	41.0	0.2	7.2	7	99.9	67
485	7.2	41.2	0.3	6.3	7	99.9	67
486	6.9	42.8	0.3	6.1	7	99.9	67
487	6.4	43.3	0.3	5.6	7	99.9	67
488	6.5	42.0	0.3	5.6	7	99.9	66
489	6.7	43.3	0.2	5.9	7	99.9	66
490	6.6	42.3	0.2	5.8	7	99.9	66
491	7.9	41.7	0.2	6.9	7	99.9	66
492	9.1	43.1	0.2	8.0	7	99.9	66
493	8.7	40.8	0.3	7.6	7	99.9	66
494	6.5	40.1	0.6	5.7	7	99.9	65
495	7.8	41.1	0.7	6.8	7	99.9	65
496	7.1	39.2	0.6	6.2	7	99.9	65
497	8.6	38.1	0.4	7.6	7	99.9	65
498	8.0	38.4	0.6	7.0	7	99.9	65

Table E.02 Measurement data - Background

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (kPa)	Relative Humidity (%)
499	8.6	39.1	0.6	7.5	7	99.9	65
500	10.1	41.5	0.7	8.9	7	99.9	65
501	10.1	42.8	0.5	8.8	7	99.9	65
502	9.6	42.1	0.4	8.4	7	99.9	65
503	9.3	45.9	0.3	8.1	7	99.9	65
504	8.0	48.5	0.4	7.0	7	99.9	65
505	6.7	44.7	0.3	5.9	7	99.9	66
506	8.2	45.4	0.2	7.2	7	99.9	66
507	6.3	45.7	0.4	5.5	7	99.9	66
508	6.7	44.3	0.3	5.8	7	99.9	66
509	11.4	44.7	0.3	9.9	7	99.9	66
510	10.6	43.9	0.3	9.3	7	99.9	66
511	9.3	42.3	0.3	8.2	7	99.9	65
512	7.6	43.6	0.4	6.6	7	99.9	65
513	7.0	43.0	0.5	6.1	7	99.9	65
514	8.0	42.7	0.6	7.0	7	99.9	65
515	7.0	46.3	0.5	6.1	7	99.9	65
516	5.5	42.8	0.5	4.9	7	99.9	65
517	7.5	41.2	0.4	6.5	7	99.9	66
518	7.1	43.5	0.4	6.2	7	99.9	67
519	6.4	43.1	0.0	5.6	7	99.9	67
520	5.6	41.3	0.0	4.9	7	99.9	67
521	6.3	41.4	0.2	5.5	7	99.9	67
522	6.2	40.6	0.3	5.4	7	99.9	67
523	6.9	41.9	0.3	6.0	7	99.9	67
524	8.0	41.9	0.2	7.0	7	99.9	67
525	8.8	44.7	0.0	7.7	7	99.9	67
526	8.9	44.2	0.2	7.8	7	99.9	67
527	8.2	47.6	0.5	7.2	7	99.9	67
528	8.8	47.0	0.5	7.7	7	99.9	67
529	8.5	44.0	0.4	7.5	7	99.9	66
530	6.5	43.9	0.3	5.6	7	99.9	65
531	6.4	40.6	0.4	5.6	7	99.9	65
532	7.8	42.5	0.6	6.8	7	99.9	65
533	5.1	42.9	0.5	4.5	7	99.9	65
534	5.1	40.3	0.4	4.4	7	99.9	65
535	5.8	40.8	0.3	5.0	7	99.9	66
536	7.5	39.9	0.2	6.5	7	99.9	67
537	7.8	40.0	0.1	6.9	7	99.9	67
538	7.8	42.0	0.0	6.8	7	99.9	67
539	8.3	40.7	0.1	7.2	7	99.9	67
540	9.6	41.0	0.4	8.4	7	99.9	67
541	9.8	40.1	0.4	8.6	7	99.9	65
542	9.0	39.9	0.3	7.9	7	99.9	64
543	7.9	39.5	0.3	6.9	7	99.9	64
544	8.8	43.0	0.3	7.7	7	99.9	64
545	8.1	42.0	0.3	7.1	7	99.9	64
546	6.1	40.2	0.3	5.4	7	99.9	64
547	6.6	39.1	0.4	5.7	7	99.9	66
548	7.0	38.9	0.5	6.2	7	99.9	66
549	7.3	39.6	0.5	6.4	7	99.9	66
550	5.7	38.2	0.3	4.9	7	99.9	66
551	7.0	38.5	0.3	6.1	7	99.9	66
552	8.0	39.1	0.2	7.0	7	99.9	66
553	6.0	39.2	0.2	5.2	7	99.9	66
554	4.7	40.7	0.4	4.1	7	99.9	66
555	6.0	39.9	0.4	5.2	7	99.9	66
556	5.7	41.5	0.4	5.0	7	99.9	66
557	6.9	47.0	0.4	6.1	7	99.9	66
558	7.8	43.3	0.3	6.8	7	99.9	66
559	6.8	41.3	0.3	6.0	7	99.9	66
560	6.7	41.9	0.3	5.9	7	99.9	66
561	5.6	40.8	0.3	4.9	7	99.9	66
562	5.8	40.0	0.2	5.1	7	99.9	66
563	5.5	37.9	0.2	4.8	7	99.9	66
564	6.6	41.5	0.1	5.8	7	99.9	66
565	6.7	40.8	0.0	5.8	7	99.9	66
566	6.8	41.5	0.2	6.0	7	99.9	66
567	9.1	38.4	0.4	7.9	7	99.9	66
568	12.1	38.9	0.5	10.6	7	99.9	66
569	10.1	42.4	0.5	8.8	7	99.9	66
570	9.2	40.2	0.6	8.0	7	99.9	66
571	9.4	41.8	0.6	8.2	7	99.9	64
572	9.9	43.2	0.7	8.6	7	99.9	63
573	9.0	42.5	0.6	7.9	7	99.9	63
574	9.5	42.1	0.7	8.3	7	99.9	63
575	8.2	46.6	0.7	7.2	7	99.9	63
576	8.4	43.9	0.6	7.4	7	99.9	63
577	7.9	43.2	0.5	6.9	7	99.9	64
578	5.7	42.0	0.5	5.0	7	99.9	64
579	6.5	42.6	0.4	5.7	7	99.9	64
580	6.4	40.7	0.4	5.6	7	99.9	64
581	7.7	39.1	0.3	6.8	7	99.9	64

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (kPa)	Relative Humidity (%)
582	8.1	40.5	0.3	7.1	7	99.9	64
583	5.5	40.6	0.3	4.8	7	99.9	65
584	4.8	42.7	0.4	4.2	7	99.9	66
585	5.2	38.8	0.5	4.5	7	99.9	66
586	6.3	43.1	0.4	5.5	7	99.9	66
587	6.1	38.8	0.3	5.3	7	99.9	66
588	6.8	37.8	0.4	5.9	7	99.9	66
589	8.9	38.3	0.4	7.8	7	99.9	65
590	9.8	36.9	0.4	8.5	7	99.9	65
591	8.7	42.6	0.4	7.6	7	99.9	65
592	7.3	45.2	0.5	6.3	7	99.9	65
593	9.1	43.0	0.4	8.0	7	99.9	65
594	10.6	39.7	0.5	9.3	7	99.9	65
595	10.3	40.0	0.4	9.0	7	99.9	64
596	10.9	42.1	0.4	9.5	7	99.9	64
597	9.1	41.8	0.4	7.9	7	99.9	64
598	7.5	41.0	0.3	6.5	7	99.9	64
599	7.3	39.0	0.5	6.4	7	99.9	64
600	8.6	41.0	0.6	7.5	7	99.9	64
601	7.7	43.3	0.4	6.8	7	99.9	64
602	8.9	38.7	0.3	7.8	7	99.9	64
603	8.5	42.7	0.5	7.4	7	99.9	64
604	8.4	40.8	0.4	7.4	7	99.9	64
605	7.7	41.2	0.6	6.7	7	99.9	64
606	6.5	43.9	0.6	5.7	7	99.9	64
607	6.5	46.2	0.4	5.7	7	99.9	65
608	6.7	45.7	0.2	5.8	7	99.9	65
609	10.0	41.0	0.3	8.7	7	99.9	65
610	10.5	42.7	0.4	9.2	7	99.9	65
611	10.0	43.5	0.4	8.8	7	99.9	65
612	9.4	42.7	0.4	8.2	7	99.9	65
613	9.7	43.7	0.4	8.5	7	99.9	65
614	10.2	44.1	0.4	8.9	7	99.9	65
615	8.6	42.8	0.6	7.6	7	99.9	65
616	8.2	41.9	0.6	7.1	7	99.9	65
617	8.9	44.3	0.5	7.8	7	99.9	65
618	9.8	42.1	0.5	8.5	7	99.9	65
619	12.1	42.7	0.5	10.6	7	99.9	65
620	10.5	42.1	0.6	9.2	7	99.9	64
621	10.4	39.7	0.5	9.1	7	99.9	64
622	10.0	40.8	0.5	8.7	7	99.9	64
623	11.1	44.4	0.7	9.7	7	99.9	64
624	11.8	42.3	0.7	10.3	7	99.9	64
625	10.6	42.0	0.7	9.3	7	99.9	65
626	9.1	47.7	0.6	8.0	7	99.9	65
627	9.2	43.3	0.7	8.0	7	99.9	65
628	10.9	41.2	0.6	9.5	7	99.9	65
629	9.1	43.0	0.7	7.9	7	99.9	65
630	8.7	42.4	0.7	7.6	7	99.9	65
631	9.0	43.1	0.7	7.9	7	99.9	66
632	7.6	43.0	0.5	6.6	7	99.9	66
633	6.4	43.8	0.4	5.6	7	99.9	66
634	7.9	43.4	0.4	6.9	7	99.9	66
635	9.1	43.0	0.3	7.9	7	99.9	66
636	7.4	42.1	0.4	6.5	7	99.9	66
637	7.5	41.8	0.3	6.5	7	99.9	66
638	6.8	41.8	0.4	6.0	7	99.9	66
639	8.6	40.7	0.6	7.5	7	99.9	66
640	8.4	41.5	0.7	7.3	7	99.9	66
641	9.3	43.1	0.7	8.2	7	99.9	66
642	8.2	42.1	0.4	7.1	7	99.9	66
643	6.7	43.2	0.4	5.9	7	99.9	66
644	8.9	43.1	0.4	7.8	7	99.9	66
645	8.8	42.7	0.4	7.7	7	99.9	66
646	7.3	42.6	0.4	6.4	7	99.9	66
647	6.1	43.6	0.3	5.3	7	99.9	66
648	7.8	47.1	0.3	6.8	7	99.9	66
649	5.8	41.8	0.4	5.0	7	99.9	66
650	5.4	41.3	0.5	4.7	7	99.9	67
651	5.2	39.1	0.5	4.6	7	99.9	67
652	5.4	39.4	0.4	4.7	7	99.9	67
653	5.4	39.0	0.4	4.8	7	99.9	67
654	6.9	39.3	0.4	6.1	7	99.9	67
655	9.6	38.7	0.4	8.4	7	99.9	66
656	9.0	38.7	0.4	7.9	7	99.9	66
657	8.7	39.3	0.4	7.6	7	99.9	66
658	8.2	41.6	0.3	7.2	7	99.9	66
659	7.7	41.3	0.4	6.8	7	99.9	66
660	8.5	40.9	0.4	7.4	7	99.9	66
661	8.1	40.9	0.3	7.1	7	99.9	65
662	7.9	44.4	0.4	6.9	7	99.9	65
663	8.9	42.2	0.4	7.8	7	99.9	65
664	7.8	44.4	0.3	6.8	7	99.9	65

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (°C)	Pressure (kPa)	Relative Humidity (%)
665	7.3	46.8	0.0	6.4	7	99.9	65
666	8.7	44.0	0.0	7.6	7	99.9	65
667	10.7	41.8	0.1	9.4	7	99.9	64
668	9.4	40.0	0.3	8.2	7	99.9	63
669	8.8	37.8	0.4	7.7	7	99.9	63
670	9.2	38.2	0.5	8.1	7	99.9	63
671	6.8	38.8	0.5	6.0	7	99.9	63
672	8.3	37.6	0.4	7.2	7	99.9	63
673	6.0	38.1	0.6	5.3	7	99.9	64
674	7.5	41.2	0.8	6.5	7	99.9	65
675	8.5	39.8	0.6	7.4	7	99.9	65
676	8.6	38.7	0.5	7.5	7	99.9	65
677	7.7	40.5	0.5	6.7	7	99.9	65
678	8.7	41.6	0.6	7.6	7	99.9	65
679	8.3	40.5	0.7	7.3	7	99.9	65
680	8.5	46.0	0.7	7.4	7	99.9	65
681	7.6	46.7	0.5	6.6	7	99.9	65
682	6.0	47.9	0.5	5.2	7	99.9	65
683	7.2	45.8	0.5	6.3	7	99.9	65
684	8.3	43.9	0.5	7.3	7	99.9	65
685	7.2	43.7	0.5	6.3	7	99.9	65
686	6.1	42.7	0.3	5.3	7	99.9	65
687	7.5	41.1	0.3	6.5	7	99.9	65
688	8.3	41.2	0.4	7.3	7	99.9	65
689	7.7	41.5	0.3	6.7	7	99.9	65
690	8.3	41.7	0.3	7.3	7	99.9	65
691	8.0	40.5	0.4	7.0	7	99.9	65
692	8.1	39.6	0.7	7.1	7	99.9	65
693	6.7	39.5	0.6	5.9	7	99.9	65
694	7.7	39.2	0.6	6.8	7	99.9	65
695	9.0	39.6	0.5	7.9	7	99.9	65
696	8.0	40.0	0.5	7.0	7	99.9	65
697	8.0	40.5	0.5	7.0	7	99.9	65
698	5.5	38.5	0.3	4.8	7	99.9	65
699	6.4	39.3	0.3	5.6	7	99.9	65
700	7.1	39.1	0.3	6.2	7	99.9	65
701	9.3	40.6	0.4	8.1	7	99.9	65
702	8.8	42.6	0.5	7.7	7	99.9	65
703	9.3	42.1	0.5	8.1	7	99.9	65
704	10.1	42.1	0.5	8.8	7	99.9	65
705	9.5	43.0	0.4	8.3	7	99.9	65
706	8.1	43.1	0.3	7.1	7	99.9	65
707	6.7	39.4	0.7	5.9	24	99.3	52
708	8.3	39.7	0.6	7.3	24	99.3	52
709	6.4	39.1	0.4	5.6	24	99.3	52
710	7.1	37.2	0.3	6.2	24	99.3	52
711	7.8	37.7	0.0	6.8	24	99.3	52
712	8.2	39.0	0.2	7.1	24	99.3	52
713	10.1	40.3	0.6	8.8	24	99.3	52
714	8.3	40.8	0.6	7.3	24	99.3	52
715	7.3	38.1	0.5	6.4	24	99.3	52
716	7.4	38.9	0.4	6.5	24	99.3	52
717	7.4	39.8	0.5	6.5	24	99.3	52
718	9.3	38.8	0.6	8.2	24	99.3	52
719	9.7	36.8	0.5	8.4	24	99.3	52
720	8.2	36.7	0.6	7.1	24	99.3	52
721	8.6	39.5	0.6	7.5	24	99.3	52
722	10.8	38.9	0.6	9.4	24	99.3	52
723	10.2	38.2	0.6	9.0	24	99.3	52
724	8.4	37.8	0.5	7.3	24	99.3	52
725	8.8	37.9	0.5	7.7	24	99.3	52
726	7.4	35.7	0.7	6.5	24	99.3	52
727	7.7	35.7	0.5	6.7	24	99.3	52
728	7.7	37.1	0.5	6.8	24	99.3	52
729	8.4	37.2	0.7	7.3	24	99.3	52
730	9.5	40.0	0.7	8.3	24	99.3	52
731	9.8	38.5	0.6	8.6	24	99.3	52
732	9.7	38.6	0.6	8.5	24	99.3	52
733	9.3	39.6	0.7	8.2	24	99.3	52
734	8.3	41.9	0.7	7.2	24	99.3	52
735	8.6	38.8	0.8	7.5	24	99.3	52
736	8.5	38.4	0.7	7.4	24	99.3	52
737	8.1	36.4	0.7	7.1	24	99.3	52
738	6.6	36.2	0.4	5.7	24	99.3	52
739	5.0	36.3	0.4	4.4	24	99.3	52
740	5.8	37.8	0.5	5.0	24	99.3	52
741	6.4	38.5	0.6	5.6	24	99.3	52
742	6.1	43.0	0.5	5.4	24	99.3	52
743	6.1	42.6	0.5	5.3	24	99.3	52
744	5.7	36.9	0.5	5.0	24	99.3	52
745	6.1	39.4	0.7	5.3	24	99.3	52
746	6.6	41.6	0.6	5.8	24	99.3	52
747	7.2	40.5	0.5	6.3	24	99.3	52

Table E.02 Measurement data - Background

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
748	6.4	37.4	0.5	5.6	24	99.3	52
749	7.3	38.8	0.4	6.4	24	99.3	52
750	7.1	37.2	0.3	6.2	24	99.3	52
751	8.5	37.0	0.4	7.4	24	99.3	52
752	9.7	35.9	0.5	8.4	24	99.3	52
753	8.3	36.3	0.5	7.3	24	99.3	52
754	7.6	38.2	0.6	6.7	24	99.3	52
755	6.3	37.1	0.7	5.5	24	99.3	52
756	6.2	37.6	0.5	5.4	24	99.3	52
757	7.8	40.6	0.5	6.8	24	99.3	52
758	10.2	39.9	0.6	8.9	24	99.3	52
759	8.2	39.2	0.6	7.2	24	99.3	52
760	7.3	40.8	0.6	6.4	24	99.3	52
761	8.1	37.6	0.8	7.1	24	99.3	52
762	8.4	38.3	0.7	7.3	24	99.3	52
763	9.9	39.1	0.6	8.6	24	99.3	52
764	8.8	40.2	0.9	7.7	24	99.3	52
765	7.2	42.4	0.8	6.3	24	99.3	52
766	6.5	39.1	0.7	5.7	24	99.3	52
767	5.7	41.3	0.6	5.0	24	99.3	52
768	7.2	44.5	0.6	6.3	24	99.3	52
769	7.9	44.3	0.7	6.9	24	99.3	52
770	7.8	42.4	0.6	6.8	24	99.3	52
771	7.8	41.7	0.5	6.8	24	99.3	52
772	8.1	40.6	0.6	7.1	24	99.3	52
773	8.1	39.8	0.5	7.1	24	99.3	52
774	8.5	39.6	0.6	7.5	24	99.3	52
775	7.9	42.3	0.7	6.9	24	99.3	52
776	7.0	37.2	0.6	6.2	24	99.3	52
777	7.2	38.1	0.7	6.3	24	99.3	52
778	8.2	38.4	0.8	7.2	24	99.3	52
779	7.6	38.9	0.7	6.6	24	99.3	52
780	10.4	38.5	0.8	9.1	24	99.3	52
781	9.6	37.5	0.7	8.4	24	99.3	52
782	9.2	38.8	0.6	8.1	24	99.3	52
783	8.6	38.9	0.8	7.5	24	99.3	52
784	8.7	39.7	0.9	7.6	24	99.3	52
785	9.0	41.8	0.9	7.9	24	99.3	52
786	7.0	41.2	0.7	6.1	24	99.3	52
787	5.7	40.3	0.5	5.0	24	99.3	52
788	7.2	42.0	0.6	6.3	24	99.3	52
789	8.3	42.8	0.6	7.2	24	99.3	52
790	6.3	37.8	0.5	5.5	24	99.3	52
791	5.7	37.8	0.6	5.0	24	99.3	53
792	5.6	37.6	0.4	4.9	24	99.3	53
793	6.7	38.3	0.5	5.9	24	99.3	53
794	6.5	42.3	0.7	5.7	24	99.3	53
795	4.7	38.1	0.8	4.1	24	99.3	53
796	4.1	41.4	0.5	3.6	24	99.3	53
797	6.6	38.8	0.4	5.8	24	99.3	53
798	6.2	39.8	0.7	5.4	24	99.3	53
799	6.6	37.0	0.6	5.8	24	99.3	53
800	7.0	36.1	0.4	6.1	24	99.3	53
801	9.8	38.9	0.4	8.5	24	99.3	53
802	8.7	38.1	0.7	7.6	24	99.3	53
803	7.1	42.4	0.6	6.2	24	99.3	52
804	7.1	42.4	0.5	6.2	24	99.3	52
805	5.6	38.9	0.6	4.9	24	99.3	52
806	7.0	39.6	0.6	6.1	24	99.3	52
807	9.0	41.0	0.6	7.9	24	99.3	52
808	9.1	42.6	0.6	7.9	24	99.3	52
809	6.6	42.5	0.7	5.8	24	99.3	52
810	6.3	39.7	0.6	5.5	24	99.3	52
811	7.0	39.7	0.5	6.1	24	99.3	52
812	7.1	43.1	0.6	6.2	24	99.3	52
813	8.5	41.6	0.7	7.4	24	99.3	52
814	8.1	37.3	0.6	7.1	24	99.3	52
815	6.9	38.2	0.6	6.0	24	99.3	52
816	7.8	40.0	0.6	6.8	24	99.3	52
817	6.4	37.9	0.7	5.6	24	99.3	52
818	8.2	38.0	0.7	7.2	24	99.3	52
819	9.6	36.2	0.7	8.4	24	99.3	52
820	10.0	36.6	0.7	8.7	24	99.3	52
821	10.0	35.9	0.6	8.7	24	99.2	53
822	8.8	41.9	0.7	7.7	24	99.2	53
823	10.2	41.4	0.5	8.9	24	99.2	53
824	10.4	42.4	0.5	9.1	24	99.2	53
825	10.1	42.3	0.7	8.8	24	99.2	53
826	8.4	41.1	0.7	7.4	24	99.2	53
827	7.1	45.5	0.6	6.2	24	99.2	53
828	8.9	43.6	0.7	7.8	24	99.2	53
829	8.1	38.6	0.8	7.0	24	99.2	53
830	7.7	39.1	0.9	6.7	24	99.2	53

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
831	7.6	39.1	0.4	6.6	24	99.2	53
832	8.8	37.7	0.6	7.7	24	99.2	53
833	7.6	39.4	0.6	6.6	24	99.3	53
834	6.2	40.2	0.6	5.4	24	99.3	53
835	5.2	39.2	0.6	4.5	24	99.3	53
836	5.2	36.9	0.6	4.5	24	99.3	53
837	5.8	41.4	0.6	5.1	24	99.3	53
838	6.1	37.2	0.8	5.3	24	99.3	53
839	5.3	40.5	0.6	4.6	24	99.3	53
840	4.8	37.1	0.6	4.2	24	99.3	53
841	5.7	39.7	0.7	5.0	24	99.3	53
842	5.5	37.8	0.5	4.8	24	99.3	53
843	5.0	36.5	0.5	4.4	24	99.3	53
844	5.1	35.3	0.5	4.5	24	99.3	53
845	5.2	36.9	0.4	4.6	24	99.3	54
846	6.1	38.5	0.4	5.3	24	99.3	54
847	6.9	37.9	0.4	6.0	24	99.3	54
848	9.6	39.7	0.5	8.4	24	99.3	54
849	9.7	40.7	0.5	8.5	24	99.3	54
850	8.3	41.9	0.5	7.3	24	99.3	54
851	8.2	39.6	0.5	7.2	24	99.3	53
852	8.7	39.5	0.7	7.6	24	99.3	53
853	7.4	40.5	0.6	6.4	24	99.3	53
854	7.9	48.1	0.6	6.9	24	99.3	53
855			0.5	6.6	24	99.2	55
856	7.7	43.9	0.5	6.7	24	99.2	55
857	10.0	44.4	0.6	8.8	24	99.2	55
858	8.1	42.8	0.7	7.1	24	99.2	55
859	5.5	43.2	0.6	4.8	24	99.2	55
860	8.0	43.0	0.8	7.0	24	99.2	55
861	7.9	42.5	0.8	6.9	24	99.2	55
862	7.3	42.3	0.5	6.4	24	99.2	55
863	8.6	42.6	0.5	7.5	24	99.2	55
864	8.2	43.9	0.4	7.2	24	99.2	55
865	9.9	42.7	0.4	8.7	24	99.2	55
866	8.7	45.1	0.5	7.6	24	99.2	55
867	9.3	45.1	0.6	8.1	24	99.2	55
868	7.4	43.6	0.6	6.4	24	99.2	55
869	6.9	42.2	0.6	6.0	24	99.2	55
870	8.6	42.8	0.6	7.6	24	99.2	55
871	7.8	41.6	0.5	6.8	24	99.2	55
872	7.7	42.1	0.6	6.8	24	99.2	55
873	7.4	43.1	0.6	6.5	24	99.2	55
874	6.1	43.6	0.6	5.3	24	99.2	55
875	7.2	43.5	0.6	6.3	24	99.2	55
876	7.4	44.9	0.6	6.4	24	99.2	55
877	7.6	42.5	0.6	6.6	24	99.2	55
878	12.1	41.9	0.7	10.5	24	99.2	55
879	10.2	41.5	0.5	8.9	24	99.2	54
880	10.9	37.3	0.6	9.5	24	99.2	54
881	9.8	41.7	0.6	8.6	24	99.2	54
882	8.3	42.0	0.6	7.2	24	99.2	54
883	8.7	38.7	0.5	7.6	24	99.2	54
884	7.2	38.7	0.6	6.3	24	99.2	55
885	7.5	37.6	0.7	6.6	24	99.2	55
886	8.9	39.2	0.6	7.8	24	99.2	55
887	8.1	39.6	0.5	7.1	24	99.2	55
888	6.1	38.8	0.5	5.3	24	99.2	55
889	7.7	35.8	0.5	6.7	24	99.2	55
890	7.0	36.4	0.5	6.1	24	99.2	55
891	6.2	35.2	0.4	5.4	24	99.2	55
892	5.9	34.6	0.5	5.2	24	99.2	55
893	5.4	34.2	0.6	4.7	24	99.2	55
894	5.5	34.8	0.5	4.8	24	99.2	55
895	5.0	35.9	0.4	4.4	24	99.2	55
896	7.7	37.4	0.3	6.8	25	99.2	54
897	7.8	36.2	0.6	6.9	25	99.2	54
898	6.7	37.0	0.6	5.9	25	99.2	54
899	7.2	36.9	0.5	6.3	25	99.2	54
900	7.7	39.1	0.4	6.7	25	99.2	54
901	6.6	39.2	0.5	5.8	25	99.2	54
902	8.4	39.4	0.6	7.3	25	99.2	54
903	9.7	37.9	0.5	8.5	25	99.2	54
904	9.9	38.9	0.6	8.7	25	99.2	54
905	7.7	39.0	1.1	6.7	25	99.2	54
906	7.4	42.1	0.8	6.4	25	99.2	54
907	9.0	41.1	0.7	7.9	25	99.2	54
908	9.5	39.8	0.7	8.3	25	99.2	54
909	8.7	41.5	0.5	7.6	25	99.2	54
910	7.0	45.0	0.9	6.1	25	99.2	54
911	5.8	40.1	0.7	5.0	25	99.2	54
912	7.6	37.8	0.6	6.6	25	99.2	54
913	7.3	38.2	0.4	6.4	25	99.2	54

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
914	7.3	39.2	0.8	6.4	25	99.2	54
915	8.6	39.4	0.6	7.5	25	99.2	54
916	8.5	42.5	0.5	7.4	25	99.2	54
917	8.1	40.1	0.8	7.1	25	99.2	54
918	9.5	38.6	0.7	8.3	25	99.2	54
919	9.9	40.1	0.5	8.6	25	99.2	54
920	9.8	40.4	0.4	8.5	25	99.2	54
921	10.1	41.6	0.5	8.8	25	99.2	54
922	11.8	41.8	0.5	10.3	25	99.2	54
923	7.3	42.0	0.6	6.4	25	99.2	54
924	9.0	41.9	0.6	7.8	25	99.2	54
925	7.8	45.3	0.6	6.9	25	99.2	54
926	7.0	44.6	0.7	6.1	25	99.2	55
927	6.0	38.0	0.6	5.2	25	99.2	55
928	7.4	40.5	0.5	6.5	25	99.2	55
929	7.8	43.8	0.4	6.9	25	99.2	55
930	6.2	44.0	0.5	5.4	25	99.2	55
931	8.0	40.6	0.4	7.0	25	99.2	55
932	9.8	42.4	0.4	8.5	25	99.2	55
933	8.4	42.5	0.6	7.3	25	99.2	54
934	7.7	39.5	0.7	6.7	25	99.2	54
935	6.5	40.5	0.7	5.7	25	99.2	54
936	8.5	40.1	0.6	7.4	25	99.2	54
937	8.3	39.1	0.6	7.3	25	99.2	54
938	6.5	38.1	0.7	5.7	25	99.2	55
939	7.6	40.1	0.7	6.6	25	99.2	55
940	7.4	43.3	0.4	6.5	25	99.2	55
941	9.0	41.3	0.5	7.9	25	99.2	55
942	9.5	40.9	0.8	8.3	25	99.2	55
943	9.5	41.2	0.6	8.3	25	99.2	55
944	8.5	40.9	0.5	7.4	25	99.2	55
945	8.2	42.2	0.6	7.2	25	99.2	55
946	11.7	41.8	0.7	10.2	25	99.2	55
947	12.2	40.6	0.7	10.7	25	99.2	55
948	8.9	41.6	0.6	7.8	25	99.2	55
949	9.2	44.7	0.7	8.0	25	99.2	55
950			0.8	8.0	25	99.2	55
951	10.1	43.4	0.7	8.8	25	99.2	55
952	10.6	45.2	0.9	9.3	25	99.2	55
953	9.3	41.3	0.8	8.1	25	99.2	55
954	8.0	41.1	0.6	7.0	25	99.2	55
955	7.8	42.7	0.5	6.8	25	99.2	55
956	6.6	40.7	0.5	5.8	25	99.2	55
957	6.1	39.5	0.6	5.3	25	99.2	55
958	6.0	41.6	0.6	5.2	25	99.2	55
959	9.8	39.3	0.9	8.5	25	99.2	55
960	9.1	39.4	0.6	8.0	25	99.2	55
961	9.7	40.3	0.6	8.5	25	99.2	55
962	9.4	40.6	0.7	8.2	25	99.2	55
963	9.5	40.9	0.6	8.3	25	99.2	54
964	9.3	39.4	0.6	8.1	25	99.2	54
965	8.7	38.6	0.6	7.6	25	99.2	54
966	10.1	39.5	0.7	8.8	25	99.2	54
967	10.3	40.9	0.6	9.0	25	99.2	54
968	10.1	39.6	0.7	8.9	25	99.2	54
969	6.9	40.6	0.6	6.0	25	99.2	54
970	8.3	42.7	0.6	7.2	25	99.2	54
971			0.6	8.6	25	99.2	54
972	8.5	43.9	0.6	7.5	25	99.2	54
973	12.1	41.9	0.6	10.6	25	99.2	54
974	11.9	43.1	0.5	10.4	25	99.2	54
975	10.1	40.4	0.6	8.8	25	99.2	54
976	9.9	37.6	0.5	8.7	25	99.2	54
977	8.3	39.7	0.5	7.2	25	99.2	54
978	8.5	41.8	0.6	7.4	25	99.2	54
979	8.1	43.6	0.6	7.1	25	99.2	54
980	9.7	43.6	0.5	8.5	25	99.2	54
981	7.1	40.2	0.4	6.2	25	99.2	55
982	7.4	38.0	0.4	6.5	25	99.2	55
983	7.8	38.4	0.5	6.8	25	99.2	55
984	6.8	37.7	0.3	5.9	25	99.2	55
985	8.2	41.5	0.6	7.2	25	99.2	55
986	9.8	40.1	0.8	8.5	25	99.2	54
987	8.3	38.9	0.6	7.2	25	99.2	54
988	9.4	38.7	0.8	8.2	25	99.2	54
989	11.3	39.6	0.7	9.9	25	99.2	54
990	11.3	40.9	0.7	9.9	25	99.2	54
991	11.3	41.6	0.6	9.9	25	99.2	54
992	9.8	42.7	0.8	8.6	25	99.2	54
993	12.1	44.5	0.8	10.6	25	99.2	54
994	12.4	44.7	0.7	10.8	25	99.2	54
995			0.6	9.5	25	99.2	54
996			0.6	8.7	25	99.2	54

Table E.02 Measurement data - Background

Project: Jericho Wind Power Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 4/26/2018

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
997			0.6	11.9	25	99.2	54
998			0.6	10.8	25	99.2	54
999	9.5	42.5	0.7	8.3	25	99.2	53
1000	12.3	45.2	0.7	10.7	25	99.2	53
1001			0.7	9.3	25	99.2	53
1002			0.7	7.6	25	99.2	53
1003			0.5	8.4	25	99.2	53
1004	8.6	44.8	0.5	7.5	25	99.2	54
1005	6.6	43.9	0.5	5.8	25	99.2	54
1006	9.5	40.6	0.5	8.3	25	99.2	54
1007	9.5	40.2	0.9	8.3	25	99.2	54
1008			0.8	8.0	25	99.2	54
1009	8.6	42.4	0.8	7.5	25	99.2	54
1010	8.5	41.5	0.7	7.4	25	99.2	54
1011	9.6	41.1	0.4	8.4	26	99.2	54
1012	8.3	44.1	0.7	7.2	26	99.2	54
1013	7.9	41.9	0.7	6.9	26	99.2	54
1014	9.8	42.0	0.6	8.6	26	99.2	54
1015	10.1	39.6	0.8	8.8	26	99.2	54
1016	8.3	41.2	0.8	7.2	26	99.2	53
1017	7.4	40.9	0.7	6.5	26	99.2	53
1018	9.6	42.7	0.8	8.4	26	99.2	53
1019	10.6	42.9	0.6	9.2	26	99.2	53
1020	9.5	44.0	0.6	8.3	26	99.2	53
1021	10.7	43.0	0.6	9.4	26	99.2	53
1022			0.5	9.7	26	99.2	53
1023	12.4	43.5	0.8	10.8	26	99.2	53
1024	12.0	43.4	0.7	10.5	26	99.2	53
1025	9.8	44.4	0.6	8.5	26	99.2	53
1026			0.6	7.9	26	99.2	53
1027			0.6	9.9	26	99.2	53
1028	13.4	41.1	0.7	11.7	26	99.2	52
1029	11.3	41.1	0.7	9.9	26	99.2	52
1030			0.6	9.0	26	99.2	52
1031			0.5	8.2	26	99.2	52
1032	9.4	45.5	0.4	8.2	26	99.2	52
1033	8.6	43.3	0.5	7.5	26	99.2	52
1034			0.6	6.8	26	99.2	53
1035			0.9	9.0	26	99.2	51
1036	8.3	47.8	0.5	7.3	26	99.2	51
1037	8.0	44.4	0.5	7.0	26	99.2	51
1038	8.7	44.4	0.6	7.6	26	99.2	51
1039	8.0	44.8	0.7	7.0	26	99.2	51
1040	8.9	44.3	0.7	7.8	26	99.2	51
1041	9.9	44.9	0.9	8.6	26	99.2	52
1042	9.3	45.6	0.8	8.2	26	99.2	52
1043	9.5	44.5	0.5	8.3	26	99.2	52
1044	11.1	44.6	0.6	9.7	26	99.2	52
1045	10.9	44.2	0.5	9.6	26	99.2	52
1046	8.3	43.2	0.6	7.3	26	99.2	52
1047	8.0	42.4	0.6	7.0	26	99.2	51
1048	8.9	44.0	0.5	7.8	26	99.2	51
1049	8.4	44.8	0.6	7.4	26	99.2	51
1050	13.2	44.4	0.7	11.5	26	99.2	51
1051	11.2	44.9	0.7	9.8	26	99.2	51
1052	10.4	44.6	0.7	9.1	26	99.2	51
1053			1.0	7.7	26	99.2	51
1054			0.9	6.7	26	99.2	51
1055			0.7	6.9	26	99.2	51
1056			0.8	8.6	26	99.2	51
1057			0.8	7.6	26	99.2	51
1058	8.4	44.5	0.7	7.4	26	99.2	51
1059	9.8	44.5	0.8	8.5	26	99.2	51
1060	7.6	45.0	0.8	6.7	26	99.2	51
1061	12.1	43.5	0.9	10.6	26	99.2	51
1062			0.9	9.6	26	99.2	51
1063			0.8	10.8	26	99.2	51
1064			0.7	8.7	26	99.2	51
1065			0.7	8.1	26	99.2	51
1066	12.0	44.3	0.7	10.5	26	99.2	51
1067	11.5	44.1	0.7	10.1	26	99.2	51
1068	9.6	45.0	0.7	8.4	26	99.2	51
1069	9.0	44.6	0.9	7.9	26	99.2	51
1070	10.2	45.1	0.8	8.9	26	99.2	51
1071	13.8	45.8	0.9	12.1	26	99.2	51
1072			0.8	12.6	26	99.2	51
1073			0.5	9.3	26	99.2	51
1074			0.4	10.2	26	99.2	51
1075			0.7	8.6	26	99.2	51
1076	9.5	44.0	0.6	8.3	26	99.2	51
1077	10.3	44.6	0.6	9.0	26	99.2	52
1078			0.7	7.2	26	99.2	52
1079	8.3	45.6	0.7	7.3	26	99.2	52

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1080			0.7	7.2	26	99.2	52
1081			0.6	8.1	26	99.2	52
1082	8.8	45.9	0.8	7.7	26	99.2	52
1083			0.7	7.2	26	99.2	52
1084	7.4	44.5	0.6	6.5	26	99.2	52
1085	5.9	44.6	0.6	5.1	26	99.2	52
1086	4.9	44.6	0.5	4.3	26	99.2	52
1087			0.4	8.1	26	99.2	52
1088	9.9	44.7	0.3	8.7	26	99.2	52
1089	9.4	43.2	0.5	8.3	26	99.2	52
1090	9.8	44.7	0.7	8.5	26	99.2	52
1091	8.9	43.6	0.7	7.8	26	99.2	52
1092	10.3	44.0	0.7	9.0	26	99.2	52
1093	8.5	45.0	0.7	7.5	26	99.2	52
1094	8.4	44.6	0.6	7.4	26	99.2	52
1095	9.8	44.5	0.5	8.6	26	99.2	52
1096	10.3	45.2	0.6	9.0	26	99.2	52
1097	8.5	45.4	0.5	7.4	26	99.2	52
1098			0.7	9.5	26	99.2	52
1099			0.6	9.5	26	99.2	52
1100	9.5	44.1	0.7	8.3	26	99.2	52
1101	10.8	44.4	0.6	9.5	26	99.2	52
1102	9.0	45.0	0.7	7.8	26	99.2	52
1103	7.6	44.8	0.5	6.6	26	99.2	52
1104	7.5	45.2	0.4	6.5	26	99.2	52
1105	8.8	45.1	0.4	7.7	26	99.2	52
1106	11.4	43.8	0.5	10.0	26	99.2	52
1107	10.7	43.9	0.5	9.3	26	99.2	52
1108	9.0	44.0	0.7	7.9	26	99.2	52
1109	6.7	43.6	0.6	5.9	26	99.2	52
1110	8.4	43.7	0.5	7.3	26	99.2	52
1111	8.2	44.1	0.6	7.2	26	99.2	52
1112			0.5	8.7	26	99.2	52
1113	6.8	45.3	0.5	5.9	26	99.2	52
1114	6.9	43.9	0.5	6.0	26	99.2	52
1115	10.1	44.0	0.8	8.9	26	99.2	52
1116	11.6	44.4	0.8	10.2	26	99.2	52
1117	8.5	45.2	0.7	7.4	26	99.2	52
1118	12.1	45.5	0.8	10.6	26	99.2	52
1119			0.6	10.3	26	99.2	52
1120	9.6	44.9	0.6	8.4	26	99.2	52
1121	8.1	45.6	0.6	7.1	26	99.2	52
1122	10.1	46.0	0.6	8.9	26	99.2	52
1123	9.1	45.3	0.5	7.9	26	99.2	52
1124	8.3	44.1	0.5	7.2	26	99.2	52
1125	6.3	45.5	0.5	5.5	26	99.2	52
1126	6.6	43.8	0.4	5.7	26	99.2	52
1127	7.2	43.7	0.5	6.3	26	99.2	52
1128	7.7	43.3	0.9	6.8	26	99.2	52
1129	9.9	43.4	0.6	8.6	26	99.2	52
1130	9.1	43.7	0.4	7.9	26	99.2	52
1131	9.4	44.1	0.5	8.2	26	99.2	51
1132	10.4	43.3	0.6	9.1	26	99.2	51
1133	9.6	44.6	0.8	8.4	26	99.2	51
1134			1.0	8.3	26	99.2	51
1135			0.7	6.8	26	99.2	51
1136			0.6	8.8	26	99.2	51
1137			0.5	10.2	26	99.1	51
1138			0.5	8.8	26	99.1	51
1139			0.4	6.7	26	99.1	51
1140			0.6	7.2	26	99.1	51
1141			0.6	8.6	26	99.1	51
1142	8.4	45.9	0.7	7.4	26	99.1	51
1143			0.7	6.7	26	99.2	51
1144	8.5	45.5	0.5	7.4	26	99.2	51
1145	10.6	44.5	0.5	9.3	26	99.2	51
1146	9.2	44.6	0.5	8.0	26	99.2	51
1147	8.8	43.7	0.5	7.7	26	99.2	51
1148	10.4	44.5	0.5	9.1	26	99.2	51
1149	12.2	43.5	0.4	10.7	26	99.2	51
1150	12.3	43.8	0.7	10.7	26	99.2	51
1151			0.8	9.1	26	99.2	51
1152			0.8	8.4	26	99.2	51
1153			0.5	7.3	26	99.2	51
1154			0.6	9.5	26	99.2	51
1155	9.7	49.7	0.6	8.5	26	99.2	50
1156	10.6	45.0	0.5	9.3	26	99.2	50
1157	8.7	44.5	0.5	7.6	26	99.2	50
1158	7.4	44.2	0.5	6.5	26	99.2	50
1159	7.5	44.8	0.6	6.6	26	99.2	50
1160	8.3	43.3	0.5	7.3	26	99.2	50
1161	9.7	41.7	0.7	8.5	26	99.2	51
1162	10.6	41.6	0.7	9.2	26	99.2	51

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

Data Point #	Standardized Wind Speed	LAeq	Rotor RPM	10m Anemometer Wind Speed (m/s)	Air Temperature (-C)	Pressure (kPa)	Relative Humidity (%)
1163	9.3	40.5	0.9	8.1	26	99.2	51
1164	13.2	43.1	0.8	11.6	26	99.2	51
1165	13.4	43.9	0.9	11.7	26	99.2	51
1166	10.0	44.3	0.9	8.7	26	99.2	51
1167			0.8	6.6	26	99.1	51
1168	8.7	43.0	0.5	7.6	26	99.1	51
1169	9.3	44.4	0.5	8.1	26	99.1	51
1170			0.4	6.7	26	99.1	51
1171	7.7	44.5	0.4	6.8	26	99.1	51
1172	9.3	44.3	0.6	8.1	26	99.1	51
1173	8.1	44.0	0.7	7.1	26	99.2	51
1174	11.3	43.4	0.7	9.9	26	99.2	51
1175	12.8	44.6	0.7	11.2	26	99.2	51
1176	9.1	44.8	0.7	8.0	26	99.2	51
1177			0.6	8.4	26	99.2	51
1178	9.8	43.7	0.8	8.6	26	99.2	51
1179	9.1	43.4	0.7	7.9	26	99.1	50
1180	9.8	40.9	0.6	8.6	26	99.1	50
1181	9.4	41.7	0.6	8.2	26	99.1	50
1182	7.0	41.7	0.5	6.1	26	99.1	50
1183	7.2	42.4	0.3	6.3	26	99.1	50
1184	7.8	40.6	0.4	6.8	26	99.1	50
1185	7.6	39.9	0.5	6.7	26	99.1	50
1186	10.4	40.0	0.5	9.1	26	99.1	50
1187	7.8	40.6	0.6	6.8	26	99.1	50
1188	7.8	38.0	0.5	6.8	26	99.1	50
1189	8.3	39.5	0.6	7.2	26	99.1	50
1190	6.9	40.5	0.6	6.1	26	99.1	50
1191	6.4	41.1	0.4	5.6	26	99.1	50
1192	5.6	41.7	0.6	4.9	26	99.1	50
1193	7.5	41.5	0.5	6.6	26	99.1	50
1194	10.5	40.4	0.5	9.2	26	99.1	50
1195	9.6	39.5	0.6	8.4	26	99.1	50
1196	10.1	41.6	0.5	8.8	26	99.1	50
1197	6.4	43.5	0.5	5.6	26	99.1	50
1198	6.1	41.5	0.7	5.3	26	99.1	50
1199	7.2	41.0	0.5	6.3	26	99.1	50
1200			0.5	6.6	26	99.1	50
1201	7.1	42.0	0.5	6.2	26	99.1	50
1202	6.4	41.0	0.5	5.6	26	99.1	50
1203	6.5	39.8	0.5	5.7	26	99.1	50
1204	10.0	39.6	0.7	8.8	26	99.1	50
1205	11.1	38.8	0.7	9.7	26	99.1	50
1206	9.7	39.3	0.7	8.5	26	99.1	50
1207	9.5	39.1	0.6	8.3	26	99.1	50
1208	8.3	39.2	0.4	7.2	26	99.1	50
1209	7.1	40.0	0.5	6.2	26	99.1	49
1210	6.5	39.9	0.4	5.7	26	99.1	49
1211							
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Appendi xF
Note on anemometer position with IEC 61400-11 Ed 2.1 and Ed 3.0

Note N6.040.17

Note on anemometer position with IEC 61400-11 editions 2.1 and 3.0

Author: Bo Søndergaard

Project number: 35.6539.01
Date: 7/11/2017
Project manager: Bo Søndergaard
Controlled by: -

To : Aercoustics Engineering Limited
Att.: Payam Ashtiani

From : Bo Søndergaard

1. Purpose

In the capacity of convenor for Maintenance Team 11, the workgroup in charge of IEC 61400-11, since 2006, I have been asked to provide background information, and comment on the consequences of changing the anemometer position when going from edition 2.1 to edition 3, and the recommended method for using measurements based on edition 2.1 for an analysis with edition 3.

2. Comment

There are several differences between IEC 61400-11 standard edition 2.1 (November 2006) and edition 3.0 (November 2012). In particular, the general data treatment procedures for noise levels, and the tonality assessment were changed to keep up with the changes in wind turbine design at the time.

However, since edition 1.0 (1998), very few changes have been made to the IEC 61400-11 standard with respect to the measurement setup. In edition 1.0 the prescribed position of the anemometer was upwind (2 to 4 rotor diameters) as it was allowed to use the anemometer for determination of the standardized wind speed with the wind turbine running. At that time the distances were smaller and this setup is maintained in Annex F on small wind turbines in edition 3. Editions 2.0 and 2.1, still allowed such use of the anemometer

In Germany, modified versions of IEC 61400-11 edition 2 were introduced by the FGW. In revision 15 (from 2004), using the power for determination of the standardized wind speed was mandatory. In revision 16 (from 2005), it was stated that the position of the anemometer can deviate from the requirements in IEC 61400-11 edition 2, without specifying position requirements. Germany has had a strong influence on the development of the IEC 61400-11 standard through the experience from several measuring companies and German authorities. The decision to allow alternative positions for the anemometer is very representative of the situation. It is difficult to set up general requirements for the position of the anemometer that works at all sites. As such, it makes sense to allow for an expert

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judgement on the anemometer position in a given situation. In the Danish regulations, it is stated that the anemometer has to be close to the wind turbine in a position where neither the wind turbine nor objects in the terrain is expected to influence the wind speed measurements.

The German and Danish considerations on the position of the anemometer is based on the fact that the dominating background noise at the microphone position can be more or less dependent on wind speed; and can be generated by vegetation upwind, downwind or to the side of the wind turbine. This is often reflected in background noise with a weak dependence on wind speed.

Maintenance Team 11, responsible for revising IEC 61400-11, discussed this issue and there was a strong support from the measurement institutes for using the nacelle anemometer for background noise measurements. In most cases, this would give a reasonable correlation between wind speed and background noise. The nacelle anemometer is not influenced by terrain and represents, to a reasonable degree, the wind in the surroundings. However, the manufacturers argued that the nacelle anemometer might not be a part of future designs and could not be guaranteed. There was a general agreement that it was difficult to decide on an optimum position, but in most cases, downwind and to the side would make sense, resulting in Figure 5 of edition 3.0. The position of the anemometer is not considered an important issue and the wording is “guidance” and “acceptable” and not a stronger wording like “shall”. This is a deliberate decision by the Maintenance Team 11 to ensure flexibility when other choices make more sense.

The recommended method when using measurements made according to IEC 61400-11 edition 2.1 for analysis with IEC 61400-11 edition 3.0 is to use the nacelle anemometer for the background noise. This will work well in most cases. Alternatively, to use the measured wind speed at 10 m height if there is no strong influence from the background noise (e.g. when signal to noise ratio is better than 6 dB).

SWECO Danmark A/S

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Appendix G
Information for Regulator

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E-Audit Checklist

(2017 Compliance Protocol AF5): E-Audit checklist

Wind Energy Project – Screening Document – Acoustic Audit Report – Emmission IEC61400-11 Standard

Information Required in the Acoustic Audit Report – Immission

Item #	Description	Complete?	Comment
1	Characterization of the wind turbine Items 1 to 26; IEC61400-11:2013, Section 10.2	✓	
2	Physical environment Items 27 to 33; IEC61400-11:2013, Section 10.3, Physical Environment	✓	
3	Measurement instrumentation Items 34 to 39; IEC61400-11:2013, Section 10.4, Instrumentation	✓	
4	Acoustic data Items 40 to 52; IEC61400-11:2013, Section 10.5, Acoustic Data	✓	
5	Non-acoustic data Items 50 to 53, and 56; IEC61400-11:2003 Section 10.6, Non-Acoustic Data Items 59 and 60; NPC-233, Section 12.3, Acoustic Audit – Acoustical Data, bullet point number 8, All necessary and supporting calculations	✓	
6	Uncertainty the apparent sound power level at integer wind speeds one-third octave band spectrum of the noise at the reference position at each integer wind speed the Tonality of the sound emissions of the wind turbine measured at the reference position	✓	
7	Additional information Item 60; NPC-233, Section 10, Report Format, bullet point number 4, Conclusions and Recommendations Item 61; NPC-233, Section 12.3, Acoustic Audit – Acoustical Data, bullet point number 8, All necessary and supporting calculations Item 62; NPC-233, Section 12.3, Acoustic Audit – Acoustical Data, bullet point number 3, Details of measurement procedure	✓	All data Excel sheet provided
8	Items 68 to 72; IEC61400-11:2013, Section 10.5, Acoustic Data	⊘	Items 68 to 72 acoustic data as per IEC 61400-11 standard are optional; low frequency noise, infrasound, impulsivity, amplitude modulation not reported
9	Non-acoustic data Items 73 to 74 are from IEC61400-11:2013, Section 10.6, Non-Acoustic Data	⊘	Items 73 to 74 non-acoustic data as per IEC 64100-11 standard are optional; turbulence intensity during acoustic meeasurements not reported

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Sample Calculation

Allowed Range from Power Curve and Required Wind Speeds

Sample Calculation: Allowed range of power curve and required wind speeds

Project: Jericho Wind Energy Centre - Turbine T03 - IEC 61400-11 Measurement

Report ID: 14462.00.T03.RP5

Created on: 3/1/2018

Power Curve & Required Wind Speeds		
Power Curve Tolerance	1%	
Acceptable range min	3	m/s
Acceptable range max	9	m/s
Min allowable range	3	m/s
Max allowable range	9	m/s
Power Output	1620	kW
85% Power	1377	kW
Corresponding wind speed	8.61	m/s
Minimum bin	7.0	m/s
Maximum bin	11.0	m/s

Power Curve Hub Wind Speed (m/s)	Power [kW]	+ value = acceptable slope of power curve
0	**0**	-32.4
1	0	-32.4
2	0	-28.4
3	4	60.6
4	97	150.6
5	280	214.6
6	527	277.6
7	837	347.6
8	1217	228.6
9	1478	86.6
10	1597	-9.4
11	1620	-32.4
12	1620	-32.4
13	1620	-32.4
14	1620	-32.4
15	1620	-32.4
16	1620	-32.4
17	1620	-32.4
18	1620	-32.4
19	1620	-32.4
20	1620	-32.4
21	1620	-32.4
22	1620	-32.4
23	1620	-32.4
24	1620	-32.4
25	1620	

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Sample Calculation

K_{nac} and K_z

[as per IEC 61400-11 Edition 3.0 Section 8.2.1.2 and Section 8.2.2]

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Sample calculations have been based on measurement data collected and reported for Jericho Wind Farm (Report ID: 14662.00.T03.R4)

For all data points with power levels from the allowed range of the power curve, the average value of the ratio of the wind speed derived from the power curve $V_{P,n}$ and the measured nacelle wind speed $V_{nac,m}$, k_{nac}, is derived as per equation (1). Information to calculate k_{nac} is provided in Table 1.

$$k_{nac} = \frac{1}{n}\left(\sum_{i=1}^{n}\left(\frac{v_{p,n}}{v_{nac,m}}\right)_i\right) \qquad (1)$$

where

$V_{nac,m}$ is measured nacelle wind speed

K_{nac} is nacelle k-factor

$V_{P,n}$ is wind speed derived from the power curve

k_{nac} = 1.0079

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Table 1 - Information to calculate K_{nac}

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1	1	994	7.41	1		7.75	
2	1	1160	7.85	1		8.40	
3	1	1400	8.70	1		9.19	
4	1	1561	9.70	0		9.28	
5	1	1353	8.52	1		8.64	
6	1	1205	7.97	1		8.13	
7	1	1125	7.76	1		6.85	
8	1	1014	7.46	1		7.34	
9	1	968	7.35	1		7.36	
10	1	1034	7.52	1		7.53	
11	1	1080	7.64	1		8.21	
12	1	1108	7.71	1		7.84	
13	1	1040	7.53	1		7.91	
14	1	874	7.10	1		6.72	
15	1	790	6.85	1		6.48	
16	1	741	6.69	1		6.70	
17	1	759	6.75	1		6.97	
18	1	895	7.15	1		7.98	
19	1	957	7.32	1		7.72	
20	1	842	7.01	1		6.69	
21	1	786	6.83	1		7.24	
22	1	695	6.54	1		6.02	
23	1	522	5.98	1		5.27	
24	1	411	5.53	1		4.85	
25	1	371	5.37	1		4.79	
26	1	303	5.09	1		5.21	
27	1	285	5.02	1		4.98	
28	1	376	5.39	1		4.91	
29	1	424	5.58	1		5.60	
30	1	464	5.74	1		6.03	
31	1	608	6.26	1		6.30	
32	1	613	6.28	1		7.03	
33	1	620	6.30	1		6.36	
34	1	679	6.49	1		7.16	
35	1	683	6.50	1		7.19	
36	1	607	6.26	1		6.25	
37	1	469	5.76	1		6.26	
38	1	558	6.10	1		5.88	
39	1	586	6.19	1		6.22	
40	1	551	6.08	1		5.94	
41	1	437	5.64	1		5.66	
42	1	304	5.10	1		5.35	
43	1	196	4.54	1		4.86	
44	1	209	4.61	1		4.84	
45	1	221	4.68	1		5.24	
46	1	324	5.18	1		5.97	
47	1	307	5.11	1		5.20	
48	1	398	5.48	1		5.88	
49	1	537	6.03	1		7.48	
50	1	703	6.57	1		7.26	
51	1	676	6.48	1		6.34	
52	1	593	6.21	1		5.97	
53	1	625	6.32	1		7.22	
54	1	567	6.13	1		5.55	
55	1	486	5.83	1		6.34	
56	1	422	5.57	1		5.37	
57	1	320	5.16	1		5.24	
58	1	375	5.39	1		6.19	
59	1	437	5.64	1		5.85	
60	1	409	5.52	1		5.50	
61	1	393	5.46	1		4.61	
62	1	452	5.70	1		6.63	
63	1	604	6.25	1		6.42	
64	1	656	6.42	1		5.81	
65	1	648	6.39	1		6.68	
66	1	576	6.16	1		6.63	
67	1	426	5.59	1		4.67	
68	1	377	5.39	1		4.77	
69	1	373	5.38	1		4.99	
70	1	390	5.45	1		4.74	
71	1	467	5.76	1		6.27	
72	1	554	6.09	1		6.53	
73	1	647	6.39	1		6.62	
74	1	708	6.58	1		7.23	
75	1	689	6.52	1		6.71	
76	1	647	6.39	1		5.95	
77	1	643	6.37	1		6.02	
78	1	752	6.73	1		7.01	
79	1	811	6.92	1		7.54	
80	1	680	6.49	1		6.19	
81	1	757	6.74	1		8.40	
82	1	752	6.73	1		6.67	
83	1	965	7.34	1		9.11	
84	1	1321	8.40	1		10.14	
85	1	1263	8.18	1		8.24	
86	1	1208	7.98	1		8.03	
87	1	1513	9.29	0		7.95	
88	1	1455	8.91	1		8.90	
89	1	1172	7.88	1		7.81	
90	1	1069	7.61	1		7.89	
91	1	959	7.32	1		6.33	
92	1	796	6.87	1		6.30	
93	1	735	6.67	1		7.24	
94	1	723	6.63	1		7.10	
95	1	693	6.53	1		6.41	
96	1	637	6.35	1		6.07	
97	1	642	6.37	1		7.33	
98	1	612	6.27	1		6.48	
99	1	535	6.03	1		5.90	
100	1	479	5.81	1		5.25	
101	1	535	6.02	1		6.22	
102	1	606	6.26	1		6.35	
103	1	602	6.24	1		5.84	
104	1	594	6.22	1		6.11	
105	1	516	5.96	1		5.38	
106	1	413	5.54	1		5.21	
107	1	388	5.44	1		4.40	
108	1	461	5.73	1		6.12	
109	1	487	5.84	1		5.76	
110	1	464	5.74	1		5.83	
111	1	576	6.16	1		5.85	
112	1	765	6.77	1		6.36	
113	1	784	6.83	1		6.67	
114	1	707	6.58	1		6.57	
115	1	595	6.22	1		7.48	
116	1	557	6.10	1		6.02	
117	1	576	6.16	1		6.16	
118	1	645	6.38	1		8.27	
119	1	654	6.41	1		6.37	
120	1	718	6.61	1		6.81	
121	1	1128	7.77	1		7.45	
122	1	1171	7.88	1		8.43	
123	1	1173	7.88	1		7.63	
124	1	1117	7.74	1		7.75	
125	1	1005	7.44	1		7.62	
126	1	951	7.30	1		7.65	
127	1	794	6.86	1		6.75	
128	1	849	7.03	1		6.57	
129	1	880	7.11	1		6.23	
130	1	980	7.38	1		7.53	
131	1	997	7.42	1		7.47	
132	1	950	7.30	1		7.97	
133	1	1008	7.45	1		7.71	
134	1	818	6.94	1		7.04	
135	1	662	6.43	1		6.79	
136	1	552	6.08	1		6.35	
137	1	371	5.37	1		5.33	
138	1	311	5.12	1		4.44	
139	1	300	5.08	1		4.57	
140	1	389	5.44	1		4.75	
141	1	434	5.63	1		5.25	
142	1	583	6.18	1		6.99	
143	1	713	6.60	1		6.85	
144	1	674	6.47	1		6.04	
145	1	557	6.10	1		6.18	
146	1	544	6.06	1		6.76	
147	1	571	6.14	1		7.04	
148	1	591	6.21	1		6.64	
149	1	596	6.22	1		7.54	
150	1	611	6.27	1		7.09	
151	1	745	6.70	1		6.87	
152	1	703	6.57	1		6.29	
153	1	644	6.38	1		5.06	
154	1	657	6.42	1		5.82	
155	1	694	6.54	1		5.35	
156	1	996	7.42	1		8.06	
157	1	1239	8.08	1		9.87	
158	1	1173	7.88	1		8.55	
159	1	1164	7.86	1		7.71	
160	1	1083	7.65	1		7.17	
161	1	926	7.23	1		6.83	
162	1	773	6.79	1		6.44	
163	1	714	6.60	1		6.78	
164	1	888	7.13	1		7.36	
165	1	1144	7.81	1		8.53	
166	1	1011	7.46	1		5.72	
167	1	763	6.76	1		6.07	
168	1	765	6.77	1		7.55	
169	1	867	7.08	1		8.04	
170	1	986	7.39	1		7.52	
171	1	1034	7.52	1		7.93	
172	1	883	7.12	1		6.62	
173	1	656	6.42	1		5.77	
174	1	464	5.74	1		4.92	
175	1	305	5.10	1		4.53	
176	1	242	4.79	1		4.16	
177	1	321	5.17	1		4.90	
178	1	373	5.38	1		5.73	
179	1	394	5.46	1		5.06	
180	1	390	5.44	1		6.05	
181	1	334	5.22	1		4.62	
182	1	386	5.43	1		5.75	
183	1	456	5.71	1		5.91	
184	1	498	5.88	1		6.07	
185	1	545	6.06	1		7.19	
186	1	605	6.25	1		6.19	
187	1	795	6.87	1		7.71	
188	1	948	7.29	1		8.44	
189	1	1032	7.51	1		8.20	
190	1	1059	7.58	1		7.25	
191	1	1220	8.01	1		8.72	
192	1	1302	8.33	1		8.00	
193	1	1094	7.68	1		7.70	
194	1	924	7.23	1		7.01	
195	1	878	7.11	1		6.97	
196	1	875	7.10	1		7.69	
197	1	877	7.11	1		7.98	
198	1	415	5.55	1		5.99	
199	1	435	5.63	1		5.97	
200	1	414	5.54	1		5.72	
201	1	380	5.40	1		4.98	
202	1	285	5.02	1		5.07	
203	1	256	4.87	1		4.70	
204	1	341	5.25	1		5.29	
205	1	316	5.15	1		5.64	
206	1	344	5.26	1		5.81	
207	1	427	5.59	1		5.49	
208	1	526	5.99	1		6.62	
209	1	646	6.38	1		6.99	
210	1	671	6.46	1		6.58	
211	1	545	6.06	1		5.23	
212	1	438	5.64	1		5.03	
213	1	456	5.71	1		6.62	
214	1	453	5.70	1		5.06	
215	1	381	5.41	1		5.23	
216	1	483	5.82	1		6.65	
217	1	634	6.35	1		6.86	
218	1	704	6.57	1		7.39	
219	1	659	6.43	1		6.98	
220	1	624	6.31	1		6.59	
221	1	540	6.04	1		5.99	
222	1	466	5.76	1		5.20	
223	1	436	5.63	1		5.28	
224	1	443	5.66	1		5.61	
225	1	571	6.14	1		7.90	
226	1	649	6.39	1		7.31	
227	1	587	6.19	1		6.17	
228	1	782	6.82	1		7.22	
229	1	1086	7.66	1		7.70	
230	1	1298	8.31	1		7.94	
231	1	1162	7.85	1		7.14	
232	1	905	7.18	1		5.57	
233	1	856	7.05	1		6.37	
234	1	888	7.13	1		6.65	
235	1	705	6.57	1		6.44	
236	1	613	6.28	1		6.29	
237	1	620	6.30	1		6.18	
238	1	714	6.60	1		5.60	
239	1	717	6.61	1		5.53	
240	1	778	6.81	1		6.38	
241	1	1135	7.79	1		7.82	
242	1	1274	8.22	1		7.44	
243	1	1147	7.82	1		7.04	
244	1	946	7.29	1		5.78	
245	1	874	7.10	1		6.64	
246	1	892	7.14	1		5.31	
247	1	733	6.66	1		6.12	
248	1	592	6.21	1		6.56	
249	1	467	5.76	1		4.98	
250	1	316	5.15	1		5.12	
251	1	276	4.98	1		4.54	
252	1	411	5.53	1		5.17	
253	1	524	5.99	1		6.96	
254	1	625	6.31	1		8.11	
255	1	603	6.25	1		6.83	
256	1	480	5.81	1		4.75	
257	1	363	5.33	1		5.10	
258	1	199	4.56	1		4.50	
259	1	206	4.59	1		4.38	
260	1	216	4.65	1		3.97	
261	1	288	5.03	1		4.52	
262	1	253	4.85	1		4.40	
263	1	156	4.32	1		3.52	
264	1	107	4.06	1		3.91	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
265	1	101	4.02	1		4.13	
266	1	130	4.18	1		3.82	
267	0	417	5.55	1	5.55	5.78	0.96
268	0	398	5.48	1	5.48	5.72	0.96
269	0	410	5.53	1	5.53	6.28	0.88
270	0	386	5.43	1	5.43	5.63	0.96
271	0	334	5.22	1	5.22	5.48	0.95
272	0	392	5.45	1	5.45	6.17	0.88
273	0	364	5.34	1	5.34	5.39	0.99
274	0	318	5.15	1	5.15	4.79	1.08
275	0	373	5.38	1	5.38	4.41	1.22
276	0	414	5.54	1	5.54	5.63	0.99
277	0	423	5.58	1	5.58	6.39	0.87
278	0	359	5.32	1	5.32	5.11	1.04
279	0	418	5.56	1	5.56	6.03	0.92
280	0	459	5.73	1	5.73	6.89	0.83
281	0	459	5.73	1	5.73	5.98	0.96
282	0	436	5.63	1	5.63	5.83	0.97
283	0	358	5.31	1	5.31	6.25	0.85
284	0	245	4.81	1	4.81	4.96	0.97
285	0	181	4.46	1	4.46	4.63	0.96
286	0	218	4.66	1	4.66	5.11	0.91
287	0	227	4.71	1	4.71	5.42	0.87
288	0	214	4.64	1	4.64	5.34	0.87
289	0	261	4.90	1	4.90	5.12	0.96
290	0	339	5.24	1	5.24	5.19	1.01
291	0	450	5.69	1	5.69	6.10	0.93
292	0	626	6.32	1	6.32	6.62	0.95
293	0	712	6.60	1	6.60	6.04	1.09
294	0	743	6.70	1	6.70	6.31	1.06
295	0	869	7.08	1	7.08	7.22	0.98
296	0	987	7.40	1	7.40	7.43	1.00
297	0	945	7.28	1	7.28	6.74	1.08
298	0	833	6.99	1	6.99	6.41	1.09
299	0	825	6.96	1	6.96	6.80	1.02
300	0	860	7.06	1	7.06	7.23	0.98
301	0	878	7.11	1	7.11	7.26	0.98
302	0	838	7.00	1	7.00	7.16	0.98
303	0	761	6.75	1	6.75	6.82	0.99
304	0	919	7.22	1	7.22	8.29	0.87
305	0	1265	8.18	1	8.18	9.00	0.91
306	0	1318	8.39	1	8.39	8.72	0.96
307	0	1286	8.26	1	8.26	8.30	1.00
308	0	1569	9.77	0		9.13	
309	0	1617	10.87	0		8.43	
310	0	1420	8.78	1	8.78	8.58	1.02
311	0	1161	7.85	1	7.85	7.52	1.04
312	0	1181	7.91	1	7.91	8.01	0.99
313	0	1521	9.36	0	9.83	9.76	
314	0	1376	8.61	1	8.61	8.23	1.05
315	0	1222	8.02	1	8.02	8.22	0.98
316	0	1259	8.16	1	8.16	8.38	0.97
317	0	1290	8.28	1	8.28	7.90	1.05
318	0	1160	7.85	1	7.85	6.52	1.20
319	0	947	7.29	1	7.29	6.71	1.09
320	0	1017	7.47	1	7.47	8.51	0.88
321	0	1139	7.79	1	7.79	8.41	0.93
322	0	1048	7.55	1	7.55	6.52	1.16
323	0	856	7.05	1	7.05	5.67	1.24
324	0	721	6.63	1	6.63	6.10	1.09
325	0	687	6.52	1	6.52	5.40	1.21
326	0	847	7.03	1	7.03	7.80	0.90
327	0	1048	7.56	1	7.56	7.89	0.96
328	0	1117	7.74	1	7.74	7.35	1.05
329	0	1137	7.79	1	7.79	7.98	0.98
330	0	1143	7.81	1	7.81	7.71	1.01
331	0	1258	8.16	1	8.16	9.57	0.85
332	0	1380	8.62	1	8.62	8.81	0.98
333	0	1297	8.31	1	8.31	8.17	1.02
334	0	1295	8.30	1	8.30	9.39	0.88
335	0	1358	8.54	1	8.54	8.76	0.97
336	0	1331	8.44	1	8.44	8.16	1.03
337	0	1179	7.90	1	7.90	7.41	1.07
338	0	1052	7.57	1	7.57	7.62	0.99
339	0	1048	7.56	1	7.56	7.35	1.03
340	0	978	7.37	1	7.37	6.59	1.12
341	0	895	7.15	1	7.15	7.45	0.96
342	0	804	6.89	1	6.89	7.44	0.93
343	0	687	6.52	1	6.52	6.86	0.95
344	0	561	6.11	1	6.11	5.77	1.06
345	0	489	5.85	1	5.85	5.84	1.00
346	0	518	5.96	1	5.96	6.32	0.94
347	0	511	5.94	1	5.94	5.56	1.07
348	0	463	5.74	1	5.74	6.38	0.90
349	0	484	5.83	1	5.83	6.06	0.96
350	0	528	6.00	1	6.00	6.12	0.98
351	0	514	5.95	1	5.95	5.83	1.02
352	0	480	5.81	1	5.81	5.97	0.97
353	0	493	5.86	1	5.86	6.34	0.92
354	0	411	5.53	1	5.53	5.93	0.93
355	0	283	5.01	1	5.01	4.92	1.02
356	0	246	4.81	1	4.81	5.18	0.93
357	0	231	4.73	1	4.73	5.64	0.84
358	0	363	5.33	1	5.33	6.27	0.85
359	0	399	5.48	1	5.48	6.32	0.87
360	0	393	5.46	1	5.46	5.29	1.03
361	0	407	5.51	1	5.51	5.53	1.00
362	0	465	5.75	1	5.75	5.94	0.97
363	0	640	6.37	1	6.37	7.30	0.87
364	0	885	7.13	1	7.13	7.46	0.95
365	0	1013	7.46	1	7.46	7.72	0.97
366	0	949	7.29	1	7.29	7.38	0.99
367	0	819	6.94	1	6.94	6.81	1.02
368	0	723	6.63	1	6.63	6.41	1.03
369	0	729	6.65	1	6.65	6.52	1.02
370	0	739	6.68	1	6.68	6.71	1.00
371	0	700	6.56	1	6.56	6.59	0.99
372	0	651	6.40	1	6.40	6.50	0.98
373	0	590	6.20	1	6.20	6.24	0.99
374	0	532	6.02	1	6.02	5.95	1.01
375	0	535	6.03	1	6.03	6.25	0.96
376	0	610	6.27	1	6.27	7.01	0.89
377	0	628	6.33	1	6.33	5.78	1.09
378	0	550	6.07	1	6.07	5.27	1.15
379	0	385	5.42	1	5.42	5.90	0.92
380	0	446	5.67	1	5.67	6.09	0.93
381	0	536	6.03	1	6.03	5.90	1.02
382	0	573	6.15	1	6.15	6.18	0.99
383	0	523	5.98	1	5.98	5.94	1.01
384	0	452	5.70	1	5.70	5.93	0.96
385	0	424	5.58	1	5.58	5.73	0.97
386	0	443	5.66	1	5.66	6.00	0.94
387	0	464	5.74	1	5.74	5.92	0.97
388	0	491	5.85	1	5.85	6.34	0.92
389	0	558	6.10	1	6.10	6.40	0.95
390	0	587	6.19	1	6.19	6.63	0.93
391	0	424	5.58	1	5.58	6.08	0.92
392	0	190	4.51	1	4.51	4.77	0.94
393	0	272	4.96	1	4.96	5.29	0.94
394	0	384	5.42	1	5.42	6.39	0.85
395	0	536	6.03	1	6.03	6.65	0.91
396	0	758	6.74	1	6.74	7.26	0.93
397	0	796	6.87	1	6.87	6.44	1.07
398	0	673	6.47	1	6.47	6.01	1.08
399	0	585	6.19	1	6.19	7.16	0.86
400	0	515	5.95	1	5.95	5.75	1.03
401	0	438	5.64	1	5.64	5.33	1.06
402	0	481	5.82	1	5.82	6.29	0.92
403	0	564	6.12	1	6.12	6.64	0.92
404	0	605	6.25	1	6.25	5.12	1.22
405	0	589	6.20	1	6.20	5.97	1.04
406	0	572	6.14	1	6.14	5.73	1.07
407	0	605	6.25	1	6.25	6.89	0.91
408	0	622	6.31	1	6.31	6.10	1.03
409	0	610	6.27	1	6.27	6.30	1.00
410	0	599	6.23	1	6.23	6.15	1.01
411	0	593	6.21	1	6.21	6.43	0.97
412	0	625	6.32	1	6.32	6.15	1.03
413	0	613	6.28	1	6.28	5.22	1.20
414	0	481	5.81	1	5.81	5.05	1.15
415	0	456	5.71	1	5.71	6.28	0.91
416	0	536	6.03	1	6.03	5.84	1.03
417	0	577	6.16	1	6.16	6.28	0.98
418	0	552	6.08	1	6.08	5.50	1.10
419	0	499	5.89	1	5.89	5.38	1.09
420	0	442	5.66	1	5.66	4.84	1.17
421	0	414	5.54	1	5.54	5.39	1.03
422	0	423	5.58	1	5.58	5.14	1.09
423	0	393	5.46	1	5.46	4.96	1.10
424	0	280	5.00	1	5.00	5.65	0.89
425	0	226	4.71	1	4.71	4.58	1.03
426	0	311	5.13	1	5.13	4.76	1.08
427	0	436	5.63	1	5.63	5.37	1.05
428	0	582	6.18	1	6.18	7.15	0.86
429	0	709	6.59	1	6.59	6.70	0.98
430	0	790	6.85	1	6.85	6.80	1.01
431	0	846	7.02	1	7.02	6.93	1.01
432	0	890	7.14	1	7.14	6.88	1.04
433	0	910	7.19	1	7.19	6.73	1.07
434	0	980	7.38	1	7.38	7.39	1.00
435	0	955	7.31	1	7.31	6.52	1.12
436	0	833	6.99	1	6.99	6.31	1.11
437	0	806	6.90	1	6.90	7.12	0.97
438	0	795	6.86	1	6.86	7.02	0.98
439	0	696	6.55	1	6.55	6.50	1.01
440	0	574	6.15	1	6.15	5.99	1.03
441	0	504	5.91	1	5.91	5.75	1.03
442	0	492	5.86	1	5.86	6.08	0.96
443	0	501	5.89	1	5.89	5.80	1.02
444	0	480	5.81	1	5.81	5.52	1.05
445	0	495	5.87	1	5.87	6.66	0.88
446	0	581	6.17	1	6.17	6.33	0.97
447	0	625	6.32	1	6.32	6.17	1.02
448	0	558	6.10	1	6.10	5.39	1.13
449	0	493	5.86	1	5.86	5.50	1.07
450	0	455	5.71	1	5.71	5.83	0.98
451	0	416	5.55	1	5.55	5.30	1.05
452	0	505	5.91	1	5.91	6.54	0.90
453	0	623	6.31	1	6.31	6.11	1.03
454	0	659	6.43	1	6.43	6.38	1.01
455	0	731	6.66	1	6.66	7.77	0.86
456	0	745	6.70	1	6.70	6.12	1.10
457	0	806	6.90	1	6.90	7.53	0.92
458	0	990	7.40	1	7.40	7.60	0.97
459	0	1042	7.54	1	7.54	7.12	1.06
460	0	837	7.00	1	7.00	6.22	1.13
461	0	611	6.27	1	6.27	6.11	1.03
462	0	559	6.10	1	6.10	6.98	0.87
463	0	638	6.36	1	6.36	7.26	0.88
464	0	638	6.36	1	6.36	6.44	0.99
465	0	580	6.17	1	6.17	6.51	0.95
466	0	529	6.01	1	6.01	6.45	0.93
467	0	478	5.80	1	5.80	6.01	0.97
468	0	442	5.66	1	5.66	6.05	0.94
469	0	432	5.61	1	5.61	6.41	0.88
470	0	427	5.60	1	5.60	5.40	1.04
471	0	281	5.00	1	5.00	6.21	0.81
472	0	132	4.19	1	4.19	5.09	0.82
473	0	101	4.02	1	4.02	4.13	0.97
474	0	115	4.10	1	4.10	4.39	0.93
475	0	129	4.18	1	4.18	4.67	0.89
476	0	212	4.63	1	4.63	4.60	1.01
477	0	250	4.84	1	4.84	5.71	0.85
478	0	239	4.78	1	4.78	5.39	0.89
479	0	210	4.62	1	4.62	5.27	0.88
480	0	273	4.96	1	4.96	4.80	1.03
481	0	398	5.48	1	5.48	6.20	0.88
482	0	387	5.43	1	5.43	5.77	0.94
483	0	312	5.13	1	5.13	5.83	0.88
484	0	275	4.98	1	4.98	5.21	0.95
485	0	316	5.15	1	5.15	5.36	0.96
486	0	285	5.02	1	5.02	5.40	0.93
487	0	379	5.40	1	5.40	5.58	0.97
488	0	401	5.49	1	5.49	5.69	0.96
489	0	275	4.97	1	4.97	5.35	0.93
490	0	197	4.55	1	4.55	4.71	0.97
491	0	146	4.27	1	4.27	3.91	1.09
492	0	170	4.40	1	4.40	4.17	1.06
493	0	185	4.48	1	4.48	5.23	0.86
494	0	249	4.83	1	4.83	4.68	1.03
495	0	302	5.09	1	5.09	4.36	1.17
496	0	364	5.34	1	5.34	5.30	1.01
497	0	379	5.40	1	5.40	5.01	1.08
498	0	359	5.32	1	5.32	5.53	0.96
499	0	306	5.10	1	5.10	5.36	0.95
500	0	238	4.77	1	4.77	5.77	0.83
501	0	207	4.60	1	4.60	4.66	0.99
502	0	216	4.65	1	4.65	4.78	0.97
503	0	131	4.19	1	4.19	4.78	0.88
504	0	100	4.02	1	4.02	4.86	0.83
505	0	111	4.07	1	4.07	4.40	0.93
506	0	134	4.20	1	4.20	4.97	0.84
507	0	163	4.36	1	4.36	4.19	1.04
508	0	169	4.39	1	4.39	5.05	0.87
509	0	144	4.26	1	4.26	4.73	0.90
510	0	166	4.38	1	4.38	4.29	1.02
511	0	319	5.16	1	5.16	5.25	0.98
512	0	327	5.19	1	5.19	4.99	1.04
513	0	213	4.63	1	4.63	4.85	0.95
514	0	357	5.31	1	5.31	5.08	1.05
515	0	396	5.47	1	5.47	5.58	0.98
516	0	403	5.50	1	5.50	5.27	1.04
517	0	302	5.09	1	5.09	4.57	1.11
518	0	249	4.83	1	4.83	5.32	0.91
519	0	201	4.57	1	4.57	4.30	1.06
520	0	282	5.01	1	5.01	4.96	1.01
521	0	400	5.49	1	5.49	6.10	0.90
522	0	467	5.76	1	5.76	6.91	0.83
523	0	656	6.42	1	6.42	6.85	0.94
524	0	860	7.06	1	7.06	7.47	0.94
525	0	786	6.84	1	6.84	6.54	1.05
526	0	613	6.28	1	6.28	5.84	1.08
527	0	534	6.02	1	6.02	5.57	1.08
528	0	548	6.07	1	6.07	5.98	1.01

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
529	0	635	6.35	1	6.35	6.99	0.91
530	0	744	6.70	1	6.70	6.69	1.00
531	0	824	6.96	1	6.96	6.26	1.11
532	0	840	7.01	1	7.01	7.01	1.00
533	0	839	7.01	1	7.01	7.01	1.00
534	0	823	6.96	1	6.96	6.62	1.05
535	0	801	6.88	1	6.88	7.65	0.90
536	0	813	6.92	1	6.92	7.72	0.90
537	0	823	6.96	1	6.96	7.08	0.98
538	0	748	6.71	1	6.71	6.90	0.97
539	0	612	6.27	1	6.27	6.02	1.04
540	0	489	5.85	1	5.85	5.17	1.13
541	0	428	5.60	1	5.60	5.36	1.04
542	0	453	5.70	1	5.70	5.48	1.04
543	0	510	5.93	1	5.93	6.24	0.95
544	0	516	5.96	1	5.96	5.54	1.07
545	0	472	5.78	1	5.78	5.56	1.04
546	0	449	5.68	1	5.68	5.91	0.96
547	0	491	5.85	1	5.85	5.98	0.98
548	0	521	5.98	1	5.98	5.59	1.07
549	0	526	6.00	1	6.00	6.29	0.95
550	0	517	5.96	1	5.96	6.36	0.94
551	0	456	5.71	1	5.71	5.63	1.01
552	0	367	5.35	1	5.35	5.41	0.99
553	0	263	4.91	1	4.91	5.09	0.96
554	0	300	5.08	1	5.08	5.13	0.99
555	0	283	5.01	1	5.01	5.17	0.97
556	0	244	4.80	1	4.80	5.19	0.93
557	0	163	4.36	1	4.36	4.50	0.97
558	0	156	4.32	1	4.32	4.16	1.04
559	0	123	4.14	1	4.14	4.34	0.95
560	0	120	4.13	1	4.13	3.63	1.14
561	0	189	4.50	1	4.50	4.90	0.92
562	0	264	4.91	1	4.91	5.99	0.82
563	0	388	5.44	1	5.44	5.75	0.95
564	0	496	5.87	1	5.87	6.41	0.92
565	0	665	6.44	1	6.44	7.13	0.90
566	0	743	6.70	1	6.70	6.78	0.99
567	0	724	6.64	1	6.64	6.37	1.04
568	0	679	6.49	1	6.49	6.42	1.01
569	0	654	6.41	1	6.41	6.12	1.05
570	0	640	6.37	1	6.37	6.43	0.99
571	0	623	6.31	1	6.31	6.46	0.98
572	0	607	6.26	1	6.26	6.53	0.96
573	0	578	6.16	1	6.16	6.17	1.00
574	0	510	5.93	1	5.93	5.65	1.05
575	0	437	5.63	1	5.63	5.73	0.98
576	0	328	5.20	1	5.20	5.05	1.03
577	0	239	4.78	1	4.78	5.21	0.92
578	0	216	4.65	1	4.65	5.51	0.84
579	0	194	4.53	1	4.53	4.61	0.98
580	0	186	4.49	1	4.49	5.02	0.89
581	0	181	4.46	1	4.46	4.96	0.90
582	0	172	4.41	1	4.41	4.55	0.97
583	0	143	4.25	1	4.25	4.96	0.86
584	0	223	4.69	1	4.69	4.81	0.98
585	0	380	5.40	1	5.40	5.25	1.03
586	0	454	5.71	1	5.71	6.32	0.90
587	0	412	5.53	1	5.53	4.98	1.11
588	0	343	5.25	1	5.25	4.75	1.11
589	0	368	5.36	1	5.36	5.58	0.96
590	0	403	5.50	1	5.50	6.24	0.88
591	0	449	5.68	1	5.68	6.02	0.94
592	0	544	6.05	1	6.05	6.85	0.88
593	0	653	6.41	1	6.41	7.73	0.83
594	0	694	6.54	1	6.54	6.10	1.07
595	0	641	6.37	1	6.37	6.04	1.05
596	0	592	6.21	1	6.21	6.37	0.97
597	0	609	6.27	1	6.27	6.45	0.97
598	0	638	6.36	1	6.36	6.35	1.00
599	0	671	6.46	1	6.46	6.94	0.93
600	0	705	6.57	1	6.57	6.50	1.01
601	0	671	6.46	1	6.46	5.63	1.15
602	0	569	6.14	1	6.14	6.12	1.00
603	0	376	5.39	1	5.39	5.20	1.04
604	0	162	4.36	1	4.36	4.76	0.92
605	0	229	4.72	1	4.72	4.58	1.03
606	0	243	4.80	1	4.80	4.45	1.08
607	0	415	5.55	1	5.55	5.14	1.08
608	0	532	6.01	1	6.01	7.97	0.75
609	0	658	6.42	1	6.42	6.82	0.94
610	0	636	6.35	1	6.35	6.38	1.00
611	0	583	6.18	1	6.18	6.86	0.90
612	0	557	6.10	1	6.10	7.29	0.84
613	0	575	6.16	1	6.16	5.88	1.05
614	0	643	6.37	1	6.37	6.04	1.05
615	0	689	6.52	1	6.52	6.63	0.98
616	0	714	6.60	1	6.60	6.88	0.96
617	0	690	6.53	1	6.53	6.40	1.02
618	0	617	6.29	1	6.29	5.42	1.16
619	0	557	6.10	1	6.10	6.79	0.90
620	0	517	5.96	1	5.96	5.80	1.03
621	0	483	5.82	1	5.82	5.64	1.03
622	0	414	5.54	1	5.54	5.07	1.09
623	0	467	5.76	1	5.76	6.17	0.93
624	0	534	6.02	1	6.02	5.97	1.01
625	0	499	5.89	1	5.89	5.83	1.01
626	0	472	5.78	1	5.78	5.47	1.06
627	0	456	5.71	1	5.71	5.87	0.97
628	0	433	5.62	1	5.62	5.67	0.99
629	0	386	5.43	1	5.43	5.64	0.96
630	0	264	4.91	1	4.91	4.95	0.99
631	0	319	5.16	1	5.16	5.66	0.91
632	0	392	5.45	1	5.45	6.08	0.90
633	0	304	5.10	1	5.10	5.06	1.01
634	1	100	4.02	1		7.12	
635	1	100	4.02	1		7.43	
636	1	100	4.02	1		7.46	
637	1	100	4.02	1		5.78	
638	1	100	4.02	1		5.90	
639	1	100	4.02	1		4.82	
640	1	153	4.31	1		4.86	
641	1	170	4.40	1		5.98	
642	1	166	4.38	1		6.17	
643	1	378	5.40	1		6.19	
644	1	720	6.62	1		6.48	
645	1	725	6.64	1		8.42	
646	1	1207	7.97	1		9.11	
647	1	1291	8.28	1		6.19	
648	1	1214	7.99	1		7.03	
649	1	978	7.37	1		5.92	
650	1	801	6.89	1		6.07	
651	1	768	6.78	1		6.41	
652	1	657	6.42	1		5.63	
653	1	629	6.33	1		6.20	
654	1	822	6.95	1		8.28	
655	1	934	7.26	1		6.71	
656	1	970	7.35	1		7.19	
657	1	909	7.19	1		7.82	
658	1	682	6.50	1		5.68	
659	1	532	6.02	1		5.16	
660	1	508	5.92	1		6.01	
661	1	532	6.02	1		5.93	
662	1	741	6.69	1		7.86	
663	1	965	7.34	1		8.44	
664	1	1124	7.75	1		7.44	
665	1	1067	7.61	1		6.52	
666	1	794	6.86	1		5.42	
667	1	609	6.27	1		5.03	
668	1	710	6.59	1		6.34	
669	1	805	6.90	1		6.73	
670	1	760	6.75	1		6.49	
671	1	745	6.70	1		6.61	
672	1	889	7.14	1		8.01	
673	1	1028	7.50	1		7.32	
674	1	1041	7.54	1		6.76	
675	1	945	7.29	1		6.13	
676	1	872	7.09	1		7.09	
677	1	967	7.34	1		7.64	
678	1	1184	7.91	1		8.73	
679	1	1327	8.42	1		8.83	
680	1	1367	8.58	1		8.13	
681	1	1114	7.73	1		6.52	
682	1	868	7.08	1		6.72	
683	1	825	6.96	1		6.44	
684	1	884	7.12	1		7.42	
685	1	868	7.08	1		7.08	
686	1	786	6.84	1		6.50	
687	1	788	6.84	1		6.95	
688	1	797	6.87	1		5.86	
689	1	748	6.71	1		5.43	
690	1	606	6.25	1		5.02	
691	1	546	6.06	1		5.46	
692	1	699	6.55	1		6.46	
693	1	783	6.83	1		6.63	
694	1	691	6.53	1		6.44	
695	1	623	6.31	1		6.70	
696	1	543	6.05	1		5.41	
697	1	463	5.74	1		5.79	
698	1	519	5.97	1		6.72	
699	1	578	6.16	1		6.04	
700	1	547	6.06	1		6.58	
701	1	611	6.27	1		5.99	
702	1	756	6.74	1		6.49	
703	1	755	6.74	1		7.05	
704	1	643	6.38	1		6.08	
705	1	510	5.93	1		4.80	
706	1	456	5.71	1		6.39	
707	1	472	5.78	1		5.70	
708	1	437	5.63	1		4.77	
709	1	481	5.81	1		5.69	
710	1	870	7.09	1		9.02	
711	1	1286	8.27	1		8.25	
712	1	1265	8.18	1		8.12	
713	1	995	7.42	1		6.27	
714	1	933	7.25	1		7.72	
715	1	1114	7.73	1		8.78	
716	1	1045	7.55	1		6.50	
717	1	817	6.94	1		6.52	
718	1	681	6.50	1		6.36	
719	0	694	6.54	1	6.54	6.41	1.02
720	0	678	6.49	1	6.49	6.65	0.98
721	0	579	6.17	1	6.17	5.38	1.15
722	0	536	6.03	1	6.03	6.03	1.00
723	0	612	6.27	1	6.27	6.65	0.94
724	0	740	6.69	1	6.69	7.34	0.91
725	0	777	6.81	1	6.81	6.78	1.00
726	0	724	6.64	1	6.64	5.73	1.16
727	0	779	6.81	1	6.81	6.96	0.98
728	0	775	6.80	1	6.80	6.20	1.10
729	0	818	6.94	1	6.94	6.63	1.05
730	0	867	7.08	1	7.08	7.26	0.98
731	0	886	7.13	1	7.13	7.39	0.97
732	0	879	7.11	1	7.11	7.51	0.95
733	0	899	7.16	1	7.16	7.02	1.02
734	0	1004	7.44	1	7.44	7.16	1.04
735	0	1005	7.44	1	7.44	6.45	1.15
736	0	965	7.34	1	7.34	7.15	1.03
737	0	919	7.22	1	7.22	6.00	1.20
738	0	768	6.78	1	6.78	5.83	1.16
739	0	744	6.70	1	6.70	7.74	0.87
740	0	847	7.03	1	7.03	6.64	1.06
741	0	795	6.86	1	6.86	6.35	1.08
742	0	687	6.51	1	6.51	6.42	1.01
743	0	764	6.76	1	6.76	6.61	1.02
744	0	853	7.04	1	7.04	6.57	1.07
745	0	788	6.84	1	6.84	6.22	1.10
746	0	743	6.70	1	6.70	6.92	0.97
747	0	799	6.88	1	6.88	7.49	0.92
748	0	946	7.29	1	7.29	7.47	0.98
749	0	1046	7.55	1	7.55	7.53	1.00
750	0	993	7.41	1	7.41	6.64	1.12
751	0	843	7.02	1	7.02	6.30	1.11
752	0	788	6.84	1	6.84	6.70	1.02
753	0	970	7.35	1	7.35	7.02	1.05
754	0	1127	7.76	1	7.76	6.49	1.20
755	0	1116	7.73	1	7.73	7.64	1.01
756	0	998	7.40	1	7.40	6.62	1.12
757	0	919	7.22	1	7.22	7.22	1.00
758	0	981	7.38	1	7.38	7.08	1.04
759	0	796	6.87	1	6.87	5.16	1.33
760	0	585	6.19	1	6.19	5.26	1.18
761	0	580	6.17	1	6.17	7.06	0.87
762	0	666	6.45	1	6.45	6.61	0.98
763	0	784	6.83	1	6.83	6.92	0.99
764	0	841	7.01	1	7.01	6.53	1.07
765	0	769	6.78	1	6.78	6.16	1.10
766	0	807	6.90	1	6.90	8.39	0.82
767	0	770	6.78	1	6.78	6.70	1.01
768	0	624	6.31	1	6.31	5.83	1.08
769	0	573	6.15	1	6.15	6.52	0.94
770	0	568	6.13	1	6.13	7.24	0.85
771	0	594	6.21	1	6.21	6.24	1.00
772	0	696	6.55	1	6.55	7.28	0.90
773	0	819	6.94	1	6.94	7.44	0.93
774	0	862	7.06	1	7.06	6.93	1.02
775	0	732	6.66	1	6.66	6.99	0.95
776	0	611	6.27	1	6.27	6.50	0.96
777	0	691	6.53	1	6.53	7.54	0.87
778	0	754	6.73	1	6.73	7.55	0.89
779	0	634	6.35	1	6.35	5.90	1.08
780	0	625	6.32	1	6.32	7.10	0.89
781	0	678	6.49	1	6.49	6.20	1.05
782	0	682	6.50	1	6.50	5.49	1.18
783	0	959	7.32	1	7.32	6.64	1.10
784	0	1508	9.25	0		8.39	
785	0	1649		0		8.61	
786	0	1574	9.81	0		8.81	
787	0	1392	8.67	1	8.67	7.82	1.11
788	0	1122	7.75	1	7.75	6.96	1.11
789	0	1225	8.03	1	8.03	9.73	0.83
790	0	1594	9.98	0	9.44	9.37	
791	0	1493	9.13	1	9.13	8.85	1.03
792	0	1423	8.79	1	8.79	8.77	1.00

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{mac,m}$ (m/s)	$V_{P,n}/V_{mac,m}$
793	0	1141	7.80	1	7.80	7.62	1.02
794	0	1080	7.64	1	7.64	7.05	1.08
795	0	1275	8.22	1	8.22	8.90	0.92
796	0	1227	8.04	1	8.04	7.38	1.09
797	0	944	7.28	1	7.28	6.49	1.12
798	0	848	7.03	1	7.03	6.59	1.07
799	0	956	7.31	1	7.31	6.69	1.09
800	0	1097	7.68	1	7.68	7.83	0.98
801	0	945	7.28	1	7.28	5.94	1.23
802	0	742	6.69	1	6.69	6.45	1.04
803	0	631	6.33	1	6.33	5.51	1.15
804	0	570	6.14	1	6.14	6.16	1.00
805	0	644	6.38	1	6.38	6.83	0.93
806	0	726	6.64	1	6.64	7.55	0.88
807	0	943	7.28	1	7.28	7.90	0.92
808	0	1238	8.08	1	8.08	8.06	1.00
809	0	1158	7.85	1	7.85	8.03	0.98
810	0	967	7.34	1	7.34	7.74	0.95
811	0	847	7.03	1	7.03	7.63	0.92
812	0	778	6.81	1	6.81	7.15	0.95
813	0	673	6.47	1	6.47	6.51	0.99
814	0	534	6.02	1	6.02	5.67	1.06
815	0	442	5.65	1	5.65	5.05	1.12
816	0	414	5.54	1	5.54	5.07	1.09
817	0	492	5.86	1	5.86	6.61	0.89
818	0	637	6.36	1	6.36	6.66	0.95
819	0	605	6.25	1	6.25	5.66	1.10
820	0	458	5.72	1	5.72	5.63	1.02
821	0	414	5.54	1	5.54	6.12	0.91
822	0	517	5.96	1	5.96	7.70	0.77
823	0	775	6.80	1	6.80	8.69	0.78
824	0	995	7.42	1	7.42	6.17	1.20
825	0	1005	7.44	1	7.44	6.83	1.09
826	0	902	7.17	1	7.17	6.63	1.08
827	0	762	6.76	1	6.76	6.45	1.05
828	0	844	7.02	1	7.02	7.38	0.95
829	0	981	7.38	1	7.38	7.92	0.93
830	0	894	7.15	1	7.15	6.63	1.08
831	0	762	6.76	1	6.76	6.50	1.04
832	0	890	7.14	1	7.14	6.79	1.05
833	0	1154	7.83	1	7.83	8.18	0.96
834	0	988	7.40	1	7.40	6.04	1.23
835	0	912	7.20	1	7.20	6.67	1.08
836	0	1132	7.78	1	7.78	7.24	1.07
837	0	1396	8.69	1	8.69	8.06	1.08
838	0	1483	9.05	1	9.05	9.41	0.96
839	0	1264	8.18	1	8.18	7.92	1.03
840	0	1024	7.49	1	7.49	6.85	1.09
841	0	848	7.03	1	7.03	5.84	1.20
842	0	778	6.81	1	6.81	6.42	1.06
843	0	781	6.82	1	6.82	6.80	1.00
844	0	825	6.96	1	6.96	7.29	0.95
845	0	928	7.24	1	7.24	8.81	0.82
846	0	1101	7.69	1	7.69	7.58	1.02
847	0	1135	7.78	1	7.78	7.10	1.10
848	0	1020	7.48	1	7.48	7.27	1.03
849	0	873	7.09	1	7.09	5.64	1.26
850	0	831	6.98	1	6.98	8.52	0.82
851	0	862	7.07	1	7.07	7.93	0.89
852	0	829	6.97	1	6.97	6.87	1.01
853	0	756	6.74	1	6.74	6.62	1.02
854	0	636	6.35	1	6.35	6.85	0.93
855	0	517	5.96	1	5.96	5.86	1.02
856	0	407	5.52	1	5.52	5.78	0.95
857	0	409	5.52	1	5.52	5.52	1.00
858	0	463	5.74	1	5.74	7.15	0.80
859	0	558	6.10	1	6.10	6.56	0.93
860	0	609	6.26	1	6.26	6.10	1.03
861	0	742	6.69	1	6.69	7.44	0.90
862	0	1024	7.49	1	7.49	8.51	0.88
863	0	1131	7.77	1	7.77	7.20	1.08
864	0	972	7.36	1	7.36	5.60	1.31
865	0	933	7.25	1	7.25	6.72	1.08
866	0	958	7.32	1	7.32	7.35	1.00
867	0	811	6.92	1	6.92	5.97	1.16
868	0	608	6.26	1	6.26	4.94	1.27
869	0	530	6.01	1	6.01	6.37	0.94
870	0	577	6.16	1	6.16	6.52	0.94
871	0	689	6.52	1	6.52	7.53	0.87
872	0	803	6.89	1	6.89	6.82	1.01
873	0	916	7.21	1	7.21	7.47	0.96
874	0	1076	7.63	1	7.63	7.11	1.07
875	0	1040	7.53	1	7.53	7.52	1.00
876	0	1023	7.49	1	7.49	8.03	0.93
877	0	1151	7.83	1	7.83	8.15	0.96
878	0	1254	8.14	1	8.14	8.39	0.97
879	0	1210	7.98	1	7.98	7.74	1.03
880	0	960	7.32	1	7.32	7.36	1.00

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{mac,m}$ (m/s)	$V_{P,n}/V_{mac,m}$
881	0	735	6.67	1	6.67	5.95	1.12
882	0	708	6.58	1	6.58	6.06	1.09
883	0	752	6.73	1	6.73	6.14	1.10
884	0	825	6.96	1	6.96	7.65	0.91
885	0	1067	7.61	1	7.61	8.34	0.91
886	0	1190	7.93	1	7.93	7.53	1.05
887	0	980	7.38	1	7.38	6.12	1.21
888	0	783	6.82	1	6.82	5.11	1.34
889	0	666	6.45	1	6.45	6.11	1.05
890	0	540	6.04	1	6.04	5.68	1.06
891	0	431	5.61	1	5.61	4.94	1.13
892	0	449	5.68	1	5.68	6.16	0.92
893	0	525	5.99	1	5.99	7.06	0.85
894	0	656	6.41	1	6.41	7.71	0.83
895	0	623	6.31	1	6.31	5.12	1.23
896	0	484	5.83	1	5.83	5.66	1.03
897	0	483	5.82	1	5.82	6.50	0.90
898	0	540	6.04	1	6.04	5.97	1.01
899	0	542	6.05	1	6.05	5.64	1.07
900	0	566	6.13	1	6.13	6.06	1.01
901	0	727	6.65	1	6.65	7.48	0.89
902	0	716	6.61	1	6.61	6.62	1.00
903	0	562	6.11	1	6.11	6.66	0.92
904	0	627	6.32	1	6.32	7.82	0.81
905	0	803	6.89	1	6.89	6.88	1.00
906	0	833	6.99	1	6.99	7.29	0.96
907	0	694	6.54	1	6.54	5.47	1.20
908	0	524	5.99	1	5.99	5.60	1.07
909	0	453	5.70	1	5.70	6.60	0.86
910	0	472	5.78	1	5.78	6.15	0.94
911	0	587	6.19	1	6.19	7.20	0.86
912	0	860	7.06	1	7.06	7.76	0.91
913	0	984	7.39	1	7.39	7.51	0.98
914	0	950	7.30	1	7.30	6.98	1.05
915	0	802	6.89	1	6.89	5.95	1.16
916	0	668	6.45	1	6.45	6.44	1.00
917	0	649	6.39	1	6.39	7.48	0.85
918	0	586	6.19	1	6.19	5.45	1.14
919	0	613	6.28	1	6.28	6.79	0.92
920	0	1104	7.70	1	7.70	8.46	0.91
921	0	1404	8.72	1	8.72	8.67	1.00
922	0	1094	7.68	1	7.68	6.79	1.13
923	0	1011	7.46	1	7.46	6.63	1.13
924	0	1017	7.47	1	7.47	6.50	1.15
925	0	906	7.18	1	7.18	6.39	1.12
926	0	794	6.86	1	6.86	6.25	1.10
927	0	700	6.56	1	6.56	6.67	0.98
928	0	621	6.30	1	6.30	6.60	0.96
929	0	577	6.16	1	6.16	6.25	0.99
930	0	557	6.10	1	6.10	6.34	0.96
931	0	616	6.29	1	6.29	7.29	0.86
932	0	782	6.82	1	6.82	6.63	1.03
933	0	840	7.01	1	7.01	6.10	1.15
934	0	809	6.91	1	6.91	7.02	0.98
935	0	723	6.63	1	6.63	5.97	1.11
936	0	623	6.31	1	6.31	6.42	0.98
937	0	628	6.33	1	6.33	6.52	0.97
938	0	656	6.42	1	6.42	7.01	0.92
939	0	519	5.97	1	5.97	6.16	0.97
940	0	388	5.44	1	5.44	5.50	0.99
941	0	486	5.84	1	5.84	7.34	0.79
942	0	704	6.57	1	6.57	8.07	0.81
943	0	758	6.74	1	6.74	7.47	0.90
944	0	691	6.53	1	6.53	6.39	1.02
945	0	645	6.38	1	6.38	5.82	1.10
946	0	532	6.02	1	6.02	6.38	0.94
947	0	422	5.57	1	5.57	5.37	1.04
948	0	483	5.82	1	5.82	5.82	1.00
949	0	678	6.49	1	6.49	7.40	0.88
950	0	855	7.05	1	7.05	7.89	0.89
951	0	976	7.37	1	7.37	7.52	0.98
952	0	1090	7.67	1	7.67	7.95	0.96
953	0	1096	7.68	1	7.68	6.72	1.14
954	0	1081	7.64	1	7.64	6.99	1.09
955	0	1164	7.86	1	7.86	7.71	1.02
956	0	1211	7.98	1	7.98	7.35	1.09
957	0	1192	7.93	1	7.93	8.01	0.99
958	0	1229	8.05	1	8.05	8.44	0.95
959	0	1176	7.89	1	7.89	7.55	1.04
960	0	1065	7.60	1	7.60	7.46	1.02
961	0	990	7.40	1	7.40	7.22	1.02
962	0	864	7.07	1	7.07	6.19	1.14
963	0	695	6.54	1	6.54	6.10	1.07
964	0	570	6.14	1	6.14	5.50	1.12
965	0	658	6.42	1	6.42	7.22	0.89
966	0	928	7.24	1	7.24	7.63	0.95
967	0	1057	7.58	1	7.58	7.60	1.00
968	0	1170	7.88	1	7.88	7.51	1.05

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969	0	1359	8.54	1	8.54	8.65	0.99
970	0	1466	8.95	1	8.95	8.80	1.02
971	0	1410	8.74	1	8.74	8.77	1.00
972	0	1262	8.17	1	8.17	7.07	1.16
973	0	1051	7.56	1	7.56	7.24	1.04
974	0	975	7.36	1	7.36	7.98	0.92
975	0	999	7.43	1	7.43	7.58	0.98
976	0	1160	7.85	1	7.85	7.91	0.99
977	0	1289	8.28	1	8.28	8.27	1.00
978	0	1299	8.31	1	8.31	7.82	1.06
979	0	1380	8.63	1	8.63	8.27	1.04
980	0	1488	9.08	1	9.08	8.78	1.03
981	0	1412	8.75	1	8.75	7.84	1.12
982	0	1446	8.88	1	8.88	8.18	1.09
983	0	1458	8.92	1	8.92	9.20	0.97
984	0	1198	7.95	1	7.95	7.66	1.04
985	0	1117	7.74	1	7.74	6.94	1.12
986	0	1125	7.76	1	7.76	7.53	1.03
987	0	1409	8.74	1	8.74	9.51	0.92
988	0	1600	10.12	0	9.40	9.33	
989	0	1502	9.20	1	9.20	8.97	1.03
990	0	1371	8.59	1	8.59	7.81	1.10
991	0	1161	7.85	1	7.85	7.63	1.03
992	0	1094	7.68	1	7.68	7.58	1.01
993	0	1079	7.64	1	7.64	6.97	1.10
994	0	963	7.33	1	7.33	5.99	1.22
995	0	885	7.13	1	7.13	5.94	1.20
996	0	816	6.93	1	6.93	6.32	1.10
997	0	636	6.35	1	6.35	5.39	1.18
998	0	632	6.34	1	6.34	6.29	1.01
999	0	714	6.60	1	6.60	7.92	0.83
1000	0	651	6.40	1	6.40	6.29	1.02
1001	0	588	6.20	1	6.20	5.77	1.07
1002	0	640	6.36	1	6.36	7.08	0.90
1003	0	668	6.46	1	6.46	5.87	1.10
1004	0	601	6.24	1	6.24	6.24	1.00
1005	0	583	6.18	1	6.18	5.85	1.06
1006	0	704	6.57	1	6.57	7.55	0.87
1007	0	899	7.16	1	7.16	7.68	0.93
1008	0	1071	7.61	1	7.61	6.96	1.09
1009	0	1258	8.16	1	8.16	8.27	0.99
1010	0	1365	8.57	1	8.57	8.24	1.04
1011	0	1139	7.79	1	7.79	6.54	1.19
1012	0	944	7.28	1	7.28	6.12	1.19
1013	0	958	7.32	1	7.32	7.28	1.01
1014	0	959	7.32	1	7.32	7.08	1.03
1015	0	894	7.15	1	7.15	6.06	1.18
1016	0	828	6.97	1	6.97	7.13	0.98
1017	0	744	6.70	1	6.70	6.21	1.08
1018	0	651	6.40	1	6.40	6.22	1.03
1019	0	596	6.22	1	6.22	6.59	0.94
1020	0	567	6.13	1	6.13	5.75	1.07
1021	0	567	6.13	1	6.13	6.16	0.99
1022	0	581	6.17	1	6.17	6.39	0.97
1023	0	618	6.29	1	6.29	6.64	0.95
1024	0	702	6.56	1	6.56	6.68	0.98
1025	0	785	6.83	1	6.83	6.94	0.98
1026	0	776	6.80	1	6.80	7.11	0.96
1027	0	705	6.57	1	6.57	6.10	1.08
1028	0	658	6.42	1	6.42	6.31	1.02
1029	0	643	6.37	1	6.37	5.48	1.16
1030	0	586	6.19	1	6.19	6.39	0.97
1031	0	507	5.92	1	5.92	5.86	1.01
1032	0	420	5.57	1	5.57	4.99	1.12
1033	0	390	5.45	1	5.45	5.89	0.92
1034	0	339	5.24	1	5.24	5.77	0.91
1035	0	355	5.31	1	5.31	5.25	1.01
1036	0	499	5.89	1	5.89	6.60	0.89
1037	0	784	6.83	1	6.83	8.06	0.85
1038	0	1091	7.67	1	7.67	8.09	0.95
1039	0	1112	7.72	1	7.72	7.52	1.03
1040	0	961	7.33	1	7.33	6.46	1.13
1041	0	742	6.69	1	6.69	6.07	1.10
1042	0	702	6.56	1	6.56	7.29	0.90
1043	0	867	7.08	1	7.08	6.88	1.03
1044	0	917	7.21	1	7.21	6.37	1.13
1045	0	786	6.83	1	6.83	5.87	1.16
1046	0	549	6.07	1	6.07	5.27	1.15
1047	0	412	5.54	1	5.54	5.23	1.06
1048	0	392	5.45	1	5.45	5.00	1.09
1049	0	401	5.49	1	5.49	5.12	1.07
1050	0	430	5.61	1	5.61	6.38	0.88
1051	0	489	5.85	1	5.85	6.83	0.86
1052	0	464	5.75	1	5.75	5.45	1.05
1053	0	393	5.46	1	5.46	6.07	0.90
1054	0	425	5.59	1	5.59	5.94	0.94
1055	0	514	5.95	1	5.95	6.07	0.98
1056	0	586	6.19	1	6.19	6.25	0.99

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1057	0	638	6.36	1	6.36	6.05	1.05
1058	0	742	6.69	1	6.69	6.60	1.01
1059	0	728	6.65	1	6.65	6.02	1.11
1060	0	614	6.28	1	6.28	6.14	1.02
1061	0	586	6.19	1	6.19	6.03	1.03
1062	0	710	6.59	1	6.59	7.22	0.91
1063	0	771	6.79	1	6.79	6.67	1.02
1064	0	669	6.46	1	6.46	6.51	0.99
1065	0	641	6.37	1	6.37	6.74	0.95
1066	0	955	7.31	1	7.31	9.41	0.78
1067	0	1252	8.13	1	8.13	7.67	1.06
1068	0	1260	8.16	1	8.16	7.66	1.07
1069	0	1509	9.26	0		8.99	
1070	0	1497	9.16	1	9.16	8.59	1.07
1071	0	1172	7.88	1	7.88	7.50	1.05
1072	0	1012	7.46	1	7.46	7.28	1.02
1073	0	1019	7.48	1	7.48	7.55	0.99
1074	0	939	7.27	1	7.27	6.74	1.08
1075	0	742	6.70	1	6.70	5.38	1.25
1076	0	549	6.07	1	6.07	5.88	1.03
1077	0	474	5.79	1	5.79	5.50	1.05
1078	0	439	5.64	1	5.64	6.29	0.90
1079	0	526	5.99	1	5.99	6.27	0.96
1080	0	681	6.50	1	6.50	6.06	1.07
1081	0	765	6.77	1	6.77	6.63	1.02
1082	0	899	7.16	1	7.16	7.12	1.01
1083	0	868	7.08	1	7.08	6.76	1.05
1084	0	746	6.71	1	6.71	6.71	1.00
1085	0	752	6.73	1	6.73	6.61	1.02
1086	0	756	6.74	1	6.74	6.45	1.05
1087	0	656	6.42	1	6.42	6.66	0.96
1088	0	532	6.02	1	6.02	6.55	0.92
1089	0	409	5.52	1	5.52	6.56	0.84
1090	0	333	5.22	1	5.22	5.59	0.93
1091	0	276	4.98	1	4.98	4.67	1.06
1092	0	339	5.24	1	5.24	6.02	0.87
1093	0	381	5.41	1	5.41	5.83	0.93
1094	0	399	5.48	1	5.48	6.22	0.88
1095	0	463	5.74	1	5.74	6.16	0.93
1096	0	579	6.17	1	6.17	6.35	0.97
1097	0	658	6.42	1	6.42	6.72	0.96
1098	0	688	6.52	1	6.52	6.90	0.95
1099	0	644	6.38	1	6.38	6.58	0.97
1100	0	525	5.99	1	5.99	5.73	1.05
1101	0	416	5.55	1	5.55	5.37	1.03
1102	0	342	5.25	1	5.25	5.97	0.88
1103	0	312	5.13	1	5.13	5.06	1.01
1104	0	341	5.25	1	5.25	5.66	0.93
1105	0	371	5.37	1	5.37	5.77	0.93
1106	0	238	4.77	1	4.77	4.46	1.07
1107	0	353	5.30	1	5.30	4.66	1.14
1108	0	399	5.48	1	5.48	6.35	0.86
1109	0	352	5.29	1	5.29	5.16	1.03
1110	0	406	5.51	1	5.51	5.95	0.93
1111	0	480	5.81	1	5.81	6.12	0.95
1112	0	447	5.68	1	5.68	5.10	1.11
1113	0	414	5.54	1	5.54	6.34	0.87
1114	0	452	5.70	1	5.70	6.77	0.84
1115	0	440	5.65	1	5.65	4.83	1.17
1116	0	416	5.55	1	5.55	6.20	0.89
1117	0	490	5.85	1	5.85	6.92	0.85
1118	0	554	6.09	1	6.09	5.85	1.04
1119	0	581	6.17	1	6.17	6.35	0.97
1120	0	588	6.20	1	6.20	5.64	1.10
1121	0	523	5.98	1	5.98	5.79	1.03
1122	0	492	5.86	1	5.86	6.67	0.88
1123	0	501	5.89	1	5.89	6.86	0.86
1124	0	547	6.06	1	6.06	6.64	0.91
1125	0	612	6.28	1	6.28	6.15	1.02
1126	0	615	6.28	1	6.28	6.70	0.94
1127	0	561	6.11	1	6.11	6.63	0.92
1128	0	478	5.80	1	5.80	5.55	1.05
1129	0	387	5.43	1	5.43	5.47	0.99
1130	0	404	5.50	1	5.50	5.88	0.94
1131	0	422	5.57	1	5.57	6.27	0.89
1132	0	323	5.17	1	5.17	5.38	0.96
1133	0	377	5.39	1	5.39	5.15	1.05
1134	0	331	5.20	1	5.20	5.19	1.00
1135	0	309	5.12	1	5.12	5.61	0.91
1136	0	427	5.59	1	5.59	5.09	1.10
1137	0	548	6.07	1	6.07	7.14	0.85
1138	0	663	6.44	1	6.44	6.51	0.99
1139	0	641	6.37	1	6.37	5.64	1.13
1140	0	686	6.51	1	6.51	7.06	0.92
1141	0	800	6.88	1	6.88	7.82	0.88
1142	0	740	6.69	1	6.69	6.64	1.01
1143	0	632	6.34	1	6.34	6.01	1.05
1144	0	499	5.89	1	5.89	5.71	1.03

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1145	0	361	5.33	1	5.33	4.99	1.07
1146	0	427	5.59	1	5.59	6.17	0.91
1147	0	479	5.81	1	5.81	5.99	0.97
1148	0	450	5.69	1	5.69	5.54	1.03
1149	0	323	5.17	1	5.17	5.31	0.98
1150	0	334	5.22	1	5.22	5.50	0.95
1151	0	376	5.39	1	5.39	5.05	1.07
1152	0	405	5.51	1	5.51	5.44	1.01
1153	0	466	5.75	1	5.75	6.21	0.93
1154	0	555	6.09	1	6.09	6.50	0.94
1155	0	600	6.23	1	6.23	7.06	0.88
1156	0	498	5.88	1	5.88	5.51	1.07
1157	0	395	5.47	1	5.47	5.68	0.96
1158	0	412	5.53	1	5.53	6.23	0.89
1159	0	461	5.73	1	5.73	6.11	0.94
1160	0	468	5.76	1	5.76	5.35	1.08
1161	0	390	5.44	1	5.44	4.58	1.19
1162	0	292	5.05	1	5.05	5.13	0.98
1163	0	209	4.61	1	4.61	4.75	0.97
1164	0	225	4.70	1	4.70	4.89	0.96
1165	0	284	5.02	1	5.02	5.65	0.89
1166	0	303	5.09	1	5.09	5.18	0.98
1167	0	323	5.17	1	5.17	4.46	1.16
1168	0	390	5.45	1	5.45	5.53	0.98
1169	0	391	5.45	1	5.45	6.24	0.87
1170	0	226	4.71	1	4.71	5.73	0.82
1171	0	227	4.71	1	4.71	5.34	0.88
1172	0	489	5.84	1	5.84	6.39	0.92
1173	0	970	7.35	1	7.35	9.84	0.75
1174	0	1372	8.59	1	8.59	8.36	1.03
1175	0	1149	7.82	1	7.82	5.84	1.34
1176	0	774	6.80	1	6.80	5.28	1.29
1177	0	604	6.25	1	6.25	5.78	1.08
1178	0	542	6.05	1	6.05	5.83	1.04
1179	0	477	5.80	1	5.80	5.46	1.06
1180	0	404	5.50	1	5.50	4.95	1.11
1181	0	221	4.68	1	4.68	5.21	0.90
1182	0	207	4.60	1	4.60	4.58	1.01
1183	0	358	5.32	1	5.32	6.05	0.88
1184	0	476	5.79	1	5.79	6.91	0.84
1185	0	649	6.39	1	6.39	6.45	0.99
1186	0	784	6.83	1	6.83	6.40	1.07
1187	0	838	7.00	1	7.00	7.59	0.92
1188	0	939	7.27	1	7.27	8.28	0.88
1189	0	962	7.33	1	7.33	7.15	1.03
1190	0	803	6.89	1	6.89	6.44	1.07
1191	0	746	6.70	1	6.70	7.17	0.93
1192	0	951	7.30	1	7.30	7.03	1.04
1193	0	1128	7.77	1	7.77	8.33	0.93
1194	0	980	7.38	1	7.38	6.09	1.21
1195	0	761	6.76	1	6.76	6.51	1.04
1196	0	664	6.44	1	6.44	6.32	1.02
1197	0	663	6.44	1	6.44	6.63	0.97
1198	0	669	6.46	1	6.46	6.59	0.98
1199	0	686	6.51	1	6.51	6.78	0.96
1200	0	761	6.76	1	6.76	7.79	0.87
1201	0	742	6.69	1	6.69	6.40	1.05
1202	0	802	6.89	1	6.89	6.41	1.07
1203	0	923	7.23	1	7.23	7.31	0.99
1204	0	832	6.98	1	6.98	5.78	1.21
1205	0	705	6.57	1	6.57	6.46	1.02
1206	0	840	7.01	1	7.01	7.83	0.90
1207	0	1129	7.77	1	7.77	7.65	1.01
1208	0	1137	7.79	1	7.79	7.74	1.01
1209	0	1008	7.45	1	7.45	8.19	0.91
1210	0	895	7.15	1	7.15	6.19	1.15
1211	0	745	6.70	1	6.70	6.42	1.04
1212	0	626	6.32	1	6.32	6.48	0.98
1213	0	581	6.17	1	6.17	6.64	0.93
1214	0	543	6.05	1	6.05	5.96	1.02
1215	0	489	5.85	1	5.85	5.66	1.03
1216	0	529	6.01	1	6.01	6.86	0.88
1217	0	684	6.51	1	6.51	6.56	0.99
1218	0	885	7.13	1	7.13	7.30	0.98
1219	0	936	7.26	1	7.26	7.25	1.00
1220	0	820	6.95	1	6.95	7.02	0.99
1221	0	664	6.44	1	6.44	6.04	1.07
1222	0	526	6.00	1	6.00	5.61	1.07
1223	0	436	5.63	1	5.63	5.70	0.99
1224	0	419	5.56	1	5.56	6.37	0.87
1225	0	466	5.75	1	5.75	6.47	0.89
1226	0	607	6.26	1	6.26	7.68	0.81
1227	0	770	6.78	1	6.78	8.08	0.84
1228	0	1008	7.45	1	7.45	7.99	0.93
1229	0	1204	7.97	1	7.97	8.60	0.93
1230	0	1157	7.84	1	7.84	6.82	1.15
1231	0	1005	7.44	1	7.44	7.10	1.05
1232	0	740	6.69	1	6.69	6.45	1.04

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1233	0	500	5.89	1	5.89	5.23	1.13
1234	0	406	5.51	1	5.51	5.48	1.01
1235	0	407	5.51	1	5.51	5.68	0.97
1236	0	480	5.81	1	5.81	6.50	0.89
1237	0	676	6.48	1	6.48	7.53	0.86
1238	0	965	7.34	1	7.34	7.59	0.97
1239	0	985	7.39	1	7.39	6.83	1.08
1240	0	746	6.71	1	6.71	6.22	1.08
1241	0	570	6.14	1	6.14	5.25	1.17
1242	0	511	5.94	1	5.94	6.29	0.94
1243	0	537	6.03	1	6.03	5.77	1.05
1244	0	526	5.99	1	5.99	5.90	1.02
1245	0	458	5.72	1	5.72	5.90	0.97
1246	0	398	5.48	1	5.48	5.69	0.96
1247	0	449	5.68	1	5.68	5.91	0.96
1248	0	523	5.98	1	5.98	6.22	0.96
1249	0	527	6.00	1	6.00	5.61	1.07
1250	0	559	6.10	1	6.10	6.28	0.97
1251	0	718	6.61	1	6.61	7.76	0.85
1252	0	924	7.23	1	7.23	8.69	0.83
1253	0	968	7.35	1	7.35	7.55	0.97
1254	0	861	7.06	1	7.06	6.35	1.11
1255	0	814	6.92	1	6.92	6.65	1.04
1256	0	805	6.90	1	6.90	7.30	0.95
1257	0	776	6.80	1	6.80	6.77	1.01
1258	0	728	6.65	1	6.65	6.42	1.04
1259	0	727	6.65	1	6.65	6.64	1.00
1260	0	806	6.90	1	6.90	6.75	1.02
1261	0	754	6.73	1	6.73	6.66	1.01
1262	0	622	6.31	1	6.31	6.48	0.97
1263	0	537	6.03	1	6.03	6.29	0.96
1264	0	541	6.05	1	6.05	6.24	0.97
1265	0	551	6.08	1	6.08	5.55	1.09
1266	0	527	6.00	1	6.00	5.79	1.04
1267	0	602	6.24	1	6.24	6.01	1.04
1268	0	838	7.00	1	7.00	6.67	1.05
1269	0	1019	7.48	1	7.48	7.36	1.02
1270	0	971	7.35	1	7.35	7.05	1.04
1271	0	803	6.89	1	6.89	6.46	1.07
1272	0	693	6.54	1	6.54	6.89	0.95
1273	0	654	6.41	1	6.41	6.87	0.93
1274	0	630	6.33	1	6.33	6.29	1.01
1275	0	592	6.21	1	6.21	6.06	1.03
1276	0	534	6.02	1	6.02	6.44	0.93
1277	0	387	5.43	1	5.43	5.51	0.99
1278	0	335	5.22	1	5.22	4.81	1.09
1279	0	387	5.43	1	5.43	5.82	0.93
1280	0	378	5.40	1	5.40	5.00	1.08
1281	0	436	5.63	1	5.63	6.46	0.87
1282	0	540	6.04	1	6.04	5.55	1.09
1283	0	655	6.41	1	6.41	7.44	0.86
1284	0	818	6.94	1	6.94	8.20	0.85
1285	0	844	7.02	1	7.02	6.92	1.01
1286	0	748	6.71	1	6.71	7.01	0.96
1287	0	670	6.46	1	6.46	6.90	0.94
1288	0	635	6.35	1	6.35	6.94	0.91
1289	0	547	6.06	1	6.06	6.21	0.98
1290	0	486	5.83	1	5.83	5.73	1.02
1291	0	512	5.94	1	5.94	5.49	1.08
1292	0	528	6.00	1	6.00	6.23	0.96
1293	0	570	6.14	1	6.14	7.06	0.87
1294	0	634	6.35	1	6.35	6.53	0.97
1295	0	724	6.63	1	6.63	6.86	0.97
1296	0	889	7.14	1	7.14	7.81	0.91
1297	0	956	7.31	1	7.31	7.42	0.99
1298	0	997	7.42	1	7.42	6.39	1.16
1299	0	1202	7.96	1	7.96	8.77	0.91
1300	0	1144	7.81	1	7.81	7.08	1.10
1301	0	946	7.29	1	7.29	6.42	1.14
1302	0	769	6.78	1	6.78	6.20	1.09
1303	0	692	6.53	1	6.53	6.60	0.99
1304	0	811	6.92	1	6.92	8.07	0.86
1305	0	858	7.05	1	7.05	6.63	1.06
1306	0	793	6.86	1	6.86	6.37	1.08
1307	0	716	6.61	1	6.61	6.17	1.07
1308	0	709	6.59	1	6.59	6.40	1.03
1309	0	740	6.69	1	6.69	6.99	0.96
1310	0	751	6.72	1	6.72	6.18	1.09
1311	0	754	6.73	1	6.73	7.20	0.94
1312	0	763	6.76	1	6.76	6.71	1.01
1313	0	790	6.85	1	6.85	6.43	1.07
1314	0	902	7.17	1	7.17	7.45	0.96
1315	0	983	7.38	1	7.38	6.41	1.15
1316	0	1027	7.50	1	7.50	7.22	1.04
1317	0	1120	7.75	1	7.75	7.20	1.08
1318	0	1029	7.51	1	7.51	7.23	1.04
1319	0	886	7.13	1	7.13	6.76	1.05
1320	0	982	7.38	1	7.38	7.14	1.03

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1321	0	1197	7.95	1	7.95	7.56	1.05
1322	0	1234	8.06	1	8.06	7.02	1.15
1323	0	1030	7.51	1	7.51	7.03	1.07
1324	0	817	6.94	1	6.94	7.27	0.95
1325	0	734	6.67	1	6.67	7.46	0.89
1326	0	714	6.60	1	6.60	6.42	1.03
1327	0	668	6.46	1	6.46	6.48	1.00
1328	0	690	6.53	1	6.53	6.74	0.97
1329	0	970	7.35	1	7.35	8.20	0.90
1330	0	1467	8.96	1	8.96	9.36	0.96
1331	0	1441	8.86	1	8.86	7.38	1.20
1332	0	1207	7.97	1	7.97	6.57	1.21
1333	0	1096	7.68	1	7.68	7.97	0.96
1334	0	1043	7.54	1	7.54	6.49	1.16
1335	0	926	7.23	1	7.23	7.23	1.00
1336	0	739	6.68	1	6.68	5.89	1.13
1337	0	579	6.17	1	6.17	5.85	1.05
1338	0	482	5.82	1	5.82	6.32	0.92
1339	0	416	5.55	1	5.55	5.54	1.00
1340	0	416	5.55	1	5.55	6.04	0.92
1341	0	545	6.06	1	6.06	6.71	0.90
1342	0	817	6.94	1	6.94	8.06	0.86
1343	0	1091	7.67	1	7.67	7.43	1.03
1344	0	1077	7.63	1	7.63	6.23	1.23
1345	0	855	7.05	1	7.05	5.56	1.27
1346	0	717	6.61	1	6.61	6.58	1.01
1347	0	649	6.40	1	6.40	6.87	0.93
1348	0	543	6.05	1	6.05	5.76	1.05
1349	0	447	5.68	1	5.68	6.00	0.95
1350	0	364	5.34	1	5.34	5.57	0.96
1351	0	371	5.37	1	5.37	4.78	1.12
1352	0	388	5.44	1	5.44	5.61	0.97
1353	0	430	5.61	1	5.61	5.84	0.96
1354	0	589	6.20	1	6.20	7.55	0.82
1355	0	673	6.47	1	6.47	6.49	1.00
1356	0	548	6.07	1	6.07	5.62	1.08
1357	0	365	5.34	1	5.34	5.19	1.03
1358	0	338	5.24	1	5.24	5.62	0.93
1359	0	400	5.49	1	5.49	5.20	1.05
1360	0	448	5.68	1	5.68	5.92	0.96
1361	0	537	6.03	1	6.03	6.19	0.97
1362	0	703	6.57	1	6.57	7.37	0.89
1363	0	925	7.23	1	7.23	8.47	0.85
1364	0	919	7.21	1	7.21	7.14	1.01
1365	0	728	6.65	1	6.65	5.75	1.16
1366	0	579	6.17	1	6.17	6.14	1.00
1367	0	373	5.38	1	5.38	5.42	0.99
1368	0	255	4.86	1	4.86	6.02	0.81
1369	0	381	5.41	1	5.41	6.46	0.84
1370	0	362	5.33	1	5.33	5.51	0.97
1371	0	444	5.66	1	5.66	6.41	0.88
1372	0	537	6.03	1	6.03	6.85	0.88
1373	0	625	6.31	1	6.31	6.88	0.92
1374	0	660	6.43	1	6.43	7.45	0.86
1375	0	828	6.97	1	6.97	7.88	0.88
1376	0	836	7.00	1	7.00	6.68	1.05
1377	0	829	6.97	1	6.97	7.57	0.92
1378	0	797	6.87	1	6.87	6.13	1.12
1379	0	653	6.41	1	6.41	6.60	0.97
1380	0	454	5.70	1	5.70	5.54	1.03
1381	0	357	5.31	1	5.31	4.48	1.18
1382	0	367	5.35	1	5.35	6.45	0.83
1383	0	414	5.54	1	5.54	5.99	0.93
1384	0	476	5.79	1	5.79	7.12	0.81
1385	0	533	6.02	1	6.02	6.05	1.00
1386	0	584	6.18	1	6.18	6.87	0.90
1387	0	797	6.87	1	6.87	7.47	0.92
1388	0	955	7.31	1	7.31	7.14	1.02
1389	0	818	6.94	1	6.94	5.47	1.27
1390	0	641	6.37	1	6.37	6.18	1.03
1391	0	581	6.18	1	6.18	6.20	1.00
1392	0	683	6.50	1	6.50	7.76	0.84
1393	0	798	6.88	1	6.88	7.55	0.91
1394	0	713	6.60	1	6.60	7.06	0.93
1395	0	608	6.26	1	6.26	6.56	0.95
1396	0	566	6.12	1	6.12	6.59	0.93
1397	0	534	6.02	1	6.02	6.48	0.93
1398	0	472	5.78	1	5.78	5.15	1.12
1399	0	400	5.49	1	5.49	5.38	1.02
1400	0	368	5.35	1	5.35	5.66	0.95
1401	0	292	5.05	1	5.05	5.20	0.97
1402	0	331	5.21	1	5.21	4.90	1.06
1403	0	412	5.54	1	5.54	4.90	1.13
1404	0	546	6.06	1	6.06	6.60	0.92
1405	0	686	6.51	1	6.51	7.39	0.88
1406	0	745	6.70	1	6.70	7.06	0.95
1407	0	833	6.99	1	6.99	6.37	1.10
1408	0	919	7.22	1	7.22	6.53	1.10
1409	0	976	7.37	1	7.37	6.63	1.11
1410	0	974	7.36	1	7.36	6.93	1.06
1411	0	1038	7.53	1	7.53	7.88	0.96
1412	0	1088	7.66	1	7.66	7.96	0.96
1413	0	1258	8.16	1	8.16	8.02	1.02
1414	0	1534	9.47	0		8.72	
1415	0	1283	8.25	1	8.25	7.46	1.11
1416	0	958	7.32	1	7.32	6.28	1.17
1417	0	743	6.70	1	6.70	5.98	1.12
1418	0	785	6.83	1	6.83	6.84	1.00
1419	0	1065	7.60	1	7.60	8.79	0.86
1420	0	1111	7.72	1	7.72	7.56	1.02
1421	0	919	7.22	1	7.22	6.66	1.08
1422	0	745	6.70	1	6.70	6.54	1.03
1423	0	706	6.58	1	6.58	7.93	0.83
1424	0	914	7.20	1	7.20	7.94	0.91
1425	0	1295	8.30	1	8.30	8.38	0.99
1426	0	1540	9.52	0		8.44	
1427	0	1505	9.23	1	9.23	9.09	1.02
1428	0	1616	10.82	0		8.58	
1429	0	1643		0		8.38	
1430	0	1517	9.33	0		7.84	
1431	0	1182	7.91	1	7.91	7.07	1.12
1432	0	1038	7.53	1	7.53	6.92	1.09
1433	0	999	7.43	1	7.43	6.51	1.14
1434	0	1149	7.82	1	7.82	8.48	0.92
1435	1	1093	7.67	1		7.01	
1436	1	888	7.14	1		6.50	
1437	1	795	6.86	1		6.68	
1438	1	687	6.52	1		5.60	
1439	1	737	6.68	1		7.92	
1440	1	968	7.35	1		6.94	
1441	1	968	7.34	1		6.02	
1442	1	976	7.37	1		7.74	
1443	1	1205	7.97	1		7.86	
1444	0	535	6.03	1	6.03	6.58	0.92
1445	0	582	6.18	1	6.18	5.20	1.19
1446	0	586	6.19	1	6.19	6.14	1.01
1447	0	510	5.93	1	5.93	5.70	1.04
1448	0	456	5.71	1	5.71	5.70	1.00
1449	0	509	5.93	1	5.93	6.28	0.94
1450	0	499	5.89	1	5.89	5.59	1.05
1451	0	470	5.77	1	5.77	6.04	0.96
1452	0	502	5.90	1	5.90	6.22	0.95
1453	0	586	6.19	1	6.19	6.94	0.89
1454	0	703	6.57	1	6.57	7.77	0.84
1455	0	793	6.86	1	6.86	7.72	0.89
1456	0	798	6.87	1	6.87	7.17	0.96
1457	0	735	6.67	1	6.67	5.70	1.17
1458	0	663	6.44	1	6.44	6.48	0.99
1459	0	590	6.20	1	6.20	6.37	0.97
1460	0	552	6.08	1	6.08	5.71	1.07
1461	0	638	6.36	1	6.36	6.93	0.92
1462	0	802	6.89	1	6.89	7.35	0.94
1463	0	809	6.91	1	6.91	6.65	1.04
1464	0	686	6.51	1	6.51	6.43	1.01
1465	0	733	6.67	1	6.67	6.81	0.98
1466	0	841	7.01	1	7.01	7.13	0.98
1467	0	852	7.04	1	7.04	7.39	0.95
1468	0	748	6.71	1	6.71	6.07	1.11
1469	0	620	6.30	1	6.30	6.69	0.94
1470	0	649	6.39	1	6.39	5.94	1.08
1471	0	790	6.85	1	6.85	6.97	0.98
1472	0	738	6.68	1	6.68	6.56	1.02
1473	0	644	6.38	1	6.38	6.54	0.97
1474	0	610	6.27	1	6.27	6.35	0.99
1475	0	535	6.03	1	6.03	5.72	1.05
1476	0	489	5.85	1	5.85	5.81	1.01
1477	0	1557	9.66	0		7.24	
1478	0	1178	7.90	1	7.90	7.41	1.07
1479	0	1177	7.90	1	7.90	8.41	0.94
1480	0	1220	8.01	1	8.01	7.58	1.06
1481	0	1305	8.34	1	8.34	9.05	0.92
1482	0	1112	7.72	1	7.72	6.70	1.15
1483	0	735	6.67	1	6.67	5.14	1.30
1484	0	599	6.23	1	6.23	5.70	1.09
1485	0	765	6.77	1	6.77	6.21	1.09
1486	0	943	7.28	1	7.28	7.57	0.96
1487	0	1138	7.79	1	7.79	8.10	0.96
1488	0	1120	7.75	1	7.75	7.03	1.10
1489	0	880	7.11	1	7.11	6.94	1.02
1490	0	809	6.91	1	6.91	5.69	1.21
1491	0	817	6.94	1	6.94	7.16	0.97
1492	0	844	7.02	1	7.02	6.56	1.07
1493	0	700	6.56	1	6.56	5.99	1.09
1494	0	531	6.01	1	6.01	6.30	0.96
1495	0	407	5.51	1	5.51	5.11	1.08
1496	0	392	5.45	1	5.45	5.17	1.05
1497	0	498	5.88	1	5.88	6.37	0.92
1498	0	783	6.83	1	6.83	6.80	1.00
1499	0	1213	7.99	1	7.99	7.92	1.01
1500	0	1371	8.59	1	8.59	7.98	1.08
1501	0	1394	8.68	1	8.68	7.48	1.16
1502	0	1563	9.71	0		8.73	
1503	0	1597	10.00	0	9.65	9.57	
1504	0	1576	9.83	0	9.27	9.19	
1505	0	1654		0	10.17	10.09	
1506	0	1427	8.80	1	8.80	8.27	1.06
1507	0	1151	7.83	1	7.83	6.93	1.13
1508	0	1022	7.49	1	7.49	6.69	1.12
1509	0	1030	7.51	1	7.51	7.72	0.97
1510	0	1094	7.68	1	7.68	7.85	0.98
1511	0	1254	8.14	1	8.14	8.77	0.93
1512	0	1575	9.82	0	9.94	9.87	
1513	0	1510	9.27	0		8.41	
1514	0	1038	7.53	1	7.53	5.99	1.26
1515	0	732	6.66	1	6.66	6.18	1.08
1516	0	571	6.14	1	6.14	4.97	1.24
1517	0	548	6.07	1	6.07	4.96	1.22
1518	1	697	6.55	1		5.90	
1519	0	865	7.07	1	7.07	6.62	1.07
1520	0	969	7.35	1	7.35	6.79	1.08
1521	0	959	7.32	1	7.32	6.59	1.11
1522	0	1134	7.78	1	7.78	7.71	1.01
1523	0	1644		0	10.42	10.34	
1524	0	1500	9.19	1	9.19	9.03	1.02
1525	0	1457	8.92	1	8.92	9.68	0.92
1526	0	1633		0	10.05	9.97	
1527	0	1614	10.74	0	12.14	12.04	
1528	0	1611	10.61	0	10.79	10.71	
1529	0	1598	10.06	0	10.17	10.09	
1530	0	1621		0	9.58	9.51	
1531	0	1618	10.89	0		8.39	
1532	0	1417	8.77	1	8.77	8.87	0.99
1533	0	1585	9.90	0		8.16	
1534	0	1545	9.57	0		8.18	
1535	0	1654		0	10.04	9.96	
1536	0	1487	9.07	1	9.07	7.69	1.18
1537	0	1485	9.06	1	9.06	8.86	1.02
1538	0	1673		0	10.41	10.32	
1539	0	1617	10.89	0	9.61	9.54	
1540	0	1597	10.00	0	10.19	10.11	
1541	0	1564	9.72	0		7.71	
1542	0	1642		0	9.89	9.82	
1543	0	1614	10.73	0	10.36	10.27	
1544	0	1616	10.84	0		8.81	
1545	0	1620		0	9.69	9.61	
1546	0	1355	8.53	1	8.53	8.34	1.02
1547	0	1251	8.13	1	8.13	7.53	1.08
1548	0	1184	7.91	1	7.91	7.11	1.11
1549	0	1372	8.59	1	8.59	10.07	0.85
1550	0	1308	8.35	1	8.35	6.44	1.30
1551	0	1280	8.24	1	8.24	8.21	1.00
1552	0	1630		0		8.27	
1553	0	1450	8.89	1	8.89	8.08	1.10
1554	0	1615	10.79	0	9.49	9.42	
1555	0	1625		0		8.58	
1556	0	1625		0		9.16	
1557	0	1640		0	9.77	9.69	
1558	0	1632		0	9.45	9.37	
1559	0	1626		0	10.94	10.85	
1560	0	1586	9.90	0		8.90	
1561	0	1626		0	9.37	9.29	
1562	0	1636		0	10.40	10.32	
1563	0	1631		0	11.19	11.10	
1564	0	1623		0	10.84	10.76	
1565	0	1632		0	11.57	11.48	
1566	0	1612	10.66	0	10.81	10.72	
1567	0	1611	10.60	0		8.01	
1568	0	1639		0	10.38	10.30	
1569	0	1626		0	12.92	12.82	
1570	0	1625		0	10.51	10.43	
1571	0	1600	10.12	0		8.58	
1572	0	1640		0	10.49	10.41	
1573	0	1594	9.97	0		8.02	
1574	0	1652		0		8.29	
1575	0	1630		0	10.49	10.41	
1576	0	1626		0	10.08	10.00	
1577	0	1595	9.98	0		8.62	
1578	0	1652		0	10.40	10.32	
1579	0	1600	10.12	0	11.82	11.72	
1580	0	1626		0	11.64	11.55	
1581	0	1617	10.89	0	11.16	11.07	
1582	0	1608	10.48	0	10.66	10.58	
1583	0	1649		0	10.54	10.45	
1584	0	1626		0	10.36	10.28	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1585	0	1605	10.34	0		8.61	
1586	0	1645		0	10.31	10.23	
1587	0	1627		0	10.37	10.29	
1588	0	1622		0	11.51	11.42	
1589	0	1600	10.14	0		8.86	
1590	0	1630		0		8.93	
1591	0	1636		0	10.93	10.84	
1592	0	1638		0	11.09	11.00	
1593	0	1632		0	11.31	11.23	
1594	0	1621		0	11.57	11.48	
1595	0	1622		0	11.75	11.66	
1596	0	1617	10.85	0	11.33	11.24	
1597	0	1627		0	9.64	9.56	
1598	0	1635		0	9.75	9.67	
1599	0	1640		0	11.98	11.88	
1600	0	1634		0	11.63	11.54	
1601	0	1613	10.69	0	12.34	12.24	
1602	0	1628		0	10.12	10.04	
1603	0	1605	10.34	0	10.38	10.29	
1604	0	1629		0	10.44	10.36	
1605	0	1627		0		9.06	
1606	0	1634		0		7.51	
1607	0	1642		0	9.54	9.47	
1608	0	1645		0	9.33	9.26	
1609	0	1637		0	11.04	10.95	
1610	0	1592	9.96	0	10.03	9.95	
1611	0	1633		0		9.02	
1612	0	1617	10.86	0	9.55	9.48	
1613	0	1626		0	10.82	10.73	
1614	0	1632		0		8.49	
1615	0	1633		0	10.71	10.62	
1616	0	1628		0	11.85	11.76	
1617	0	1628		0	13.38	13.27	
1618	0	1622		0	14.58	14.47	
1619	0	1614	10.74	0	12.62	12.52	
1620	0	1623		0	11.47	11.38	
1621	0	1614	10.74	0	9.51	9.43	
1622	0	1608	10.49	0	9.76	9.68	
1623	0	1374	8.60	1	8.60	7.91	1.09
1624	0	1612	10.65	0		9.12	
1625	0	1553	9.63	0		8.93	
1626	0	1534	9.47	0		9.18	
1627	0	1630		0		8.95	
1628	0	1665		0	12.41	12.32	
1629	0	1599	10.08	0	12.33	12.24	
1630	0	1625		0	12.23	12.14	
1631	0	1626		0	12.55	12.45	
1632	0	1603	10.25	0	11.37	11.28	
1633	0	1632		0	10.64	10.56	
1634	0	1621		0	9.64	9.56	
1635	0	1629		0	10.75	10.66	
1636	0	1629		0	11.06	10.97	
1637	0	1636		0	11.39	11.30	
1638	0	1595	9.98	0	9.26	9.18	
1639	0	1631		0	10.65	10.56	
1640	0	1610	10.54	0	9.95	9.87	
1641	0	1607	10.46	0		8.63	
1642	0	1614	10.73	0		8.56	
1643	0	1218	8.01	1	8.01	8.02	1.00
1644	0	1139	7.79	1	7.79	7.39	1.05
1645	0	1088	7.66	1	7.66	6.58	1.16
1646	0	1338	8.46	1	8.46	8.48	1.00
1647	0	1411	8.74	1	8.74	6.91	1.26
1648	0	1354	8.53	1	8.53	7.96	1.07
1649	0	1677		0	10.20	10.12	
1650	0	1600	10.12	0	9.66	9.58	
1651	0	1637		0	10.87	10.78	
1652	0	1617	10.88	0	9.41	9.34	
1653	0	1582	9.88	0	9.30	9.23	
1654	0	1636		0	9.68	9.61	
1655	0	1585	9.90	0	9.76	9.69	
1656	0	1183	7.91	1	7.91	7.32	1.08
1657	0	1089	7.66	1	7.66	6.20	1.24
1658	0	1069	7.61	1	7.61	7.83	0.97
1659	0	965	7.34	1	7.34	6.12	1.20
1660	0	895	7.15	1	7.15	6.95	1.03
1661	0	776	6.80	1	6.80	6.90	0.99
1662	0	654	6.41	1	6.41	6.89	0.93
1663	0	722	6.63	1	6.63	7.01	0.95
1664	0	881	7.12	1	7.12	6.96	1.02
1665	0	1000	7.43	1	7.43	7.44	1.00
1666	0	1474	8.98	1	8.98	10.48	0.86
1667	0	1640		0		9.14	
1668	0	1619	10.96	0		7.95	
1669	0	1638		0	10.50	10.42	
1670	0	1511	9.28	0		8.30	
1671	0	1252	8.13	1	8.13	8.79	0.93
1672	0	1528	9.42	0	10.68	10.59	

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1673	0	1194	7.94	1	7.94	5.99	1.32
1674	0	907	7.19	1	7.19	6.65	1.08
1675	0	961	7.33	1	7.33	6.26	1.17
1676	0	1361	8.55	1	8.55	9.04	0.95
1677	0	1670		0	10.45	10.37	
1678	0	1610	10.58	0	9.34	9.27	
1679	0	1643		0	12.46	12.37	
1680	0	1603	10.27	0	12.99	12.89	
1681	0	1613	10.68	0	12.41	12.31	
1682	0	1614	10.72	0	11.98	11.89	
1683	0	1628		0	10.35	10.26	
1684	0	1647		0	10.58	10.50	
1685	0	1626		0	10.70	10.62	
1686	0	1614	10.74	0	10.95	10.87	
1687	0	1619	10.98	0	10.66	10.57	
1688	0	1634		0		9.02	
1689	0	1640		0	11.37	11.28	
1690	0	1635		0	11.00	10.91	
1691	0	1603	10.28	0	9.94	9.86	
1692	0	1637		0	10.23	10.15	
1693	0	1643		0	9.87	9.80	
1694	0	1630		0	12.28	12.18	
1695	0	1621		0	11.80	11.71	
1696	0	1628		0	12.96	12.86	
1697	0	1611	10.62	0	11.81	11.71	
1698	0	1625		0	11.74	11.65	
1699	0	1621		0	10.92	10.83	
1700	0	1624		0	10.75	10.67	
1701	0	1626		0	10.75	10.66	
1702	0	1610	10.57	0	10.28	10.20	
1703	0	1628		0	10.52	10.44	
1704	0	1623		0	9.56	9.49	
1705	0	1576	9.82	0	9.61	9.54	
1706	0	1222	8.02	1	8.02	10.00	0.80
1707	0	1527	9.41	0	11.18	11.09	
1708	0	1656		0	10.64	10.56	
1709	0	1599	10.09	0		7.83	
1710	0	1570	9.77	0		7.01	
1711	0	1629		0		8.32	
1712	0	1665		0	9.95	9.88	
1713	0	1598	10.05	0	10.32	10.24	
1714	0	1536	9.49	0		8.62	
1715	0	1417	8.77	1	8.77	8.22	1.07
1716	0	1296	8.30	1	8.30	5.71	1.45
1717	0	1124	7.76	1	7.76	6.39	1.21
1718	0	1119	7.74	1	7.74	6.52	1.19
1719	0	1160	7.85	1	7.85	6.21	1.26
1720	0	1137	7.79	1	7.79	6.66	1.17
1721	0	1659		0		8.37	
1722	0	1636		0	9.72	9.64	
1723	0	1630		0	9.30	9.23	
1724	0	1609	10.53	0	9.35	9.27	
1725	0	1600	10.14	0		8.54	
1726	0	1640		0		8.89	
1727	0	1595	9.98	0		8.79	
1728	0	1555	9.65	0		8.60	
1729	0	1660		0	12.12	12.02	
1730	0	1608	10.46	0	11.70	11.61	
1731	0	1609	10.54	0		8.53	
1732	0	1604	10.31	0	9.62	9.55	
1733	0	1438	8.85	1	8.85	7.76	1.14
1734	0	1041	7.54	1	7.54	6.66	1.13
1735	0	1587	9.91	0	10.53	10.44	
1736	0	1624		0	9.57	9.49	
1737	0	1567	9.75	0		7.03	
1738	0	1565	9.73	0	9.84	9.76	
1739	0	1332	8.44	1	8.44	8.83	0.96
1740	0	1292	8.29	1	8.29	7.30	1.13
1741	0	1562	9.71	0		9.03	
1742	0	1586	9.90	0		8.14	
1743	0	1517	9.33	0	9.29	9.21	
1744	0	1282	8.25	1	8.25	7.68	1.07
1745	0	1034	7.52	1	7.52	7.02	1.07
1746	0	1027	7.50	1	7.50	7.70	0.97
1747	0	1049	7.56	1	7.56	8.82	0.86
1748	0	950	7.30	1	7.30	6.86	1.06
1749	0	1055	7.57	1	7.57	7.34	1.03
1750	0	1250	8.13	1	8.13	8.94	0.91
1751	0	1088	7.66	1	7.66	6.91	1.11
1752	0	1624		0	11.64	11.55	
1753	0	1576	9.82	0	11.49	11.40	
1754	0	1625		0	10.96	10.87	
1755	0	1630		0	14.29	14.18	
1756	0	1627		0	10.55	10.47	
1757	0	1614	10.74	0	12.75	12.65	
1758	0	1624		0	11.77	11.68	
1759	0	1629		0	9.74	9.67	
1760	0	1634		0	12.39	12.29	

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1761	0	1627		0	13.60	13.50	
1762	0	1622		0	12.43	12.34	
1763	0	1635		0	13.96	13.85	
1764	0	1616	10.84	0	12.65	12.55	
1765	0	1621		0	10.88	10.80	
1766	0	1630		0	11.23	11.14	
1767	0	1598	10.04	0	9.95	9.87	
1768	0	1619	10.94	0	10.13	10.05	
1769	0	1633		0		9.16	
1770	0	1650		0	10.26	10.18	
1771	0	1489	9.10	1	9.10	8.52	1.07
1772	0	1433	8.83	1	8.83	7.37	1.20
1773	0	1617	10.89	0	9.86	9.79	
1774	0	1638		0	10.74	10.65	
1775	0	1619	10.97	0		8.96	
1776	0	1611	10.59	0	12.30	12.21	
1777	0	1611	10.60	0	11.06	10.98	
1778	0	1612	10.67	0	11.25	11.16	
1779	0	1623		0	11.08	10.99	
1780	0	1622		0	11.08	11.00	
1781	0	1644		0	10.77	10.68	
1782	0	1605	10.36	0	9.98	9.91	
1783	0	1587	9.92	0	9.53	9.45	
1784	0	1309	8.35	1	8.35	9.03	0.93
1785	0	1283	8.25	1	8.25	7.58	1.09
1786	0	1328	8.43	1	8.43	8.28	1.02
1787	0	1416	8.76	1	8.76	10.23	0.86
1788	0	1601	10.16	0		9.13	
1789	0	1590	9.94	0	9.32	9.25	
1790	0	1639		0		8.41	
1791	0	1620	10.99	0	9.52	9.44	
1792	0	1305	8.34	1	8.34	8.31	1.00
1793	0	1390	8.66	1	8.66	8.09	1.07
1794	0	1658		0	10.81	10.73	
1795	0	1555	9.65	0	9.57	9.50	
1796	0	1636		0		9.13	
1797	0	1626		0	10.41	10.33	
1798	0	1627		0	10.33	10.25	
1799	0	1611	10.59	0		8.71	
1800	0	1582	9.87	0		8.38	
1801	0	1318	8.39	1	8.39	8.04	1.04
1802	0	1203	7.96	1	7.96	8.40	0.95
1803	0	1072	7.62	1	7.62	6.85	1.11
1804	0	1191	7.93	1	7.93	7.64	1.04
1805	0	1551	9.62	0	10.47	10.39	
1806	0	1566	9.74	0	9.50	9.43	
1807	0	1455	8.91	1	8.91	8.36	1.07
1808	0	1313	8.37	1	8.37	7.71	1.08
1809	0	1186	7.92	1	7.92	8.13	0.97
1810	0	1630		0	10.71	10.62	
1811	0	1586	9.91	0	10.50	10.41	
1812	0	1266	8.19	1	8.19	7.86	1.04
1813	0	912	7.20	1	7.20	7.18	1.00
1814	0	1014	7.46	1	7.46	7.89	0.95
1815	0	1040	7.53	1	7.53	6.01	1.25
1816	0	1057	7.58	1	7.58	6.53	1.16
1817	0	1298	8.31	1	8.31	9.50	0.87
1818	0	1563	9.72	0	9.96	9.89	
1819	0	1593	9.97	0		8.69	
1820	0	1632		0		8.17	
1821	0	1571	9.78	0		8.60	
1822	0	1631		0		7.15	
1823	0	1628		0	9.62	9.54	
1824	0	1624		0	9.87	9.79	
1825	0	1639		0	9.51	9.43	
1826	0	1631		0		8.68	
1827	0	1589	9.93	0		8.60	
1828	0	1600	10.11	0	10.12	10.04	
1829	0	1642		0		8.38	
1830	0	1616	10.81	0	9.40	9.32	
1831	0	1321	8.40	1	8.40	7.54	1.11
1832	0	1067	7.61	1	7.61	6.39	1.19
1833	0	1065	7.60	1	7.60	7.32	1.04
1834	0	1276	8.23	1	8.23	7.93	1.04
1835	0	1667		0	11.94	11.84	
1836	0	1618	10.91	0	10.94	10.85	
1837	0	1615	10.79	0	10.50	10.42	
1838	0	1620		0	9.80	9.72	
1839	0	1615	10.78	0	9.96	9.89	
1840	0	1637		0	10.56	10.48	
1841	0	1639		0	10.76	10.67	
1842	0	1660		0	9.49	9.41	
1843	0	1634		0	12.26	12.16	
1844	0	1606	10.38	0	11.95	11.86	
1845	0	1617	10.87	0	10.75	10.67	
1846	0	1622		0	11.56	11.47	
1847	0	1592	9.96	0		8.84	
1848	0	1641		0	10.22	10.14	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of nacelle k-factor as per IEC 61400-11 Edition 3.0 section 8.2.1.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1849	0	1586	9.91	0	9.91	9.83	
1850	0	1635		0		8.10	
1851	0	1549	9.60	0	9.38	9.31	
1852	0	1357	8.54	1	8.54	8.92	0.96
1853	0	1399	8.70	1	8.70	9.15	0.95
1854	0	1353	8.52	1	8.52	7.36	1.16
1855	0	1250	8.13	1	8.13	6.84	1.19
1856	0	1274	8.22	1	8.22	8.17	1.01
1857	0	1415	8.76	1	8.76	8.21	1.07
1858	0	1479	9.01	1	9.01	7.88	1.14
1859	0	1238	8.08	1	8.08	7.69	1.05
1860	0	1009	7.45	1	7.45	6.23	1.20
1861	0	893	7.15	1	7.15	6.49	1.10
1862	0	793	6.86	1	6.86	5.75	1.19
1863	0	705	6.57	1	6.57	4.92	1.34
1864	0	629	6.33	1	6.33	5.17	1.22
1865	0	639	6.36	1	6.36	6.82	0.93
1866	0	936	7.26	1	7.26	7.73	0.94
1867	0	1168	7.87	1	7.87	7.36	1.07
1868	0	1335	8.45	1	8.45	9.03	0.94
1869	0	1283	8.25	1	8.25	7.67	1.08
1870	0	1000	7.43	1	7.43	5.84	1.27
1871	0	867	7.08	1	7.08	7.01	1.01
1872	0	931	7.25	1	7.25	7.93	0.91
1873	0	1127	7.76	1	7.76	7.82	0.99
1874	0	1624		0	9.89	9.81	
1875	0	1654		0		8.36	
1876	0	1611	10.60	0	10.64	10.56	
1877	0	1579	9.85	0	9.31	9.24	
1878	0	1293	8.29	1	8.29	7.59	1.09
1879	0	1091	7.67	1	7.67	7.38	1.04
1880	0	1236	8.07	1	8.07	6.81	1.18
1881	0	1460	8.93	1	8.93	7.86	1.14
1882	0	1662		0	9.59	9.51	
1883	0	1626		0	9.81	9.73	
1884	0	1629		0	10.59	10.51	
1885	0	1599	10.11	0	9.54	9.46	
1886	0	1614	10.72	0	9.43	9.36	
1887	0	1627		0		9.07	
1888	0	1629		0	9.91	9.84	
1889	0	1639		0	12.22	12.13	
1890	0	1621		0	11.44	11.35	
1891	0	1617	10.86	0	10.76	10.68	
1892	0	1615	10.79	0	10.81	10.73	
1893	0	1631		0	9.29	9.21	
1894	0	1635		0	12.02	11.92	
1895	0	1625		0	11.96	11.87	
1896	0	1633		0	11.30	11.21	
1897	0	1613	10.69	0	11.33	11.24	
1898	0	1636		0	11.29	11.20	
1899	0	1617	10.88	0	12.18	12.09	
1900	0	1630		0	10.59	10.50	
1901	0	1629		0	11.81	11.72	
1902	0	1620	10.99	0	11.47	11.38	
1903	0	1627		0	12.41	12.31	
1904	0	1619	10.94	0	11.64	11.55	
1905	0	1625		0	10.91	10.82	
1906	0	1614	10.75	0	11.46	11.37	
1907	0	1613	10.71	0	9.99	9.91	
1908	0	1511	9.28	0		7.46	
1909	0	1654		0	10.29	10.21	
1910	0	1412	8.75	1	8.75	8.72	1.00
1911	0	1284	8.26	1	8.26	8.28	1.00
1912	0	1106	7.71	1	7.71	7.42	1.04
1913	0	928	7.24	1	7.24	7.44	0.97
1914	0	781	6.82	1	6.82	5.82	1.17
1915	0	757	6.74	1	6.74	5.87	1.15
1916	0	934	7.26	1	7.26	7.71	0.94
1917	0	1187	7.92	1	7.92	9.07	0.87
1918	0	1334	8.45	1	8.45	9.07	0.93
1919	0	1329	8.43	1	8.43	7.52	1.12
1920	0	1252	8.13	1	8.13	8.07	1.01
1921	0	1159	7.85	1	7.85	7.91	0.99
1922	0	1233	8.06	1	8.06	9.33	0.86
1923	0	1624		0	10.77	10.69	
1924	0	1432	8.82	1	8.82	9.40	0.94
1925	0	1500	9.19	1	9.19	10.19	0.90
1926	0	1610	10.56	0	10.31	10.23	
1927	0	1466	8.95	1	8.95	8.69	1.03
1928	0	1576	9.82	0		7.92	
1929	0	1510	9.27	0		8.63	
1930	0	1630		0	9.55	9.47	
1931	0	1628		0	11.34	11.25	
1932	0	1586	9.91	0	9.88	9.80	
1933	0	1583	9.88	0	9.28	9.20	
1934	0	1605	10.36	0	9.41	9.34	
1935	0	1390	8.66	1	8.66	9.24	0.94
1936	0	1624		0		9.01	

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$
1937	0	1648		0	9.95	9.88	
1938	0	1612	10.66	0	11.00	10.91	
1939	0	1375	8.60	1	8.60	8.46	1.02
1940	0	1027	7.50	1	7.50	6.53	1.15
1941	0	935	7.26	1	7.26	8.46	0.86
1942	0	1216	8.00	1	8.00	7.67	1.04
1943	0	1587	9.91	0	10.30	10.22	
1944	0	1398	8.69	1	8.69	9.18	0.95
1945	0	1383	8.63	1	8.63	8.80	0.98
1946	0	1313	8.37	1	8.37	8.15	1.03
1947	0	1386	8.65	1	8.65	10.66	0.81
1948	0	1240	8.09	1	8.09	6.87	1.18
1949	0	1175	7.89	1	7.89	9.05	0.87
1950	0	1238	8.08	1	8.08	9.68	0.83
1951	0	1255	8.15	1	8.15	7.33	1.11
1952	0	1572	9.79	0	9.26	9.19	
1953	0	1644		0	10.24	10.16	
1954	0	1527	9.41	0		7.83	
1955	0	1059	7.58	1	7.58	7.58	1.00
1956	0	839	7.01	1	7.01	4.52	1.55
1957	0	954	7.31	1	7.31	7.02	1.04
1958	0	1473	8.98	1	8.98	8.68	1.03
1959	0	1425	8.80	1	8.80	7.68	1.15
1960	0	1197	7.95	1	7.95	7.48	1.06
1961	0	993	7.41	1	7.41	6.88	1.08
1962	0	962	7.33	1	7.33	7.70	0.95
1963	0	1120	7.75	1	7.75	7.59	1.02
1964	0	1357	8.54	1	8.54	8.15	1.05
1965	0	1509	9.26	0		9.06	
1966	0	1503	9.21	1	9.21	8.80	1.05
1967	0	1404	8.72	1	8.72	8.46	1.03
1968	0	1535	9.48	0		8.52	
1969	0	1480	9.02	1	9.02	9.98	0.90
1970	0	1204	7.97	1	7.97	6.12	1.30
1971	0	1022	7.49	1	7.49	5.69	1.32
1972	0	997	7.42	1	7.42	5.28	1.41
1973	0	830	6.98	1	6.98	5.18	1.35
1974	0	953	7.31	1	7.31	7.83	0.93
1975	0	1373	8.60	1	8.60	7.54	1.14
1976	0	1281	8.24	1	8.24	7.08	1.17
1977	0	1069	7.61	1	7.61	7.98	0.95
1978	0	922	7.22	1	7.22	7.41	0.97
1979	0	718	6.62	1	6.62	5.18	1.28
1980	0	534	6.02	1	6.02	6.01	1.00
1981	0	559	6.10	1	6.10	5.83	1.05
1982	0	837	7.00	1	7.00	8.02	0.87
1983	0	1013	7.46	1	7.46	7.21	1.04
1984	0	847	7.03	1	7.03	5.89	1.19
1985	0	723	6.63	1	6.63	6.18	1.07
1986	0	649	6.39	1	6.39	5.53	1.16
1987	0	610	6.27	1	6.27	6.67	0.94
1988	0	736	6.67	1	6.67	6.68	1.00
1989	0	900	7.17	1	7.17	7.19	1.00
1990	0	954	7.31	1	7.31	6.04	1.21
1991	0	1014	7.46	1	7.46	7.15	1.04

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	Nacelle Anemometer Wind Speed, $V_{nac,m}$ (m/s)	$V_{p,n}/V_{nac,m}$

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Sample calculations have been based on measurement data collected and reported for Jericho Wind Farm (Report ID: 14662.00.T03.R4)

For all data points with power levels from the allowed range of the power curve, the average value of the ratio of the wind speed derived from the power curve VP,n and the measured wind speed $V_{Z,m}$, k_Z, is derived as per equation (1) Information to calculate k_Z is provided in Table 1.

$$k_Z = \frac{1}{n}\left(\sum_{i=1}^{n}\left(\frac{v_{p,n}}{v_{Z,m}}\right)_i\right) \qquad (1)$$

where

$V_{P,n}$ is wind speed derived from power curve

K_Z is Background k-factor

$V_{Z,n}$ is measured 10m wind speed

k_Z = 1.1438

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Table 1 - Information to calculate K_Z

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed in acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,n}$ (m/s)	$V_{P,n}/V_{Z,m}$
1	1	994	7.41	1		5.40	
2	1	1160	7.85	1		4.84	
3	1	1400	8.70	1		4.54	
4	1	1561	9.70	0		3.56	
5	1	1353	8.52	1		4.11	
6	1	1205	7.97	1		3.62	
7	1	1125	7.76	1		3.90	
8	1	1014	7.46	1		3.45	
9	1	968	7.35	1		3.52	
10	1	1034	7.52	1		3.98	
11	1	1080	7.64	1		3.89	
12	1	1108	7.71	1		3.82	
13	1	1040	7.53	1		3.93	
14	1	874	7.10	1		2.86	
15	1	790	6.85	1		2.96	
16	1	741	6.69	1		2.85	
17	1	759	6.75	1		4.16	
18	1	895	7.15	1		5.08	
19	1	957	7.32	1		5.70	
20	1	842	7.01	1		4.95	
21	1	786	6.83	1		3.64	
22	1	695	6.54	1		5.47	
23	1	522	5.98	1		5.70	
24	1	411	5.53	1		4.75	
25	1	371	5.37	1		4.07	
26	1	303	5.09	1		4.61	
27	1	285	5.02	1		3.78	
28	1	376	5.39	1		4.30	
29	1	424	5.58	1		4.27	
30	1	464	5.74	1		3.38	
31	1	608	6.26	1		3.06	
32	1	613	6.28	1		2.96	
33	1	620	6.30	1		2.86	
34	1	679	6.49	1		3.17	
35	1	683	6.50	1		2.21	
36	1	607	6.26	1		1.52	
37	1	469	5.76	1		2.72	
38	1	558	6.10	1		2.39	
39	1	586	6.19	1		1.33	
40	1	551	6.08	1		2.26	
41	1	437	5.64	1		3.78	
42	1	304	5.10	1		2.10	
43	1	196	4.54	1		4.36	
44	1	209	4.61	1		4.27	
45	1	221	4.68	1		3.18	
46	1	324	5.18	1		3.47	
47	1	307	5.11	1		3.80	
48	1	398	5.48	1		4.35	
49	1	537	6.03	1		3.47	
50	1	703	6.57	1		3.25	
51	1	676	6.48	1		5.85	
52	1	593	6.21	1		4.92	
53	1	625	6.32	1		3.76	
54	1	567	6.13	1		4.40	
55	1	486	5.83	1		4.48	
56	1	422	5.57	1		3.75	
57	1	320	5.16	1		3.30	
58	1	375	5.39	1		3.87	
59	1	437	5.64	1		4.48	
60	1	409	5.52	1		6.12	
61	1	393	5.46	1		5.89	
62	1	452	5.70	1		3.72	
63	1	604	6.25	1		3.70	
64	1	656	6.42	1		4.65	
65	1	648	6.39	1		4.22	
66	1	576	6.16	1		5.33	
67	1	426	5.59	1		5.68	
68	1	377	5.39	1		4.61	
69	1	373	5.38	1		3.23	
70	1	390	5.45	1		3.97	
71	1	467	5.76	1		3.99	
72	1	554	6.09	1		4.51	
73	1	647	6.39	1		4.36	
74	1	708	6.58	1		4.36	
75	1	689	6.52	1		4.73	
76	1	647	6.39	1		4.99	
77	1	643	6.37	1		4.55	
78	1	752	6.73	1		5.20	
79	1	811	6.92	1		5.67	
80	1	680	6.49	1		7.67	
81	1	757	6.74	1		7.82	
82	1	752	6.73	1		5.99	
83	1	965	7.34	1		5.54	
84	1	1321	8.40	1		6.10	
85	1	1263	8.18	1		7.14	
86	1	1208	7.98	1		6.98	
87	1	1513	9.29	0		5.40	
88	1	1455	8.91	1		3.63	
89	1	1172	7.88	1		5.62	
90	1	1069	7.61	1		5.94	
91	1	959	7.32	1		4.66	
92	1	796	6.87	1		4.61	
93	1	735	6.67	1		2.91	
94	1	723	6.63	1		4.15	
95	1	693	6.53	1		3.25	
96	1	637	6.35	1		3.03	
97	1	642	6.37	1		4.10	
98	1	612	6.27	1		5.53	
99	1	535	6.03	1		4.72	
100	1	479	5.81	1		4.27	
101	1	535	6.02	1		3.88	
102	1	606	6.26	1		3.25	
103	1	602	6.24	1		3.97	
104	1	594	6.22	1		5.36	
105	1	516	5.96	1		4.88	
106	1	413	5.54	1		4.80	
107	1	388	5.44	1		5.17	
108	1	461	5.73	1		6.88	
109	1	487	5.84	1		5.92	
110	1	464	5.74	1		5.73	
111	1	576	6.16	1		5.17	
112	1	765	6.77	1		4.47	
113	1	784	6.83	1		4.89	
114	1	707	6.58	1		6.12	
115	1	595	6.22	1		7.36	
116	1	557	6.10	1		7.29	
117	1	576	6.16	1		7.10	
118	1	645	6.38	1		5.36	
119	1	654	6.41	1		4.93	
120	1	718	6.61	1		5.14	
121	1	1128	7.77	1		6.69	
122	1	1171	7.88	1		5.92	
123	1	1173	7.88	1		4.72	
124	1	1117	7.74	1		5.04	
125	1	1005	7.44	1		4.06	
126	1	951	7.30	1		3.22	
127	1	794	6.86	1		5.21	
128	1	849	7.03	1		7.46	
129	1	880	7.11	1		5.78	
130	1	980	7.38	1		5.00	
131	1	997	7.42	1		5.91	
132	1	950	7.30	1		4.91	
133	1	1008	7.45	1		4.78	
134	1	818	6.94	1		4.60	
135	1	662	6.43	1		4.31	
136	1	552	6.08	1		3.95	
137	1	371	5.37	1		3.76	
138	1	311	5.12	1		3.49	
139	1	300	5.08	1		3.34	
140	1	389	5.44	1		4.77	
141	1	434	5.63	1		4.51	
142	1	583	6.18	1		5.99	
143	1	713	6.60	1		5.90	
144	1	674	6.47	1		4.74	
145	1	557	6.10	1		6.87	
146	1	544	6.06	1		5.85	
147	1	571	6.14	1		6.66	
148	1	591	6.21	1		6.20	
149	1	596	6.22	1		7.38	
150	1	611	6.27	1		7.55	
151	1	745	6.70	1		8.98	
152	1	703	6.57	1		8.94	
153	1	644	6.38	1		7.07	
154	1	657	6.42	1		7.11	
155	1	694	6.54	1		6.42	
156	1	996	7.42	1		5.75	
157	1	1239	8.08	1		6.27	
158	1	1173	7.88	1		5.96	
159	1	1164	7.86	1		4.68	
160	1	1083	7.65	1		3.84	
161	1	926	7.23	1		3.54	
162	1	773	6.79	1		5.33	
163	1	714	6.60	1		4.95	
164	1	888	7.13	1		3.65	
165	1	1144	7.81	1		6.27	
166	1	1011	7.46	1		4.81	
167	1	763	6.76	1		4.20	
168	1	765	6.77	1		4.02	
169	1	867	7.08	1		4.57	
170	1	986	7.39	1		5.76	
171	1	1034	7.52	1		5.35	
172	1	883	7.12	1		5.62	
173	1	656	6.42	1		4.75	
174	1	464	5.74	1		4.46	
175	1	305	5.10	1		3.90	
176	1	242	4.79	1		5.35	
177	1	321	5.17	1		5.89	
178	1	373	5.38	1		5.04	
179	1	394	5.46	1		4.34	
180	1	390	5.44	1		4.82	
181	1	334	5.22	1		4.62	
182	1	386	5.43	1		5.31	
183	1	456	5.71	1		5.69	
184	1	498	5.88	1		4.98	
185	1	545	6.06	1		4.88	
186	1	605	6.25	1		4.81	
187	1	795	6.87	1		4.01	
188	1	948	7.29	1		3.95	
189	1	1032	7.51	1		4.53	
190	1	1059	7.58	1		5.73	
191	1	1220	8.01	1		7.35	
192	1	1302	8.33	1		6.33	
193	1	1094	7.68	1		5.38	
194	1	924	7.23	1		5.05	
195	1	878	7.11	1		4.79	
196	1	875	7.10	1		6.97	
197	1	877	7.11	1		6.79	
198	1	415	5.55	1		4.94	
199	1	435	5.63	1		4.57	
200	1	414	5.54	1		4.02	
201	1	380	5.40	1		4.62	
202	1	285	5.02	1		4.71	
203	1	256	4.87	1		5.23	
204	1	341	5.25	1		7.45	
205	1	316	5.15	1		4.71	
206	1	344	5.26	1		6.87	
207	1	427	5.59	1		5.80	
208	1	526	5.99	1		4.64	
209	1	646	6.38	1		3.79	
210	1	671	6.46	1		4.56	
211	1	545	6.06	1		4.33	
212	1	438	5.64	1		4.11	
213	1	456	5.71	1		4.15	
214	1	453	5.70	1		5.49	
215	1	381	5.41	1		5.43	
216	1	483	5.82	1		4.22	
217	1	634	6.35	1		3.50	
218	1	704	6.57	1		3.38	
219	1	659	6.43	1		3.15	
220	1	624	6.31	1		3.31	
221	1	540	6.04	1		4.54	
222	1	466	5.76	1		5.29	
223	1	436	5.63	1		5.48	
224	1	443	5.66	1		5.64	
225	1	571	6.14	1		5.71	
226	1	649	6.39	1		6.37	
227	1	587	6.19	1		5.67	
228	1	782	6.82	1		5.14	
229	1	1086	7.66	1		5.87	
230	1	1298	8.31	1		4.30	
231	1	1162	7.85	1		4.53	
232	1	905	7.18	1		5.28	
233	1	856	7.05	1		6.22	
234	1	888	7.13	1		5.10	
235	1	705	6.57	1		4.48	
236	1	613	6.28	1		5.71	
237	1	620	6.30	1		5.54	
238	1	714	6.60	1		6.32	
239	1	717	6.61	1		6.03	
240	1	778	6.81	1		4.40	
241	1	1135	7.79	1		4.84	
242	1	1274	8.22	1		4.89	
243	1	1147	7.82	1		3.38	
244	1	946	7.29	1		5.12	
245	1	874	7.10	1		5.47	
246	1	892	7.14	1		4.68	
247	1	733	6.66	1		3.65	
248	1	592	6.21	1		4.65	
249	1	467	5.76	1		4.53	
250	1	316	5.15	1		3.38	
251	1	276	4.98	1		3.54	
252	1	411	5.53	1		3.85	
253	1	524	5.99	1		4.54	
254	1	625	6.31	1		3.76	
255	1	603	6.25	1		4.15	
256	1	480	5.81	1		4.71	
257	1	363	5.33	1		5.43	
258	1	199	4.56	1		4.42	
259	1	206	4.59	1		5.33	
260	1	216	4.65	1		5.98	
261	1	288	5.03	1		4.29	
262	1	253	4.85	1		4.32	
263	1	156	4.32	1		3.41	
264	1	107	4.06	1		2.83	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
265	1	101	4.02	1		2.76	
266	1	130	4.18	1		3.05	
267	0	417	5.55	1	5.55	5.53	1.00
268	0	398	5.48	1	5.48	3.98	1.38
269	0	410	5.53	1	5.53	4.93	1.12
270	0	386	5.43	1	5.43	6.18	0.88
271	0	334	5.22	1	5.22	5.56	0.94
272	0	392	5.45	1	5.45	4.52	1.21
273	0	364	5.34	1	5.34	5.67	0.94
274	0	318	5.15	1	5.15	5.71	0.90
275	0	373	5.38	1	5.38	3.98	1.35
276	0	414	5.54	1	5.54	4.14	1.34
277	0	423	5.58	1	5.58	6.24	0.89
278	0	359	5.32	1	5.32	5.79	0.92
279	0	418	5.56	1	5.56	4.52	1.23
280	0	459	5.73	1	5.73	3.64	1.57
281	0	459	5.73	1	5.73	4.08	1.40
282	0	436	5.63	1	5.63	4.02	1.40
283	0	358	5.31	1	5.31	3.65	1.46
284	0	245	4.81	1	4.81	4.15	1.16
285	0	181	4.46	1	4.46	4.84	0.92
286	0	218	4.66	1	4.66	5.54	0.84
287	0	227	4.71	1	4.71	5.01	0.94
288	0	214	4.64	1	4.64	4.48	1.04
289	0	261	4.90	1	4.90	5.13	0.95
290	0	339	5.24	1	5.24	5.76	0.91
291	0	450	5.69	1	5.69	4.74	1.20
292	0	626	6.32	1	6.32	4.46	1.42
293	0	712	6.60	1	6.60	4.07	1.62
294	0	743	6.70	1	6.70	6.41	1.04
295	0	869	7.08	1	7.08	7.14	0.99
296	0	987	7.40	1	7.40	6.34	1.17
297	0	945	7.28	1	7.28	5.18	1.41
298	0	833	6.99	1	6.99	5.25	1.33
299	0	825	6.96	1	6.96	5.00	1.39
300	0	860	7.06	1	7.06	6.16	1.15
301	0	878	7.11	1	7.11	5.86	1.21
302	0	838	7.00	1	7.00	7.23	0.97
303	0	761	6.75	1	6.75	7.67	0.88
304	0	919	7.22	1	7.22	8.24	0.88
305	0	1265	8.18	1	8.18	7.81	1.05
306	0	1318	8.39	1	8.39	6.88	1.22
307	0	1286	8.26	1	8.26	7.46	1.11
308	0	1569	9.77	0		7.21	
309	0	1617	10.87	0		6.74	
310	0	1420	8.78	1	8.78	5.92	1.48
311	0	1161	7.85	1	7.85	6.51	1.21
312	0	1181	7.91	1	7.91	6.40	1.23
313	0	1521	9.36	0	9.83	8.14	
314	0	1376	8.61	1	8.61	6.80	1.27
315	0	1222	8.02	1	8.02	5.73	1.40
316	0	1259	8.16	1	8.16	7.28	1.12
317	0	1290	8.28	1	8.28	6.46	1.28
318	0	1160	7.85	1	7.85	7.04	1.12
319	0	947	7.29	1	7.29	7.40	0.99
320	0	1017	7.47	1	7.47	6.72	1.11
321	0	1139	7.79	1	7.79	6.76	1.15
322	0	1048	7.55	1	7.55	6.83	1.11
323	0	856	7.05	1	7.05	5.98	1.18
324	0	721	6.63	1	6.63	5.14	1.29
325	0	687	6.52	1	6.52	5.55	1.17
326	0	847	7.03	1	7.03	5.94	1.18
327	0	1048	7.56	1	7.56	5.07	1.49
328	0	1117	7.74	1	7.74	6.34	1.22
329	0	1137	7.79	1	7.79	7.66	1.02
330	0	1143	7.81	1	7.81	7.92	0.99
331	0	1258	8.16	1	8.16	7.05	1.16
332	0	1380	8.62	1	8.62	6.91	1.25
333	0	1297	8.31	1	8.31	6.62	1.25
334	0	1295	8.30	1	8.30	5.77	1.44
335	0	1358	8.54	1	8.54	6.25	1.37
336	0	1331	8.44	1	8.44	7.51	1.12
337	0	1179	7.90	1	7.90	6.97	1.13
338	0	1052	7.57	1	7.57	7.20	1.05
339	0	1048	7.56	1	7.56	6.27	1.21
340	0	978	7.37	1	7.37	5.51	1.34
341	0	895	7.15	1	7.15	4.96	1.44
342	0	804	6.89	1	6.89	4.50	1.53
343	0	687	6.52	1	6.52	4.70	1.39
344	0	561	6.11	1	6.11	5.96	1.03
345	0	489	5.85	1	5.85	6.43	0.91
346	0	518	5.96	1	5.96	5.39	1.11
347	0	511	5.94	1	5.94	4.78	1.24
348	0	463	5.74	1	5.74	4.27	1.35
349	0	484	5.83	1	5.83	4.50	1.30
350	0	528	6.00	1	6.00	4.59	1.31
351	0	514	5.95	1	5.95	3.72	1.60
352	0	480	5.81	1	5.81	4.56	1.27

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
353	0	493	5.86	1	5.86	4.16	1.41
354	0	411	5.53	1	5.53	4.58	1.21
355	0	283	5.01	1	5.01	4.51	1.11
356	0	246	4.81	1	4.81	5.22	0.92
357	0	231	4.73	1	4.73	5.72	0.83
358	0	363	5.33	1	5.33	5.52	0.97
359	0	399	5.48	1	5.48	7.60	0.72
360	0	393	5.46	1	5.46	7.02	0.78
361	0	407	5.51	1	5.51	6.95	0.79
362	0	465	5.75	1	5.75	7.07	0.81
363	0	640	6.37	1	6.37	6.87	0.93
364	0	885	7.13	1	7.13	6.20	1.15
365	0	1013	7.46	1	7.46	6.65	1.12
366	0	949	7.29	1	7.29	5.86	1.24
367	0	819	6.94	1	6.94	5.47	1.27
368	0	723	6.63	1	6.63	6.01	1.10
369	0	729	6.65	1	6.65	5.11	1.30
370	0	739	6.68	1	6.68	4.33	1.54
371	0	700	6.56	1	6.56	4.51	1.45
372	0	651	6.40	1	6.40	5.07	1.26
373	0	590	6.20	1	6.20	5.18	1.20
374	0	532	6.02	1	6.02	4.46	1.35
375	0	535	6.03	1	6.03	4.15	1.45
376	0	610	6.27	1	6.27	4.52	1.39
377	0	628	6.33	1	6.33	5.28	1.20
378	0	550	6.07	1	6.07	5.80	1.05
379	0	385	5.42	1	5.42	5.91	0.92
380	0	446	5.67	1	5.67	5.29	1.07
381	0	536	6.03	1	6.03	5.79	1.04
382	0	573	6.15	1	6.15	5.19	1.18
383	0	523	5.98	1	5.98	5.62	1.07
384	0	452	5.70	1	5.70	5.23	1.09
385	0	424	5.58	1	5.58	6.26	0.89
386	0	443	5.66	1	5.66	6.05	0.94
387	0	464	5.74	1	5.74	5.56	1.03
388	0	491	5.85	1	5.85	4.79	1.22
389	0	558	6.10	1	6.10	4.85	1.26
390	0	587	6.19	1	6.19	4.93	1.26
391	0	424	5.58	1	5.58	4.68	1.19
392	0	190	4.51	1	4.51	4.37	1.03
393	0	272	4.96	1	4.96	5.39	0.92
394	0	384	5.42	1	5.42	3.92	1.38
395	0	536	6.03	1	6.03	4.07	1.48
396	0	758	6.74	1	6.74	5.26	1.28
397	0	796	6.87	1	6.87	6.64	1.03
398	0	673	6.47	1	6.47	6.19	1.05
399	0	585	6.19	1	6.19	6.14	1.01
400	0	515	5.95	1	5.95	6.26	0.95
401	0	438	5.64	1	5.64	5.51	1.02
402	0	481	5.82	1	5.82	6.31	0.92
403	0	564	6.12	1	6.12	6.43	0.95
404	0	605	6.25	1	6.25	5.94	1.05
405	0	589	6.20	1	6.20	6.03	1.03
406	0	572	6.14	1	6.14	6.24	0.98
407	0	605	6.25	1	6.25	5.81	1.08
408	0	622	6.31	1	6.31	5.25	1.20
409	0	610	6.27	1	6.27	5.13	1.22
410	0	599	6.23	1	6.23	5.49	1.13
411	0	593	6.21	1	6.21	5.48	1.13
412	0	625	6.32	1	6.32	4.10	1.54
413	0	613	6.28	1	6.28	4.10	1.53
414	0	481	5.81	1	5.81	4.64	1.25
415	0	456	5.71	1	5.71	6.04	0.95
416	0	536	6.03	1	6.03	5.84	1.03
417	0	577	6.16	1	6.16	5.05	1.22
418	0	552	6.08	1	6.08	4.74	1.28
419	0	499	5.89	1	5.89	5.38	1.09
420	0	442	5.66	1	5.66	5.22	1.08
421	0	414	5.54	1	5.54	5.57	0.99
422	0	423	5.58	1	5.58	4.13	1.35
423	0	393	5.46	1	5.46	3.59	1.52
424	0	280	5.00	1	5.00	4.92	1.02
425	0	226	4.71	1	4.71	5.54	0.85
426	0	311	5.13	1	5.13	6.07	0.84
427	0	436	5.63	1	5.63	7.94	0.71
428	0	582	6.18	1	6.18	7.23	0.85
429	0	709	6.59	1	6.59	6.74	0.98
430	0	790	6.85	1	6.85	5.09	1.35
431	0	846	7.02	1	7.02	5.14	1.37
432	0	890	7.14	1	7.14	4.29	1.67
433	0	910	7.19	1	7.19	4.93	1.46
434	0	980	7.38	1	7.38	5.57	1.32
435	0	955	7.31	1	7.31	5.53	1.32
436	0	833	6.99	1	6.99	5.15	1.36
437	0	806	6.90	1	6.90	4.77	1.45
438	0	795	6.86	1	6.86	5.06	1.36
439	0	696	6.55	1	6.55	4.67	1.40
440	0	574	6.15	1	6.15	4.57	1.35

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
441	0	504	5.91	1	5.91	4.42	1.34
442	0	492	5.86	1	5.86	3.63	1.61
443	0	501	5.89	1	5.89	3.58	1.64
444	0	480	5.81	1	5.81	3.77	1.54
445	0	495	5.87	1	5.87	3.11	1.89
446	0	581	6.17	1	6.17	4.03	1.53
447	0	625	6.32	1	6.32	4.55	1.39
448	0	558	6.10	1	6.10	5.72	1.07
449	0	493	5.86	1	5.86	6.16	0.95
450	0	455	5.71	1	5.71	5.93	0.96
451	0	416	5.55	1	5.55	5.44	1.02
452	0	505	5.91	1	5.91	5.44	1.09
453	0	623	6.31	1	6.31	5.87	1.08
454	0	659	6.43	1	6.43	5.89	1.09
455	0	731	6.66	1	6.66	7.50	0.89
456	0	745	6.70	1	6.70	7.00	0.96
457	0	806	6.90	1	6.90	6.15	1.12
458	0	990	7.40	1	7.40	5.78	1.28
459	0	1042	7.54	1	7.54	5.31	1.42
460	0	837	7.00	1	7.00	5.04	1.39
461	0	611	6.27	1	6.27	5.22	1.20
462	0	559	6.10	1	6.10	4.68	1.31
463	0	638	6.36	1	6.36	5.37	1.18
464	0	638	6.36	1	6.36	4.83	1.32
465	0	580	6.17	1	6.17	5.24	1.18
466	0	529	6.01	1	6.01	4.36	1.38
467	0	478	5.80	1	5.80	4.61	1.26
468	0	442	5.66	1	5.66	3.62	1.56
469	0	432	5.61	1	5.61	4.71	1.19
470	0	427	5.60	1	5.60	4.33	1.29
471	0	281	5.00	1	5.00	4.55	1.10
472	0	132	4.19	1	4.19	4.41	0.95
473	0	101	4.02	1	4.02	4.23	0.95
474	0	115	4.10	1	4.10	3.94	1.04
475	0	129	4.18	1	4.18	6.06	0.69
476	0	212	4.63	1	4.63	5.76	0.80
477	0	250	4.84	1	4.84	4.56	1.06
478	0	239	4.78	1	4.78	3.88	1.23
479	0	210	4.62	1	4.62	4.14	1.12
480	0	273	4.96	1	4.96	4.50	1.10
481	0	398	5.48	1	5.48	4.68	1.17
482	0	387	5.43	1	5.43	4.21	1.29
483	0	312	5.13	1	5.13	4.45	1.15
484	0	275	4.98	1	4.98	3.50	1.42
485	0	316	5.15	1	5.15	3.23	1.59
486	0	285	5.02	1	5.02	3.69	1.36
487	0	379	5.40	1	5.40	4.41	1.22
488	0	401	5.49	1	5.49	3.89	1.41
489	0	275	4.97	1	4.97	4.08	1.22
490	0	197	4.55	1	4.55	4.12	1.10
491	0	146	4.27	1	4.27	4.70	0.91
492	0	170	4.40	1	4.40	4.34	1.01
493	0	185	4.48	1	4.48	4.57	0.98
494	0	249	4.83	1	4.83	4.87	0.99
495	0	302	5.09	1	5.09	3.74	1.36
496	0	364	5.34	1	5.34	4.24	1.26
497	0	379	5.40	1	5.40	4.01	1.35
498	0	359	5.32	1	5.32	3.60	1.48
499	0	306	5.10	1	5.10	3.01	1.69
500	0	238	4.77	1	4.77	2.54	1.88
501	0	207	4.60	1	4.60	2.32	1.98
502	0	216	4.65	1	4.65	1.89	2.46
503	0	131	4.19	1	4.19	2.96	1.41
504	0	100	4.02	1	4.02	3.23	1.24
505	0	111	4.07	1	4.07	3.32	1.23
506	0	134	4.20	1	4.20	2.82	1.49
507	0	163	4.36	1	4.36	4.63	0.94
508	0	169	4.39	1	4.39	5.51	0.80
509	0	144	4.26	1	4.26	5.16	0.82
510	0	166	4.38	1	4.38	4.57	0.96
511	0	319	5.16	1	5.16	5.04	1.02
512	0	327	5.19	1	5.19	4.50	1.15
513	0	213	4.63	1	4.63	3.11	1.49
514	0	357	5.31	1	5.31	2.79	1.91
515	0	396	5.47	1	5.47	3.34	1.64
516	0	403	5.50	1	5.50	4.36	1.26
517	0	302	5.09	1	5.09	6.30	0.81
518	0	249	4.83	1	4.83	5.73	0.84
519	0	201	4.57	1	4.57	4.15	1.10
520	0	282	5.01	1	5.01	3.99	1.26
521	0	400	5.49	1	5.49	4.68	1.17
522	0	467	5.76	1	5.76	4.85	1.19
523	0	656	6.42	1	6.42	4.61	1.39
524	0	860	7.06	1	7.06	4.75	1.49
525	0	786	6.84	1	6.84	4.86	1.41
526	0	613	6.28	1	6.28	5.26	1.19
527	0	534	6.02	1	6.02	5.02	1.20
528	0	548	6.07	1	6.07	6.84	0.89

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
529	0	635	6.35	1	6.35	6.95	0.91
530	0	744	6.70	1	6.70	6.65	1.01
531	0	824	6.96	1	6.96	5.89	1.18
532	0	840	7.01	1	7.01	5.83	1.20
533	0	839	7.01	1	7.01	5.24	1.34
534	0	823	6.96	1	6.96	5.73	1.21
535	0	801	6.88	1	6.88	5.96	1.16
536	0	813	6.92	1	6.92	5.81	1.19
537	0	823	6.96	1	6.96	5.64	1.23
538	0	748	6.71	1	6.71	6.28	1.07
539	0	612	6.27	1	6.27	5.94	1.06
540	0	489	5.85	1	5.85	5.32	1.10
541	0	428	5.60	1	5.60	5.07	1.10
542	0	453	5.70	1	5.70	4.92	1.16
543	0	510	5.93	1	5.93	5.00	1.19
544	0	516	5.96	1	5.96	4.46	1.34
545	0	472	5.78	1	5.78	5.29	1.09
546	0	449	5.68	1	5.68	6.38	0.89
547	0	491	5.85	1	5.85	5.16	1.13
548	0	521	5.98	1	5.98	4.50	1.33
549	0	526	6.00	1	6.00	3.60	1.67
550	0	517	5.96	1	5.96	3.56	1.67
551	0	456	5.71	1	5.71	3.80	1.50
552	0	367	5.35	1	5.35	3.64	1.47
553	0	263	4.91	1	4.91	5.97	0.82
554	0	300	5.08	1	5.08	6.81	0.75
555	0	283	5.01	1	5.01	7.01	0.71
556	0	244	4.80	1	4.80	5.68	0.85
557	0	163	4.36	1	4.36	4.56	0.96
558	0	156	4.32	1	4.32	4.65	0.93
559	0	123	4.14	1	4.14	6.35	0.65
560	0	120	4.13	1	4.13	6.00	0.69
561	0	189	4.50	1	4.50	5.86	0.77
562	0	264	4.91	1	4.91	5.89	0.83
563	0	388	5.44	1	5.44	5.78	0.94
564	0	496	5.87	1	5.87	5.00	1.17
565	0	665	6.44	1	6.44	4.48	1.44
566	0	743	6.70	1	6.70	5.37	1.25
567	0	724	6.64	1	6.64	5.19	1.28
568	0	679	6.49	1	6.49	5.09	1.27
569	0	654	6.41	1	6.41	7.03	0.91
570	0	640	6.37	1	6.37	6.71	0.95
571	0	623	6.31	1	6.31	5.68	1.11
572	0	607	6.26	1	6.26	4.61	1.36
573	0	578	6.16	1	6.16	4.77	1.29
574	0	510	5.93	1	5.93	4.51	1.32
575	0	437	5.63	1	5.63	4.38	1.29
576	0	328	5.20	1	5.20	4.12	1.26
577	0	239	4.78	1	4.78	5.02	0.95
578	0	216	4.65	1	4.65	5.43	0.86
579	0	194	4.53	1	4.53	4.85	0.93
580	0	186	4.49	1	4.49	5.11	0.88
581	0	181	4.46	1	4.46	5.49	0.81
582	0	172	4.41	1	4.41	4.85	0.91
583	0	143	4.25	1	4.25	4.64	0.92
584	0	223	4.69	1	4.69	5.97	0.79
585	0	380	5.40	1	5.40	6.35	0.85
586	0	454	5.71	1	5.71	6.38	0.89
587	0	412	5.53	1	5.53	6.71	0.82
588	0	343	5.25	1	5.25	6.31	0.83
589	0	368	5.36	1	5.36	7.05	0.76
590	0	403	5.50	1	5.50	7.11	0.77
591	0	449	5.68	1	5.68	7.47	0.76
592	0	544	6.05	1	6.05	5.98	1.01
593	0	653	6.41	1	6.41	6.12	1.05
594	0	694	6.54	1	6.54	5.92	1.11
595	0	641	6.37	1	6.37	6.03	1.06
596	0	592	6.21	1	6.21	6.39	0.97
597	0	609	6.27	1	6.27	6.01	1.04
598	0	638	6.36	1	6.36	5.40	1.18
599	0	671	6.46	1	6.46	6.28	1.03
600	0	705	6.57	1	6.57	5.93	1.11
601	0	671	6.46	1	6.46	4.72	1.37
602	0	569	6.14	1	6.14	5.64	1.09
603	0	376	5.39	1	5.39	6.79	0.79
604	0	162	4.36	1	4.36	6.60	0.66
605	0	229	4.72	1	4.72	5.54	0.85
606	0	243	4.80	1	4.80	5.47	0.88
607	0	415	5.55	1	5.55	5.24	1.06
608	0	532	6.01	1	6.01	5.95	1.01
609	0	658	6.42	1	6.42	5.91	1.09
610	0	636	6.35	1	6.35	5.98	1.06
611	0	583	6.18	1	6.18	4.82	1.28
612	0	557	6.10	1	6.10	5.12	1.19
613	0	575	6.16	1	6.16	4.69	1.31
614	0	643	6.37	1	6.37	6.14	1.04
615	0	689	6.52	1	6.52	6.46	1.01
616	0	714	6.60	1	6.60	5.27	1.25
617	0	690	6.53	1	6.53	5.04	1.30
618	0	617	6.29	1	6.29	4.60	1.37
619	0	557	6.10	1	6.10	4.45	1.37
620	0	517	5.96	1	5.96	5.47	1.09
621	0	483	5.82	1	5.82	5.28	1.10
622	0	414	5.54	1	5.54	5.40	1.03
623	0	467	5.76	1	5.76	6.18	0.93
624	0	534	6.02	1	6.02	5.22	1.15
625	0	499	5.89	1	5.89	5.23	1.13
626	0	472	5.78	1	5.78	5.34	1.08
627	0	456	5.71	1	5.71	4.53	1.26
628	0	433	5.62	1	5.62	3.53	1.59
629	0	386	5.43	1	5.43	4.71	1.15
630	0	264	4.91	1	4.91	5.59	0.88
631	0	319	5.16	1	5.16	5.19	0.99
632	0	392	5.45	1	5.45	4.15	1.31
633	0	304	5.10	1	5.10	4.64	1.10
634	1	100	4.02	1		7.43	
635	1	100	4.02	1		8.51	
636	1	100	4.02	1		6.59	
637	1	100	4.02	1		7.41	
638	1	100	4.02	1		7.51	
639	1	100	4.02	1		8.02	
640	1	153	4.31	1		7.15	
641	1	170	4.40	1		6.46	
642	1	166	4.38	1		4.97	
643	1	378	5.40	1		4.74	
644	1	720	6.62	1		7.24	
645	1	725	6.64	1		7.83	
646	1	1207	7.97	1		6.79	
647	1	1291	8.28	1		6.46	
648	1	1214	7.99	1		7.45	
649	1	978	7.37	1		8.57	
650	1	801	6.89	1		7.86	
651	1	768	6.78	1		7.38	
652	1	657	6.42	1		6.80	
653	1	629	6.33	1		7.43	
654	1	822	6.95	1		8.07	
655	1	934	7.26	1		7.72	
656	1	970	7.35	1		7.71	
657	1	909	7.19	1		8.13	
658	1	682	6.50	1		7.27	
659	1	532	6.02	1		7.45	
660	1	508	5.92	1		5.76	
661	1	532	6.02	1		6.53	
662	1	741	6.69	1		7.54	
663	1	965	7.34	1		7.79	
664	1	1124	7.75	1		7.00	
665	1	1067	7.61	1		7.08	
666	1	794	6.86	1		8.23	
667	1	609	6.27	1		7.49	
668	1	710	6.59	1		6.44	
669	1	805	6.90	1		5.52	
670	1	760	6.75	1		6.64	
671	1	745	6.70	1		8.88	
672	1	889	7.14	1		9.97	
673	1	1028	7.50	1		8.90	
674	1	1041	7.54	1		8.42	
675	1	945	7.29	1		8.67	
676	1	872	7.09	1		8.54	
677	1	967	7.34	1		7.33	
678	1	1184	7.91	1		8.48	
679	1	1327	8.42	1		7.61	
680	1	1367	8.58	1		7.77	
681	1	1114	7.73	1		6.88	
682	1	868	7.08	1		6.79	
683	1	825	6.96	1		7.22	
684	1	884	7.12	1		6.26	
685	1	868	7.08	1		6.57	
686	1	786	6.84	1		6.51	
687	1	788	6.84	1		6.58	
688	1	797	6.87	1		7.06	
689	1	748	6.71	1		6.48	
690	1	606	6.25	1		5.59	
691	1	546	6.06	1		5.03	
692	1	699	6.55	1		4.75	
693	1	783	6.83	1		5.41	
694	1	691	6.53	1		5.90	
695	1	623	6.31	1		5.18	
696	1	543	6.05	1		5.08	
697	1	463	5.74	1		4.47	
698	1	519	5.97	1		5.65	
699	1	578	6.16	1		7.07	
700	1	547	6.06	1		7.80	
701	1	611	6.27	1		8.15	
702	1	756	6.74	1		5.97	
703	1	755	6.74	1		5.92	
704	1	643	6.38	1		7.10	
705	1	510	5.93	1		7.25	
706	1	456	5.71	1		6.14	
707	1	472	5.78	1		6.09	
708	1	437	5.63	1		6.98	
709	1	481	5.81	1		8.65	
710	1	870	7.09	1		7.26	
711	1	1286	8.27	1		7.72	
712	1	1265	8.18	1		7.43	
713	1	995	7.42	1		7.35	
714	1	933	7.25	1		7.29	
715	1	1114	7.73	1		6.29	
716	1	1045	7.55	1		5.77	
717	1	817	6.94	1		5.68	
718	1	681	6.50	1		7.51	
719	0	694	6.54	1	6.54	6.74	0.97
720	0	678	6.49	1	6.49	7.25	0.90
721	0	579	6.17	1	6.17	7.21	0.86
722	0	536	6.03	1	6.03	8.19	0.74
723	0	612	6.27	1	6.27	6.34	0.99
724	0	740	6.69	1	6.69	6.23	1.07
725	0	777	6.81	1	6.81	6.35	1.07
726	0	724	6.64	1	6.64	9.16	0.72
727	0	779	6.81	1	6.81	7.85	0.87
728	0	775	6.80	1	6.80	8.11	0.84
729	0	818	6.94	1	6.94	7.59	0.91
730	0	867	7.08	1	7.08	8.29	0.85
731	0	886	7.13	1	7.13	8.10	0.88
732	0	879	7.11	1	7.11	7.74	0.92
733	0	899	7.16	1	7.16	7.36	0.97
734	0	1004	7.44	1	7.44	8.15	0.91
735	0	1005	7.44	1	7.44	8.65	0.86
736	0	965	7.34	1	7.34	7.91	0.93
737	0	919	7.22	1	7.22	6.96	1.04
738	0	768	6.78	1	6.78	6.10	1.11
739	0	744	6.70	1	6.70	6.63	1.01
740	0	847	7.03	1	7.03	7.48	0.94
741	0	795	6.86	1	6.86	6.61	1.04
742	0	687	6.51	1	6.51	6.43	1.01
743	0	764	6.76	1	6.76	8.84	0.77
744	0	853	7.04	1	7.04	7.60	0.93
745	0	788	6.84	1	6.84	8.31	0.82
746	0	743	6.70	1	6.70	8.58	0.78
747	0	799	6.88	1	6.88	7.93	0.87
748	0	946	7.29	1	7.29	9.29	0.78
749	0	1046	7.55	1	7.55	9.81	0.77
750	0	993	7.41	1	7.41	6.53	1.14
751	0	843	7.02	1	7.02	6.85	1.02
752	0	788	6.84	1	6.84	8.00	0.86
753	0	970	7.35	1	7.35	7.77	0.95
754	0	1127	7.76	1	7.76	7.34	1.06
755	0	1116	7.73	1	7.73	7.71	1.00
756	0	998	7.40	1	7.40	7.20	1.03
757	0	919	7.22	1	7.22	6.56	1.10
758	0	981	7.38	1	7.38	6.92	1.07
759	0	796	6.87	1	6.87	5.73	1.20
760	0	585	6.19	1	6.19	6.09	1.02
761	0	580	6.17	1	6.17	6.59	0.94
762	0	666	6.45	1	6.45	6.49	0.99
763	0	784	6.83	1	6.83	6.21	1.10
764	0	841	7.01	1	7.01	7.53	0.93
765	0	769	6.78	1	6.78	6.93	0.98
766	0	807	6.90	1	6.90	6.56	1.05
767	0	770	6.78	1	6.78	6.33	1.07
768	0	624	6.31	1	6.31	7.43	0.85
769	0	573	6.15	1	6.15	7.51	0.82
770	0	568	6.13	1	6.13	8.93	0.69
771	0	594	6.21	1	6.21	8.99	0.69
772	0	696	6.55	1	6.55	8.19	0.80
773	0	819	6.94	1	6.94	7.86	0.88
774	0	862	7.06	1	7.06	8.93	0.79
775	0	732	6.66	1	6.66	7.77	0.86
776	0	611	6.27	1	6.27	7.64	0.82
777	0	691	6.53	1	6.53	7.00	0.93
778	0	754	6.73	1	6.73	6.59	1.02
779	0	634	6.35	1	6.35	6.30	1.01
780	0	625	6.32	1	6.32	7.98	0.79
781	0	678	6.49	1	6.49	6.44	1.01
782	0	682	6.50	1	6.50	7.65	0.85
783	0	959	7.32	1	7.32	6.65	1.10
784	0	1508	9.25	0		6.59	
785	0	1649		0		6.49	
786	0	1574	9.81	0		6.27	
787	0	1392	8.67	1	8.67	6.03	1.44
788	0	1122	7.75	1	7.75	5.52	1.40
789	0	1225	8.03	1	8.03	6.77	1.19
790	0	1594	9.98	0	9.44	7.46	
791	0	1493	9.13	1	9.13	7.12	1.28
792	0	1423	8.79	1	8.79	5.69	1.55

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
793	0	1141	7.80	1	7.80	5.17	1.51
794	0	1080	7.64	1	7.64	5.95	1.28
795	0	1275	8.22	1	8.22	5.48	1.50
796	0	1227	8.04	1	8.04	5.88	1.37
797	0	944	7.28	1	7.28	7.22	1.01
798	0	848	7.03	1	7.03	6.95	1.01
799	0	956	7.31	1	7.31	7.19	1.02
800	0	1097	7.68	1	7.68	7.61	1.01
801	0	945	7.28	1	7.28	8.49	0.86
802	0	742	6.69	1	6.69	8.96	0.75
803	0	631	6.33	1	6.33	7.82	0.81
804	0	570	6.14	1	6.14	5.81	1.06
805	0	644	6.38	1	6.38	6.22	1.03
806	0	726	6.64	1	6.64	5.71	1.16
807	0	943	7.28	1	7.28	4.68	1.55
808	0	1238	8.08	1	8.08	6.00	1.35
809	0	1158	7.85	1	7.85	6.04	1.30
810	0	967	7.34	1	7.34	5.60	1.31
811	0	847	7.03	1	7.03	6.59	1.07
812	0	778	6.81	1	6.81	6.04	1.13
813	0	673	6.47	1	6.47	5.80	1.12
814	0	534	6.02	1	6.02	4.76	1.26
815	0	442	5.65	1	5.65	4.50	1.26
816	0	414	5.54	1	5.54	5.36	1.03
817	0	492	5.86	1	5.86	5.36	1.09
818	0	637	6.36	1	6.36	3.71	1.71
819	0	605	6.25	1	6.25	3.25	1.92
820	0	458	5.72	1	5.72	4.65	1.23
821	0	414	5.54	1	5.54	5.66	0.98
822	0	517	5.96	1	5.96	6.43	0.93
823	0	775	6.80	1	6.80	6.04	1.13
824	0	995	7.42	1	7.42	5.34	1.39
825	0	1005	7.44	1	7.44	5.24	1.42
826	0	902	7.17	1	7.17	5.17	1.39
827	0	762	6.76	1	6.76	5.31	1.27
828	0	844	7.02	1	7.02	6.86	1.02
829	0	981	7.38	1	7.38	6.57	1.12
830	0	894	7.15	1	7.15	8.38	0.85
831	0	762	6.76	1	6.76	7.91	0.85
832	0	890	7.14	1	7.14	5.57	1.28
833	0	1154	7.83	1	7.83	5.50	1.42
834	0	988	7.40	1	7.40	6.38	1.16
835	0	912	7.20	1	7.20	6.68	1.08
836	0	1132	7.78	1	7.78	6.92	1.12
837	0	1396	8.69	1	8.69	6.20	1.40
838	0	1483	9.05	1	9.05	5.31	1.70
839	0	1264	8.18	1	8.18	5.59	1.46
840	0	1024	7.49	1	7.49	4.47	1.67
841	0	848	7.03	1	7.03	6.18	1.14
842	0	778	6.81	1	6.81	6.23	1.09
843	0	781	6.82	1	6.82	5.58	1.22
844	0	825	6.96	1	6.96	6.70	1.04
845	0	928	7.24	1	7.24	6.38	1.13
846	0	1101	7.69	1	7.69	6.32	1.22
847	0	1135	7.78	1	7.78	4.72	1.65
848	0	1020	7.48	1	7.48	5.53	1.35
849	0	873	7.09	1	7.09	6.01	1.18
850	0	831	6.98	1	6.98	5.81	1.20
851	0	862	7.07	1	7.07	6.34	1.11
852	0	829	6.97	1	6.97	5.03	1.39
853	0	756	6.74	1	6.74	6.22	1.08
854	0	636	6.35	1	6.35	6.37	1.00
855	0	517	5.96	1	5.96	5.71	1.04
856	0	407	5.52	1	5.52	5.54	1.00
857	0	409	5.52	1	5.52	5.36	1.03
858	0	463	5.74	1	5.74	5.52	1.04
859	0	558	6.10	1	6.10	5.64	1.08
860	0	609	6.26	1	6.26	6.67	0.94
861	0	742	6.69	1	6.69	7.81	0.86
862	0	1024	7.49	1	7.49	7.60	0.99
863	0	1131	7.77	1	7.77	6.74	1.15
864	0	972	7.36	1	7.36	7.51	0.98
865	0	933	7.25	1	7.25	6.61	1.10
866	0	958	7.32	1	7.32	4.98	1.47
867	0	811	6.92	1	6.92	4.45	1.56
868	0	608	6.26	1	6.26	6.01	1.04
869	0	530	6.01	1	6.01	5.98	1.01
870	0	577	6.16	1	6.16	5.41	1.14
871	0	689	6.52	1	6.52	5.01	1.30
872	0	803	6.89	1	6.89	4.53	1.52
873	0	916	7.21	1	7.21	4.62	1.56
874	0	1076	7.63	1	7.63	3.09	2.47
875	0	1040	7.53	1	7.53	3.98	1.89
876	0	1023	7.49	1	7.49	4.86	1.54
877	0	1151	7.83	1	7.83	5.01	1.56
878	0	1254	8.14	1	8.14	5.44	1.50
879	0	1210	7.98	1	7.98	6.93	1.15
880	0	960	7.32	1	7.32	6.68	1.10

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
881	0	735	6.67	1	6.67	5.70	1.17
882	0	708	6.58	1	6.58	4.96	1.33
883	0	752	6.73	1	6.73	4.84	1.39
884	0	825	6.96	1	6.96	3.79	1.84
885	0	1067	7.61	1	7.61	5.23	1.45
886	0	1190	7.93	1	7.93	5.06	1.57
887	0	980	7.38	1	7.38	5.82	1.27
888	0	783	6.82	1	6.82	6.30	1.08
889	0	666	6.45	1	6.45	5.90	1.09
890	0	540	6.04	1	6.04	5.11	1.18
891	0	431	5.61	1	5.61	5.51	1.02
892	0	449	5.68	1	5.68	5.16	1.10
893	0	525	5.99	1	5.99	5.00	1.20
894	0	656	6.41	1	6.41	5.98	1.07
895	0	623	6.31	1	6.31	6.42	0.98
896	0	484	5.83	1	5.83	7.42	0.79
897	0	483	5.82	1	5.82	7.14	0.82
898	0	540	6.04	1	6.04	6.60	0.92
899	0	542	6.05	1	6.05	5.99	1.01
900	0	566	6.13	1	6.13	5.77	1.06
901	0	727	6.65	1	6.65	7.19	0.92
902	0	716	6.61	1	6.61	7.51	0.88
903	0	562	6.11	1	6.11	6.70	0.91
904	0	627	6.32	1	6.32	7.18	0.88
905	0	803	6.89	1	6.89	7.03	0.98
906	0	833	6.99	1	6.99	6.23	1.12
907	0	694	6.54	1	6.54	7.10	0.92
908	0	524	5.99	1	5.99	6.92	0.87
909	0	453	5.70	1	5.70	6.35	0.90
910	0	472	5.78	1	5.78	7.17	0.81
911	0	587	6.19	1	6.19	8.36	0.74
912	0	860	7.06	1	7.06	6.37	1.11
913	0	984	7.39	1	7.39	6.23	1.19
914	0	950	7.30	1	7.30	7.38	0.99
915	0	802	6.89	1	6.89	7.16	0.96
916	0	668	6.45	1	6.45	4.69	1.38
917	0	649	6.39	1	6.39	4.64	1.38
918	0	586	6.19	1	6.19	5.11	1.21
919	0	613	6.28	1	6.28	7.43	0.85
920	0	1104	7.70	1	7.70	8.29	0.93
921	0	1404	8.72	1	8.72	8.33	1.05
922	0	1094	7.68	1	7.68	7.63	1.01
923	0	1011	7.46	1	7.46	6.48	1.15
924	0	1017	7.47	1	7.47	6.04	1.24
925	0	906	7.18	1	7.18	5.44	1.32
926	0	794	6.86	1	6.86	5.44	1.26
927	0	700	6.56	1	6.56	4.78	1.37
928	0	621	6.30	1	6.30	4.70	1.34
929	0	577	6.16	1	6.16	5.03	1.23
930	0	557	6.10	1	6.10	6.10	1.00
931	0	616	6.29	1	6.29	6.98	0.90
932	0	782	6.82	1	6.82	6.41	1.07
933	0	840	7.01	1	7.01	7.02	1.00
934	0	809	6.91	1	6.91	7.33	0.94
935	0	723	6.63	1	6.63	8.09	0.82
936	0	623	6.31	1	6.31	7.00	0.90
937	0	628	6.33	1	6.33	7.25	0.87
938	0	656	6.42	1	6.42	6.92	0.93
939	0	519	5.97	1	5.97	7.80	0.77
940	0	388	5.44	1	5.44	7.09	0.77
941	0	486	5.84	1	5.84	6.66	0.88
942	0	704	6.57	1	6.57	6.14	1.07
943	0	758	6.74	1	6.74	5.74	1.18
944	0	691	6.53	1	6.53	6.09	1.07
945	0	645	6.38	1	6.38	7.03	0.91
946	0	532	6.02	1	6.02	8.01	0.75
947	0	422	5.57	1	5.57	6.89	0.81
948	0	483	5.82	1	5.82	5.96	0.98
949	0	678	6.49	1	6.49	5.89	1.10
950	0	855	7.05	1	7.05	7.49	0.94
951	0	976	7.37	1	7.37	7.36	1.00
952	0	1090	7.67	1	7.67	8.22	0.93
953	0	1096	7.68	1	7.68	8.29	0.93
954	0	1081	7.64	1	7.64	7.14	1.07
955	0	1164	7.86	1	7.86	6.23	1.26
956	0	1211	7.98	1	7.98	5.93	1.35
957	0	1192	7.93	1	7.93	5.41	1.47
958	0	1229	8.05	1	8.05	7.36	1.09
959	0	1176	7.89	1	7.89	5.66	1.40
960	0	1065	7.60	1	7.60	5.62	1.35
961	0	990	7.40	1	7.40	6.57	1.13
962	0	864	7.07	1	7.07	5.83	1.21
963	0	695	6.54	1	6.54	5.44	1.20
964	0	570	6.14	1	6.14	5.17	1.19
965	0	658	6.42	1	6.42	7.15	0.90
966	0	928	7.24	1	7.24	6.56	1.10
967	0	1057	7.58	1	7.58	7.43	1.02
968	0	1170	7.88	1	7.88	7.20	1.09

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
969	0	1359	8.54	1	8.54	8.29	1.03
970	0	1466	8.95	1	8.95	6.51	1.37
971	0	1410	8.74	1	8.74	6.34	1.38
972	0	1262	8.17	1	8.17	7.03	1.16
973	0	1051	7.56	1	7.56	6.60	1.15
974	0	975	7.36	1	7.36	6.78	1.09
975	0	999	7.43	1	7.43	6.59	1.13
976	0	1160	7.85	1	7.85	6.58	1.19
977	0	1289	8.28	1	8.28	6.53	1.27
978	0	1299	8.31	1	8.31	6.94	1.20
979	0	1380	8.63	1	8.63	7.00	1.23
980	0	1488	9.08	1	9.08	7.80	1.16
981	0	1412	8.75	1	8.75	8.12	1.08
982	0	1446	8.88	1	8.88	7.47	1.19
983	0	1458	8.92	1	8.92	7.20	1.24
984	0	1198	7.95	1	7.95	7.25	1.10
985	0	1117	7.74	1	7.74	8.52	0.91
986	0	1125	7.76	1	7.76	9.57	0.81
987	0	1409	8.74	1	8.74	9.11	0.96
988	0	1600	10.12	0	9.40	7.44	
989	0	1502	9.20	1	9.20	7.68	1.20
990	0	1371	8.59	1	8.59	6.44	1.33
991	0	1161	7.85	1	7.85	6.38	1.23
992	0	1094	7.68	1	7.68	6.23	1.23
993	0	1079	7.64	1	7.64	7.38	1.03
994	0	963	7.33	1	7.33	6.82	1.07
995	0	885	7.13	1	7.13	6.53	1.09
996	0	816	6.93	1	6.93	4.96	1.40
997	0	636	6.35	1	6.35	4.58	1.39
998	0	632	6.34	1	6.34	4.21	1.51
999	0	714	6.60	1	6.60	5.16	1.28
1000	0	651	6.40	1	6.40	5.80	1.10
1001	0	588	6.20	1	6.20	6.01	1.03
1002	0	640	6.36	1	6.36	5.51	1.16
1003	0	668	6.46	1	6.46	7.00	0.92
1004	0	601	6.24	1	6.24	6.12	1.02
1005	0	583	6.18	1	6.18	6.90	0.90
1006	0	704	6.57	1	6.57	6.59	1.00
1007	0	899	7.16	1	7.16	6.77	1.06
1008	0	1071	7.61	1	7.61	6.31	1.21
1009	0	1258	8.16	1	8.16	5.31	1.54
1010	0	1365	8.57	1	8.57	7.66	1.12
1011	0	1139	7.79	1	7.79	8.47	0.92
1012	0	944	7.28	1	7.28	7.16	1.02
1013	0	958	7.32	1	7.32	7.49	0.98
1014	0	959	7.32	1	7.32	7.02	1.04
1015	0	894	7.15	1	7.15	7.31	0.98
1016	0	828	6.97	1	6.97	7.47	0.93
1017	0	744	6.70	1	6.70	6.76	0.99
1018	0	651	6.40	1	6.40	5.73	1.12
1019	0	596	6.22	1	6.22	5.51	1.13
1020	0	567	6.13	1	6.13	5.41	1.13
1021	0	567	6.13	1	6.13	5.64	1.09
1022	0	581	6.17	1	6.17	5.84	1.06
1023	0	618	6.29	1	6.29	7.62	0.83
1024	0	702	6.56	1	6.56	6.92	0.95
1025	0	785	6.83	1	6.83	6.13	1.12
1026	0	776	6.80	1	6.80	6.70	1.02
1027	0	705	6.57	1	6.57	6.47	1.02
1028	0	658	6.42	1	6.42	5.38	1.19
1029	0	643	6.37	1	6.37	5.37	1.19
1030	0	586	6.19	1	6.19	5.98	1.04
1031	0	507	5.92	1	5.92	5.01	1.18
1032	0	420	5.57	1	5.57	5.93	0.94
1033	0	390	5.45	1	5.45	6.54	0.83
1034	0	339	5.24	1	5.24	6.66	0.79
1035	0	355	5.31	1	5.31	5.95	0.89
1036	0	499	5.89	1	5.89	6.86	0.86
1037	0	784	6.83	1	6.83	8.22	0.83
1038	0	1091	7.67	1	7.67	8.10	0.95
1039	0	1112	7.72	1	7.72	6.78	1.14
1040	0	961	7.33	1	7.33	5.54	1.32
1041	0	742	6.69	1	6.69	5.79	1.16
1042	0	702	6.56	1	6.56	6.38	1.03
1043	0	867	7.08	1	7.08	7.22	0.98
1044	0	917	7.21	1	7.21	5.82	1.24
1045	0	786	6.83	1	6.83	4.13	1.65
1046	0	549	6.07	1	6.07	4.20	1.45
1047	0	412	5.54	1	5.54	5.41	1.02
1048	0	392	5.45	1	5.45	6.76	0.81
1049	0	401	5.49	1	5.49	7.31	0.75
1050	0	430	5.61	1	5.61	5.73	0.98
1051	0	489	5.85	1	5.85	5.80	1.01
1052	0	464	5.75	1	5.75	5.72	1.00
1053	0	393	5.46	1	5.46	8.13	0.67
1054	0	425	5.59	1	5.59	7.35	0.76
1055	0	514	5.95	1	5.95	6.65	0.89
1056	0	586	6.19	1	6.19	7.03	0.88

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
1057	0	638	6.36	1	6.36	5.12	1.24
1058	0	742	6.69	1	6.69	4.28	1.56
1059	0	728	6.65	1	6.65	7.16	0.93
1060	0	614	6.28	1	6.28	8.40	0.75
1061	0	586	6.19	1	6.19	7.21	0.86
1062	0	710	6.59	1	6.59	7.29	0.90
1063	0	771	6.79	1	6.79	6.92	0.98
1064	0	669	6.46	1	6.46	7.14	0.90
1065	0	641	6.37	1	6.37	7.43	0.86
1066	0	955	7.31	1	7.31	5.40	1.35
1067	0	1252	8.13	1	8.13	4.50	1.81
1068	0	1260	8.16	1	8.16	4.70	1.74
1069	0	1509	9.26	0		5.05	
1070	0	1497	9.16	1	9.16	6.06	1.51
1071	0	1172	7.88	1	7.88	4.82	1.63
1072	0	1012	7.46	1	7.46	6.02	1.24
1073	0	1019	7.48	1	7.48	5.91	1.27
1074	0	939	7.27	1	7.27	5.28	1.38
1075	0	742	6.70	1	6.70	5.52	1.21
1076	0	549	6.07	1	6.07	6.98	0.87
1077	0	474	5.79	1	5.79	5.75	1.01
1078	0	439	5.64	1	5.64	6.01	0.94
1079	0	526	5.99	1	5.99	6.62	0.91
1080	0	681	6.50	1	6.50	6.94	0.94
1081	0	765	6.77	1	6.77	6.34	1.07
1082	0	899	7.16	1	7.16	5.51	1.30
1083	0	868	7.08	1	7.08	5.20	1.36
1084	0	746	6.71	1	6.71	6.20	1.08
1085	0	752	6.73	1	6.73	5.71	1.18
1086	0	756	6.74	1	6.74	7.03	0.96
1087	0	656	6.42	1	6.42	6.94	0.92
1088	0	532	6.02	1	6.02	6.12	0.98
1089	0	409	5.52	1	5.52	5.34	1.03
1090	0	333	5.22	1	5.22	5.34	0.98
1091	0	276	4.98	1	4.98	4.74	1.05
1092	0	339	5.24	1	5.24	4.57	1.15
1093	0	381	5.41	1	5.41	4.21	1.29
1094	0	399	5.48	1	5.48	5.35	1.02
1095	0	463	5.74	1	5.74	5.53	1.04
1096	0	579	6.17	1	6.17	6.11	1.01
1097	0	658	6.42	1	6.42	5.90	1.09
1098	0	688	6.52	1	6.52	7.28	0.90
1099	0	644	6.38	1	6.38	7.51	0.85
1100	0	525	5.99	1	5.99	7.24	0.83
1101	0	416	5.55	1	5.55	6.24	0.89
1102	0	342	5.25	1	5.25	5.90	0.89
1103	0	312	5.13	1	5.13	5.18	0.99
1104	0	341	5.25	1	5.25	4.96	1.06
1105	0	371	5.37	1	5.37	5.52	0.97
1106	0	238	4.77	1	4.77	5.21	0.92
1107	0	353	5.30	1	5.30	6.12	0.87
1108	0	399	5.48	1	5.48	6.29	0.87
1109	0	352	5.29	1	5.29	6.45	0.82
1110	0	406	5.51	1	5.51	7.13	0.77
1111	0	480	5.81	1	5.81	6.45	0.90
1112	0	447	5.68	1	5.68	5.40	1.05
1113	0	414	5.54	1	5.54	4.90	1.13
1114	0	452	5.70	1	5.70	8.60	0.66
1115	0	440	5.65	1	5.65	8.40	0.67
1116	0	416	5.55	1	5.55	6.63	0.84
1117	0	490	5.85	1	5.85	6.87	0.85
1118	0	554	6.09	1	6.09	6.97	0.87
1119	0	581	6.17	1	6.17	7.38	0.84
1120	0	588	6.20	1	6.20	5.37	1.15
1121	0	523	5.98	1	5.98	5.65	1.06
1122	0	492	5.86	1	5.86	6.43	0.91
1123	0	501	5.89	1	5.89	7.46	0.79
1124	0	547	6.06	1	6.06	7.83	0.77
1125	0	612	6.28	1	6.28	6.46	0.97
1126	0	615	6.28	1	6.28	6.02	1.04
1127	0	561	6.11	1	6.11	5.40	1.13
1128	0	478	5.80	1	5.80	5.45	1.06
1129	0	387	5.43	1	5.43	5.97	0.91
1130	0	404	5.50	1	5.50	5.74	0.96
1131	0	422	5.57	1	5.57	6.10	0.91
1132	0	323	5.17	1	5.17	7.14	0.72
1133	0	377	5.39	1	5.39	7.64	0.71
1134	0	331	5.20	1	5.20	5.94	0.88
1135	0	309	5.12	1	5.12	6.92	0.74
1136	0	427	5.59	1	5.59	6.89	0.81
1137	0	548	6.07	1	6.07	7.30	0.83
1138	0	663	6.44	1	6.44	7.65	0.84
1139	0	641	6.37	1	6.37	7.18	0.89
1140	0	686	6.51	1	6.51	6.64	0.98
1141	0	800	6.88	1	6.88	7.43	0.93
1142	0	740	6.69	1	6.69	8.04	0.83
1143	0	632	6.34	1	6.34	7.70	0.82
1144	0	499	5.89	1	5.89	7.44	0.79

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
1145	0	361	5.33	1	5.33	7.22	0.74
1146	0	427	5.59	1	5.59	7.14	0.78
1147	0	479	5.81	1	5.81	5.24	1.11
1148	0	450	5.69	1	5.69	3.89	1.46
1149	0	323	5.17	1	5.17	5.59	0.93
1150	0	334	5.22	1	5.22	6.89	0.76
1151	0	376	5.39	1	5.39	6.73	0.80
1152	0	405	5.51	1	5.51	5.89	0.93
1153	0	466	5.75	1	5.75	5.32	1.08
1154	0	555	6.09	1	6.09	6.19	0.98
1155	0	600	6.23	1	6.23	6.91	0.90
1156	0	498	5.88	1	5.88	5.69	1.03
1157	0	395	5.47	1	5.47	6.54	0.84
1158	0	412	5.53	1	5.53	6.06	0.91
1159	0	461	5.73	1	5.73	6.00	0.96
1160	0	468	5.76	1	5.76	5.13	1.12
1161	0	390	5.44	1	5.44	6.49	0.84
1162	0	292	5.05	1	5.05	5.99	0.84
1163	0	209	4.61	1	4.61	5.19	0.89
1164	0	225	4.70	1	4.70	5.46	0.86
1165	0	284	5.02	1	5.02	5.76	0.87
1166	0	303	5.09	1	5.09	5.67	0.90
1167	0	323	5.17	1	5.17	4.41	1.17
1168	0	390	5.45	1	5.45	6.20	0.88
1169	0	391	5.45	1	5.45	8.65	0.63
1170	0	226	4.71	1	4.71	6.49	0.72
1171	0	227	4.71	1	4.71	5.24	0.90
1172	0	489	5.84	1	5.84	6.86	0.85
1173	0	970	7.35	1	7.35	6.67	1.10
1174	0	1372	8.59	1	8.59	7.42	1.16
1175	0	1149	7.82	1	7.82	6.57	1.19
1176	0	774	6.80	1	6.80	6.45	1.05
1177	0	604	6.25	1	6.25	6.44	0.97
1178	0	542	6.05	1	6.05	6.29	0.96
1179	0	477	5.80	1	5.80	5.53	1.05
1180	0	404	5.50	1	5.50	6.36	0.87
1181	0	221	4.68	1	4.68	6.98	0.67
1182	0	207	4.60	1	4.60	5.47	0.84
1183	0	358	5.32	1	5.32	6.61	0.80
1184	0	476	5.79	1	5.79	7.25	0.80
1185	0	649	6.39	1	6.39	8.12	0.79
1186	0	784	6.83	1	6.83	7.26	0.94
1187	0	838	7.00	1	7.00	7.24	0.97
1188	0	939	7.27	1	7.27	5.73	1.27
1189	0	962	7.33	1	7.33	5.04	1.45
1190	0	803	6.89	1	6.89	5.86	1.18
1191	0	746	6.70	1	6.70	6.99	0.96
1192	0	951	7.30	1	7.30	6.98	1.05
1193	0	1128	7.77	1	7.77	6.49	1.20
1194	0	980	7.38	1	7.38	5.72	1.29
1195	0	761	6.76	1	6.76	6.32	1.07
1196	0	664	6.44	1	6.44	6.93	0.93
1197	0	663	6.44	1	6.44	6.85	0.94
1198	0	669	6.46	1	6.46	6.60	0.98
1199	0	686	6.51	1	6.51	5.79	1.13
1200	0	761	6.76	1	6.76	7.16	0.94
1201	0	742	6.69	1	6.69	6.14	1.09
1202	0	802	6.89	1	6.89	6.48	1.06
1203	0	923	7.23	1	7.23	6.36	1.14
1204	0	832	6.98	1	6.98	5.85	1.19
1205	0	705	6.57	1	6.57	5.55	1.18
1206	0	840	7.01	1	7.01	4.87	1.44
1207	0	1129	7.77	1	7.77	5.80	1.34
1208	0	1137	7.79	1	7.79	5.99	1.30
1209	0	1008	7.45	1	7.45	6.92	1.08
1210	0	895	7.15	1	7.15	6.88	1.04
1211	0	745	6.70	1	6.70	6.29	1.07
1212	0	626	6.32	1	6.32	6.56	0.96
1213	0	581	6.17	1	6.17	6.35	0.97
1214	0	543	6.05	1	6.05	5.79	1.05
1215	0	489	5.85	1	5.85	6.86	0.85
1216	0	529	6.01	1	6.01	6.31	0.95
1217	0	684	6.51	1	6.51	7.37	0.88
1218	0	885	7.13	1	7.13	7.73	0.92
1219	0	936	7.26	1	7.26	6.28	1.16
1220	0	820	6.95	1	6.95	6.72	1.03
1221	0	664	6.44	1	6.44	6.69	0.96
1222	0	526	6.00	1	6.00	6.42	0.93
1223	0	436	5.63	1	5.63	7.08	0.80
1224	0	419	5.56	1	5.56	6.43	0.86
1225	0	466	5.75	1	5.75	6.70	0.86
1226	0	607	6.26	1	6.26	6.02	1.04
1227	0	770	6.78	1	6.78	5.47	1.24
1228	0	1008	7.45	1	7.45	3.63	2.05
1229	0	1204	7.97	1	7.97	4.71	1.69
1230	0	1157	7.84	1	7.84	5.20	1.51
1231	0	1005	7.44	1	7.44	5.82	1.28
1232	0	740	6.69	1	6.69	6.50	1.03

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{P,n}/V_{Z,m}$
1233	0	500	5.89	1	5.89	5.60	1.05
1234	0	406	5.51	1	5.51	5.92	0.93
1235	0	407	5.51	1	5.51	5.37	1.03
1236	0	480	5.81	1	5.81	5.53	1.05
1237	0	676	6.48	1	6.48	5.71	1.14
1238	0	965	7.34	1	7.34	5.81	1.26
1239	0	985	7.39	1	7.39	4.91	1.51
1240	0	746	6.71	1	6.71	6.13	1.09
1241	0	570	6.14	1	6.14	6.52	0.94
1242	0	511	5.94	1	5.94	6.02	0.99
1243	0	537	6.03	1	6.03	6.58	0.92
1244	0	526	5.99	1	5.99	6.43	0.93
1245	0	458	5.72	1	5.72	6.93	0.83
1246	0	398	5.48	1	5.48	7.14	0.77
1247	0	449	5.68	1	5.68	6.31	0.90
1248	0	523	5.98	1	5.98	6.48	0.92
1249	0	527	6.00	1	6.00	6.81	0.88
1250	0	559	6.10	1	6.10	7.04	0.87
1251	0	718	6.61	1	6.61	5.77	1.15
1252	0	924	7.23	1	7.23	6.25	1.16
1253	0	968	7.35	1	7.35	6.69	1.10
1254	0	861	7.06	1	7.06	5.91	1.20
1255	0	814	6.92	1	6.92	6.46	1.07
1256	0	805	6.90	1	6.90	5.69	1.21
1257	0	776	6.80	1	6.80	5.55	1.23
1258	0	728	6.65	1	6.65	4.54	1.46
1259	0	727	6.65	1	6.65	4.48	1.48
1260	0	806	6.90	1	6.90	4.90	1.41
1261	0	754	6.73	1	6.73	4.67	1.44
1262	0	622	6.31	1	6.31	4.59	1.37
1263	0	537	6.03	1	6.03	5.68	1.06
1264	0	541	6.05	1	6.05	6.27	0.96
1265	0	551	6.08	1	6.08	5.82	1.04
1266	0	527	6.00	1	6.00	6.08	0.99
1267	0	602	6.24	1	6.24	5.54	1.13
1268	0	838	7.00	1	7.00	5.40	1.30
1269	0	1019	7.48	1	7.48	5.39	1.39
1270	0	971	7.35	1	7.35	5.44	1.35
1271	0	803	6.89	1	6.89	7.38	0.93
1272	0	693	6.54	1	6.54	7.20	0.91
1273	0	654	6.41	1	6.41	6.08	1.05
1274	0	630	6.33	1	6.33	6.73	0.94
1275	0	592	6.21	1	6.21	6.37	0.97
1276	0	534	6.02	1	6.02	7.30	0.82
1277	0	387	5.43	1	5.43	7.38	0.74
1278	0	335	5.22	1	5.22	7.24	0.72
1279	0	387	5.43	1	5.43	7.39	0.74
1280	0	378	5.40	1	5.40	8.35	0.65
1281	0	436	5.63	1	5.63	7.22	0.78
1282	0	540	6.04	1	6.04	5.99	1.01
1283	0	655	6.41	1	6.41	6.17	1.04
1284	0	818	6.94	1	6.94	5.90	1.18
1285	0	844	7.02	1	7.02	7.24	0.97
1286	0	748	6.71	1	6.71	7.30	0.92
1287	0	670	6.46	1	6.46	6.28	1.03
1288	0	635	6.35	1	6.35	7.31	0.87
1289	0	547	6.06	1	6.06	7.82	0.78
1290	0	486	5.83	1	5.83	7.59	0.77
1291	0	512	5.94	1	5.94	6.32	0.94
1292	0	528	6.00	1	6.00	6.61	0.91
1293	0	570	6.14	1	6.14	6.91	0.89
1294	0	634	6.35	1	6.35	7.10	0.89
1295	0	724	6.63	1	6.63	7.32	0.91
1296	0	889	7.14	1	7.14	7.04	1.01
1297	0	956	7.31	1	7.31	7.30	1.00
1298	0	997	7.42	1	7.42	7.18	1.03
1299	0	1202	7.96	1	7.96	7.44	1.07
1300	0	1144	7.81	1	7.81	6.35	1.23
1301	0	946	7.29	1	7.29	7.24	1.01
1302	0	769	6.78	1	6.78	8.09	0.84
1303	0	692	6.53	1	6.53	7.75	0.84
1304	0	811	6.92	1	6.92	7.72	0.90
1305	0	858	7.05	1	7.05	6.89	1.02
1306	0	793	6.86	1	6.86	6.13	1.12
1307	0	716	6.61	1	6.61	7.04	0.94
1308	0	709	6.59	1	6.59	6.70	0.98
1309	0	740	6.69	1	6.69	6.32	1.06
1310	0	751	6.72	1	6.72	6.43	1.05
1311	0	754	6.73	1	6.73	7.39	0.91
1312	0	763	6.76	1	6.76	6.88	0.98
1313	0	790	6.85	1	6.85	8.08	0.85
1314	0	902	7.17	1	7.17	7.22	0.99
1315	0	983	7.38	1	7.38	7.38	1.00
1316	0	1027	7.50	1	7.50	6.85	1.10
1317	0	1120	7.75	1	7.75	6.73	1.15
1318	0	1029	7.51	1	7.51	8.24	0.91
1319	0	886	7.13	1	7.13	8.95	0.80
1320	0	982	7.38	1	7.38	8.29	0.89

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed in acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,n}$ (m/s)	$V_{P,n}/V_{Z,m}$
1321	0	1197	7.95	1	7.95	6.95	1.14
1322	0	1234	8.06	1	8.06	7.41	1.09
1323	0	1030	7.51	1	7.51	6.89	1.09
1324	0	817	6.94	1	6.94	7.47	0.93
1325	0	734	6.67	1	6.67	7.49	0.89
1326	0	714	6.60	1	6.60	5.63	1.17
1327	0	668	6.46	1	6.46	5.94	1.09
1328	0	690	6.53	1	6.53	6.60	0.99
1329	0	970	7.35	1	7.35	7.77	0.95
1330	0	1467	8.96	1	8.96	6.93	1.29
1331	0	1441	8.86	1	8.86	6.43	1.38
1332	0	1207	7.97	1	7.97	7.01	1.14
1333	0	1096	7.68	1	7.68	7.71	1.00
1334	0	1043	7.54	1	7.54	7.93	0.95
1335	0	926	7.23	1	7.23	6.96	1.04
1336	0	739	6.68	1	6.68	6.29	1.06
1337	0	579	6.17	1	6.17	5.19	1.19
1338	0	482	5.82	1	5.82	4.56	1.28
1339	0	416	5.55	1	5.55	4.12	1.35
1340	0	416	5.55	1	5.55	5.14	1.08
1341	0	545	6.06	1	6.06	4.00	1.51
1342	0	817	6.94	1	6.94	4.11	1.69
1343	0	1091	7.67	1	7.67	5.19	1.48
1344	0	1077	7.63	1	7.63	4.86	1.57
1345	0	855	7.05	1	7.05	4.93	1.43
1346	0	717	6.61	1	6.61	5.42	1.22
1347	0	649	6.40	1	6.40	4.06	1.57
1348	0	543	6.05	1	6.05	4.24	1.43
1349	0	447	5.68	1	5.68	4.99	1.14
1350	0	364	5.34	1	5.34	4.51	1.18
1351	0	371	5.37	1	5.37	5.04	1.07
1352	0	388	5.44	1	5.44	5.18	1.05
1353	0	430	5.61	1	5.61	5.66	0.99
1354	0	589	6.20	1	6.20	5.17	1.20
1355	0	673	6.47	1	6.47	5.04	1.28
1356	0	548	6.07	1	6.07	4.80	1.26
1357	0	365	5.34	1	5.34	4.63	1.15
1358	0	338	5.24	1	5.24	4.41	1.19
1359	0	400	5.49	1	5.49	4.22	1.30
1360	0	448	5.68	1	5.68	3.67	1.55
1361	0	537	6.03	1	6.03	5.40	1.12
1362	0	703	6.57	1	6.57	8.41	0.78
1363	0	925	7.23	1	7.23	9.01	0.80
1364	0	919	7.21	1	7.21	7.73	0.93
1365	0	728	6.65	1	6.65	6.43	1.03
1366	0	579	6.17	1	6.17	7.05	0.87
1367	0	373	5.38	1	5.38	7.80	0.69
1368	0	255	4.86	1	4.86	8.06	0.60
1369	0	381	5.41	1	5.41	7.33	0.74
1370	0	362	5.33	1	5.33	7.34	0.73
1371	0	444	5.66	1	5.66	7.23	0.78
1372	0	537	6.03	1	6.03	7.10	0.85
1373	0	625	6.31	1	6.31	8.55	0.74
1374	0	660	6.43	1	6.43	6.34	1.01
1375	0	828	6.97	1	6.97	6.03	1.16
1376	0	836	7.00	1	7.00	5.98	1.17
1377	0	829	6.97	1	6.97	7.20	0.97
1378	0	797	6.87	1	6.87	7.44	0.92
1379	0	653	6.41	1	6.41	7.08	0.90
1380	0	454	5.70	1	5.70	6.10	0.94
1381	0	357	5.31	1	5.31	5.09	1.04
1382	0	367	5.35	1	5.35	4.99	1.07
1383	0	414	5.54	1	5.54	5.07	1.09
1384	0	476	5.79	1	5.79	5.07	1.14
1385	0	533	6.02	1	6.02	5.65	1.06
1386	0	584	6.18	1	6.18	7.10	0.87
1387	0	797	6.87	1	6.87	6.26	1.10
1388	0	955	7.31	1	7.31	5.61	1.30
1389	0	818	6.94	1	6.94	5.66	1.23
1390	0	641	6.37	1	6.37	6.12	1.04
1391	0	581	6.18	1	6.18	5.16	1.20
1392	0	683	6.50	1	6.50	4.95	1.31
1393	0	798	6.88	1	6.88	5.27	1.31
1394	0	713	6.60	1	6.60	5.45	1.21
1395	0	608	6.26	1	6.26	5.81	1.08
1396	0	566	6.12	1	6.12	5.67	1.08
1397	0	534	6.02	1	6.02	5.16	1.17
1398	0	472	5.78	1	5.78	4.67	1.24
1399	0	400	5.49	1	5.49	5.28	1.04
1400	0	368	5.35	1	5.35	5.30	1.01
1401	0	292	5.05	1	5.05	5.04	1.00
1402	0	331	5.21	1	5.21	5.20	1.00
1403	0	412	5.54	1	5.54	4.50	1.23
1404	0	546	6.06	1	6.06	4.84	1.25
1405	0	686	6.51	1	6.51	4.97	1.31
1406	0	745	6.70	1	6.70	4.63	1.45
1407	0	833	6.99	1	6.99	4.68	1.49
1408	0	919	7.22	1	7.22	5.28	1.37

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed in acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,n}$ (m/s)	$V_{P,n}/V_{Z,m}$
1409	0	976	7.37	1	7.37	7.12	1.03
1410	0	974	7.36	1	7.36	7.34	1.00
1411	0	1038	7.53	1	7.53	5.88	1.28
1412	0	1088	7.66	1	7.66	6.63	1.16
1413	0	1258	8.16	1	8.16	6.58	1.24
1414	0	1534	9.47	0		7.59	
1415	0	1283	8.25	1	8.25	8.07	1.02
1416	0	958	7.32	1	7.32	6.89	1.06
1417	0	743	6.70	1	6.70	5.22	1.28
1418	0	785	6.83	1	6.83	5.89	1.16
1419	0	1065	7.60	1	7.60	4.98	1.53
1420	0	1111	7.72	1	7.72	5.88	1.31
1421	0	919	7.22	1	7.22	5.58	1.29
1422	0	745	6.70	1	6.70	5.36	1.25
1423	0	706	6.58	1	6.58	5.75	1.14
1424	0	914	7.20	1	7.20	5.89	1.22
1425	0	1295	8.30	1	8.30	6.34	1.31
1426	0	1540	9.52	0		7.18	
1427	0	1505	9.23	1	9.23	6.75	1.37
1428	0	1616	10.82	0		6.34	
1429	0	1643		0		7.75	
1430	0	1517	9.33	0		8.13	
1431	0	1182	7.91	1	7.91	8.80	0.90
1432	0	1038	7.53	1	7.53	8.80	0.86
1433	0	999	7.43	1	7.43	7.82	0.95
1434	0	1149	7.82	1	7.82	7.33	1.07
1435	1	1093	7.67	1		6.44	
1436	1	888	7.14	1		6.61	
1437	1	795	6.86	1		6.25	
1438	1	687	6.52	1		7.80	
1439	1	737	6.68	1		7.50	
1440	1	968	7.35	1		7.93	
1441	1	968	7.34	1		6.98	
1442	1	976	7.37	1		6.54	
1443	1	1205	7.97	1		6.69	
1444	0	535	6.03	1	6.03	7.13	0.85
1445	0	582	6.18	1	6.18	8.94	0.69
1446	0	586	6.19	1	6.19	6.08	1.02
1447	0	510	5.93	1	5.93	4.96	1.20
1448	0	456	5.71	1	5.71	6.08	0.94
1449	0	509	5.93	1	5.93	6.83	0.87
1450	0	499	5.89	1	5.89	7.20	0.82
1451	0	470	5.77	1	5.77	7.22	0.80
1452	0	502	5.90	1	5.90	8.62	0.68
1453	0	586	6.19	1	6.19	7.61	0.81
1454	0	703	6.57	1	6.57	6.43	1.02
1455	0	793	6.86	1	6.86	5.17	1.33
1456	0	798	6.87	1	6.87	7.23	0.95
1457	0	735	6.67	1	6.67	7.71	0.86
1458	0	663	6.44	1	6.44	7.95	0.81
1459	0	590	6.20	1	6.20	7.87	0.79
1460	0	552	6.08	1	6.08	6.81	0.89
1461	0	638	6.36	1	6.36	8.03	0.79
1462	0	802	6.89	1	6.89	7.83	0.88
1463	0	809	6.91	1	6.91	7.31	0.95
1464	0	686	6.51	1	6.51	8.63	0.75
1465	0	733	6.67	1	6.67	8.37	0.80
1466	0	841	7.01	1	7.01	7.96	0.88
1467	0	852	7.04	1	7.04	9.38	0.75
1468	0	748	6.71	1	6.71	8.01	0.84
1469	0	620	6.30	1	6.30	8.09	0.78
1470	0	649	6.39	1	6.39	7.95	0.80
1471	0	790	6.85	1	6.85	6.02	1.14
1472	0	738	6.68	1	6.68	6.53	1.02
1473	0	644	6.38	1	6.38	7.46	0.85
1474	0	610	6.27	1	6.27	7.87	0.80
1475	0	535	6.03	1	6.03	6.67	0.90
1476	0	489	5.85	1	5.85	5.60	1.04
1477	0	1557	9.66	0		6.21	
1478	0	1178	7.90	1	7.90	6.74	1.17
1479	0	1177	7.90	1	7.90	6.03	1.31
1480	0	1220	8.01	1	8.01	5.82	1.38
1481	0	1305	8.34	1	8.34	6.95	1.20
1482	0	1112	7.72	1	7.72	5.75	1.34
1483	0	735	6.67	1	6.67	5.47	1.22
1484	0	599	6.23	1	6.23	5.28	1.18
1485	0	765	6.77	1	6.77	5.63	1.20
1486	0	943	7.28	1	7.28	5.11	1.43
1487	0	1138	7.79	1	7.79	6.39	1.22
1488	0	1120	7.75	1	7.75	5.25	1.48
1489	0	880	7.11	1	7.11	5.68	1.25
1490	0	809	6.91	1	6.91	5.17	1.34
1491	0	817	6.94	1	6.94	4.63	1.50
1492	0	844	7.02	1	7.02	4.80	1.46
1493	0	700	6.56	1	6.56	4.81	1.36
1494	0	531	6.01	1	6.01	5.06	1.19
1495	0	407	5.51	1	5.51	8.22	0.67
1496	0	392	5.45	1	5.45	7.77	0.70

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed in acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,n}$ (m/s)	$V_{P,n}/V_{Z,m}$
1497	0	498	5.88	1	5.88	7.13	0.83
1498	0	783	6.83	1	6.83	7.70	0.89
1499	0	1213	7.99	1	7.99	7.35	1.09
1500	0	1371	8.59	1	8.59	6.48	1.32
1501	0	1394	8.68	1	8.68	7.06	1.23
1502	0	1563	9.71	0		7.47	
1503	0	1597	10.00	0	9.65	6.17	
1504	0	1576	9.83	0	9.27	6.55	
1505	0	1654		0	10.17	6.78	
1506	0	1427	8.80	1	8.80	6.95	1.27
1507	0	1151	7.83	1	7.83	7.18	1.09
1508	0	1022	7.49	1	7.49	6.14	1.22
1509	0	1030	7.51	1	7.51	6.26	1.20
1510	0	1094	7.68	1	7.68	5.82	1.32
1511	0	1254	8.14	1	8.14	4.55	1.79
1512	0	1575	9.82	0	9.94	6.22	
1513	0	1510	9.27	0		9.04	
1514	0	1038	7.53	1	7.53	9.61	0.78
1515	0	732	6.66	1	6.66	9.53	0.70
1516	0	571	6.14	1	6.14	6.39	0.96
1517	0	548	6.07	1	6.07	5.84	1.04
1518	1	697	6.55	1		7.29	
1519	0	865	7.07	1	7.07	8.00	0.88
1520	0	969	7.35	1	7.35	6.90	1.06
1521	0	959	7.32	1	7.32	5.57	1.31
1522	0	1134	7.78	1	7.78	3.99	1.95
1523	0	1644		0	10.42	4.95	
1524	0	1500	9.19	1	9.19	6.24	1.47
1525	0	1457	8.92	1	8.92	5.64	1.58
1526	0	1633		0	10.05	6.65	
1527	0	1614	10.74	0	12.14	6.36	
1528	0	1611	10.61	0	10.79	7.64	
1529	0	1598	10.06	0	10.17	7.16	
1530	0	1621		0	9.58	8.36	
1531	0	1618	10.89	0		7.10	
1532	0	1417	8.77	1	8.77	7.60	1.15
1533	0	1585	9.90	0		9.32	
1534	0	1545	9.57	0		10.32	
1535	0	1654		0	10.04	8.26	
1536	0	1487	9.07	1	9.07	7.81	1.16
1537	0	1485	9.06	1	9.06	8.06	1.12
1538	0	1673		0	10.41	6.07	
1539	0	1617	10.89	0	9.61	5.78	
1540	0	1597	10.00	0	10.19	5.16	
1541	0	1564	9.72	0		4.70	
1542	0	1642		0	9.89	3.97	
1543	0	1614	10.73	0	10.36	4.82	
1544	0	1616	10.84	0		5.00	
1545	0	1620		0	9.69	4.54	
1546	0	1355	8.53	1	8.53	4.18	2.04
1547	0	1251	8.13	1	8.13	4.01	2.03
1548	0	1184	7.91	1	7.91	3.96	2.00
1549	0	1372	8.59	1	8.59	4.21	2.04
1550	0	1308	8.35	1	8.35	4.33	1.93
1551	0	1280	8.24	1	8.24	4.81	1.71
1552	0	1630		0		4.84	
1553	0	1450	8.89	1	8.89	4.77	1.87
1554	0	1615	10.79	0	9.49	6.72	
1555	0	1625		0		6.70	
1556	0	1625		0		5.86	
1557	0	1640		0	9.77	5.47	
1558	0	1632		0	9.45	6.14	
1559	0	1626		0	10.94	7.11	
1560	0	1586	9.90	0		6.81	
1561	0	1626		0	9.37	6.35	
1562	0	1636		0	10.40	5.00	
1563	0	1631		0	11.19	5.66	
1564	0	1623		0	10.84	4.44	
1565	0	1632		0	11.57	4.63	
1566	0	1612	10.66	0	10.81	5.39	
1567	0	1611	10.60	0		5.28	
1568	0	1639		0	10.38	5.58	
1569	0	1626		0	12.92	6.03	
1570	0	1625		0	10.51	5.36	
1571	0	1600	10.12	0		7.32	
1572	0	1640		0	10.49	6.74	
1573	0	1594	9.97	0		5.74	
1574	0	1652		0		5.98	
1575	0	1630		0	10.49	4.66	
1576	0	1626		0	10.08	4.14	
1577	0	1595	9.98	0		4.24	
1578	0	1652		0	10.40	4.01	
1579	0	1600	10.12	0	11.82	4.88	
1580	0	1626		0	11.64	4.56	
1581	0	1617	10.89	0	11.16	4.65	
1582	0	1608	10.48	0	10.66	6.26	
1583	0	1649		0	10.54	5.94	
1584	0	1626		0	10.36	6.08	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range $V_{p,n}$ (m/s)	10m Anemometer Wind Speed, $V_{z,n}$ (m/s)	$V_{P,n}/V_{Z,m}$
1585	0	1605	10.34	0		5.68	
1586	0	1645		0	10.31	6.54	
1587	0	1627		0	10.37	7.87	
1588	0	1622		0	11.51	8.54	
1589	0	1600	10.14	0		9.78	
1590	0	1630		0		9.50	
1591	0	1636		0	10.93	8.32	
1592	0	1638		0	11.09	6.87	
1593	0	1632		0	11.31	8.97	
1594	0	1621		0	11.57	8.82	
1595	0	1622		0	11.75	8.10	
1596	0	1617	10.85	0	11.33	6.70	
1597	0	1627		0	9.64	6.28	
1598	0	1635		0	9.75	4.41	
1599	0	1640		0	11.98	3.81	
1600	0	1634		0	11.63	6.00	
1601	0	1613	10.69	0	12.34	5.20	
1602	0	1628		0	10.12	5.65	
1603	0	1605	10.34	0	10.38	5.92	
1604	0	1629		0	10.44	5.94	
1605	0	1627		0		5.15	
1606	0	1634		0		6.35	
1607	0	1642		0	9.54	6.23	
1608	0	1645		0	9.33	7.99	
1609	0	1637		0	11.04	6.77	
1610	0	1592	9.96	0	10.03	6.23	
1611	0	1633		0		7.64	
1612	0	1617	10.86	0	9.55	6.02	
1613	0	1626		0	10.82	5.47	
1614	0	1632		0		6.42	
1615	0	1633		0	10.71	7.92	
1616	0	1628		0	11.85	7.91	
1617	0	1628		0	13.38	8.10	
1618	0	1622		0	14.58	6.25	
1619	0	1614	10.74	0	12.62	5.46	
1620	0	1623		0	11.47	6.47	
1621	0	1614	10.74	0	9.51	7.82	
1622	0	1608	10.49	0	9.76	7.51	
1623	0	1374	8.60	1	8.60	6.21	1.39
1624	0	1612	10.65	0		7.60	
1625	0	1553	9.63	0		9.33	
1626	0	1534	9.47	0		9.02	
1627	0	1630		0		7.77	
1628	0	1665		0	12.41	7.78	
1629	0	1599	10.08	0	12.33	8.58	
1630	0	1625		0	12.23	8.38	
1631	0	1626		0	12.55	9.69	
1632	0	1603	10.25	0	11.37	9.28	
1633	0	1632		0	10.64	7.92	
1634	0	1621		0	9.64	6.54	
1635	0	1629		0	10.75	6.90	
1636	0	1629		0	11.06	7.06	
1637	0	1636		0	11.39	6.69	
1638	0	1595	9.98	0	9.26	5.10	
1639	0	1631		0	10.65	5.29	
1640	0	1610	10.54	0	9.95	4.95	
1641	0	1607	10.46	0		7.82	
1642	0	1614	10.73	0		8.32	
1643	0	1218	8.01	1	8.01	6.20	1.29
1644	0	1139	7.79	1	7.79	7.72	1.01
1645	0	1088	7.66	1	7.66	7.87	0.97
1646	0	1338	8.46	1	8.46	6.59	1.28
1647	0	1411	8.74	1	8.74	7.00	1.25
1648	0	1354	8.53	1	8.53	4.54	1.88
1649	0	1677		0	10.20	4.96	
1650	0	1600	10.12	0	9.66	4.41	
1651	0	1637		0	10.87	4.66	
1652	0	1617	10.88	0	9.41	5.55	
1653	0	1582	9.88	0	9.30	4.93	
1654	0	1636		0	9.68	4.73	
1655	0	1585	9.90	0	9.76	4.55	
1656	0	1183	7.91	1	7.91	4.35	1.82
1657	0	1089	7.66	1	7.66	4.40	1.74
1658	0	1069	7.61	1	7.61	4.59	1.66
1659	0	965	7.34	1	7.34	5.99	1.23
1660	0	895	7.15	1	7.15	6.00	1.19
1661	0	776	6.80	1	6.80	6.31	1.08
1662	0	654	6.41	1	6.41	6.70	0.96
1663	0	722	6.63	1	6.63	6.87	0.97
1664	0	881	7.12	1	7.12	8.02	0.89
1665	0	1000	7.43	1	7.43	8.54	0.87
1666	0	1474	8.98	1	8.98	7.17	1.25
1667	0	1640		0		6.87	
1668	0	1619	10.96	0		8.30	
1669	0	1638		0	10.50	7.98	
1670	0	1511	9.28	0		6.60	
1671	0	1252	8.13	1	8.13	6.72	1.21
1672	0	1528	9.42	0	10.68	7.80	
1673	0	1194	7.94	1	7.94	5.54	1.43
1674	0	907	7.19	1	7.19	5.02	1.43
1675	0	961	7.33	1	7.33	5.31	1.38
1676	0	1361	8.55	1	8.55	5.93	1.44
1677	0	1670		0	10.45	6.68	
1678	0	1610	10.58	0	9.34	5.25	
1679	0	1643		0	12.46	5.48	
1680	0	1603	10.27	0	12.99	7.48	
1681	0	1613	10.68	0	12.41	6.95	
1682	0	1614	10.72	0	11.98	8.11	
1683	0	1628		0	10.35	6.41	
1684	0	1647		0	10.58	5.74	
1685	0	1626		0	10.70	5.34	
1686	0	1614	10.74	0	10.95	7.09	
1687	0	1619	10.98	0	10.66	7.32	
1688	0	1634		0		5.55	
1689	0	1640		0	11.37	5.88	
1690	0	1635		0	11.00	6.37	
1691	0	1603	10.28	0	9.94	6.28	
1692	0	1637		0	10.23	4.88	
1693	0	1643		0	9.87	4.18	
1694	0	1630		0	12.28	4.11	
1695	0	1621		0	11.80	5.86	
1696	0	1628		0	12.96	8.52	
1697	0	1611	10.62	0	11.81	8.21	
1698	0	1625		0	11.74	7.06	
1699	0	1621		0	10.92	5.58	
1700	0	1624		0	10.75	5.31	
1701	0	1626		0	10.75	5.86	
1702	0	1610	10.57	0	10.28	6.24	
1703	0	1628		0	10.52	6.31	
1704	0	1623		0	9.56	6.14	
1705	0	1576	9.82	0	9.61	6.03	
1706	0	1222	8.02	1	8.02	7.02	1.14
1707	0	1527	9.41	0	11.18	4.99	
1708	0	1656		0	10.64	8.68	
1709	0	1599	10.09	0		9.19	
1710	0	1570	9.77	0		8.56	
1711	0	1629		0		7.26	
1712	0	1665		0	9.95	7.97	
1713	0	1598	10.05	0	10.32	7.23	
1714	0	1536	9.49	0		6.63	
1715	0	1417	8.77	1	8.77	8.78	1.00
1716	0	1296	8.30	1	8.30	8.09	1.03
1717	0	1124	7.76	1	7.76	6.24	1.24
1718	0	1119	7.74	1	7.74	6.67	1.16
1719	0	1160	7.85	1	7.85	6.98	1.12
1720	0	1137	7.79	1	7.79	7.65	1.02
1721	0	1659		0		7.52	
1722	0	1636		0	9.72	6.10	
1723	0	1630		0	9.30	5.56	
1724	0	1609	10.53	0	9.35	5.40	
1725	0	1600	10.14	0		6.88	
1726	0	1640		0		6.13	
1727	0	1595	9.98	0		6.22	
1728	0	1555	9.65	0		5.62	
1729	0	1660		0	12.12	5.84	
1730	0	1608	10.46	0	11.70	6.82	
1731	0	1609	10.54	0		8.05	
1732	0	1604	10.31	0	9.62	8.52	
1733	0	1438	8.85	1	8.85	7.66	1.16
1734	0	1041	7.54	1	7.54	6.58	1.14
1735	0	1587	9.91	0	10.53	7.73	
1736	0	1624		0	9.57	7.24	
1737	0	1567	9.75	0		6.58	
1738	0	1565	9.73	0	9.84	6.24	
1739	0	1332	8.44	1	8.44	6.19	1.36
1740	0	1292	8.29	1	8.29	5.47	1.52
1741	0	1562	9.71	0		4.93	
1742	0	1586	9.90	0		4.57	
1743	0	1517	9.33	0	9.29	3.57	
1744	0	1282	8.25	1	8.25	3.30	2.50
1745	0	1034	7.52	1	7.52	4.41	1.70
1746	0	1027	7.50	1	7.50	4.89	1.53
1747	0	1049	7.56	1	7.56	4.11	1.84
1748	0	950	7.30	1	7.30	5.19	1.41
1749	0	1055	7.57	1	7.57	6.60	1.15
1750	0	1250	8.13	1	8.13	7.26	1.12
1751	0	1088	7.66	1	7.66	8.56	0.89
1752	0	1624		0	11.64	7.41	
1753	0	1576	9.82	0	11.49	5.99	
1754	0	1625		0	10.96	6.10	
1755	0	1630		0	14.29	5.42	
1756	0	1627		0	10.55	8.15	
1757	0	1614	10.74	0	12.75	9.55	
1758	0	1624		0	11.77	7.55	
1759	0	1629		0	9.74	7.39	
1760	0	1634		0	12.39	8.74	
1761	0	1627		0	13.60	9.05	
1762	0	1622		0	12.43	7.89	
1763	0	1635		0	13.96	7.17	
1764	0	1616	10.84	0	12.65	6.28	
1765	0	1621		0	10.88	6.92	
1766	0	1630		0	11.23	6.49	
1767	0	1598	10.04	0	9.95	5.89	
1768	0	1619	10.94	0	10.13	6.43	
1769	0	1633		0		7.36	
1770	0	1650		0	10.26	5.53	
1771	0	1489	9.10	1	9.10	7.04	1.29
1772	0	1433	8.83	1	8.83	7.14	1.24
1773	0	1617	10.89	0	9.86	7.61	
1774	0	1638		0	10.74	8.57	
1775	0	1619	10.97	0		8.24	
1776	0	1611	10.59	0	12.30	8.01	
1777	0	1611	10.60	0	11.06	5.13	
1778	0	1612	10.67	0	11.25	5.92	
1779	0	1623		0	11.08	5.48	
1780	0	1622		0	11.08	5.49	
1781	0	1644		0	10.77	5.30	
1782	0	1605	10.36	0	9.98	5.70	
1783	0	1587	9.92	0	9.53	6.95	
1784	0	1309	8.35	1	8.35	6.45	1.30
1785	0	1283	8.25	1	8.25	6.17	1.34
1786	0	1328	8.43	1	8.43	5.96	1.41
1787	0	1416	8.76	1	8.76	4.79	1.83
1788	0	1601	10.16	0		4.94	
1789	0	1590	9.94	0	9.32	4.64	
1790	0	1639		0		4.64	
1791	0	1620	10.99	0	9.52	4.35	
1792	0	1305	8.34	1	8.34	4.35	1.92
1793	0	1390	8.66	1	8.66	3.42	2.53
1794	0	1658		0	10.81	2.72	
1795	0	1555	9.65	0	9.57	4.41	
1796	0	1636		0		4.60	
1797	0	1626		0	10.41	4.86	
1798	0	1627		0	10.33	5.48	
1799	0	1611	10.59	0		4.71	
1800	0	1582	9.87	0		6.11	
1801	0	1318	8.39	1	8.39	4.98	1.68
1802	0	1203	7.96	1	7.96	4.10	1.94
1803	0	1072	7.62	1	7.62	6.03	1.26
1804	0	1191	7.93	1	7.93	8.45	0.94
1805	0	1551	9.62	0	10.47	6.09	
1806	0	1566	9.74	0	9.50	5.23	
1807	0	1455	8.91	1	8.91	5.03	1.77
1808	0	1313	8.37	1	8.37	4.71	1.78
1809	0	1186	7.92	1	7.92	5.54	1.43
1810	0	1630		0	10.71	5.16	
1811	0	1586	9.91	0	10.50	6.24	
1812	0	1266	8.19	1	8.19	5.42	1.51
1813	0	912	7.20	1	7.20	4.74	1.52
1814	0	1014	7.46	1	7.46	5.64	1.32
1815	0	1040	7.53	1	7.53	5.85	1.29
1816	0	1057	7.58	1	7.58	5.54	1.37
1817	0	1298	8.31	1	8.31	5.24	1.59
1818	0	1563	9.72	0	9.96	6.39	
1819	0	1593	9.97	0		6.33	
1820	0	1632		0		5.77	
1821	0	1571	9.78	0		7.41	
1822	0	1631		0		7.59	
1823	0	1628		0	9.62	6.39	
1824	0	1624		0	9.87	5.39	
1825	0	1639		0	9.51	8.20	
1826	0	1631		0		6.34	
1827	0	1589	9.93	0		6.98	
1828	0	1600	10.11	0	10.12	6.84	
1829	0	1642		0		6.11	
1830	0	1616	10.81	0	9.40	5.69	
1831	0	1321	8.40	1	8.40	4.10	2.05
1832	0	1067	7.61	1	7.61	4.77	1.60
1833	0	1065	7.60	1	7.60	5.16	1.47
1834	0	1276	8.23	1	8.23	4.89	1.68
1835	0	1667		0	11.94	4.79	
1836	0	1618	10.91	0	10.94	4.85	
1837	0	1615	10.79	0	10.50	6.04	
1838	0	1620		0	9.80	5.30	
1839	0	1615	10.78	0	9.96	4.81	
1840	0	1637		0	10.56	6.02	
1841	0	1639		0	10.76	4.97	
1842	0	1660		0	9.49	5.73	
1843	0	1634		0	12.26	5.48	
1844	0	1606	10.38	0	11.95	6.59	
1845	0	1617	10.87	0	10.75	7.59	
1846	0	1622		0	11.56	7.90	
1847	0	1592	9.96	0		7.27	
1848	0	1641		0	10.22	5.99	

SAMPLE CALCULATION

This calculation example demonstrates the calculation of background k-factor as per IEC 61400-11 Edition 3.0 section 8.2.2

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range V_{bin} (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{hub}/V_{z,m}$
1849	0	1586	9.91	0	9.91	5.56	
1850	0	1635		0		5.80	
1851	0	1549	9.60	0	9.38	5.19	
1852	0	1357	8.54	1	8.54	5.08	1.68
1853	0	1399	8.70	1	8.70	5.19	1.68
1854	0	1353	8.52	1	8.52	5.95	1.43
1855	0	1250	8.13	1	8.13	5.32	1.53
1856	0	1274	8.22	1	8.22	4.98	1.65
1857	0	1415	8.76	1	8.76	5.57	1.57
1858	0	1479	9.01	1	9.01	5.24	1.72
1859	0	1238	8.08	1	8.08	5.58	1.45
1860	0	1009	7.45	1	7.45	5.44	1.37
1861	0	893	7.15	1	7.15	4.39	1.63
1862	0	793	6.86	1	6.86	4.84	1.42
1863	0	705	6.57	1	6.57	5.62	1.17
1864	0	629	6.33	1	6.33	4.54	1.39
1865	0	639	6.36	1	6.36	4.81	1.32
1866	0	936	7.26	1	7.26	4.82	1.51
1867	0	1168	7.87	1	7.87	5.48	1.44
1868	0	1335	8.45	1	8.45	5.28	1.60
1869	0	1283	8.25	1	8.25	4.60	1.80
1870	0	1000	7.43	1	7.43	4.84	1.54
1871	0	867	7.08	1	7.08	5.42	1.31
1872	0	931	7.25	1	7.25	6.79	1.07
1873	0	1127	7.76	1	7.76	5.97	1.30
1874	0	1624		0	9.89	4.81	
1875	0	1654		0		4.67	
1876	0	1611	10.60	0	10.64	6.60	
1877	0	1579	9.85	0	9.31	7.00	
1878	0	1293	8.29	1	8.29	9.81	0.85
1879	0	1091	7.67	1	7.67	7.48	1.02
1880	0	1236	8.07	1	8.07	6.11	1.32
1881	0	1460	8.93	1	8.93	8.92	1.00
1882	0	1662		0	9.59	7.60	
1883	0	1626		0	9.81	7.81	
1884	0	1629		0	10.59	6.84	
1885	0	1599	10.11	0	9.54	6.79	
1886	0	1614	10.72	0	9.43	5.51	
1887	0	1627		0		5.21	
1888	0	1629		0	9.91	6.31	
1889	0	1639		0	12.22	7.28	
1890	0	1621		0	11.44	6.23	
1891	0	1617	10.86	0	10.76	5.69	
1892	0	1615	10.79	0	10.81	5.45	
1893	0	1631		0	9.29	7.25	
1894	0	1635		0	12.02	7.35	
1895	0	1625		0	11.96	7.88	
1896	0	1633		0	11.30	6.85	
1897	0	1613	10.69	0	11.33	6.67	
1898	0	1636		0	11.29	6.55	
1899	0	1617	10.88	0	12.18	8.21	
1900	0	1630		0	10.59	7.81	
1901	0	1629		0	11.81	7.85	
1902	0	1620	10.99	0	11.47	8.22	
1903	0	1627		0	12.41	7.65	
1904	0	1619	10.94	0	11.64	9.68	
1905	0	1625		0	10.91	9.69	
1906	0	1614	10.75	0	11.46	8.20	
1907	0	1613	10.71	0	9.99	8.00	
1908	0	1511	9.28	0		8.39	
1909	0	1654		0	10.29	6.76	
1910	0	1412	8.75	1	8.75	8.44	1.04
1911	0	1284	8.26	1	8.26	7.52	1.10
1912	0	1106	7.71	1	7.71	6.54	1.18
1913	0	928	7.24	1	7.24	6.19	1.17
1914	0	781	6.82	1	6.82	6.39	1.07
1915	0	757	6.74	1	6.74	6.48	1.04
1916	0	934	7.26	1	7.26	6.14	1.18
1917	0	1187	7.92	1	7.92	6.07	1.30
1918	0	1334	8.45	1	8.45	4.80	1.76
1919	0	1329	8.43	1	8.43	5.89	1.43
1920	0	1252	8.13	1	8.13	5.75	1.41
1921	0	1159	7.85	1	7.85	5.90	1.33
1922	0	1233	8.06	1	8.06	5.95	1.36
1923	0	1624		0	10.77	5.34	
1924	0	1432	8.82	1	8.82	4.34	2.03
1925	0	1500	9.19	1	9.19	5.96	1.54
1926	0	1610	10.56	0	10.31	6.67	
1927	0	1466	8.95	1	8.95	6.18	1.45
1928	0	1576	9.82	0		6.19	
1929	0	1510	9.27	0		6.14	
1930	0	1630		0	9.55	4.74	
1931	0	1628		0	11.34	5.45	
1932	0	1586	9.91	0	9.88	6.02	
1933	0	1583	9.88	0	9.28	5.35	
1934	0	1605	10.36	0	9.41	6.17	
1935	0	1390	8.66	1	8.66	5.71	1.52
1936	0	1624		0		5.07	

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range V_{bin} (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{hub}/V_{z,m}$
1937	0	1648		0	9.95	5.94	
1938	0	1612	10.66	0	11.00	5.40	
1939	0	1375	8.60	1	8.60	5.32	1.62
1940	0	1027	7.50	1	7.50	5.48	1.37
1941	0	935	7.26	1	7.26	5.19	1.40
1942	0	1216	8.00	1	8.00	6.19	1.29
1943	0	1587	9.91	0	10.30	4.35	
1944	0	1398	8.69	1	8.69	4.40	1.97
1945	0	1383	8.63	1	8.63	4.76	1.82
1946	0	1313	8.37	1	8.37	5.18	1.61
1947	0	1386	8.65	1	8.65	4.98	1.74
1948	0	1240	8.09	1	8.09	5.81	1.39
1949	0	1175	7.89	1	7.89	5.62	1.40
1950	0	1238	8.08	1	8.08	4.17	1.94
1951	0	1255	8.15	1	8.15	4.96	1.64
1952	0	1572	9.79	0	9.26	3.73	
1953	0	1644		0	10.24	3.97	
1954	0	1527	9.41	0		5.46	
1955	0	1059	7.58	1	7.58	6.65	1.14
1956	0	839	7.01	1	7.01	5.58	1.26
1957	0	954	7.31	1	7.31	4.25	1.72
1958	0	1473	8.98	1	8.98	3.10	2.90
1959	0	1425	8.80	1	8.80	5.45	1.62
1960	0	1197	7.95	1	7.95	5.52	1.44
1961	0	993	7.41	1	7.41	5.60	1.32
1962	0	962	7.33	1	7.33	5.33	1.38
1963	0	1120	7.75	1	7.75	5.20	1.49
1964	0	1357	8.54	1	8.54	5.29	1.61
1965	0	1509	9.26	0		7.34	
1966	0	1503	9.21	1	9.21	6.97	1.32
1967	0	1404	8.72	1	8.72	6.47	1.35
1968	0	1535	9.48	0		5.37	
1969	0	1480	9.02	1	9.02	4.52	1.99
1970	0	1204	7.97	1	7.97	3.80	2.10
1971	0	1022	7.49	1	7.49	4.13	1.81
1972	0	997	7.42	1	7.42	5.12	1.45
1973	0	830	6.98	1	6.98	5.90	1.18
1974	0	953	7.31	1	7.31	5.47	1.33
1975	0	1373	8.60	1	8.60	5.89	1.46
1976	0	1281	8.24	1	8.24	6.22	1.33
1977	0	1069	7.61	1	7.61	6.06	1.26
1978	0	922	7.22	1	7.22	5.31	1.36
1979	0	718	6.62	1	6.62	4.64	1.43
1980	0	534	6.02	1	6.02	4.91	1.23
1981	0	559	6.10	1	6.10	4.49	1.36
1982	0	837	7.00	1	7.00	3.69	1.90
1983	0	1013	7.46	1	7.46	3.68	2.03
1984	0	847	7.03	1	7.03	3.83	1.84
1985	0	723	6.63	1	6.63	3.54	1.88
1986	0	649	6.39	1	6.39	4.52	1.41
1987	0	610	6.27	1	6.27	5.23	1.20
1988	0	736	6.67	1	6.67	6.18	1.08
1989	0	900	7.17	1	7.17	6.07	1.18
1990	0	954	7.31	1	7.31	5.41	1.35
1991	0	1014	7.46	1	7.46	5.90	1.27

Data ID#	Data Point Excluded 1=yes, 0=no	Power (kW)	Hub Height Wind Speed (m/s) from power curve	Hub Wind speed In acceptable range 1=yes, 0=no	wind speed from acceptable range V_{bin} (m/s)	10m Anemometer Wind Speed, $V_{z,m}$ (m/s)	$V_{hub}/V_{z,m}$

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Sample Calculation

Standardized Wind Speed Through Power Curve
Standardized Wind Speed with Nacelle Anemometer
[as per IEC 61400-11 Edition 3.0 Section 8.2.1.1 and Section 8.2.1.2]

SAMPLE CALCULATION

This calculation example demonstrates the calculation of standardized wind speed through power curve and the calculation of standardized wind speed with Nacelle anemometer as per IEC 61400-11 Edition 3.0 section 8.2.1.1 and section 8.2.1.2

Sample calculations have been based on measurement data collected and reported for Jericho Wind Farm (Report ID: 14662.00.T03.R4) for data points collected during Turbine ON measurements [Data point #267 and #313]

8.2.1.1 Determination of Wind Speed through power curve (m/s)

Step 1: Determine Acceptable Range of Power Curve

The power curve relates the power to the wind speed at hub height. The wind speed is determined from the measured electric power. Correlation between measured sound level and measured electric power is very high for the allowed intervals of the power curve, see Equation (3).

The intervals on the power curve that can be used are all intervals where no duplicated values exist and the slope of the power curve including the uncertainty is positive. The demand on the slope of the power curve is satisfied for any interval on the power curve, where the following is fulfilled:

$$(P_{k+1} - P_{tol}) - (P_k + P_{tol}) > 0 \qquad (3)$$

where

k is the wind speed bin number of the power curve;

P_k is the power curve value at wind bin k;

P_{tol} is the tolerance on the power reading, typical values for Ptol are 1 to 5% of maximum value

The Acceptable Range of the power curve based on the slope of the power curve is highlighted in table 1.

Step2: Determine Standardized Wind Speed from linear interpolation from power curve for Data Point # 267

Average Active Power measured for Data Point #267 (x) = 417 kW

$$y = y_0 + (x - x_0)\frac{y_1 - y_0}{x_1 - x_0} = \frac{y_0(x_1 - x) + y_1(x - x_0)}{x_1 - x_0},$$

y_0 =	5	m/s
x_0 =	280	kW
y_1 =	6	m/s
x_1 =	527	kW
x =	417	kW
y =	5.55	m/s

8.2.1.2 Determination of Wind Speed with Nacelle Anemometer

For all data points with power levels from the allowed range of the power curve, the average value of the ratio of the wind speed derived from the power curve $V_{P,n}$ and the measured nacelle wind speed $V_{nac,m}$, k_{nac}, is derived. This value is applied to the measured nacelle wind speed for the data points with power levels outside the allowed range of the power curve to derive the normalised wind speed using Equation (4).

$$V_{nac,n} = \kappa_{nac} V_{nac,m} \qquad (4)$$

$V_{nac,m}$ is the wind speed measured with the nacelle anemometer;

$V_{nac,n}$ is the normalised wind speed from the nacelle anemometer, corrected to hub height

Determine Standardized Wind Speed using eq(4) for Data Point #313

K_{nac} =	1.0079	
$V_{nac,m}$ =	9.7573	m/s
$V_{nac,n}$ =	9.83	m/s

Table 1 - Power Curve and Acceptable Range of Power Curve

Power Curve		+ value = acceptable
Hub Wind Speed (m/s)	Power [kW]	slope of power curve
0	0	-32.4
1	0	-32.4
2	0	-28.4
3	4	60.6
4	97	150.6
5	280	214.6
6	527	277.6
7	837	347.6
8	1217	228.6
9	1478	86.6
10	1597	-9.4
11	1620	-32.4
12	1620	-32.4
13	1620	-32.4
14	1620	-32.4
15	1620	-32.4
16	1620	-32.4
17	1620	-32.4
18	1620	-32.4
19	1620	-32.4
20	1620	-32.4
21	1620	-32.4
22	1620	-32.4
23	1620	-32.4
24	1620	-32.4
25	1620	

Table 2 - Power Curve & Required Wind Speeds

Power Curve & Required Wind Speeds		
Power Curve Tolerance	1%	
Acceptable range min	3	m/s
Acceptable range max	9	m/s
Min allowable range	3	m/s
Max allowable range	9	m/s
Power Output	1620	kW
85% Power	1377	kW
Corresponding wind speed	8.61	m/s
Minimum bin	7.0	m/s
Maximum bin	11.0	m/s

Table 3 - Nacelle K-factor and Bacground K-factor

Environmental Details		
k_nac	1.0079	
k_Z	1.1438	

aercoustics

Aercoustics Engineering Ltd.
1004 Middlegate Road, Suite 1100
Mississauga, ON L4Y 0G1

Tel: 416-249-3361
Fax 416-249-3613
aercoustics.com

Calibration Certificates

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

ACOUSTICAL CALIBRATOR

Manufactured by:	BRUEL & KJAER
Model No:	4231
Serial No:	2513182
Calibration Recall No:	27880

Submitted By:

Customer:

Company: Aercoustics Egineering LTD

Address:

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 4231 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, ISO 10012-1 MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9001:2008 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by: FC

Calibration Date: 25-Jul-17

Felix Christopher (QA Mgr.)

Certificate No: 27880 - 2

ISO/IEC 17025:2005

ACCREDITED

Calibration Lab. Cert. # 1533.01

uncompromised calibration West Caldwell Calibration Laboratories, Inc.

1575 State Route 96, Victor, NY 14564, U.S.A.

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor NY 14564

ISO/IEC 17025: 2005
ACCREDITED
Calibration Lab. Cert. # 1533.01

REPORT OF CALIBRATION

for

Brüel & Kjær Acoustical Calibrator **Model No.: 4231** **Serial No.: 2513182**
Company: Aercoustics Engineering LTD **ID No.: XXXX**

Calibration results:

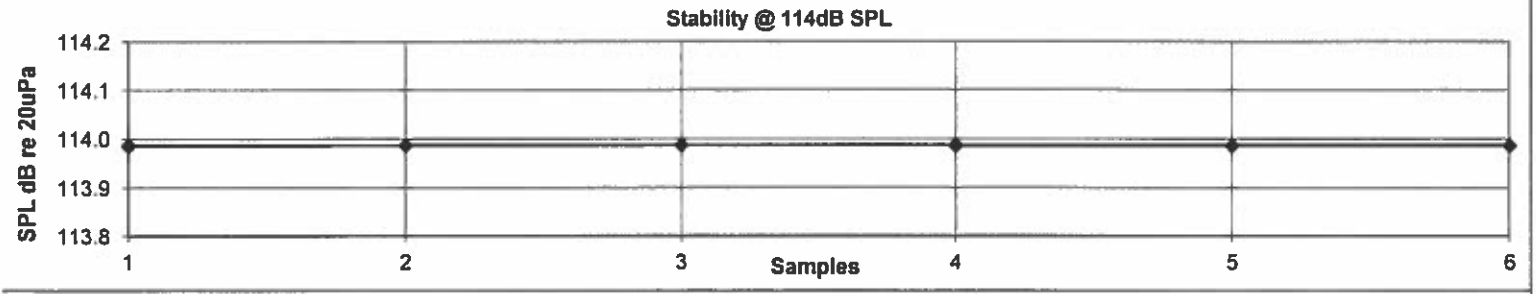
Before data: ..... **After data:** .....
Before & after data same: ...X...
Sound Pressure Level at 1000.0 Hz and pressure of 1013 hPa (mbar)
was 113.99 dB re 20µPa
(Calibrator tested with ½" adaptor UC 0210)
IEC 1094-4 Type WS 2 P Microphone was used for measurement.

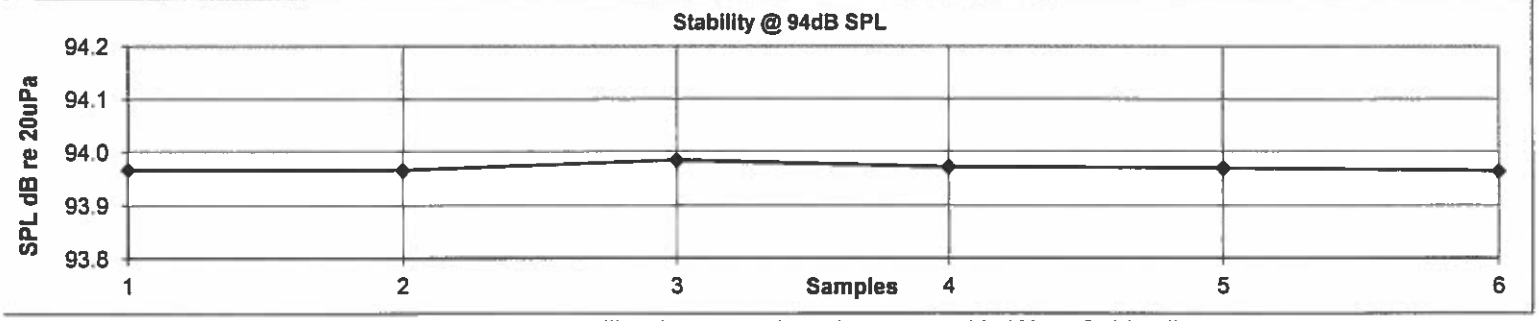
	114dB	94dB
Sound Pressure Level:	Pass	Pass
Frequency:	Pass	Pass
Distortion:	Pass	Pass
Stability:	Pass	Pass
All tested parameters:		Pass

Laboratory Environment:		
Ambient Temperature:	22.6	°C
Ambient Humidity:	54.8	% RH
Ambient Pressure:	99.611	kPa
Calibration Date:	25-Jul-2017	
Calibration Due:	25-Jul-2019	
Report Number:	27880 -2	
Control Number:	27880	

The above listed instrument meets or exceeds the tested manufacturer's specifications
The IEC 942:1988 Class 1 specifications, passed.
The ANSI S1.4-1984 specifications, passed.
This Calibration is traceable through NIST test numbers: 683/284413-14
The expanded uncertainty of calibration: 0.09dB at 95% confidence level with a coverage factor of k=2.

Graph represents six samples of Sound Pressure Level measured at 5sec. interval.





The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 4231B&K**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A) and ISO 9001:2008, ISO 17025

Cal. Date: 25-Jul-2017

Measurements performed by: .....
James Zhu

Calibrated on WCCL system type 9700

West Caldwell Calibration Laboratories Inc.
1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

Brüel & Kjær Acoustical Calibrator **Model No.: 4231** **Serial No.: 2513182**
Company: Aercoustics Engineering LTD

All tested parameters: Pass

Measured Sound Pressure Level (Six samples measured at 5 sec. interval)

Sample	1	113.99 dB re 20µPa		93.97 dB re 20µPa	
	2	113.99		93.97	
	3	113.99		93.98	
	4	113.99		93.97	
	5	113.99		93.97	
	6	113.99		93.96	
	Average	**113.99**	Spec. 114dB ± 0.2dB	**93.97**	Spec. 94dB ± 0.2dB

Frequency measured (Three samples at 30 sec. Interval)

Sample	1	999.98 Hz		1000.00 Hz	
	2	999.98		999.96	
	3	999.98		999.95	
	Average	**999.98**		**999.97**	Spec. 1000Hz ±0.1%

The Frequency expanded uncertainty of calibration:45µHz/Hz at 95% confidence level with a coverage factor of k=2.

Distortion measured	-49.9 dB		-46.6 dB	Spec. ≤-40dB

Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær	4231	S/N 2205492	1-Nov-2016	683/284413-14	1-Nov-2017
Brüel & Kjær	4134	S/N 173494	1-Nov-2016	683/284413-14	1-Nov-2017
Brüel & Kjær	2669	S/N 1835080	1-Nov-2016	683/284413-14	1-Nov-2017
HP	34401A	S/N MY440029	1-Nov-2016	,287708	1-Nov-2017
Brüel & Kjær	2636	S/N 1487493	1-Nov-2016	683/284413-14	1-Nov-2017
HP	33120A	S/N SG400116	1-Nov-2016	,287708	1-Nov-2017

Cal. Date: 25-Jul-2017 **Tested by: James Zhu**

Calibrated on WCCL system type 9700

West Caldwell Calibration Laboratories Inc.

Certificate of Calibration

for

MICROPHONE UNIT

Manufactured by:	BRUEL & KJAER
Model No:	4189-A-021
Serial No:	2622170
Calibration Recall No:	28017

Submitted By:

Customer:

Company: Aercoustics Engineering LTD

Address:

The subject instrument was calibrated to the indicated specification using standards traceable to the National Institute of Standards and Technology or to accepted values of natural physical constants. This document certifies that the instrument met the following specification upon its return to the submitter.

West Caldwell Calibration Laboratories Procedure No. 4189-A-021 BRUE

Upon receipt for Calibration, the instrument was found to be:

Within (X)

tolerance of the indicated specification. See attached Report of Calibration.

West Caldwell Calibration Laboratories' calibration control system meets the requirements, ISO 10012-1 MIL-STD-45662A, ANSI/NCSL Z540-1, IEC Guide 25, ISO 9001:2008 and ISO 17025.

Note: With this Certificate, Report of Calibration is included.

Approved by: FC

Calibration Date: 11-Sep-17

Felix Christopher (QA Mgr.)

Certificate No: 28017 - 14

ISO/IEC 17025:2005

ACCREDITED

Calibration Lab. Cert. # 1533.01

uncompromised calibration West Caldwell Calibration Laboratories, Inc.

1575 State Route 96, Victor, NY 14564, U.S.A.

West Caldwell Calibration Laboratories, Inc.
uncompromised calibration
1575 State Route 96, Victor NY 14564

ISO/IEC 17025: 2005
ACCREDITED
Calibration Lab. Cert. # 1533.01

REPORT OF CALIBRATION

for

Brüel & Kjær Microphone Unit
Model No.: 4189-A-021 Serial No.: 2622170
Mic. Model No.: 4189 Serial No.: 2625416
Preamp. Model No.: 2671 Serial No.: 2614901
Company: Aercoustics Engineering LTD I. D. No.: XXXX

Calibration results:

Before & after data same: ...X...

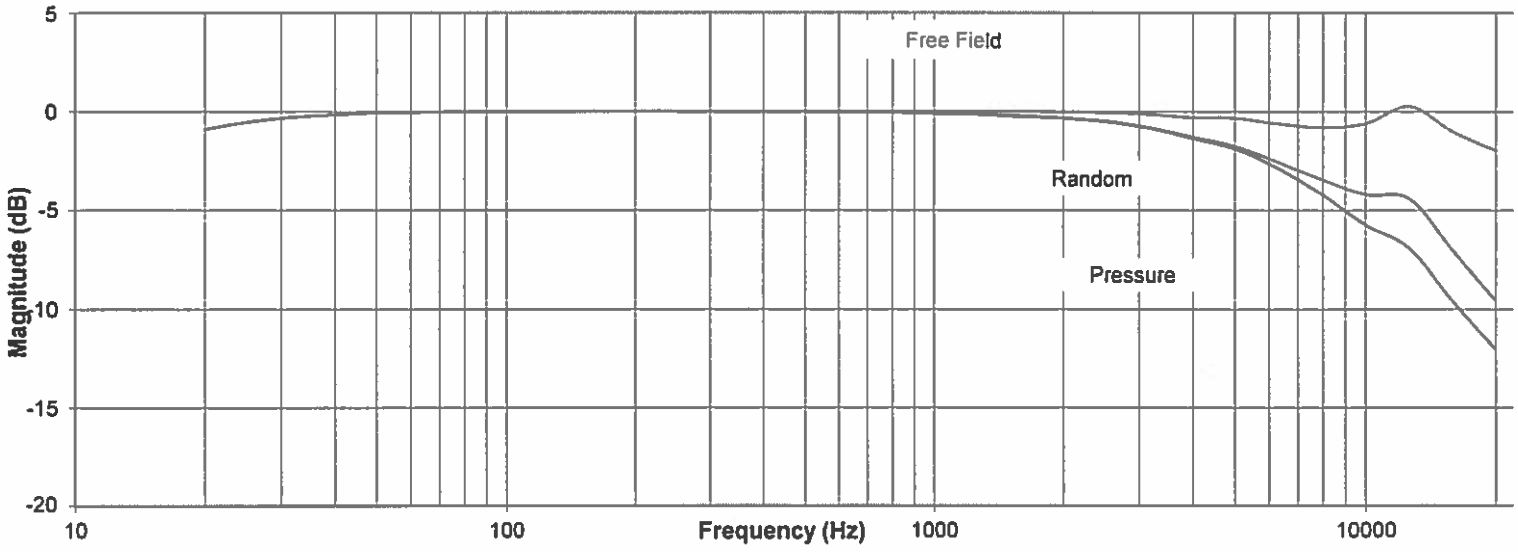
Combined Sensitivity @ 250 Hz and pressure of 100.57 kPa
(Sens. with mic. and preamp.) 0 Volts Polarization voltage (External):
-26.67 dB re.1V/Pascal
46.41 mV/Pascal
0.67 Ko (- dB re 50 mV/Pascal)
Sensitivity: Pass
Freq. Response: Pass
All tests: Pass

Ambient Temperature:	20.7	°C
Ambient Humidity:	53.0	% RH
Ambient Pressure:	100.568	kPa
Calibration Date:	11-Sep-2017	
Calibration Due:	11-Sep-2018	
Report Number:	28017 -14	
Control Number:	28017	

The above listed instrument meets or exceeds the tested manufacturer's specifications.
The IEC 651:1979 & 1993 Type 1 specification passed.
This Calibration is traceable through NIST test numbers: 683/284413-14
The expanded uncertainty of calibration: 0.079dB at 95% confidence level with a coverage factor of k=2.

The pressure response recorded with electroacoustic method.

Frequency Response



The above listed instrument was checked using calibration procedure documented in West Caldwell Calibration Laboratories Inc. procedure : **Rev. 7.0 Jan. 24, 2014 Doc. # 1038 P4189A021B&K**

Calibration was performed by West Caldwell Calibration Laboratories Inc. under Operating Procedures intended to implement the requirements of ISO10012-1, IEC Guide 25, ANSI/NCSL Z540-1, (MIL-STD-45662A) and ISO 9001:2008, ISO 17025

Measurements performed by: .....
James Zhu

Calibrated on WCCL system type 9700

West Caldwell Calibration Laboratories Inc.
1575 State Route 96, Victor NY 14564
Tel. (585) 586-3900 FAX (585) 586-4327

Calibration Data Record

for

Brüel & Kjær Microphone Unit **Model No.: 4189-A-021** **Serial No.: 2622170**
Company: Aercoustics Engineering LTD **I. D. No.: XXXX**

Frequency Response (Reference = 0 dB @ 250Hz)

Frequency [Hz]	Pressure [dB]	Free Field (dB)	Random (dB)
19.95	-0.90	-0.90	-0.90
25.12	-0.52	-0.52	-0.52
31.62	-0.29	-0.29	-0.29
39.81	-0.15	-0.15	-0.15
50.12	-0.07	-0.07	-0.07
63.10	-0.04	-0.04	-0.04
79.43	-0.02	-0.02	-0.02
100.00	0.00	0.00	0.00
125.89	0.00	0.00	0.00
158.49	0.01	0.01	0.01
199.53	0.00	0.00	0.00
251.19	0.00	0.00	0.00
316.23	0.00	0.00	0.00
398.11	-0.01	0.00	-0.01
501.19	-0.01	0.01	-0.01
630.96	-0.02	0.01	-0.02
794.33	-0.04	0.02	-0.04
1000.00	-0.08	0.02	-0.10
1258.93	-0.12	0.03	-0.16
1584.89	-0.21	0.01	-0.27
1995.26	-0.34	-0.02	-0.34
2511.89	-0.52	-0.05	-0.48
3162.28	-0.84	-0.13	-0.81
3981.07	-1.36	-0.30	-1.27
5011.87	-1.90	-0.32	-1.76
6309.57	-2.88	-0.60	-2.57
7943.28	-4.18	-0.80	-3.43
10000.00	-5.72	-0.60	-4.19
12589.25	-6.92	0.27	-4.42
15848.93	-9.60	-1.02	-7.02
19952.62	-12.00	-1.95	-9.52

Freq. response: Expanded Uncertainty (dB) with coverage factor K = 2
20 to 63Hz 0.1dB, 63 to 12.5kHz 0.094dB, 12.5k to 16kHz 0.10dB, 16k to 20kHz 0.5dB.

Instruments used for calibration:			Date of Cal.	Traceability No.	Re-cal. Due Date
Brüel & Kjær	4226	S/N 1445428	3-Nov-2016	683/284413-14	3-Nov-2017
Brüel & Kjær	3560	S/N 2202374	3-Nov-2016	683/284413-14	3-Nov-2017
HP	33120A	S/N 36043716	1-Oct-2016	,287708	1-Oct-2017
HP	34401A	S/N 36064102	1-Oct-2016	,287708	1-Oct-2017

Cal. Date: 11-Sep-2017 **Tested by: James Zhu**

Calibrated on WCCL system type 9700

SOH Wind Engineering LLC
141 Leroy Road · Williston, VT 05495 · USA
Tel 802.316.4368 · Fax 802.735.9106 · www.sohwind.com

CERTIFICATE FOR CALIBRATION OF SONIC ANEMOMETER

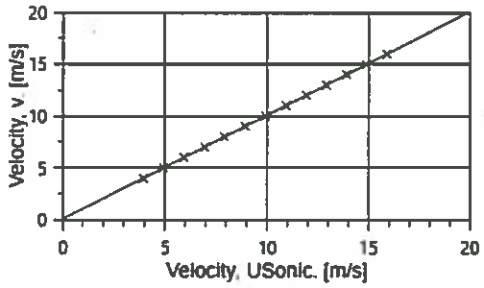
Certificate number: 17.US1.10370 **Date of issue:** November 16, 2017
Type: Vaisala Weather Transmitter, WXT520 **Serial number:** G4420002
Manufacturer: Vaisala, Oyj, Pl 26, FIN-00421 Helsinki, Finland
Client: Aercoustics Engineering Ltd., 1004 Middlegate RD, Suite 1100, S.Tower, Mississauga, ON L4Y 1M4, Canada

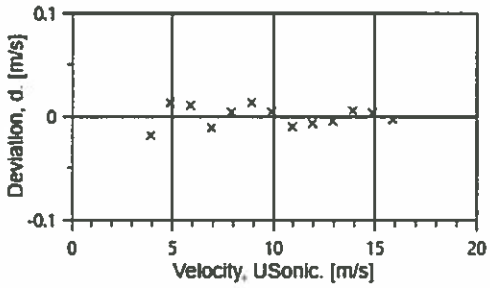
Anemometer received: November 15, 2017 **Anemometer calibrated:** November 15, 2017
Calibrated by: MEJ **Procedure:** MEASNET, IEC 61400-12-1:2017 Annex F
Certificate prepared by: EJF **Approved by:** Calibration engineer, EJF

Calibration equation obtained: $v\,[m/s] = 1.00118 \cdot f\,[m/s] + 0.06286$

Standard uncertainty, slope: 0.00077 **Standard uncertainty, offset:** 0.13048
Covariance: -0.0000059 $(m/s)^2/m/s$ **Coefficient of correlation:** $\rho = 0.999997$
Absolute maximum deviation: -0.019 m/s at 3.969 m/s
Barometric pressure: 1011.5 hPa **Relative humidity:** 21.9%

Succession	Velocity pressure, q. [Pa]	Temperature in wind tunnel [°C]	Temperature in d.p. box [°C]	Wind velocity, v. [m/s]	Anemometer Output, f. [m/s]	Deviation, d. [m/s]	Uncertainty u_c (k=2) [m/s]
2	9.39	22.0	26.0	3.969	3.9200	-0.019	0.024
4	14.85	22.0	26.0	4.992	4.9103	0.013	0.025
6	21.38	22.0	26.0	5.990	5.9100	0.011	0.027
8	29.13	22.1	26.0	6.993	6.9333	-0.011	0.029
10	38.09	22.1	26.0	7.996	7.9200	0.004	0.032
12	48.35	22.1	26.0	9.010	8.9233	0.013	0.035
13-last	59.50	22.1	26.0	9.996	9.9172	0.004	0.038
11	72.14	22.0	26.0	11.006	10.9400	-0.010	0.041
9	85.76	22.0	26.0	12.000	11.9300	-0.007	0.044
7	100.55	22.0	26.0	12.993	12.9200	-0.005	0.047
5	116.73	22.0	26.0	14.000	13.9150	0.006	0.050
3	133.56	22.0	26.0	14.974	14.8900	0.004	0.053
1-first	152.12	21.9	26.0	15.979	15.9000	-0.003	0.057





AC-1746

EQUIPMENT USED

Serial Number	Description
Njord1	Wind tunnel, blockage factor = 1.0035
2254	Control cup anemometer
-	Mounting tube, D = 19 mm
TT003	Summit Electronics, 1XPT100, 0-10V Output, wind tunnel temp.
TP001	PR Electronics 5102, 0-10V Output, differential pressure box temp.
DP004	Setra Model 239, 0-1inWC, differential pressure transducer
HY002	Dwyer RHP-2D20, 0-10V Output, humidity transmitter
BP001	Setra Model 278, barometer
PL8	Pitot tube
XB002	Computer Board. 16 bit A/D data acquisition board
9PRZRW1	PC dedicated to data acquisition

Traceable calibrations of the equipment are carried out by external accredited institutions: Atlantic Scale, Essco Calibration Labs & Furness Controls. A real-time analysis module within the data acquisition software detects pulse frequency.

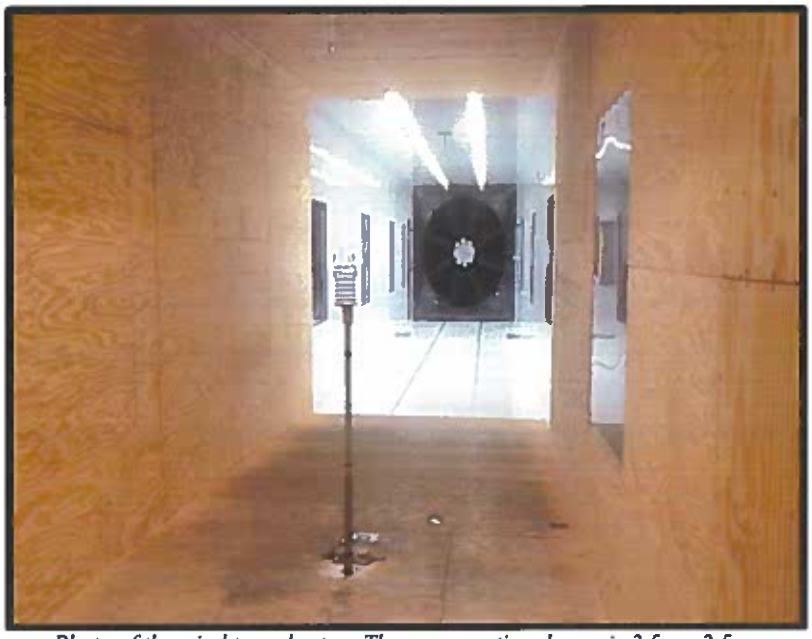


Photo of the wind tunnel setup. The cross-sectional area is 2.5m x 2.5m.

UNCERTAINTIES

The documented uncertainty is the total combined uncertainty at 95% confidence level (k=2) in accordance with EA-4/02. The uncertainty at 10 m/s comply with the requirements in the IEC 61400-12-1:2005 procedure. See Document US.12.01.004 for further details.

COMMENTS

This sensor was calibrated at 0° for this certificate.

Certificate number: 17.US1.10370

SOH Wind Engineering LLC
141 Leroy Road · Williston, VT 05495 · USA
Tel 802.316.4368 · Fax 802.735.9106 · www.sohwind.com

CERTIFICATE FOR CALIBRATION OF SONIC ANEMOMETER

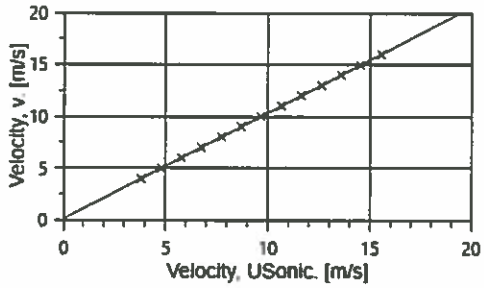
Certificate number: 17.US1.10369 **Date of issue:** November 16, 2017
Type: Vaisala Weather Transmitter, WXT520 **Serial number:** G4420002
Manufacturer: Vaisala, Oyj, Pl 26, FIN-00421 Helsinki, Finland
Client: Aercoustics Engineering Ltd., 1004 Middlegate RD, Suite 1100, S.Tower, Mississauga, ON L4Y 1M4, Canada

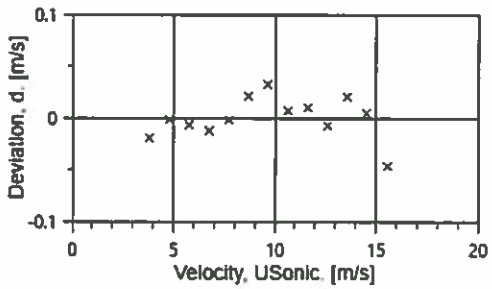
Anemometer received: November 15, 2017 **Anemometer calibrated:** November 15, 2017
Calibrated by: MEJ **Procedure:** MEASNET, IEC 61400-12-1:2017 Annex F
Certificate prepared by: EJF **Approved by:** Calibration engineer, EJF

Calibration equation obtained: v [m/s] = 1.02399 · f [m/s] + 0.09265

Standard uncertainty, slope: 0.00156 **Standard uncertainty, offset:** 0.17838
Covariance: -0.0000247 (m/s)²/m/s **Coefficient of correlation:** ρ = 0.999987
Absolute maximum deviation: -0.046 m/s at 15.979 m/s
Barometric pressure: 1011.1 hPa **Relative humidity:** 22.0%

Succession	Velocity pressure, q. [Pa]	Temperature in wind tunnel [°C]	d.p. box [°C]	Wind velocity, v. [m/s]	Anemometer Output, f. [m/s]	Deviation, d. [m/s]	Uncertainty u_c (k=2) [m/s]
2	9.41	22.0	26.0	3.975	3.8100	-0.019	0.024
4	14.86	22.0	26.0	4.996	4.7897	-0.002	0.025
6	21.40	22.1	26.0	5.994	5.7700	-0.007	0.027
8	29.14	22.1	26.0	6.996	6.7533	-0.012	0.029
10	38.16	22.1	26.0	8.006	7.7300	-0.002	0.032
12	48.35	22.1	26.0	9.012	8.6900	0.021	0.035
13-last	59.54	22.1	26.0	10.001	9.6448	0.032	0.038
11	72.13	22.1	26.0	11.009	10.6533	0.007	0.041
9	85.87	22.1	26.0	12.012	11.6300	0.010	0.044
7	100.56	22.1	26.0	12.998	12.6100	-0.008	0.047
5	116.94	22.0	26.0	14.015	13.5767	0.020	0.050
3	133.53	22.0	26.0	14.976	14.5300	0.005	0.053
1-first	152.03	22.0	26.0	15.979	15.5600	-0.046	0.057





AC-1746

EQUIPMENT USED

Serial Number	Description
Njord1	Wind tunnel, blockage factor = 1.0035
2254	Control cup anemometer
-	Mounting tube, D = 19 mm
TT003	Summit Electronics, 1XPT100, 0-10V Output, wind tunnel temp.
TP001	PR Electronics 5102, 0-10V Output, differential pressure box temp.
DP004	Setra Model 239, 0-1inWC, differential pressure transducer
HY002	Dwyer RHP-2D20, 0-10V Output, humidity transmitter
BP001	Setra Model 278, barometer
PL8	Pitot tube
XB002	Computer Board. 16 bit A/D data acquisition board
9PRZRW1	PC dedicated to data acquisition

Traceable calibrations of the equipment are carried out by external accredited institutions: Atlantic Scale, Essco Calibration Labs & Furness Controls. A real-time analysis module within the data acquisition software detects pulse frequency.

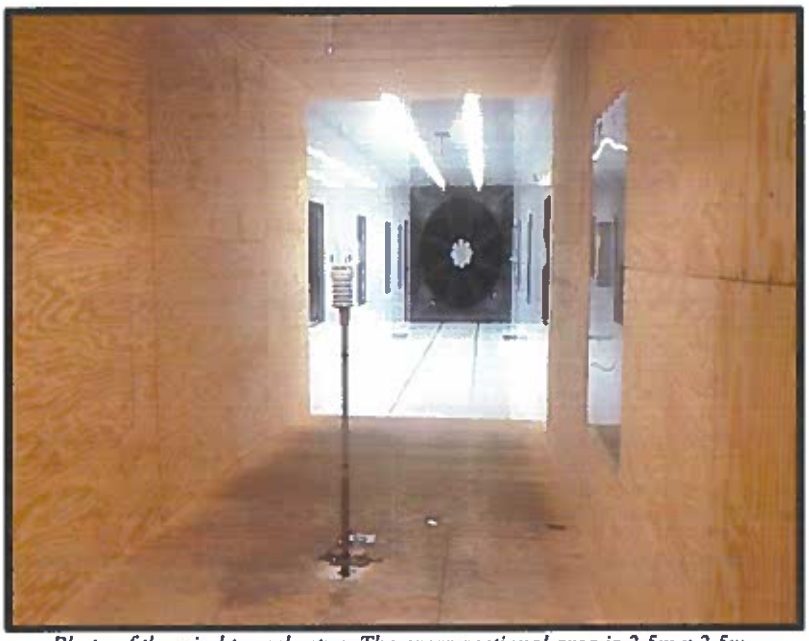


Photo of the wind tunnel setup. The cross-sectional area is 2.5m x 2.5m.

UNCERTAINTIES

The documented uncertainty is the total combined uncertainty at 95% confidence level (k=2) in accordance with EA-4/02. The uncertainty at 10 m/s comply with the requirements in the IEC 61400-12-1:2005 procedure. See Document US.12.01.004 for further details.

COMMENTS

This sensor was calibrated at 90° for this certificate.

Certificate number: 17.US1.10369

TRANSCAT CANADA
Trust in every measure

CERTIFICATE OF CALIBRATION

Customer: AEROCOUSTICS ENGINEERING LTD
1004 MIDDLEGATE ROAD
SUITE 1100
MISSISSAUGA, ON L4Y 1M4
PO Number: TR2018.02.14

SCC Accredited LAB — LAB Accrédité CCN
SCC Lab No 827

CLAS NRC·CNRC CLAS CLAS 2016-02

ilac-MRA

Certificate/SO Number: 33-Q0W0C-20-1 Revision 0

Manufacturer: Nokeval
Model Number: 7470
Description: Serial to Analog Converter
Serial Number: A159784
ID: NONE

As-Found: In Tolerance
As-Left: In Tolerance

Calibration Date: Feb 20, 2018
Due Date: Feb 20, 2020

Calibrated To: Manufacturer Specification
Calibration Procedure: 1-AC58014-0

Transcat Calibration Laboratories have been audited and found in compliance with ISO/IEC 17025:2005. Accredited calibrations performed within the Lab's Scope of Accreditation are indicated by the presence of the Accrediting Body's Logo and Certificate Number. Any measurements on an accredited calibration not covered by that Lab's Scope of Accreditation are listed in the notes section of the certificate. SCC, NRC, CLAS or ANAB do not guarantee the accuracy of an individual calibration by accredited laboratories.

Transcat calibrations, as applicable, are performed in compliance with the requirements of the Transcat Quality Manual QAC-P01-000 Revision 1.0, the customer's Purchase Order and/or Quality Agreement requirements, ISO 9001:2008, ANSI/NCSL Z540.1-1994 (R2002). Complete records of work performed are maintained by Transcat and are available for inspection. Laboratory standards used in the performance of this calibration are listed below.

Transcat documents the traceability of measurements to the SI units through the National Institute of Standards and Technology (NIST), or the National Research Council of Canada (NRC), or other national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Arrangement, or accepted fundamental and/or natural physical constants, or by the use of specified methods, consensus standards or ratio type measurements. Documentation supporting traceability information is available for review upon written request at a Transcat facility. The measured quantity and the measurement uncertainty are required for further dissemination of traceability.

Uncertainties are reported with a coverage factor k=2, providing a level of confidence of approximately 95%. All calibrations have been performed using processes having a TUR of 4:1 or better (3:1 for mass calibrations), unless otherwise noted. The Test Uncertainty Ratio (TUR) is calculated in accordance with NCSL International RP-18. For mass calibrations: Conventional mass referenced to 8.0 g/cm³.

The results in this report relate only to the item calibrated or tested. Recorded calibration data is valid at the time of calibration within the stated uncertainties at the environmental conditions noted. The determination of compliance to the specification is specific to the model/serial no./ID no. referenced above based on the tolerances shown; these tolerances are either the original equipment manufacturers (OEM's) warranted specifications or the client's requested specifications. This certificate may not be reproduced except in full, without the written approval of Transcat. Additional information, if applicable may be included on separate report(s).

TRANSCAT CANADA
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CERTIFICATE OF CALIBRATION

Customer: AEROCOUSTICS ENGINEERING LTD
1004 MIDDLEGATE ROAD
SUITE 1100
MISSISSAUGA, ON L4Y 1M4
PO Number: TR2018.02.14

SCC Accredited LAB
LAB Accrédité CCN
SCC Lab No 827

CLAS
NRC·CNRC
CLAS CLAS 2016-02

ilac-MRA

Certificate/SO Number: 33-Q0W0C-20-1 Revision 0

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	OOT	Cal Process Uncertainty (k=2; ±)	Measurement Uncertainty (k=2; ±)	Units	TUR
DC Current % Source - 4-20mA Ch #1										
4 - 20mA	0%	±(0.1% Span)	3.984	4.016	3.996 mA		1.6e-004	1.9e-003	mA	100.0 : 1
	25%	±(0.1% Span)	7.984	8.016	7.995 mA		2.7e-004	1.9e-003	mA	59.3 : 1
	50%	±(0.1% Span)	11.984	12.016	12.000 mA		1.1e-003	2.2e-003	mA	14.5 : 1
	75%	±(0.1% Span)	15.984	16.016	15.999 mA		1.3e-003	2.3e-003	mA	12.3 : 1
	100%	±(0.1% Span)	19.984	20.016	19.998 mA		1.4e-003	2.3e-003	mA	11.4 : 1
DC Current % Source - 4-20mA Ch #2										
4 - 20mA	0%	±(0.1% Span)	3.984	4.016	3.996 mA		1.6e-004	1.9e-003	mA	100.0 : 1
	25%	±(0.1% Span)	7.984	8.016	7.999 mA		2.7e-004	1.9e-003	mA	59.3 : 1
	50%	±(0.1% Span)	11.984	12.016	11.997 mA		1.1e-003	2.2e-003	mA	14.5 : 1
	75%	±(0.1% Span)	15.984	16.016	16.002 mA		1.3e-003	2.3e-003	mA	12.3 : 1
	100%	±(0.1% Span)	19.984	20.016	19.999 mA		1.4e-003	2.3e-003	mA	11.4 : 1
DC Current % Source - 4-20mA Ch #3										
4 - 20mA	0%	±(0.1% Span)	3.984	4.016	3.996 mA		1.6e-004	1.9e-003	mA	100.0 : 1
	25%	±(0.1% Span)	7.984	8.016	7.996 mA		2.7e-004	1.9e-003	mA	59.3 : 1
	50%	±(0.1% Span)	11.984	12.016	11.996 mA		1.1e-003	2.2e-003	mA	14.5 : 1
	75%	±(0.1% Span)	15.984	16.016	16.002 mA		1.3e-003	2.3e-003	mA	12.3 : 1
	100%	±(0.1% Span)	19.984	20.016	20.002 mA		1.4e-003	2.3e-003	mA	11.4 : 1
DC Current % Source - 4-20mA Ch #4										
4 - 20mA	0%	±(0.1% Span)	3.984	4.016	3.997 mA		1.6e-004	1.9e-003	mA	100.0 : 1
	25%	±(0.1% Span)	7.984	8.016	7.995 mA		2.7e-004	1.9e-003	mA	59.3 : 1
	50%	±(0.1% Span)	11.984	12.016	11.999 mA		1.1e-003	2.2e-003	mA	14.5 : 1
	75%	±(0.1% Span)	15.984	16.016	15.997 mA		1.3e-003	2.3e-003	mA	12.3 : 1
	100%	±(0.1% Span)	19.984	20.016	20.001 mA		1.4e-003	2.3e-003	mA	11.4 : 1

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ilac-MRA

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DC Current % Source - 0-20mA Ch #1										
0 - 20mA	0%	±(0.1% Span)	-0.020	0.020	0.000 mA		9.2e-007	2.3e-003	mA	100.0 : 1
	25%	±(0.1% Span)	4.980	5.020	4.997 mA		1.9e-004	2.3e-003	mA	100.0 : 1
	50%	±(0.1% Span)	9.980	10.020	9.997 mA		3.2e-004	2.3e-003	mA	62.5 : 1
	75%	±(0.1% Span)	14.980	15.020	14.998 mA		1.2e-003	2.6e-003	mA	16.7 : 1
	100%	±(0.1% Span)	19.980	20.020	19.998 mA		1.4e-003	2.7e-003	mA	14.3 : 1
DC Current % Source - 0-20mA Ch #2										
0 - 20mA	0%	±(0.1% Span)	-0.020	0.020	0.002 mA		9.2e-007	2.3e-003	mA	100.0 : 1
	25%	±(0.1% Span)	4.980	5.020	4.996 mA		1.9e-004	2.3e-003	mA	100.0 : 1
	50%	±(0.1% Span)	9.980	10.020	10.000 mA		3.2e-004	2.3e-003	mA	62.5 : 1
	75%	±(0.1% Span)	14.980	15.020	15.000 mA		1.2e-003	2.6e-003	mA	16.7 : 1
	100%	±(0.1% Span)	19.980	20.020	19.999 mA		1.4e-003	2.7e-003	mA	14.3 : 1
DC Current % Source - 0-20mA Ch #3										
0 - 20mA	0%	±(0.1% Span)	-0.020	0.020	0.001 mA		9.2e-007	2.3e-003	mA	100.0 : 1
	25%	±(0.1% Span)	4.980	5.020	4.996 mA		1.9e-004	2.3e-003	mA	100.0 : 1
	50%	±(0.1% Span)	9.980	10.020	9.996 mA		3.2e-004	2.3e-003	mA	62.5 : 1
	75%	±(0.1% Span)	14.980	15.020	14.996 mA		1.2e-003	2.6e-003	mA	16.7 : 1
	100%	±(0.1% Span)	19.980	20.020	20.001 mA		1.4e-003	2.7e-003	mA	14.3 : 1
DC Current % Source - 0-20mA Ch #4										
0 - 20mA	0%	±(0.1% Span)	-0.020	0.020	0.001 mA		9.2e-007	2.3e-003	mA	100.0 : 1
	25%	±(0.1% Span)	4.980	5.020	4.992 mA		1.9e-004	2.3e-003	mA	100.0 : 1
	50%	±(0.1% Span)	9.980	10.020	9.997 mA		3.2e-004	2.3e-003	mA	62.5 : 1
	75%	±(0.1% Span)	14.980	15.020	14.996 mA		1.2e-003	2.6e-003	mA	16.7 : 1
	100%	±(0.1% Span)	19.980	20.020	20.001 mA		1.4e-003	2.7e-003	mA	14.3 : 1

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Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	OOT	Cal Process Uncertainty (k=2; ±)	Measurement Uncertainty (k=2; ±)	Units	TUR
DC Voltage % Source - 0-5V Ch#1										
0 -5V	0%	±(0.1% Span)	-0.0050	0.0050	0.0009 V		5.0e-007	5.8e-004	V	100.0 : 1
	20%	±(0.1% Span)	0.9950	1.0050	1.0010 V		5.5e-006	5.8e-004	V	100.0 : 1
	40%	±(0.1% Span)	1.9950	2.0050	2.0001 V		1.1e-005	5.8e-004	V	100.0 : 1
	60%	±(0.1% Span)	2.9950	3.0050	2.9984 V		1.6e-005	5.8e-004	V	100.0 : 1
	80%	±(0.1% Span)	3.9950	4.0050	4.0001 V		2.1e-005	5.8e-004	V	100.0 : 1
	100%	±(0.1% Span)	4.9950	5.0050	4.9988 V		2.6e-005	5.8e-004	V	100.0 : 1
DC Voltage % Source - 0-5V Ch#2										
0 -5V	0%	±(0.1% Span)	-0.0050	0.0050	0.0002 V		5.0e-007	5.8e-004	V	100.0 : 1
	20%	±(0.1% Span)	0.9950	1.0050	1.0000 V		5.5e-006	5.8e-004	V	100.0 : 1
	40%	±(0.1% Span)	1.9950	2.0050	2.0010 V		1.1e-005	5.8e-004	V	100.0 : 1
	60%	±(0.1% Span)	2.9950	3.0050	2.9990 V		1.6e-005	5.8e-004	V	100.0 : 1
	80%	±(0.1% Span)	3.9950	4.0050	3.9980 V		2.1e-005	5.8e-004	V	100.0 : 1
	100%	±(0.1% Span)	4.9950	5.0050	5.0000 V		2.6e-005	5.8e-004	V	100.0 : 1
DC Voltage % Source - 0-5V Ch#3										
0 -5V	0%	±(0.1% Span)	-0.0050	0.0050	0.0001 V		5.0e-007	5.8e-004	V	100.0 : 1
	20%	±(0.1% Span)	0.9950	1.0050	0.9995 V		5.5e-006	5.8e-004	V	100.0 : 1
	40%	±(0.1% Span)	1.9950	2.0050	1.9991 V		1.1e-005	5.8e-004	V	100.0 : 1
	60%	±(0.1% Span)	2.9950	3.0050	2.9982 V		1.6e-005	5.8e-004	V	100.0 : 1
	80%	±(0.1% Span)	3.9950	4.0050	4.0008 V		2.1e-005	5.8e-004	V	100.0 : 1
	100%	±(0.1% Span)	4.9950	5.0050	5.0015 V		2.6e-005	5.8e-004	V	100.0 : 1

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ilac-MRA

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As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	OOT	Cal Process Uncertainty (k=2; ±)	Measurement Uncertainty (k=2; ±)	Units	TUR
DC Voltage % Source - 0-5V Ch#4										
0 -5V	0%	±(0.1% Span)	-0.0050	0.0050	0.0001 V		5.0e-007	5.8e-004	V	100.0 : 1
	20%	±(0.1% Span)	0.9950	1.0050	1.0006 V		5.5e-006	5.8e-004	V	100.0 : 1
	40%	±(0.1% Span)	1.9950	2.0050	1.9991 V		1.1e-005	5.8e-004	V	100.0 : 1
	60%	±(0.1% Span)	2.9950	3.0050	2.9999 V		1.6e-005	5.8e-004	V	100.0 : 1
	80%	±(0.1% Span)	3.9950	4.0050	3.9984 V		2.1e-005	5.8e-004	V	100.0 : 1
	100%	±(0.1% Span)	4.9950	5.0050	4.9996 V		2.6e-005	5.8e-004	V	100.0 : 1
DC Voltage % Source - 0-10V Ch#1										
0 - 10V	0%	±(0.1% Span)	-0.010	0.010	0.001 V		5.0e-007	1.2e-003	V	100.0 : 1
	20%	±(0.1% Span)	1.990	2.010	2.000 V		1.1e-005	1.2e-003	V	100.0 : 1
	40%	±(0.1% Span)	3.990	4.010	4.000 V		2.1e-005	1.2e-003	V	100.0 : 1
	60%	±(0.1% Span)	5.990	6.010	6.000 V		3.1e-005	1.2e-003	V	100.0 : 1
	80%	±(0.1% Span)	7.990	8.010	7.997 V		4.1e-005	1.2e-003	V	100.0 : 1
	100%	±(0.1% Span)	9.990	10.010	9.997 V		5.2e-005	1.2e-003	V	100.0 : 1
DC Voltage % Source - 0-10V Ch#2										
0 - 10V	0%	±(0.1% Span)	-0.010	0.010	0.002 V		5.0e-007	1.2e-003	V	100.0 : 1
	20%	±(0.1% Span)	1.990	2.010	2.001 V		1.1e-005	1.2e-003	V	100.0 : 1
	40%	±(0.1% Span)	3.990	4.010	3.998 V		2.1e-005	1.2e-003	V	100.0 : 1
	60%	±(0.1% Span)	5.990	6.010	5.998 V		3.1e-005	1.2e-003	V	100.0 : 1
	80%	±(0.1% Span)	7.990	8.010	7.998 V		4.1e-005	1.2e-003	V	100.0 : 1
	100%	±(0.1% Span)	9.990	10.010	9.997 V		5.2e-005	1.2e-003	V	100.0 : 1

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1004 MIDDLEGATE ROAD
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CLAS NRC·CNRC CLAS CLAS 2016-02

ilac-MRA

Certificate/SO Number: 33-Q0W0C-20-1 Revision 0

As Found/As Left Data

Description	Setpoints	Accuracy	Low Limit	High Limit	As Found / As Left	OOT	Cal Process Uncertainty (k=2; ±)	Measurement Uncertainty (k=2; ±)	Units	TUR
DC Voltage % Source - 0-10V Ch#3										
0 - 10V	0%	±(0.1% Span)	-0.010	0.010	0.000 V		5.0e-007	1.2e-003	V	100.0 : 1
	20%	±(0.1% Span)	1.990	2.010	1.999 V		1.1e-005	1.2e-003	V	100.0 : 1
	40%	±(0.1% Span)	3.990	4.010	4.001 V		2.1e-005	1.2e-003	V	100.0 : 1
	60%	±(0.1% Span)	5.990	6.010	6.000 V		3.1e-005	1.2e-003	V	100.0 : 1
	80%	±(0.1% Span)	7.990	8.010	7.999 V		4.1e-005	1.2e-003	V	100.0 : 1
	100%	±(0.1% Span)	9.990	10.010	9.998 V		5.2e-005	1.2e-003	V	100.0 : 1
DC Voltage % Source - 0-10V Ch#4										
0 - 10V	0%	±(0.1% Span)	-0.010	0.010	0.001 V		5.0e-007	1.2e-003	V	100.0 : 1
	20%	±(0.1% Span)	1.990	2.010	1.999 V		1.1e-005	1.2e-003	V	100.0 : 1
	40%	±(0.1% Span)	3.990	4.010	3.998 V		2.1e-005	1.2e-003	V	100.0 : 1
	60%	±(0.1% Span)	5.990	6.010	6.000 V		3.1e-005	1.2e-003	V	100.0 : 1
	80%	±(0.1% Span)	7.990	8.010	8.000 V		4.1e-005	1.2e-003	V	100.0 : 1
	100%	±(0.1% Span)	9.990	10.010	9.998 V		5.2e-005	1.2e-003	V	100.0 : 1

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Traceable Standards

Asset	Manufacturer	Model Number	Description	Cal Date	Due Date	Traceability Number	Use
N0150	Fluke Corporation	5700A	Calibrator	23-Jun-17	31-May-18	5-&N0150-14-1	AF
N0436	Agilent Technologies	3458A Opt 002	Digital Multimeter, 8.5 Digit	19-Apr-17	30-Apr-18	5-&N0436-14-1	AF/AL

The use of the standard is defined as: AF - used for as-found readings, AL - used for as-left readings.

Environmental Data

Temperature	Relative Humidity	Temp / RH Asset
71.35°F /21.86°C	33.50%	N0457

Calibrated At:
4043 Carling Avenue
Ottawa, ON K2K 2A4

Facility Responsible:
4043 Carling Avenue
Ottawa, ON K2K 2A4
800-828-1470

Calibrated By:
Electronically Signed By:
Mark King

Mark King	Feb 20, 2018
Calibration Technician	15:08:17 -05:00

Reviewed By:
Electronically Signed By:
Francis Kane

Francis Kane	Feb 20, 2018
Lab Manager	15:24:41 -05:00

Unit Barcode: 901B0150195

Date Received: February 15, 2018
Service Level : R9

Customer Number: 9-322110-000

ISO17025

As Found RECALIBRATION CERTIFICATE

Sales Region:	Canada
Account:	Aercoustics Engineering Ltd
Instrument:	LMS SCADAS
Manufacturer:	Siemens Industry Software B.V.
Type:	SCR05
Serial number(s):	53103922
Calibration method:	Two calibrated external standards (DC voltage and frequency) are used to calibrate the internal LMS SCADAS references: time/frequency accuracy of the internal system clock and amplitude accuracy of the internal signal sources. All input channels are calibrated against the internal references.
Ambient conditions:	The calibrations have been carried out in a controlled environment, at an ambient temperature of 23.4°C and a relative humidity of 47%.
Calibration date:	October 24, 2017
Results:	The calibration results, together with their associated uncertainties, are included in this calibration certificate. *Calibration results within specification.*
Uncertainty:	The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k =2, which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with publication EA-4/02.
Traceability:	The measurements have been executed using methods for which the traceability to international standards has been demonstrated towards the Raad voor Accreditatie.

Breda, October 25, 2017

Calibration performed by:

Wilfred Nolles

Certificate approved by:

Frank Lemmens

The Raad voor Accreditatie is one of the signatories of the Multilateral Agreement of the European Cooperation for Accreditation (EA) for the mutual recognition of calibration certificates.

Siemens Industry Software B.V.
Weidehek 53
4824 AT Breda
The Netherlands
Phone: +31 76 573 6363

Table of contents

Siemens Industry Software B.V.
Weidehek 53
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Phone: +31 76 573 6363

1 Explanation of the factory calibration procedure

The production process of an LMS SCADAS front-end consists of a number of stages.
Every single board or module that will be part of the system is tested extensively on reliability and functionality before it is inserted in the LMS SCADAS frame.
After assembly, the amplitude accuracy and offset errors of all input and output channels are adjusted to a value as close to zero as possible. The adjustment procedure incorporates external measurement equipment, which is documented in the next section of this report.

As a final step, the front-end is submitted to a factory calibration. The factory calibration verifies whether all input and output channels meet their published specifications with respect to amplitude accuracy, offset, and a number of dynamic capabilities such as distortion, signal to noise ratio and inter-channel crosstalk. The measurements that are done as a part of the calibration use an internal reference source, which has been calibrated against an external standard (documented in the next section of this report).
The results of this calibration procedure are documented in the *Calibration Certificate* you have in front of you.

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Phone: +31 76 573 6363

2 External reference - used equipment

	Type	Serial Number	Cal Certificate	Cal Date
Digital Multimeter	Agilent 34401A	MY41040399	201702735.00	July 21, 2017
Calibration software	NA	2.10.0001	NA	NA

The external reference (DMM) is calibrated on a yearly basis by a calibration laboratory that is ISO17025:2005 accredited by The Dutch Accreditation Council RvA.

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3 System configuration

Frame	Backplane Module	Conditioner	Unique number	Hardware version	Software version	Option
Master (0)			0053103922			
	XSIDA BT GPS (0)		2009501008	2	0	
	VC8_E (1)		2010788002	0	0	
	VC8_E (2)		2010788018	0	0	
	XSII CF CN (3)		2012144006	10	0	
	PS12-2 MOB (4)		2010622010	12	11	

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4 VC8_E_h0s0

4.1 Gain Accuracy after Adjustment

Description of calibration:
Determination of the amplitude accuracy of the input channels over all input ranges and available ADC bandwidths, by applying an accurate 1kHz -3dBFS (max 4V) sine wave which is generated by the internal reference generator. For charge amplifiers, the reference voltage signal is translated to a reference charge signal.
The reported values represent the deviations from the expected signal amplitude, both absolute (either in Volt or Coulomb, depending on the input channel type) and relative (in %).

AdcBw 102400Hz, Range 0.316V Alternating voltage 100mV < IR <= 316mV Spec: <= ±0.100% Uncertainty: 72µV	
Chan	Value
0,1,x,0	-0.014 mV, -0.006%
0,1,x,1	-0.017 mV, -0.007%
0,1,x,2	-0.013 mV, -0.006%
0,1,x,3	-0.014 mV, -0.006%
0,1,x,4	-0.015 mV, -0.007%
0,1,x,5	-0.015 mV, -0.007%
0,1,x,6	-0.015 mV, -0.007%
0,1,x,7	-0.019 mV, -0.008%
0,2,x,0	-0.020 mV, -0.009%
0,2,x,1	-0.020 mV, -0.009%
0,2,x,2	-0.012 mV, -0.005%
0,2,x,3	-0.016 mV, -0.007%
0,2,x,4	-0.018 mV, -0.008%
0,2,x,5	-0.016 mV, -0.007%
0,2,x,6	-0.014 mV, -0.006%
0,2,x,7	-0.013 mV, -0.006%

AdcBw 102400Hz, Range 1V Alternating voltage 316mV < IR <= 1V Spec: <= ±0.100% Uncertainty: 140µV	
Chan	Value
0,1,x,0	-0.008 mV, -0.001%
0,1,x,1	-0.012 mV, -0.002%
0,1,x,2	-0.003 mV, -0.000%
0,1,x,3	-0.002 mV, -0.000%
0,1,x,4	-0.010 mV, -0.001%
0,1,x,5	-0.010 mV, -0.001%
0,1,x,6	-0.009 mV, -0.001%
0,1,x,7	-0.018 mV, -0.002%
0,2,x,0	-0.017 mV, -0.002%
0,2,x,1	-0.019 mV, -0.003%
0,2,x,2	0.003 mV, 0.000%
0,2,x,3	-0.009 mV, -0.001%
0,2,x,4	-0.017 mV, -0.002%
0,2,x,5	-0.005 mV, -0.001%
0,2,x,6	-0.001 mV, -0.000%
0,2,x,7	-0.005 mV, -0.001%

AdcBw 102400Hz, Range 3.16V Alternating voltage 1V < IR <= 3.16V Spec: <= ±0.100% Uncertainty: 370µV	
Chan	Value
0,1,x,0	0.058 mV, 0.003%
0,1,x,1	0.044 mV, 0.002%
0,1,x,2	0.066 mV, 0.003%
0,1,x,3	0.071 mV, 0.003%
0,1,x,4	0.041 mV, 0.002%
0,1,x,5	0.051 mV, 0.002%
0,1,x,6	0.049 mV, 0.002%
0,1,x,7	-0.002 mV, -0.000%
0,2,x,0	0.016 mV, 0.001%
0,2,x,1	0.011 mV, 0.000%
0,2,x,2	0.081 mV, 0.004%
0,2,x,3	0.040 mV, 0.002%
0,2,x,4	0.019 mV, 0.001%
0,2,x,5	0.062 mV, 0.003%
0,2,x,6	0.077 mV, 0.003%
0,2,x,7	0.068 mV, 0.003%

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AdcBw 102400Hz, Range 10V
Alternating voltage 3.16V < IR <= 10V
Spec: <= ±0.100%
Uncertainty: 640µV

Chan	Value
0,1,x,0	0.175 mV, 0.004%
0,1,x,1	0.145 mV, 0.004%
0,1,x,2	0.186 mV, 0.005%
0,1,x,3	0.189 mV, 0.005%
0,1,x,4	0.143 mV, 0.004%
0,1,x,5	0.154 mV, 0.004%
0,1,x,6	0.151 mV, 0.004%
0,1,x,7	0.095 mV, 0.002%
0,2,x,0	0.109 mV, 0.003%
0,2,x,1	0.085 mV, 0.002%
0,2,x,2	0.221 mV, 0.006%
0,2,x,3	0.155 mV, 0.004%
0,2,x,4	0.117 mV, 0.003%
0,2,x,5	0.160 mV, 0.004%
0,2,x,6	0.201 mV, 0.005%
0,2,x,7	0.189 mV, 0.005%

AdcBw 102400Hz, Range 316pC
Alternating charge IR <= 316pC
Spec: <= ±0.100%
Uncertainty: 3.0pC

Chan	Value
0,1,x,0	0.006 pC, 0.003%
0,1,x,1	0.003 pC, 0.001%
0,1,x,2	0.006 pC, 0.003%
0,1,x,3	0.003 pC, 0.001%
0,1,x,4	0.005 pC, 0.002%
0,1,x,5	0.005 pC, 0.002%
0,1,x,6	0.004 pC, 0.002%
0,1,x,7	-0.003 pC, -0.001%
0,2,x,0	-0.001 pC, -0.001%
0,2,x,1	-0.001 pC, -0.000%
0,2,x,2	0.010 pC, 0.004%
0,2,x,3	0.002 pC, 0.001%
0,2,x,4	-0.000 pC, -0.000%
0,2,x,5	0.004 pC, 0.002%
0,2,x,6	0.007 pC, 0.003%
0,2,x,7	0.006 pC, 0.003%

AdcBw 102400Hz, Range 1nC
Alternating charge 316pC < IR <= 1nC
Spec: <= ±0.100%
Uncertainty: 9.2pC

Chan	Value
0,1,x,0	0.026 pC, 0.004%
0,1,x,1	0.022 pC, 0.003%
0,1,x,2	0.029 pC, 0.004%
0,1,x,3	0.020 pC, 0.003%
0,1,x,4	0.022 pC, 0.003%
0,1,x,5	0.023 pC, 0.003%
0,1,x,6	0.022 pC, 0.003%
0,1,x,7	0.002 pC, 0.000%
0,2,x,0	0.014 pC, 0.002%
0,2,x,1	0.011 pC, 0.001%
0,2,x,2	0.039 pC, 0.006%
0,2,x,3	0.018 pC, 0.003%
0,2,x,4	0.011 pC, 0.002%
0,2,x,5	0.030 pC, 0.004%
0,2,x,6	0.032 pC, 0.005%
0,2,x,7	0.023 pC, 0.003%

AdcBw 102400Hz, Range 3.16nC
Alternating charge 1nC < IR <= 3.16nC
Spec: <= ±0.100%
Uncertainty: 30pC

Chan	Value
0,1,x,0	0.098 pC, 0.004%
0,1,x,1	0.084 pC, 0.004%
0,1,x,2	0.102 pC, 0.005%
0,1,x,3	0.074 pC, 0.003%
0,1,x,4	0.081 pC, 0.004%
0,1,x,5	0.087 pC, 0.004%
0,1,x,6	0.084 pC, 0.004%
0,1,x,7	-0.004 pC, -0.000%
0,2,x,0	0.053 pC, 0.002%
0,2,x,1	0.045 pC, 0.002%
0,2,x,2	0.122 pC, 0.005%
0,2,x,3	0.065 pC, 0.003%
0,2,x,4	0.044 pC, 0.002%
0,2,x,5	0.108 pC, 0.005%
0,2,x,6	0.117 pC, 0.005%
0,2,x,7	0.094 pC, 0.004%

AdcBw 102400Hz, Range 10nC
Alternating charge 3.16nC < IR <= 10nC
Spec: <= ±0.100%
Uncertainty: 96pC

Chan	Value
0,1,x,0	0.252 pC, 0.006%
0,1,x,1	0.220 pC, 0.006%
0,1,x,2	0.257 pC, 0.006%
0,1,x,3	0.195 pC, 0.005%
0,1,x,4	0.223 pC, 0.006%
0,1,x,5	0.219 pC, 0.005%
0,1,x,6	0.220 pC, 0.006%
0,1,x,7	0.103 pC, 0.003%
0,2,x,0	0.185 pC, 0.005%
0,2,x,1	0.165 pC, 0.004%
0,2,x,2	0.295 pC, 0.007%
0,2,x,3	0.208 pC, 0.005%
0,2,x,4	0.172 pC, 0.004%
0,2,x,5	0.250 pC, 0.006%
0,2,x,6	0.272 pC, 0.007%
0,2,x,7	0.237 pC, 0.006%

AdcBw 51200Hz, Range 0.316V
Alternating voltage 100mV < IR <= 316mV
Spec: <= ±0.100%
Uncertainty: 72µV

Chan	Value
0,1,x,0	0.021 mV, 0.009%
0,1,x,1	0.018 mV, 0.008%
0,1,x,2	0.021 mV, 0.009%
0,1,x,3	0.022 mV, 0.010%
0,1,x,4	0.020 mV, 0.009%
0,1,x,5	0.021 mV, 0.009%
0,1,x,6	0.019 mV, 0.009%
0,1,x,7	0.015 mV, 0.007%
0,2,x,0	0.013 mV, 0.006%
0,2,x,1	0.014 mV, 0.006%
0,2,x,2	0.024 mV, 0.011%
0,2,x,3	0.018 mV, 0.008%
0,2,x,4	0.017 mV, 0.007%
0,2,x,5	0.017 mV, 0.008%
0,2,x,6	0.022 mV, 0.010%
0,2,x,7	0.022 mV, 0.010%

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AdcBw 51200Hz, Range 1V Alternating voltage 316mV < IR <= 1V Spec: <= ±0.100% Uncertainty: 140µV	
Chan	Value
0,1,x,0	0.069 mV, 0.010%
0,1,x,1	0.064 mV, 0.009%
0,1,x,2	0.073 mV, 0.010%
0,1,x,3	0.076 mV, 0.011%
0,1,x,4	0.066 mV, 0.009%
0,1,x,5	0.069 mV, 0.010%
0,1,x,6	0.066 mV, 0.009%
0,1,x,7	0.056 mV, 0.008%
0,2,x,0	0.057 mV, 0.008%
0,2,x,1	0.053 mV, 0.007%
0,2,x,2	0.082 mV, 0.012%
0,2,x,3	0.066 mV, 0.009%
0,2,x,4	0.059 mV, 0.008%
0,2,x,5	0.070 mV, 0.010%
0,2,x,6	0.076 mV, 0.011%
0,2,x,7	0.072 mV, 0.010%

AdcBw 51200Hz, Range 10V Alternating voltage 3.16V < IR <= 10V Spec: <= ±0.100% Uncertainty: 640µV	
Chan	Value
0,1,x,0	0.392 mV, 0.010%
0,1,x,1	0.355 mV, 0.009%
0,1,x,2	0.399 mV, 0.010%
0,1,x,3	0.411 mV, 0.010%
0,1,x,4	0.359 mV, 0.009%
0,1,x,5	0.367 mV, 0.009%
0,1,x,6	0.362 mV, 0.009%
0,1,x,7	0.303 mV, 0.008%
0,2,x,0	0.320 mV, 0.008%
0,2,x,1	0.289 mV, 0.007%
0,2,x,2	0.450 mV, 0.011%
0,2,x,3	0.373 mV, 0.009%
0,2,x,4	0.337 mV, 0.008%
0,2,x,5	0.376 mV, 0.009%
0,2,x,6	0.428 mV, 0.011%
0,2,x,7	0.406 mV, 0.010%

AdcBw 51200Hz, Range 1nC Alternating charge 316pC < IR <= 1nC Spec: <= ±0.100% Uncertainty: 9.2pC	
Chan	Value
0,1,x,0	0.043 pC, 0.006%
0,1,x,1	0.038 pC, 0.005%
0,1,x,2	0.045 pC, 0.006%
0,1,x,3	0.038 pC, 0.005%
0,1,x,4	0.040 pC, 0.006%
0,1,x,5	0.040 pC, 0.006%
0,1,x,6	0.038 pC, 0.005%
0,1,x,7	0.019 pC, 0.003%
0,2,x,0	0.031 pC, 0.004%
0,2,x,1	0.025 pC, 0.004%
0,2,x,2	0.055 pC, 0.008%
0,2,x,3	0.035 pC, 0.005%
0,2,x,4	0.028 pC, 0.004%
0,2,x,5	0.045 pC, 0.006%
0,2,x,6	0.049 pC, 0.007%
0,2,x,7	0.041 pC, 0.006%

AdcBw 51200Hz, Range 3.16V Alternating voltage 1V < IR <= 3.16V Spec: <= ±0.100% Uncertainty: 370µV	
Chan	Value
0,1,x,0	0.221 mV, 0.010%
0,1,x,1	0.203 mV, 0.009%
0,1,x,2	0.228 mV, 0.010%
0,1,x,3	0.242 mV, 0.011%
0,1,x,4	0.203 mV, 0.009%
0,1,x,5	0.215 mV, 0.010%
0,1,x,6	0.209 mV, 0.009%
0,1,x,7	0.154 mV, 0.007%
0,2,x,0	0.171 mV, 0.008%
0,2,x,1	0.164 mV, 0.007%
0,2,x,2	0.250 mV, 0.011%
0,2,x,3	0.201 mV, 0.009%
0,2,x,4	0.179 mV, 0.008%
0,2,x,5	0.225 mV, 0.010%
0,2,x,6	0.248 mV, 0.011%
0,2,x,7	0.235 mV, 0.011%

AdcBw 51200Hz, Range 316pC Alternating charge IR <= 316pC Spec: <= ±0.100% Uncertainty: 3.0pC	
Chan	Value
0,1,x,0	0.013 pC, 0.006%
0,1,x,1	0.009 pC, 0.004%
0,1,x,2	0.012 pC, 0.005%
0,1,x,3	0.009 pC, 0.004%
0,1,x,4	0.011 pC, 0.005%
0,1,x,5	0.011 pC, 0.005%
0,1,x,6	0.010 pC, 0.005%
0,1,x,7	0.003 pC, 0.001%
0,2,x,0	0.004 pC, 0.002%
0,2,x,1	0.004 pC, 0.002%
0,2,x,2	0.016 pC, 0.007%
0,2,x,3	0.007 pC, 0.003%
0,2,x,4	0.006 pC, 0.003%
0,2,x,5	0.008 pC, 0.004%
0,2,x,6	0.012 pC, 0.006%
0,2,x,7	0.013 pC, 0.006%

AdcBw 51200Hz, Range 3.16nC Alternating charge 1nC < IR <= 3.16nC Spec: <= ±0.100% Uncertainty: 30pC	
Chan	Value
0,1,x,0	0.137 pC, 0.006%
0,1,x,1	0.114 pC, 0.005%
0,1,x,2	0.134 pC, 0.006%
0,1,x,3	0.116 pC, 0.005%
0,1,x,4	0.117 pC, 0.005%
0,1,x,5	0.119 pC, 0.005%
0,1,x,6	0.116 pC, 0.005%
0,1,x,7	0.030 pC, 0.001%
0,2,x,0	0.083 pC, 0.004%
0,2,x,1	0.071 pC, 0.003%
0,2,x,2	0.158 pC, 0.007%
0,2,x,3	0.099 pC, 0.004%
0,2,x,4	0.076 pC, 0.003%
0,2,x,5	0.139 pC, 0.006%
0,2,x,6	0.156 pC, 0.007%
0,2,x,7	0.136 pC, 0.006%

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AdcBw 51200Hz, Range 10nC
Alternating charge 3.16nC < IR <= 10nC
Spec: <= ±0.100%
Uncertainty: 96pC

Chan	Value
0,1,x,0	0.255 pC, 0.006%
0,1,x,1	0.219 pC, 0.005%
0,1,x,2	0.252 pC, 0.006%
0,1,x,3	0.199 pC, 0.005%
0,1,x,4	0.221 pC, 0.006%
0,1,x,5	0.218 pC, 0.005%
0,1,x,6	0.216 pC, 0.005%
0,1,x,7	0.099 pC, 0.002%
0,2,x,0	0.181 pC, 0.005%
0,2,x,1	0.144 pC, 0.004%
0,2,x,2	0.298 pC, 0.007%
0,2,x,3	0.205 pC, 0.005%
0,2,x,4	0.169 pC, 0.004%
0,2,x,5	0.240 pC, 0.006%
0,2,x,6	0.275 pC, 0.007%
0,2,x,7	0.242 pC, 0.006%

AdcBw 25600Hz, Range 1V
Alternating voltage 316mV < IR <= 1V
Spec: <= ±0.100%
Uncertainty: 140µV

Chan	Value
0,1,x,0	0.081 mV, 0.011%
0,1,x,1	0.075 mV, 0.011%
0,1,x,2	0.084 mV, 0.012%
0,1,x,3	0.089 mV, 0.013%
0,1,x,4	0.079 mV, 0.011%
0,1,x,5	0.081 mV, 0.011%
0,1,x,6	0.077 mV, 0.011%
0,1,x,7	0.068 mV, 0.010%
0,2,x,0	0.068 mV, 0.010%
0,2,x,1	0.063 mV, 0.009%
0,2,x,2	0.095 mV, 0.013%
0,2,x,3	0.078 mV, 0.011%
0,2,x,4	0.071 mV, 0.010%
0,2,x,5	0.082 mV, 0.012%
0,2,x,6	0.089 mV, 0.013%
0,2,x,7	0.084 mV, 0.012%

AdcBw 25600Hz, Range 10V
Alternating voltage 3.16V < IR <= 10V
Spec: <= ±0.100%
Uncertainty: 640µV

Chan	Value
0,1,x,0	0.456 mV, 0.011%
0,1,x,1	0.425 mV, 0.011%
0,1,x,2	0.464 mV, 0.012%
0,1,x,3	0.478 mV, 0.012%
0,1,x,4	0.424 mV, 0.011%
0,1,x,5	0.441 mV, 0.011%
0,1,x,6	0.426 mV, 0.011%
0,1,x,7	0.364 mV, 0.009%
0,2,x,0	0.376 mV, 0.009%
0,2,x,1	0.345 mV, 0.009%
0,2,x,2	0.517 mV, 0.013%
0,2,x,3	0.437 mV, 0.011%
0,2,x,4	0.398 mV, 0.010%
0,2,x,5	0.432 mV, 0.011%
0,2,x,6	0.496 mV, 0.012%
0,2,x,7	0.471 mV, 0.012%

AdcBw 25600Hz, Range 0.316V
Alternating voltage 100mV < IR <= 316mV
Spec: <= ±0.100%
Uncertainty: 72µV

Chan	Value
0,1,x,0	0.025 mV, 0.011%
0,1,x,1	0.021 mV, 0.009%
0,1,x,2	0.025 mV, 0.011%
0,1,x,3	0.026 mV, 0.011%
0,1,x,4	0.023 mV, 0.010%
0,1,x,5	0.024 mV, 0.011%
0,1,x,6	0.023 mV, 0.010%
0,1,x,7	0.018 mV, 0.008%
0,2,x,0	0.017 mV, 0.008%
0,2,x,1	0.017 mV, 0.008%
0,2,x,2	0.029 mV, 0.013%
0,2,x,3	0.022 mV, 0.010%
0,2,x,4	0.020 mV, 0.009%
0,2,x,5	0.020 mV, 0.009%
0,2,x,6	0.026 mV, 0.012%
0,2,x,7	0.027 mV, 0.012%

AdcBw 25600Hz, Range 3.16V
Alternating voltage 1V < IR <= 3.16V
Spec: <= ±0.100%
Uncertainty: 370µV

Chan	Value
0,1,x,0	0.255 mV, 0.011%
0,1,x,1	0.226 mV, 0.010%
0,1,x,2	0.256 mV, 0.011%
0,1,x,3	0.275 mV, 0.012%
0,1,x,4	0.236 mV, 0.011%
0,1,x,5	0.241 mV, 0.011%
0,1,x,6	0.236 mV, 0.011%
0,1,x,7	0.179 mV, 0.008%
0,2,x,0	0.197 mV, 0.009%
0,2,x,1	0.188 mV, 0.008%
0,2,x,2	0.281 mV, 0.013%
0,2,x,3	0.230 mV, 0.010%
0,2,x,4	0.208 mV, 0.009%
0,2,x,5	0.250 mV, 0.011%
0,2,x,6	0.281 mV, 0.013%
0,2,x,7	0.267 mV, 0.012%

AdcBw 25600Hz, Range 316pC
Alternating charge IR <= 316pC
Spec: <= ±0.100%
Uncertainty: 3.0pC

Chan	Value
0,1,x,0	0.013 pC, 0.006%
0,1,x,1	0.009 pC, 0.004%
0,1,x,2	0.012 pC, 0.005%
0,1,x,3	0.010 pC, 0.004%
0,1,x,4	0.012 pC, 0.005%
0,1,x,5	0.011 pC, 0.005%
0,1,x,6	0.010 pC, 0.005%
0,1,x,7	0.003 pC, 0.001%
0,2,x,0	0.004 pC, 0.002%
0,2,x,1	0.004 pC, 0.002%
0,2,x,2	0.015 pC, 0.007%
0,2,x,3	0.007 pC, 0.003%
0,2,x,4	0.006 pC, 0.003%
0,2,x,5	0.008 pC, 0.003%
0,2,x,6	0.012 pC, 0.005%
0,2,x,7	0.013 pC, 0.006%

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AdcBw 25600Hz, Range 1nC Alternating charge 316pC < IR <= 1nC Spec: <= ±0.100% Uncertainty: 9.2pC	
Chan	Value
0,1,x,0	0.040 pC, 0.006%
0,1,x,1	0.033 pC, 0.005%
0,1,x,2	0.040 pC, 0.006%
0,1,x,3	0.034 pC, 0.005%
0,1,x,4	0.037 pC, 0.005%
0,1,x,5	0.035 pC, 0.005%
0,1,x,6	0.033 pC, 0.005%
0,1,x,7	0.015 pC, 0.002%
0,2,x,0	0.026 pC, 0.004%
0,2,x,1	0.020 pC, 0.003%
0,2,x,2	0.049 pC, 0.007%
0,2,x,3	0.030 pC, 0.004%
0,2,x,4	0.022 pC, 0.003%
0,2,x,5	0.040 pC, 0.006%
0,2,x,6	0.043 pC, 0.006%
0,2,x,7	0.038 pC, 0.005%

AdcBw 25600Hz, Range 3.16nC Alternating charge 1nC < IR <= 3.16nC Spec: <= ±0.100% Uncertainty: 30pC	
Chan	Value
0,1,x,0	0.151 pC, 0.007%
0,1,x,1	0.118 pC, 0.005%
0,1,x,2	0.145 pC, 0.006%
0,1,x,3	0.127 pC, 0.006%
0,1,x,4	0.130 pC, 0.006%
0,1,x,5	0.125 pC, 0.006%
0,1,x,6	0.126 pC, 0.006%
0,1,x,7	0.037 pC, 0.002%
0,2,x,0	0.092 pC, 0.004%
0,2,x,1	0.077 pC, 0.003%
0,2,x,2	0.164 pC, 0.007%
0,2,x,3	0.107 pC, 0.005%
0,2,x,4	0.085 pC, 0.004%
0,2,x,5	0.147 pC, 0.007%
0,2,x,6	0.166 pC, 0.007%
0,2,x,7	0.148 pC, 0.007%

AdcBw 25600Hz, Range 10nC Alternating charge 3.16nC < IR <= 10nC Spec: <= ±0.100% Uncertainty: 96pC	
Chan	Value
0,1,x,0	0.275 pC, 0.007%
0,1,x,1	0.238 pC, 0.006%
0,1,x,2	0.267 pC, 0.007%
0,1,x,3	0.221 pC, 0.006%
0,1,x,4	0.239 pC, 0.006%
0,1,x,5	0.239 pC, 0.006%
0,1,x,6	0.230 pC, 0.006%
0,1,x,7	0.115 pC, 0.003%
0,2,x,0	0.195 pC, 0.005%
0,2,x,1	0.146 pC, 0.004%
0,2,x,2	0.314 pC, 0.008%
0,2,x,3	0.224 pC, 0.006%
0,2,x,4	0.184 pC, 0.005%
0,2,x,5	0.245 pC, 0.006%
0,2,x,6	0.294 pC, 0.007%
0,2,x,7	0.264 pC, 0.007%

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4.2 Residual Offset after Adjustment

Description of calibration:
Determination of the residual input offsets of the input channels over all input ranges and available ADC bandwidths, by internally shorting the input channels to ground.

AdcBw 102400Hz, Range 0.316V Direct voltage IR <= 316mV Spec: <= ±0.316 mV Uncertainty: 4.8µV	
Chan	Value
0,1,x,0	0.027 mV
0,1,x,1	-0.005 mV
0,1,x,2	-0.015 mV
0,1,x,3	0.001 mV
0,1,x,4	0.003 mV
0,1,x,5	-0.005 mV
0,1,x,6	-0.007 mV
0,1,x,7	0.032 mV
0,2,x,0	0.003 mV
0,2,x,1	0.026 mV
0,2,x,2	-0.010 mV
0,2,x,3	0.009 mV
0,2,x,4	-0.006 mV
0,2,x,5	0.013 mV
0,2,x,6	0.001 mV
0,2,x,7	0.002 mV

AdcBw 102400Hz, Range 3.16V Direct voltage 1V < IR <= 3.16V Spec: <= ±3.160 mV Uncertainty: 8µV	
Chan	Value
0,1,x,0	-0.012 mV
0,1,x,1	0.019 mV
0,1,x,2	-0.058 mV
0,1,x,3	-0.022 mV
0,1,x,4	-0.058 mV
0,1,x,5	-0.086 mV
0,1,x,6	-0.069 mV
0,1,x,7	-0.006 mV
0,2,x,0	0.012 mV
0,2,x,1	-0.000 mV
0,2,x,2	-0.019 mV
0,2,x,3	-0.020 mV
0,2,x,4	-0.022 mV
0,2,x,5	-0.003 mV
0,2,x,6	-0.004 mV
0,2,x,7	-0.044 mV

AdcBw 51200Hz, Range 0.316V Direct voltage IR <= 316mV Spec: <= ±0.316 mV Uncertainty: 4.8µV	
Chan	Value
0,1,x,0	0.026 mV
0,1,x,1	-0.007 mV
0,1,x,2	-0.016 mV
0,1,x,3	-0.000 mV
0,1,x,4	-0.001 mV
0,1,x,5	-0.006 mV
0,1,x,6	-0.004 mV
0,1,x,7	0.028 mV
0,2,x,0	0.003 mV
0,2,x,1	0.026 mV
0,2,x,2	-0.011 mV
0,2,x,3	0.009 mV
0,2,x,4	-0.004 mV
0,2,x,5	0.015 mV
0,2,x,6	-0.006 mV
0,2,x,7	-0.001 mV

AdcBw 51200Hz, Range 3.16V Direct voltage 1V < IR <= 3.16V Spec: <= ±3.160 mV Uncertainty: 8µV	
Chan	Value
0,1,x,0	-0.001 mV
0,1,x,1	0.014 mV
0,1,x,2	-0.045 mV
0,1,x,3	-0.019 mV
0,1,x,4	-0.049 mV
0,1,x,5	-0.078 mV
0,1,x,6	-0.067 mV
0,1,x,7	-0.001 mV
0,2,x,0	0.017 mV
0,2,x,1	0.006 mV
0,2,x,2	-0.020 mV
0,2,x,3	-0.007 mV
0,2,x,4	-0.015 mV
0,2,x,5	0.001 mV
0,2,x,6	-0.018 mV
0,2,x,7	-0.045 mV

AdcBw 102400Hz, Range 1V Direct voltage 316mV < IR <= 1V Spec: <= ±1.000 mV Uncertainty: 5.2µV	
Chan	Value
0,1,x,0	0.019 mV
0,1,x,1	-0.003 mV
0,1,x,2	-0.026 mV
0,1,x,3	-0.005 mV
0,1,x,4	-0.013 mV
0,1,x,5	-0.021 mV
0,1,x,6	-0.024 mV
0,1,x,7	0.024 mV
0,2,x,0	0.005 mV
0,2,x,1	0.022 mV
0,2,x,2	-0.015 mV
0,2,x,3	0.004 mV
0,2,x,4	-0.010 mV
0,2,x,5	0.009 mV
0,2,x,6	-0.002 mV
0,2,x,7	-0.006 mV

AdcBw 102400Hz, Range 10V Direct voltage 3.16V < IR <= 10V Spec: <= ±10.000 mV Uncertainty: 21µV	
Chan	Value
0,1,x,0	-0.083 mV
0,1,x,1	0.081 mV
0,1,x,2	-0.138 mV
0,1,x,3	-0.074 mV
0,1,x,4	-0.187 mV
0,1,x,5	-0.284 mV
0,1,x,6	-0.234 mV
0,1,x,7	-0.080 mV
0,2,x,0	0.036 mV
0,2,x,1	-0.047 mV
0,2,x,2	-0.030 mV
0,2,x,3	-0.063 mV
0,2,x,4	-0.059 mV
0,2,x,5	-0.028 mV
0,2,x,6	-0.022 mV
0,2,x,7	-0.147 mV

AdcBw 51200Hz, Range 1V Direct voltage 316mV < IR <= 1V Spec: <= ±1.000 mV Uncertainty: 5.2µV	
Chan	Value
0,1,x,0	0.019 mV
0,1,x,1	0.001 mV
0,1,x,2	-0.022 mV
0,1,x,3	-0.006 mV
0,1,x,4	-0.011 mV
0,1,x,5	-0.025 mV
0,1,x,6	-0.017 mV
0,1,x,7	0.020 mV
0,2,x,0	0.005 mV
0,2,x,1	0.022 mV
0,2,x,2	-0.010 mV
0,2,x,3	0.003 mV
0,2,x,4	-0.006 mV
0,2,x,5	0.011 mV
0,2,x,6	-0.008 mV
0,2,x,7	-0.010 mV

AdcBw 51200Hz, Range 10V Direct voltage 3.16V < IR <= 10V Spec: <= ±10.000 mV Uncertainty: 21µV	
Chan	Value
0,1,x,0	-0.060 mV
0,1,x,1	0.085 mV
0,1,x,2	-0.113 mV
0,1,x,3	-0.056 mV
0,1,x,4	-0.183 mV
0,1,x,5	-0.283 mV
0,1,x,6	-0.202 mV
0,1,x,7	-0.094 mV
0,2,x,0	0.029 mV
0,2,x,1	-0.040 mV
0,2,x,2	-0.052 mV
0,2,x,3	-0.062 mV
0,2,x,4	-0.042 mV
0,2,x,5	-0.030 mV
0,2,x,6	-0.050 mV
0,2,x,7	-0.127 mV

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AdcBw 25600Hz, Range 0.316V Direct voltage IR <= 316mV Spec: <= ±0.316 mV Uncertainty: 4.8µV	
Chan	Value
0,1,x,0	0.024 mV
0,1,x,1	-0.010 mV
0,1,x,2	-0.015 mV
0,1,x,3	0.002 mV
0,1,x,4	-0.003 mV
0,1,x,5	-0.004 mV
0,1,x,6	-0.002 mV
0,1,x,7	0.026 mV
0,2,x,0	0.002 mV
0,2,x,1	0.024 mV
0,2,x,2	-0.010 mV
0,2,x,3	0.013 mV
0,2,x,4	-0.009 mV
0,2,x,5	0.018 mV
0,2,x,6	-0.006 mV
0,2,x,7	-0.002 mV

AdcBw 25600Hz, Range 3.16V Direct voltage 1V < IR <= 3.16V Spec: <= ±3.160 mV Uncertainty: 8µV	
Chan	Value
0,1,x,0	-0.003 mV
0,1,x,1	0.015 mV
0,1,x,2	-0.047 mV
0,1,x,3	-0.020 mV
0,1,x,4	-0.056 mV
0,1,x,5	-0.089 mV
0,1,x,6	-0.059 mV
0,1,x,7	-0.009 mV
0,2,x,0	0.013 mV
0,2,x,1	0.008 mV
0,2,x,2	-0.021 mV
0,2,x,3	-0.001 mV
0,2,x,4	-0.016 mV
0,2,x,5	0.006 mV
0,2,x,6	-0.023 mV
0,2,x,7	-0.037 mV

AdcBw 25600Hz, Range 1V Direct voltage 316mV < IR <= 1V Spec: <= ±1.000 mV Uncertainty: 5.2µV	
Chan	Value
0,1,x,0	0.016 mV
0,1,x,1	-0.004 mV
0,1,x,2	-0.022 mV
0,1,x,3	-0.003 mV
0,1,x,4	-0.016 mV
0,1,x,5	-0.027 mV
0,1,x,6	-0.015 mV
0,1,x,7	0.013 mV
0,2,x,0	0.003 mV
0,2,x,1	0.016 mV
0,2,x,2	-0.013 mV
0,2,x,3	0.007 mV
0,2,x,4	-0.009 mV
0,2,x,5	0.014 mV
0,2,x,6	-0.012 mV
0,2,x,7	-0.009 mV

AdcBw 25600Hz, Range 10V Direct voltage 3.16V < IR <= 10V Spec: <= ±10.000 mV Uncertainty: 21µV	
Chan	Value
0,1,x,0	-0.087 mV
0,1,x,1	0.089 mV
0,1,x,2	-0.117 mV
0,1,x,3	-0.086 mV
0,1,x,4	-0.184 mV
0,1,x,5	-0.314 mV
0,1,x,6	-0.199 mV
0,1,x,7	-0.103 mV
0,2,x,0	0.047 mV
0,2,x,1	-0.045 mV
0,2,x,2	-0.030 mV
0,2,x,3	-0.048 mV
0,2,x,4	-0.049 mV
0,2,x,5	-0.027 mV
0,2,x,6	-0.074 mV
0,2,x,7	-0.122 mV

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4.3 Total Harmonic Distortion

Description of calibration:
Determination of the harmonic distortion of the input channels over all input ranges, by applying an accurate 1kHz -3dBFS (max 4V) sine wave which is generated by the internal reference generator. For charge amplifiers, the reference voltage signal is translated to a reference charge signal. Harmonic components 2, 3, 4 and 5 are determined to calculate the harmonic content (either in Volt or Coulomb, depending on the input channel type) and the ratio between the fundamental tone and its harmonics (in dB).

Range 10V **Distortion 3.16V < IR <= 10V** **Spec: <= -94.0dB** **Uncertainty: 2.6µV**	
Chan	Value
0,1,x,0	15.463 µV, -108.3dB
0,1,x,1	16.216 µV, -107.8dB
0,1,x,2	15.755 µV, -108.1dB
0,1,x,3	15.225 µV, -108.4dB
0,1,x,4	14.711 µV, -108.7dB
0,1,x,5	14.920 µV, -108.6dB
0,1,x,6	14.943 µV, -108.6dB
0,1,x,7	15.216 µV, -108.4dB
0,2,x,0	15.326 µV, -108.3dB
0,2,x,1	14.758 µV, -108.7dB
0,2,x,2	15.474 µV, -108.2dB
0,2,x,3	14.916 µV, -108.6dB
0,2,x,4	15.006 µV, -108.5dB
0,2,x,5	15.041 µV, -108.5dB
0,2,x,6	14.961 µV, -108.5dB
0,2,x,7	13.064 µV, -109.7dB

Range 1 V **Distortion 316mV < IR <= 1V** **Spec: <= -94.0dB** **Uncertainty: 290nV**	
Chan	Value
0,1,x,0	5.055 µV, -102.9dB
0,1,x,1	5.187 µV, -102.7dB
0,1,x,2	5.123 µV, -102.8dB
0,1,x,3	4.887 µV, -103.2dB
0,1,x,4	4.559 µV, -103.8dB
0,1,x,5	4.998 µV, -103.0dB
0,1,x,6	4.860 µV, -103.3dB
0,1,x,7	4.753 µV, -103.4dB
0,2,x,0	5.607 µV, -102.0dB
0,2,x,1	5.262 µV, -102.6dB
0,2,x,2	5.492 µV, -102.2dB
0,2,x,3	5.364 µV, -102.4dB
0,2,x,4	5.143 µV, -102.8dB
0,2,x,5	4.779 µV, -103.4dB
0,2,x,6	5.199 µV, -102.7dB
0,2,x,7	5.010 µV, -103.0dB

Range 10nC **Distortion 3.16nC < IR <= 10nC** **Spec: <= -94.0dB** **Uncertainty: 2.6fC**	
Chan	Value
0,1,x,0	22.372 fC, -105.0dB
0,1,x,1	23.497 fC, -104.6dB
0,1,x,2	22.060 fC, -105.2dB
0,1,x,3	21.667 fC, -105.3dB
0,1,x,4	21.145 fC, -105.5dB
0,1,x,5	21.951 fC, -105.2dB
0,1,x,6	22.107 fC, -105.2dB
0,1,x,7	20.616 fC, -105.8dB
0,2,x,0	23.308 fC, -104.7dB
0,2,x,1	21.936 fC, -105.2dB
0,2,x,2	23.245 fC, -104.7dB
0,2,x,3	21.748 fC, -105.3dB
0,2,x,4	22.222 fC, -105.1dB
0,2,x,5	21.998 fC, -105.2dB
0,2,x,6	22.137 fC, -105.1dB
0,2,x,7	18.755 fC, -106.6dB

Range 3.16V **Distortion 1V < IR <= 3.16V** **Spec: <= -94.0dB** **Uncertainty: 0.8µV**	
Chan	Value
0,1,x,0	6.286 µV, -111.0dB
0,1,x,1	6.977 µV, -110.1dB
0,1,x,2	6.083 µV, -111.3dB
0,1,x,3	6.354 µV, -110.9dB
0,1,x,4	4.898 µV, -113.2dB
0,1,x,5	5.632 µV, -112.0dB
0,1,x,6	5.967 µV, -111.5dB
0,1,x,7	5.691 µV, -111.9dB
0,2,x,0	6.628 µV, -110.6dB
0,2,x,1	6.170 µV, -111.2dB
0,2,x,2	7.023 µV, -110.1dB
0,2,x,3	6.048 µV, -111.4dB
0,2,x,4	5.616 µV, -112.0dB
0,2,x,5	5.120 µV, -112.8dB
0,2,x,6	5.480 µV, -112.2dB
0,2,x,7	3.963 µV, -115.0dB

Range 0.316V **Distortion 100mV < IR <= 316mV** **Spec: <= -91.0dB** **Uncertainty: 140nV**	
Chan	Value
0,1,x,0	4.141 µV, -94.6dB
0,1,x,1	4.159 µV, -94.6dB
0,1,x,2	4.303 µV, -94.3dB
0,1,x,3	3.973 µV, -95.0dB
0,1,x,4	3.893 µV, -95.2dB
0,1,x,5	4.300 µV, -94.3dB
0,1,x,6	4.029 µV, -94.9dB
0,1,x,7	4.056 µV, -94.8dB
0,2,x,0	4.815 µV, -93.3dB
0,2,x,1	4.287 µV, -94.3dB
0,2,x,2	4.477 µV, -94.0dB
0,2,x,3	4.599 µV, -93.7dB
0,2,x,4	4.429 µV, -94.1dB
0,2,x,5	4.044 µV, -94.8dB
0,2,x,6	4.557 µV, -93.8dB
0,2,x,7	4.666 µV, -93.6dB

Range 3.16nC **Distortion 1nC < IR <= 3.16nC** **Spec: <= -94.0dB** **Uncertainty: 0.8fC**	
Chan	Value
0,1,x,0	13.908 fC, -104.1dB
0,1,x,1	14.496 fC, -103.8dB
0,1,x,2	13.574 fC, -104.3dB
0,1,x,3	14.048 fC, -104.0dB
0,1,x,4	12.624 fC, -105.0dB
0,1,x,5	13.264 fC, -104.5dB
0,1,x,6	13.791 fC, -104.2dB
0,1,x,7	13.398 fC, -104.4dB
0,2,x,0	13.828 fC, -104.2dB
0,2,x,1	13.506 fC, -104.4dB
0,2,x,2	14.425 fC, -103.8dB
0,2,x,3	13.000 fC, -104.7dB
0,2,x,4	13.031 fC, -104.7dB
0,2,x,5	12.827 fC, -104.8dB
0,2,x,6	12.820 fC, -104.8dB
0,2,x,7	10.623 fC, -106.5dB

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Range 1nC **Distortion 316pC < IR <= 1nC** **Spec: <= -94.0dB** **Uncertainty: 290aC**	
Chan	Value
0,1,x,0	6.812 fC, -100.3dB
0,1,x,1	7.093 fC, -100.0dB
0,1,x,2	6.824 fC, -100.3dB
0,1,x,3	6.707 fC, -100.5dB
0,1,x,4	6.411 fC, -100.9dB
0,1,x,5	6.641 fC, -100.5dB
0,1,x,6	6.677 fC, -100.5dB
0,1,x,7	6.600 fC, -100.6dB
0,2,x,0	7.276 fC, -99.8dB
0,2,x,1	6.995 fC, -100.1dB
0,2,x,2	7.245 fC, -99.8dB
0,2,x,3	6.939 fC, -100.2dB
0,2,x,4	6.855 fC, -100.3dB
0,2,x,5	6.599 fC, -100.6dB
0,2,x,6	6.852 fC, -100.3dB
0,2,x,7	6.325 fC, -101.0dB

Range 0.316nC **Distortion IR <= 316pC** **Spec: <= -90.0dB** **Uncertainty: 140aC**	
Chan	Value
0,1,x,0	4.550 fC, -93.8dB
0,1,x,1	4.642 fC, -93.6dB
0,1,x,2	4.663 fC, -93.6dB
0,1,x,3	4.465 fC, -94.0dB
0,1,x,4	4.451 fC, -94.0dB
0,1,x,5	4.555 fC, -93.8dB
0,1,x,6	4.481 fC, -94.0dB
0,1,x,7	4.482 fC, -94.0dB
0,2,x,0	5.098 fC, -92.8dB
0,2,x,1	4.867 fC, -93.2dB
0,2,x,2	4.937 fC, -93.1dB
0,2,x,3	4.895 fC, -93.2dB
0,2,x,4	4.916 fC, -93.2dB
0,2,x,5	4.712 fC, -93.5dB
0,2,x,6	4.982 fC, -93.0dB
0,2,x,7	4.756 fC, -93.4dB

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4.4 RMS Noise

Description of calibration:
Determination of the noise contribution of the input channels, by internally shorting the input channels to ground. The reported values are RMS values over the corresponding bandwidth.

Range 10V, Bw 80kHz Not in Scope Spec: < 311.0000µVrms	
Chan	Value
0,1,x,0	215.7331µVrms
0,1,x,1	216.8399µVrms
0,1,x,2	215.1143µVrms
0,1,x,3	214.9676µVrms
0,1,x,4	217.1991µVrms
0,1,x,5	219.4411µVrms
0,1,x,6	219.4025µVrms
0,1,x,7	217.0582µVrms
0,2,x,0	218.4044µVrms
0,2,x,1	220.6707µVrms
0,2,x,2	214.5613µVrms
0,2,x,3	218.7858µVrms
0,2,x,4	219.2260µVrms
0,2,x,5	220.7999µVrms
0,2,x,6	216.1602µVrms
0,2,x,7	215.5046µVrms

Range 10nC, Bw 80kHz Not in Scope Spec: < 331.0000fCrms	
Chan	Value
0,1,x,0	216.9160fCrms
0,1,x,1	217.7132fCrms
0,1,x,2	216.2103fCrms
0,1,x,3	215.2511fCrms
0,1,x,4	218.4760fCrms
0,1,x,5	220.4308fCrms
0,1,x,6	220.4813fCrms
0,1,x,7	217.5184fCrms
0,2,x,0	217.5387fCrms
0,2,x,1	220.4054fCrms
0,2,x,2	213.5679fCrms
0,2,x,3	219.7129fCrms
0,2,x,4	218.4869fCrms
0,2,x,5	218.6897fCrms
0,2,x,6	216.9374fCrms
0,2,x,7	215.5797fCrms

Range 10V, Bw 40kHz Not in Scope Spec: < 42.0000µVrms	
Chan	Value
0,1,x,0	31.0481µVrms
0,1,x,1	30.9056µVrms
0,1,x,2	30.5448µVrms
0,1,x,3	30.2800µVrms
0,1,x,4	31.1077µVrms
0,1,x,5	30.9900µVrms
0,1,x,6	31.0441µVrms
0,1,x,7	30.4306µVrms
0,2,x,0	31.1010µVrms
0,2,x,1	31.8063µVrms
0,2,x,2	30.8414µVrms
0,2,x,3	30.6689µVrms
0,2,x,4	30.4073µVrms
0,2,x,5	30.7581µVrms
0,2,x,6	30.9162µVrms
0,2,x,7	30.4965µVrms

Range 0.316V, Bw 80kHz Not in Scope Spec: < 10.5000µVrms	
Chan	Value
0,1,x,0	7.2655µVrms
0,1,x,1	7.3131µVrms
0,1,x,2	7.2502µVrms
0,1,x,3	7.2040µVrms
0,1,x,4	7.3174µVrms
0,1,x,5	7.3369µVrms
0,1,x,6	7.4118µVrms
0,1,x,7	7.2699µVrms
0,2,x,0	7.3112µVrms
0,2,x,1	7.4048µVrms
0,2,x,2	7.2379µVrms
0,2,x,3	7.2816µVrms
0,2,x,4	7.3230µVrms
0,2,x,5	7.3056µVrms
0,2,x,6	7.3281µVrms
0,2,x,7	7.2234µVrms

Range 0.316nC, Bw 80kHz Not in Scope Spec: < 12.1000fCrms	
Chan	Value
0,1,x,0	8.5676fCrms
0,1,x,1	8.4833fCrms
0,1,x,2	8.4951fCrms
0,1,x,3	8.4640fCrms
0,1,x,4	8.4615fCrms
0,1,x,5	8.3955fCrms
0,1,x,6	8.5839fCrms
0,1,x,7	8.4918fCrms
0,2,x,0	8.5019fCrms
0,2,x,1	8.6402fCrms
0,2,x,2	8.4711fCrms
0,2,x,3	8.4602fCrms
0,2,x,4	8.3771fCrms
0,2,x,5	8.4910fCrms
0,2,x,6	8.4662fCrms
0,2,x,7	8.5282fCrms

Range 0.316V, Bw 40kHz Not in Scope Spec: < 2.8000µVrms	
Chan	Value
0,1,x,0	2.0543µVrms
0,1,x,1	2.0619µVrms
0,1,x,2	2.0645µVrms
0,1,x,3	2.0559µVrms
0,1,x,4	2.0637µVrms
0,1,x,5	2.0613µVrms
0,1,x,6	2.0678µVrms
0,1,x,7	2.0544µVrms
0,2,x,0	2.0552µVrms
0,2,x,1	2.0688µVrms
0,2,x,2	2.0647µVrms
0,2,x,3	2.0561µVrms
0,2,x,4	2.0526µVrms
0,2,x,5	2.0690µVrms
0,2,x,6	2.0548µVrms
0,2,x,7	2.0533µVrms

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Range 10nC, Bw 40kHz Not in Scope Spec: < 44.5000fCrms	
Chan	Value
0,1,x,0	31.1678fCrms
0,1,x,1	30.9036fCrms
0,1,x,2	30.8610fCrms
0,1,x,3	30.6852fCrms
0,1,x,4	31.2625fCrms
0,1,x,5	31.2388fCrms
0,1,x,6	31.4626fCrms
0,1,x,7	31.2002fCrms
0,2,x,0	31.4553fCrms
0,2,x,1	32.0019fCrms
0,2,x,2	31.1568fCrms
0,2,x,3	31.0972fCrms
0,2,x,4	30.9503fCrms
0,2,x,5	31.0932fCrms
0,2,x,6	31.1749fCrms
0,2,x,7	30.8646fCrms

Range 0.316nC, Bw 40kHz Not in Scope Spec: < 5.3700fCrms	
Chan	Value
0,1,x,0	3.7320fCrms
0,1,x,1	3.6576fCrms
0,1,x,2	3.6431fCrms
0,1,x,3	3.7079fCrms
0,1,x,4	3.7499fCrms
0,1,x,5	3.6826fCrms
0,1,x,6	3.6674fCrms
0,1,x,7	3.7069fCrms
0,2,x,0	3.6692fCrms
0,2,x,1	3.6771fCrms
0,2,x,2	3.6382fCrms
0,2,x,3	3.6994fCrms
0,2,x,4	3.6884fCrms
0,2,x,5	3.6640fCrms
0,2,x,6	3.6950fCrms
0,2,x,7	3.7135fCrms

Range 10V, Bw 20kHz Noise 3.16V < IR <= 10V Spec: <= 29.000 µV Uncertainty: 3.4nV	
Chan	Value
0,1,x,0	20.707 µV
0,1,x,1	20.504 µV
0,1,x,2	20.650 µV
0,1,x,3	20.418 µV
0,1,x,4	20.924 µV
0,1,x,5	20.383 µV
0,1,x,6	20.609 µV
0,1,x,7	20.366 µV
0,2,x,0	20.884 µV
0,2,x,1	20.717 µV
0,2,x,2	21.268 µV
0,2,x,3	21.039 µV
0,2,x,4	20.563 µV
0,2,x,5	20.436 µV
0,2,x,6	20.616 µV
0,2,x,7	20.272 µV

Range 0.316V, Bw 20kHz Noise IR <= 316mV Spec: <= 1.980 µV Uncertainty: 2.0nV	
Chan	Value
0,1,x,0	1.455 µV
0,1,x,1	1.457 µV
0,1,x,2	1.454 µV
0,1,x,3	1.458 µV
0,1,x,4	1.458 µV
0,1,x,5	1.455 µV
0,1,x,6	1.460 µV
0,1,x,7	1.445 µV
0,2,x,0	1.449 µV
0,2,x,1	1.455 µV
0,2,x,2	1.458 µV
0,2,x,3	1.453 µV
0,2,x,4	1.448 µV
0,2,x,5	1.461 µV
0,2,x,6	1.455 µV
0,2,x,7	1.451 µV

Range 10nC, Bw 20kHz Noise 3.16nC < IR <= 10nC Spec: <= 30.000 fC Uncertainty: 2.8aC	
Chan	Value
0,1,x,0	20.941 fC
0,1,x,1	20.723 fC
0,1,x,2	20.792 fC
0,1,x,3	20.599 fC
0,1,x,4	21.153 fC
0,1,x,5	20.781 fC
0,1,x,6	20.846 fC
0,1,x,7	20.678 fC
0,2,x,0	20.792 fC
0,2,x,1	21.031 fC
0,2,x,2	20.986 fC
0,2,x,3	20.982 fC
0,2,x,4	20.799 fC
0,2,x,5	20.681 fC
0,2,x,6	20.689 fC
0,2,x,7	20.547 fC

Range 0.316nC, Bw 20kHz Noise IR <= 316pC Spec: <= 3.960 fC Uncertainty: 0.1aC	
Chan	Value
0,1,x,0	2.687 fC
0,1,x,1	2.665 fC
0,1,x,2	2.684 fC
0,1,x,3	2.677 fC
0,1,x,4	2.700 fC
0,1,x,5	2.667 fC
0,1,x,6	2.676 fC
0,1,x,7	2.689 fC
0,2,x,0	2.649 fC
0,2,x,1	2.666 fC
0,2,x,2	2.660 fC
0,2,x,3	2.677 fC
0,2,x,4	2.657 fC
0,2,x,5	2.631 fC
0,2,x,6	2.655 fC
0,2,x,7	2.682 fC

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4.5 Spurious Free Floor

Description of calibration:
Determination of the peak spurious components generated by the input channels, by internally shorting the input channels to ground. The reported values are peak values over the corresponding bandwidth.

Range 10V, Bw 80kHz Not in Scope Spec: < 40.0000µV	
Chan	Value
0,1,x,0	18.0258µV
0,1,x,1	19.7598µV
0,1,x,2	21.3127µV
0,1,x,3	20.2946µV
0,1,x,4	22.8623µV
0,1,x,5	18.4378µV
0,1,x,6	21.1810µV
0,1,x,7	20.5866µV
0,2,x,0	19.7253µV
0,2,x,1	28.9388µV
0,2,x,2	20.5672µV
0,2,x,3	19.2183µV
0,2,x,4	21.2738µV
0,2,x,5	21.8250µV
0,2,x,6	20.1144µV
0,2,x,7	19.0972µV

Range 10nC, Bw 80kHz Not in Scope Spec: < 40.0000fC	
Chan	Value
0,1,x,0	20.9669fC
0,1,x,1	19.3920fC
0,1,x,2	18.9895fC
0,1,x,3	20.6996fC
0,1,x,4	21.5149fC
0,1,x,5	22.9002fC
0,1,x,6	20.1692fC
0,1,x,7	21.2094fC
0,2,x,0	28.7950fC
0,2,x,1	18.4514fC
0,2,x,2	20.5792fC
0,2,x,3	20.2400fC
0,2,x,4	20.7207fC
0,2,x,5	22.2564fC
0,2,x,6	21.3554fC
0,2,x,7	20.5170fC

Range 10V, Bw 40kHz Not in Scope Spec: < 3.0000µV	
Chan	Value
0,1,x,0	1.4346µV
0,1,x,1	1.5138µV
0,1,x,2	1.4216µV
0,1,x,3	1.6728µV
0,1,x,4	1.6711µV
0,1,x,5	1.6846µV
0,1,x,6	1.8798µV
0,1,x,7	1.9603µV
0,2,x,0	2.1265µV
0,2,x,1	1.6921µV
0,2,x,2	2.1057µV
0,2,x,3	1.8577µV
0,2,x,4	2.3854µV
0,2,x,5	1.6558µV
0,2,x,6	1.6987µV
0,2,x,7	1.4657µV

Range 10nC, Bw 40kHz Not in Scope Spec: < 3.0000fC	
Chan	Value
0,1,x,0	1.9829fC
0,1,x,1	1.5564fC
0,1,x,2	1.8120fC
0,1,x,3	1.5570fC
0,1,x,4	1.7344fC
0,1,x,5	1.7927fC
0,1,x,6	1.7502fC
0,1,x,7	1.4902fC
0,2,x,0	1.7261fC
0,2,x,1	1.4957fC
0,2,x,2	2.3281fC
0,2,x,3	1.7758fC
0,2,x,4	1.6961fC
0,2,x,5	1.6725fC
0,2,x,6	1.4451fC
0,2,x,7	1.3794fC

Range 0.316V, Bw 80kHz Not in Scope Spec: < 1.2000µV	
Chan	Value
0,1,x,0	0.6794µV
0,1,x,1	0.6306µV
0,1,x,2	0.6120µV
0,1,x,3	0.6073µV
0,1,x,4	0.6083µV
0,1,x,5	0.6841µV
0,1,x,6	0.6372µV
0,1,x,7	0.5810µV
0,2,x,0	0.6941µV
0,2,x,1	0.5971µV
0,2,x,2	0.6532µV
0,2,x,3	0.7280µV
0,2,x,4	0.6325µV
0,2,x,5	0.6444µV
0,2,x,6	0.5478µV
0,2,x,7	0.6098µV

Range 0.316nC, Bw 80kHz Not in Scope Spec: < 1.2000fC	
Chan	Value
0,1,x,0	0.6534fC
0,1,x,1	0.6345fC
0,1,x,2	0.6020fC
0,1,x,3	0.6248fC
0,1,x,4	0.6508fC
0,1,x,5	0.6198fC
0,1,x,6	0.6614fC
0,1,x,7	0.6902fC
0,2,x,0	0.6119fC
0,2,x,1	0.7955fC
0,2,x,2	0.6187fC
0,2,x,3	0.6484fC
0,2,x,4	0.6443fC
0,2,x,5	0.6474fC
0,2,x,6	0.7112fC
0,2,x,7	0.6161fC

Range 0.316V, Bw 40kHz Not in Scope Spec: < 0.1600µV	
Chan	Value
0,1,x,0	0.0773µV
0,1,x,1	0.0815µV
0,1,x,2	0.0900µV
0,1,x,3	0.0983µV
0,1,x,4	0.0994µV
0,1,x,5	0.1014µV
0,1,x,6	0.0922µV
0,1,x,7	0.0779µV
0,2,x,0	0.0935µV
0,2,x,1	0.0926µV
0,2,x,2	0.0909µV
0,2,x,3	0.0825µV
0,2,x,4	0.0827µV
0,2,x,5	0.0897µV
0,2,x,6	0.0839µV
0,2,x,7	0.0897µV

Range 0.316nC, Bw 40kHz Not in Scope Spec: < 0.3500fC	
Chan	Value
0,1,x,0	0.1643fC
0,1,x,1	0.1682fC
0,1,x,2	0.1443fC
0,1,x,3	0.1500fC
0,1,x,4	0.1397fC
0,1,x,5	0.1534fC
0,1,x,6	0.1460fC
0,1,x,7	0.1468fC
0,2,x,0	0.1486fC
0,2,x,1	0.1466fC
0,2,x,2	0.1524fC
0,2,x,3	0.1534fC
0,2,x,4	0.1955fC
0,2,x,5	0.1347fC
0,2,x,6	0.1768fC
0,2,x,7	0.1535fC

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Range 10V, Bw 20kHz Spurious 3.16V < IR <= 10V Spec: <= 2.300 µV Uncertainty: 3.4nV	
Chan	Value
0,1,x,0	1.311 µV
0,1,x,1	1.266 µV
0,1,x,2	1.205 µV
0,1,x,3	1.154 µV
0,1,x,4	1.059 µV
0,1,x,5	1.175 µV
0,1,x,6	1.246 µV
0,1,x,7	1.013 µV
0,2,x,0	1.261 µV
0,2,x,1	1.269 µV
0,2,x,2	1.405 µV
0,2,x,3	1.455 µV
0,2,x,4	1.040 µV
0,2,x,5	1.149 µV
0,2,x,6	1.062 µV
0,2,x,7	0.985 µV

Range 10nC, Bw 20kHz Spurious 3.16nC < IR <= 10nC Spec: <= 2.500 fC Uncertainty: 2.8aC	
Chan	Value
0,1,x,0	1.535 fC
0,1,x,1	1.246 fC
0,1,x,2	1.482 fC
0,1,x,3	1.294 fC
0,1,x,4	1.304 fC
0,1,x,5	1.153 fC
0,1,x,6	1.224 fC
0,1,x,7	1.217 fC
0,2,x,0	1.041 fC
0,2,x,1	1.257 fC
0,2,x,2	1.590 fC
0,2,x,3	1.604 fC
0,2,x,4	1.120 fC
0,2,x,5	1.370 fC
0,2,x,6	1.249 fC
0,2,x,7	0.983 fC

ICP Not in Scope Spec: < 0.2600µVp	
Chan	Value
0,1,x,0	0.0886µVp
0,1,x,1	0.0906µVp
0,1,x,2	0.0735µVp
0,1,x,3	0.0781µVp
0,1,x,4	0.0803µVp
0,1,x,5	0.0924µVp
0,1,x,6	0.0681µVp
0,1,x,7	0.0688µVp
0,2,x,0	0.0877µVp
0,2,x,1	0.0697µVp
0,2,x,2	0.0656µVp
0,2,x,3	0.0615µVp
0,2,x,4	0.0737µVp
0,2,x,5	0.0776µVp
0,2,x,6	0.0709µVp
0,2,x,7	0.0665µVp

Range 0.316V, Bw 20kHz Spurious IR <= 316mV Spec: <= 0.130 µV Uncertainty: 2.0nV	
Chan	Value
0,1,x,0	0.072 µV
0,1,x,1	0.064 µV
0,1,x,2	0.057 µV
0,1,x,3	0.063 µV
0,1,x,4	0.058 µV
0,1,x,5	0.056 µV
0,1,x,6	0.062 µV
0,1,x,7	0.062 µV
0,2,x,0	0.062 µV
0,2,x,1	0.078 µV
0,2,x,2	0.064 µV
0,2,x,3	0.063 µV
0,2,x,4	0.063 µV
0,2,x,5	0.060 µV
0,2,x,6	0.060 µV
0,2,x,7	0.055 µV

Range 0.316nC, Bw 20kHz Spurious IR <= 316pC Spec: <= 0.300 fC Uncertainty: 0.1aC	
Chan	Value
0,1,x,0	0.097 fC
0,1,x,1	0.120 fC
0,1,x,2	0.097 fC
0,1,x,3	0.120 fC
0,1,x,4	0.113 fC
0,1,x,5	0.116 fC
0,1,x,6	0.099 fC
0,1,x,7	0.106 fC
0,2,x,0	0.106 fC
0,2,x,1	0.105 fC
0,2,x,2	0.139 fC
0,2,x,3	0.105 fC
0,2,x,4	0.108 fC
0,2,x,5	0.105 fC
0,2,x,6	0.122 fC
0,2,x,7	0.114 fC

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4.6 Inter-channel Crosstalk

Description of calibration:
Determination of the crosstalk between the input channels in a system. The channel under calibration is internally shorted to ground, while its neighbour channels are fed with a near full scale sine wave signal which is generated by the internal reference generator. This is done for two input range settings of the channel under calibration, and two signal frequencies. The reported results represent the measured crosstalk values in the channels under calibration (either in Volt or Coulomb, depending on the input channel type) and the ratio between the applied signal amplitude and the crosstalk values (in dB).

Range 0.316V, F 1K5
Crosstalk 100mV < IR <= 316mV
Spec: <= -120.0dB
Uncertainty: 68nV

Chan	Value
0,1,x,0	0.135 µV, -131.4dB
0,1,x,1	0.145 µV, -130.8dB
0,1,x,2	0.124 µV, -132.1dB
0,1,x,3	0.082 µV, -135.7dB
0,1,x,4	0.131 µV, -131.6dB
0,1,x,5	0.123 µV, -132.2dB
0,1,x,6	0.136 µV, -131.3dB
0,1,x,7	0.115 µV, -132.7dB
0,2,x,0	0.093 µV, -134.6dB
0,2,x,1	0.111 µV, -133.1dB
0,2,x,2	0.070 µV, -137.1dB
0,2,x,3	0.133 µV, -131.5dB
0,2,x,4	0.093 µV, -134.6dB
0,2,x,5	0.094 µV, -134.5dB
0,2,x,6	0.114 µV, -132.8dB
0,2,x,7	0.131 µV, -131.6dB

Range 0.316nC, F 1K5
Crosstalk IR <= 316pC
Spec: <= -118.0dB
Uncertainty: 68aC

Chan	Value
0,1,x,0	0.172 fC, -129.3dB
0,1,x,1	0.163 fC, -129.7dB
0,1,x,2	0.164 fC, -129.7dB
0,1,x,3	0.129 fC, -131.8dB
0,1,x,4	0.171 fC, -129.3dB
0,1,x,5	0.150 fC, -130.4dB
0,1,x,6	0.191 fC, -128.4dB
0,1,x,7	0.202 fC, -127.9dB
0,2,x,0	0.186 fC, -128.6dB
0,2,x,1	0.167 fC, -129.5dB
0,2,x,2	0.192 fC, -128.3dB
0,2,x,3	0.169 fC, -129.4dB
0,2,x,4	0.197 fC, -128.1dB
0,2,x,5	0.192 fC, -128.3dB
0,2,x,6	0.227 fC, -126.9dB
0,2,x,7	0.199 fC, -128.0dB

Range 0.316V, F 15K
Crosstalk 100mV < IR <= 316mV
Spec: <= -107.0dB
Uncertainty: 68nV

Chan	Value
0,1,x,0	0.594 µV, -118.5dB
0,1,x,1	0.961 µV, -114.3dB
0,1,x,2	0.968 µV, -114.3dB
0,1,x,3	0.775 µV, -116.2dB
0,1,x,4	0.910 µV, -114.8dB
0,1,x,5	0.932 µV, -114.6dB
0,1,x,6	0.957 µV, -114.4dB
0,1,x,7	0.883 µV, -115.1dB
0,2,x,0	0.558 µV, -119.1dB
0,2,x,1	0.932 µV, -114.6dB
0,2,x,2	0.950 µV, -114.4dB
0,2,x,3	0.794 µV, -116.0dB
0,2,x,4	0.903 µV, -114.9dB
0,2,x,5	0.906 µV, -114.8dB
0,2,x,6	0.930 µV, -114.6dB
0,2,x,7	0.881 µV, -115.1dB

Range 10V, F 1K5
Crosstalk 3.16V < IR <= 10V
Spec: <= -108.0dB
Uncertainty: 1.3µV

Chan	Value
0,1,x,0	0.362 µV, -122.8dB
0,1,x,1	0.317 µV, -124.0dB
0,1,x,2	0.217 µV, -127.3dB
0,1,x,3	0.498 µV, -120.0dB
0,1,x,4	0.303 µV, -124.4dB
0,1,x,5	0.562 µV, -119.0dB
0,1,x,6	0.647 µV, -117.8dB
0,1,x,7	0.821 µV, -115.7dB
0,2,x,0	0.311 µV, -124.1dB
0,2,x,1	0.422 µV, -121.5dB
0,2,x,2	0.112 µV, -133.0dB
0,2,x,3	0.698 µV, -117.1dB
0,2,x,4	0.320 µV, -123.9dB
0,2,x,5	0.548 µV, -119.2dB
0,2,x,6	0.634 µV, -117.9dB
0,2,x,7	0.676 µV, -117.4dB

Range 10nC, F 1K5
Crosstalk 3.16nC < IR <= 10nC
Spec: <= -109.0dB
Uncertainty: 1.3fC

Chan	Value
0,1,x,0	0.340 fC, -123.4dB
0,1,x,1	0.214 fC, -127.4dB
0,1,x,2	0.205 fC, -127.7dB
0,1,x,3	0.947 fC, -114.5dB
0,1,x,4	0.516 fC, -119.7dB
0,1,x,5	0.474 fC, -120.5dB
0,1,x,6	0.603 fC, -118.4dB
0,1,x,7	0.800 fC, -115.9dB
0,2,x,0	0.169 fC, -129.4dB
0,2,x,1	0.174 fC, -129.2dB
0,2,x,2	0.345 fC, -123.2dB
0,2,x,3	0.389 fC, -122.2dB
0,2,x,4	0.598 fC, -118.4dB
0,2,x,5	0.603 fC, -118.4dB
0,2,x,6	0.753 fC, -116.4dB
0,2,x,7	0.568 fC, -118.9dB

Range 10V, F 15K
Crosstalk 3.16V < IR <= 10V
Spec: <= -105.0dB
Uncertainty: 1.3µV

Chan	Value
0,1,x,0	0.913 µV, -114.8dB
0,1,x,1	1.579 µV, -110.0dB
0,1,x,2	1.585 µV, -110.0dB
0,1,x,3	1.551 µV, -110.2dB
0,1,x,4	1.325 µV, -111.5dB
0,1,x,5	1.235 µV, -112.1dB
0,1,x,6	1.372 µV, -111.2dB
0,1,x,7	0.950 µV, -114.4dB
0,2,x,0	1.090 µV, -113.2dB
0,2,x,1	1.624 µV, -109.8dB
0,2,x,2	1.598 µV, -109.9dB
0,2,x,3	1.519 µV, -110.3dB
0,2,x,4	1.196 µV, -112.4dB
0,2,x,5	1.386 µV, -111.1dB
0,2,x,6	1.298 µV, -111.7dB
0,2,x,7	1.151 µV, -112.8dB

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Range 0.316nC, F 15K Crosstalk IR <= 316pC Spec: <= -118.0dB Uncertainty: 68aC	
Chan	Value
0,1,x,0	0.230 fC, -126.7dB
0,1,x,1	0.364 fC, -122.7dB
0,1,x,2	0.247 fC, -126.1dB
0,1,x,3	0.459 fC, -120.7dB
0,1,x,4	0.323 fC, -123.8dB
0,1,x,5	0.303 fC, -124.3dB
0,1,x,6	0.301 fC, -124.4dB
0,1,x,7	0.312 fC, -124.1dB
0,2,x,0	0.238 fC, -126.5dB
0,2,x,1	0.326 fC, -123.7dB
0,2,x,2	0.242 fC, -126.3dB
0,2,x,3	0.423 fC, -121.5dB
0,2,x,4	0.324 fC, -123.8dB
0,2,x,5	0.280 fC, -125.0dB
0,2,x,6	0.302 fC, -124.4dB
0,2,x,7	0.319 fC, -123.9dB

Range 10nC, F 15K Crosstalk 3.16nC < IR <= 10nC Spec: <= -109.0dB Uncertainty: 1.3fC	
Chan	Value
0,1,x,0	0.660 fC, -117.6dB
0,1,x,1	0.964 fC, -114.3dB
0,1,x,2	0.906 fC, -114.8dB
0,1,x,3	1.260 fC, -112.0dB
0,1,x,4	0.675 fC, -117.4dB
0,1,x,5	0.737 fC, -116.6dB
0,1,x,6	0.444 fC, -121.0dB
0,1,x,7	0.080 fC, -135.9dB
0,2,x,0	0.444 fC, -121.0dB
0,2,x,1	0.961 fC, -114.3dB
0,2,x,2	1.037 fC, -113.7dB
0,2,x,3	0.910 fC, -114.8dB
0,2,x,4	0.688 fC, -117.2dB
0,2,x,5	0.843 fC, -115.5dB
0,2,x,6	0.621 fC, -118.1dB
0,2,x,7	0.560 fC, -119.0dB

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4.7 Inter-channel Phase Match

Description of calibration:
Determination of the phase difference between the input channels in a system, by applying an accurate -3dBFS (max 4V) sine wave which is generated by the internal reference generator. For charge amplifiers, the reference voltage signal is translated to a reference charge signal. The reported values represent the highest phase differences found between any of the channels in the system. This is done for two input range settings and two signal frequencies.

Range 10V, F 9k9 Not in Scope Spec: < 0.3000°	
Chan	Value
0,1,x,0	0.0413°
0,1,x,1	0.0274°
0,1,x,2	0.0353°
0,1,x,3	0.0212°
0,1,x,4	0.0245°
0,1,x,5	0.0413°
0,1,x,6	0.0334°
0,1,x,7	0.0399°
0,2,x,0	0.0292°
0,2,x,1	0.0265°
0,2,x,2	0.0231°
0,2,x,3	0.0408°
0,2,x,4	0.0234°
0,2,x,5	0.0340°
0,2,x,6	0.0250°
0,2,x,7	0.0249°

Range 10nC, F 9k9 Not in Scope Spec: < 0.3000°	
Chan	Value
0,1,x,0	0.0468°
0,1,x,1	0.0256°
0,1,x,2	0.0439°
0,1,x,3	0.0285°
0,1,x,4	0.0332°
0,1,x,5	0.0392°
0,1,x,6	0.0288°
0,1,x,7	0.0468°
0,2,x,0	0.0260°
0,2,x,1	0.0354°
0,2,x,2	0.0333°
0,2,x,3	0.0332°
0,2,x,4	0.0281°
0,2,x,5	0.0341°
0,2,x,6	0.0242°
0,2,x,7	0.0245°

Range 10V, F 19k9 Not in Scope Spec: < 0.4000°	
Chan	Value
0,1,x,0	0.0836°
0,1,x,1	0.0548°
0,1,x,2	0.0714°
0,1,x,3	0.0430°
0,1,x,4	0.0491°
0,1,x,5	0.0836°
0,1,x,6	0.0671°
0,1,x,7	0.0812°
0,2,x,0	0.0594°
0,2,x,1	0.0536°
0,2,x,2	0.0472°
0,2,x,3	0.0818°
0,2,x,4	0.0472°
0,2,x,5	0.0686°
0,2,x,6	0.0501°
0,2,x,7	0.0499°

Range 10nC, F 19K9 Not in Scope Spec: < 0.4000°	
Chan	Value
0,1,x,0	0.0966°
0,1,x,1	0.0514°
0,1,x,2	0.0912°
0,1,x,3	0.0586°
0,1,x,4	0.0678°
0,1,x,5	0.0787°
0,1,x,6	0.0580°
0,1,x,7	0.0966°
0,2,x,0	0.0523°
0,2,x,1	0.0734°
0,2,x,2	0.0685°
0,2,x,3	0.0669°
0,2,x,4	0.0588°
0,2,x,5	0.0685°
0,2,x,6	0.0514°
0,2,x,7	0.0519°

Range 0.316V, F 9k9 Not in Scope Spec: < 0.3000°	
Chan	Value
0,1,x,0	0.0727°
0,1,x,1	0.1025°
0,1,x,2	0.0779°
0,1,x,3	0.1260°
0,1,x,4	0.0866°
0,1,x,5	0.1115°
0,1,x,6	0.1218°
0,1,x,7	0.1409°
0,2,x,0	0.1319°
0,2,x,1	0.1048°
0,2,x,2	0.1205°
0,2,x,3	0.0966°
0,2,x,4	0.1161°
0,2,x,5	0.0868°
0,2,x,6	0.1177°
0,2,x,7	0.1409°

Range 0.316nC, F 9k9 Not in Scope Spec: < 0.3000°	
Chan	Value
0,1,x,0	0.0749°
0,1,x,1	0.0959°
0,1,x,2	0.0732°
0,1,x,3	0.1288°
0,1,x,4	0.0787°
0,1,x,5	0.1044°
0,1,x,6	0.1127°
0,1,x,7	0.1429°
0,2,x,0	0.1429°
0,2,x,1	0.1159°
0,2,x,2	0.1330°
0,2,x,3	0.1120°
0,2,x,4	0.1231°
0,2,x,5	0.0944°
0,2,x,6	0.1277°
0,2,x,7	0.1427°

Range 0.316V, F 19k9 Not in Scope Spec: < 0.6000°	
Chan	Value
0,1,x,0	0.1434°
0,1,x,1	0.2034°
0,1,x,2	0.1531°
0,1,x,3	0.2511°
0,1,x,4	0.1719°
0,1,x,5	0.2218°
0,1,x,6	0.2419°
0,1,x,7	0.2808°
0,2,x,0	0.2633°
0,2,x,1	0.2089°
0,2,x,2	0.2412°
0,2,x,3	0.1927°
0,2,x,4	0.2317°
0,2,x,5	0.1729°
0,2,x,6	0.2355°
0,2,x,7	0.2808°

Range 0.316nC, F 19K9 Not in Scope Spec: < 0.6000°	
Chan	Value
0,1,x,0	0.1527°
0,1,x,1	0.1912°
0,1,x,2	0.1500°
0,1,x,3	0.2587°
0,1,x,4	0.1582°
0,1,x,5	0.2093°
0,1,x,6	0.2242°
0,1,x,7	0.2879°
0,2,x,0	0.2876°
0,2,x,1	0.2337°
0,2,x,2	0.2669°
0,2,x,3	0.2254°
0,2,x,4	0.2471°
0,2,x,5	0.1904°
0,2,x,6	0.2580°
0,2,x,7	0.2879°

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5.1 Gain Accuracy after Adjustment

Description of calibration:
Determination of the amplitude accuracy of the input channels over all input ranges and available ADC bandwidths, by applying an accurate 1kHz -3dBFS (max 4V) sine wave which is generated by the internal reference generator. For charge amplifiers, the reference voltage signal is translated to a reference charge signal.
The reported values represent the deviations from the expected signal amplitude, both absolute (either in Volt or Coulomb, depending on the input channel type) and relative (in %).

BW 25k6 **Alternating voltage 3.16V < IR <= 10V** **Spec: <= ±0.100%** **Uncertainty: 640µV**	
Chan	Value
0,0,x,0	0.368 mV, 0.009%
0,0,x,1	0.087 mV, 0.002%

BW 51k2 **Alternating voltage 3.16V < IR <= 10V** **Spec: <= ±0.100%** **Uncertainty: 640µV**	
Chan	Value
0,0,x,0	0.389 mV, 0.010%
0,0,x,1	0.255 mV, 0.006%

BW 102k4 **Not in Scope** **Spec: 1.00000 ±0.10%**	
Chan	Value
0,0,x,0	1.00006, 0.01%
0,0,x,1	1.00003, 0.00%

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End of Report