Environment

NextEra Energy Canada, ULC.

Bluewater Wind Energy Centre – Noise Assessment Report

Prepared by:

AECOM
5600 Cancross Court, Suite A 905.501.0641 tel
Mississauga, ON, Canada L5R 3E9 905.501.0181 fax
www.aecom.com

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AECOM Signatures

Report Prepared By:

Alex Dundon, P.Eng., INCE, MIEAust
Acoustic Engineer

Report Reviewed By:

Alan Oldfield, P.Eng., MEng, CEng(UK)
Acoustic Engineer

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1. Introduction

Varna Wind, Inc., a wholly owned subsidiary of NextEra Energy Canada, ULC (NextEra) is proposing to construct a wind energy centre project in the Municipalities of Bluewater and Huron East in Huron County, Ontario. The project will be referred to as the Bluewater Wind Energy Centre (the "Project") and will be located on private lands east of Highway 21 in the vicinity of the shoreline of Lake Huron.

This report has been prepared in accordance with the Ontario Ministry of the Environment (MOE) guideline "Noise Guidelines for Wind Farms – Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities" (October 2008). This report will form part of the Renewable Energy Approval (REA) application for the Project as required under Ontario Regulation 359/09.

2. Project Layout

Approval is being sought for forty (40) wind turbine locations, with each turbine rated at 1.6 Megawatts maximum generation capacity. However, only approximately thirty-seven (37) of the wind turbines will ultimately be constructed in order to achieve the Project nameplate generation target of up to 60 Megawatts. All of the wind turbines will feed into a centrally located transformer substation.

The proposed Project is located in Huron County, within the Municipalities of Bluewater and Huron East. The Project Study Area consists of the areas being studied for the wind farm components (Wind Energy Centre Study Area), as well as for the interconnection route (i.e., the area being studied for transmission lines to connect the Project to the electrical grid) (Transmission Line Study Area). The Wind Energy Centre Study Area is generally bounded by Blackbush Line/Bronson Line to the west, Mill Road to the north, Concession 5 Road to the east, and Danceland Road/Staffa Road to the south, in the Municipality of Bluewater. The Transmission Line Study Area is located to the east of the Wind Energy Centre Study Area, and is generally bounded by Concession 5 Road to the west, Mill Road to the north, Huron Road and Perth 183 Road to the east, and Staffa Road to the south, extending into the Municipality of Huron East.

The location of the Project Study Area was defined early in the planning process for the proposed wind energy facility, based on the availability of wind resources, approximate area required for the proposed project, and availability of existing infrastructure for connection to the electrical grid. The Project Study Area was used to facilitate information collection.

A figure showing the project location, wind turbine layout and transformer location is provided in Appendix A.

3. Noise Assessment Guideline

Part V.0.1 of the Ontario Environmental Protection Act R.S.O. 1990 (EPA) addresses the approvals process required for renewable energy projects and Ontario Regulation 359/09 outlines the specific requirements for obtaining a Renewable Energy Approval (REA) from the MOE.

As required by O.Reg. 359/09, noise from wind farm projects requiring approval within Ontario are assessed using the MOE guideline: "Noise Guidelines for Wind Farms – Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities" (PIBS 4709e, October 2008). This guideline sets the definitions, assessment procedures and noise level limits for noise assessments of wind farm projects.

The project area is best defined as Class 3 rural, as per MOE Publication 4709e. A Class 3 Area is defined as "a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following: a small community with less than 1000 population; agricultural area; a rural recreational area such as a cottage or a resort area; or a wilderness area." The MOE noise level limits, at integer wind speeds, for points of reception in Class 3 areas are summarized in Table 1 below.

Table 1. Noise Level Limits for Wind Turbines

Point of Reception Classifications	1-hr L_{EQ} Sound Level Limit (dBA) at 10m height Wind Speeds (m/s)				
	Less than or equal to 6 m/s	7 m/s	8 m/s	9 m/s	Greater than or equal to 10 m/s
Class 1 & 2 Areas	45.0	45.0	45.0	49.0	51.0
Class 3 Areas	40.0	43.0	45.0	49.0	51.0

4. Noise Sources

The wind turbine technology proposed for this Project is the GE 1.6-100 Wind Turbine with Low-Noise Trailing Edges (LNTE). The turbines have a 100 metre rotor diameter with a swept area of 7,854 m^2; each blade is connected to the main shaft via the hub. The turbine is mounted on an 80 m tubular steel tower which contains an internal ladder provided for maintenance access. Each turbine will be constructed on a foundation that is approximately 400 m^2. The GE 1.6-100 LNTE has an electrical generation rating of 1.6 Megawatts. Manufacturers' noise data for the GE 1.6-100 LNTE are summarized in Table 3 of Section 9. The noise datasheets provided have been prepared and reported in accordance with IEC 61400-11 (equivalent to CAN/CSA-C61400-11). The calculations used to adjust for site specific wind shear are also presented in Appendix B.

The electricity generated by each wind turbine will be collected at a central transformer substation. The performance specification of the transformer will require that the noise emissions be measured in accordance with ANSI/IEEE C57.12.90 at the highest (MVA) rating with all fans in operation and at the tap position that creates the highest current. The performance specification will require that the average sound pressure level measured in accordance with ANSI/IEEE C57.12.90 shall not exceed 77 dBA over the measurement surface (as defined in the ANSI/IEEE standard). An estimate of the noise emissions expected from the transformer is provided in Table 4. Appendix B includes a detailed calculation to support the transformer emission estimate. Note that a 5dB penalty has been added to the transformer emission level in the noise prediction modelling as per the requirements of PIBS 4709e.

The MOE requires that the cumulative noise impact of existing or proposed[1] wind farms also be included in the noise impact analysis. To that end all existing or proposed wind turbines within 5 kilometres of the Project were included in the noise impact analysis.

Table 5 of Section 9 provides the coordinates of all noise sources considered in the noise impact analysis and assessment.

5. Points of Reception

The Noise Impact Summary Table, provided in Appendix C, lists all of the points of reception within 2000 metres of the Project turbines and the associated coordinates as per Section 6.1 d) of the MOE noise guideline (PIBS 4709e). The points of reception have been classified into four (4) different categories which are outlined in Table 2, below.

[1] *Based on MOE guidelines, proposed projects which have not yet published a site plan have not been accounted for in the noise impact analysis.*

Table 2. Point of Reception Classifications

Class	Description	Remarks
NP	Non-participating	MOE Limits Apply
PR	Participating	MOE Limits Do Not Apply
VNP	Vacant Lot Non-participating	MOE Limits Apply
VPR	Vacant Lot Participating	MOE Limits Do Not Apply

The classifications NP and VNP are both non-participating and are subject to the noise level limits outlined in the MOE noise guideline (PIBS 4709e, see Table 1).

The classifications PR and VPR are both participating and are not subject to the noise level limits outlined in the MOE noise guideline. Participating points of reception are associated with the wind farm development via a legal agreement with the owner of the subject property, to allow the installation and operation of wind turbines or related equipment.

6. Detailed Noise Impact Assessment

The noise impact analysis for the Project was completed using the Cadna/A environmental noise modelling software. The noise modelling was conducted in accordance with the international standard ISO 9613-2. The noise predictions were calculated using downwind propagation from each source to each point of reception. This method produces a theoretical worst case prediction at each point of reception. The noise impact calculations were completed using octave band spectral values in the range of 63 to 8000Hz for each integer 10 metre height wind speed from 6 to 10m/s.

The noise model was configured to calculate the resultant noise impact at each point of reception within 1500 metres of the Project turbines as per Sections 6.3 and 6.4.1 of the MOE noise guideline (PIBS 4709e). The contribution of each noise source located within 5000 metres from each point of reception was included in the noise impact calculation according to Section 6.4.9 of PIBS 4709e. The air attenuation and ground attenuation calculation within the model were configured according to Section 6.4.10 of PIBS 4709e.

The noise impact at each point of reception, for each integer 10 metre height wind speed from 6 to 10m/s, is presented in The Noise Impact Summary Table (Appendix C). All of the noise predictions were completed in accordance with the detailed requirements of the MOE noise guideline (PIBS 4709e).

7. Results and Compliance

The results of the noise modelling in The Noise Impact Summary Table (Appendix C) show that the Project is predicted to operate in compliance with the MOE noise level limits at all points of reception within 1500 metres of the Project turbines. Appendix D includes noise contour maps for each integer 10 metre height wind speed from 6 to 10m/s and a sample calculation is provided in Appendix E.

Therefore, all of the non-participating (NP) and vacant lot non-participating (VNP) points of reception assessed can comply with the MOE sound level limits for Wind Turbines in Class 3 areas.

8. References

The following references were used in the preparation of this report:

PIBS 4709e, “Noise Guidelines for Wind Farms – Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities”, Ontario Ministry of the Environment, Queens Printer for Ontario, October 2008.

IEC 61400-11, “Wind turbine generator systems – Part 11: Acoustic noise measurement techniques”, International Electrotechnical Commission, 2006.

ANSI/IEEE C57.12.90, “Sandard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers”, Institute of Electrical and Electronics Engineers, Inc.

9. Summary Tables

Table 3. Wind Turbine Acoustic Emission Summary Tables

Table 3A. General Electric Model 1.6-100 LNTE

Associated Project: Bluewater Wind Energy Centre
Make: General Electric
Model: GE 1.6-100 LNTE
Electrical Rating: 1.6 Megawatts
Hub Height (m): 80 metres
Wind Shear Coefficient: 0.26
Source of Data: Provided by General Electric

		Octave Band Sound Power Level (dBA)									
		Manufacturer's Emission Levels					Adjusted Emission Levels				
10m Height Wind Speed (m/s)		6	7	8	9	10	6	7	8	9	10
Frequency (Hz)	63	80.3	84.0	84.1	84.1	84.0	84.0	84.1	84.0	84.0	84.0
	125	88.4	91.6	91.8	91.8	91.7	91.6	91.8	91.7	91.7	91.7
	250	94.7	95.4	95.3	95.4	95.5	95.4	95.4	95.5	95.5	95.5
	500	95.5	97.1	96.6	96.7	97.0	97.1	96.7	97.0	97.0	97.0
	1000	91.8	97.1	97.5	97.6	97.8	97.1	97.6	97.8	97.8	97.8
	2000	92.4	95.7	95.7	95.5	95.1	95.7	95.5	95.1	95.1	95.1
	4000	88.9	89.7	89.1	88.4	87.9	89.7	88.4	87.9	87.9	87.9
	8000	70.3	70.4	70.6	69.4	69.1	70.4	69.4	69.1	69.1	69.1
Overall A-weighted		100.5	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

Table 3B. ENERCON Model E-48

Associated Project: Zurich Wind Project
Make: ENERCON
Model: E-48
Electrical Rating: 800 Kilowatts
Hub Height (m): 76 metres
Wind Shear Coefficient: 0.26
Source of Data: Provided by ENERCON

		Octave Band Sound Power Level (dBA)									
		Manufacturer's Emission Levels					Adjusted Emission Levels				
10 metre Height Wind Speed (m/s)		6	7	8	9	10	6	7	8	9	10
Frequency (Hz)	63	79.5	81.6	79.6	79.8	78.6	79.6	79.8	78.6	78.6	78.6
	125	83.6	86.3	86.0	87.3	84.4	86.0	87.3	84.4	84.4	84.4
	250	90.5	93.8	95.1	96.1	93.3	95.1	96.1	93.3	93.3	93.3
	500	92.8	95.7	97.1	97.5	96.8	97.1	97.5	96.8	96.8	96.8
	1000	92.6	94.1	95.5	95.1	97.9	95.5	95.1	97.9	97.9	97.9
	2000	87.4	89.0	89.1	90.0	92.7	89.1	90.0	92.7	92.7	92.7
	4000	83.6	86.1	85.8	88.8	87.6	85.8	88.8	87.6	87.6	87.6
	8000	80.2	83.6	83.6	87.1	84.6	83.6	87.1	84.6	84.6	84.6
Overall A-weighted		97.8	100.3	101.4	102.0	102.1	101.4	102.0	102.1	102.1	102.1

Table 4. Transformer Acoustic Emission Summary

Octave Band Centre Frequency (Hz)	31.5	63	125	250	500	1000	2000	4000	8000	Overall
Transformer Sound Power (dBA)	57.0	76.2	88.3	90.8	96.2	93.4	89.6	84.4	75.3	99.8
Tonal Penalty (dB)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Resultant Transformer Sound Power (dBA)	**62.0**	**81.2**	**93.3**	**95.8**	**101.2**	**98.4**	**94.6**	**89.4**	**80.3**	**104.8**

Table 5. Project Wind Turbine and Transformer Locations

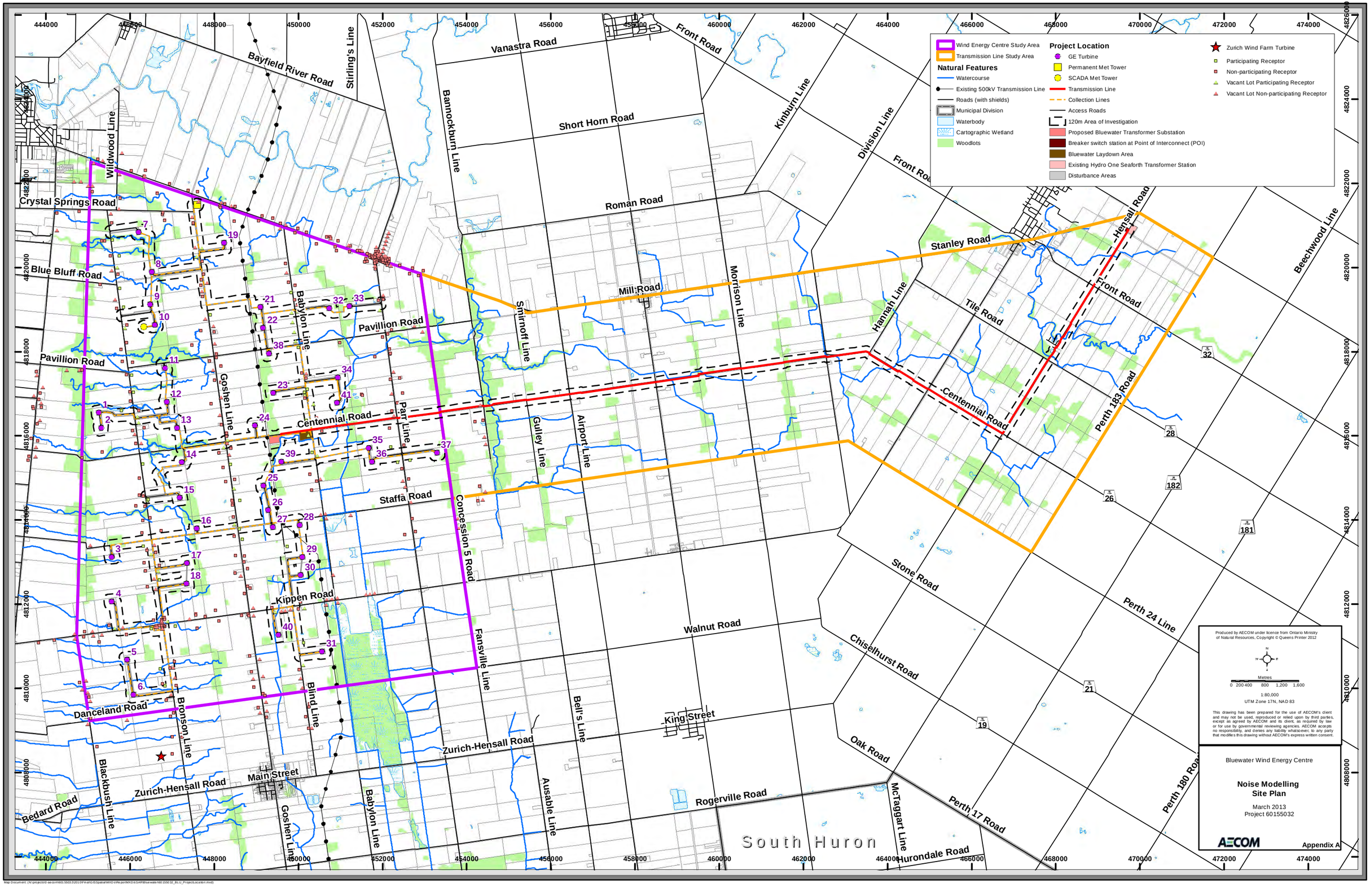
Identifier	Project	Equipment Make & Model	UTM Coordinates (NAD83 Zone 17N)		Remarks
			Easting	Northing	
B_Trans	Bluewater	-	449415	4815904	Transformer
B_WTG01	Bluewater	GE 1.6 – 100 LNTE	445260	4816548	-
B_WTG02	Bluewater	GE 1.6 – 100 LNTE	445320	4816183	-
B_WTG03	Bluewater	GE 1.6 – 100 LNTE	445565	4813118	-
B_WTG04	Bluewater	GE 1.6 – 100 LNTE	445568	4812063	-
B_WTG05	Bluewater	GE 1.6 – 100 LNTE	445933	4810683	-
B_WTG06	Bluewater	GE 1.6 – 100 LNTE	446088	4809847	-
B_WTG07	Bluewater	GE 1.6 – 100 LNTE	446207	4820836	-
B_WTG08	Bluewater	GE 1.6 – 100 LNTE	446521	4819890	-
B_WTG09	Bluewater	GE 1.6 – 100 LNTE	446485	4819125	-
B_WTG10	Bluewater	GE 1.6 – 100 LNTE	446595	4818636	-
B_WTG11	Bluewater	GE 1.6 – 100 LNTE	446832	4817609	-
B_WTG12	Bluewater	GE 1.6 – 100 LNTE	446877	4816800	-
B_WTG13	Bluewater	GE 1.6 – 100 LNTE	447116	4816186	-
B_WTG14	Bluewater	GE 1.6 – 100 LNTE	447232	4815368	-
B_WTG15	Bluewater	GE 1.6 – 100 LNTE	447186	4814525	-
B_WTG16	Bluewater	GE 1.6 – 100 LNTE	447590	4813794	-
B_WTG17	Bluewater	GE 1.6 – 100 LNTE	447358	4812978	-
B_WTG18	Bluewater	GE 1.6 – 100 LNTE	447341	4812484	-
B_WTG19	Bluewater	GE 1.6 – 100 LNTE	448234	4820588	-
B_WTG21	Bluewater	GE 1.6 – 100 LNTE	449105	4819060	-
B_WTG22	Bluewater	GE 1.6 – 100 LNTE	449166	4818561	-
B_WTG23	Bluewater	GE 1.6 – 100 LNTE	449406	4817022	-
B_WTG24	Bluewater	GE 1.6 – 100 LNTE	448974	4816250	-
B_WTG25	Bluewater	GE 1.6 – 100 LNTE	449175	4814818	-
B_WTG26	Bluewater	GE 1.6 – 100 LNTE	449284	4814234	-
B_WTG27	Bluewater	GE 1.6 – 100 LNTE	449400	4813830	-
B_WTG28	Bluewater	GE 1.6 – 100 LNTE	450031	4813877	-
B_WTG29	Bluewater	GE 1.6 – 100 LNTE	450097	4813116	-
B_WTG30	Bluewater	GE 1.6 – 100 LNTE	450058	4812694	-
B_WTG31	Bluewater	GE 1.6 – 100 LNTE	450567	4810875	-
B_WTG32	Bluewater	GE 1.6 – 100 LNTE	450732	4819033	-
B_WTG33	Bluewater	GE 1.6 – 100 LNTE	451219	4819080	-
B_WTG34	Bluewater	GE 1.6 – 100 LNTE	450937	4817380	-

Identifier	Project	Equipment Make & Model	UTM Coordinates (NAD83 Zone 17N)		Remarks
			Easting	Northing	
B_WTG35	Bluewater	GE 1.6 – 100 LNTE	451669	4815710	-
B_WTG36	Bluewater	GE 1.6 – 100 LNTE	451756	4815381	-
B_WTG37	Bluewater	GE 1.6 – 100 LNTE	453294	4815596	-
B_WTG38	Bluewater	GE 1.6 – 100 LNTE	449306	4817953	-
B_WTG39	Bluewater	GE 1.6 – 100 LNTE	449597	4815379	-
B_WTG40	Bluewater	GE 1.6 – 100 LNTE	449532	4811269	-
B_WTG41	Bluewater	GE 1.6 – 100 LNTE	450920	4816780	-

Table 6. Non-Project Wind Turbine and Transformer Locations

Identifier	Project	Equipment Make & Model	UTM Coordinates (NAD83 Zone 17N)		Remarks
			Easting	Northing	
Z_WTG01	Zurich	E-48	446741	4808398	-

Appendix A: Site Plan



Map Document: (N:\projects\0-aecom\60155037\2010\FinalGIS\SpatialMXD\site.portMXD\SAR\Bluewater60155032_BLU_Projects.acadon.mxd)

Appendix B: Equipment Noise Emission Data and Calculations

GE Power & Water

– Original Instructions –

Technical Documentation
Wind Turbine Generator Systems
1.6-100 with LNTE
50 Hz and 60 Hz

Product Acoustic Specifications

Normal Operation according to IEC
Incl. Octave Band Spectra
Incl. 1/3rd Octave Band Spectra

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1 Introduction

This document summarizes the acoustic emission characteristics of the 1.6-100 with Low Noise Trailing Edge (LNTE) wind turbine for normal operation, including calculated apparent sound power levels $L_{WA,k}$, as well as uncertainty levels associated with the apparent sound power levels, tonal audibility, and calculated third octave band apparent sound power level.

All provided sound power levels are A-weighted.

GE continuously verifies specifications with measurements, including those performed by independent institutes. If a wind turbine noise performance test is carried out, it needs to be done in accordance with the regulations of the international standard IEC 61400-11, ed. 2.1: 2006 and Machine Noise Performance Test document.

2 Normal Operation Calculated Apparent Sound Power Level

The apparent sound power levels $L_{WA,k}$ are initially calculated as a function of the hub height wind speed v_{HH}. The corresponding wind speeds v_{10m} at 10 m height above ground level have been evaluated assuming a logarithmic wind profile. In this case a surface roughness of z_{0ref} = 0.05 m has been used, which is representative of average terrain conditions.

$$v_{10m} = v_{HH} \frac{\ln\left(10m / z_{0ref}\right)}{\ln\left(hub\ height / z_{0ref}\right)} \quad *$$

The calculated apparent sound power levels $L_{WA,k}$ and the associated octave-band spectra are given in Table 1 and Table 2 for two different hub heights. The values are provided as mean levels as a function of v_{10m} for Normal Operation (NO) over cut-in to cut-out wind speed range. The uncertainties for octave sound power levels are generally higher than for total sound power levels. Guidance is given in IEC 61400-11, Annex D.

1.6-100 with LNTE – Normal Operation Octave Spectra									
Standard wind speed at 10 m [m/s]		**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10-Cutout**
Hub height wind speed at 80 m [m/s]		**4.2**	**5.6**	**7.0**	**8.4**	**9.7**	**11.1**	**12.5**	**14-Cutout**
Frequency (Hz)	**31.5**	62.5	62.2	66.1	70.1	73.5	73.7	73.6	73.5
	63	72.1	71.9	75.9	80.3	84.0	84.1	84.1	84.0
	125	79.0	79.2	83.8	88.4	91.6	91.8	91.8	91.7
	250	84.0	84.6	89.4	94.7	95.4	95.3	95.4	95.5
	500	85.5	84.9	89.7	95.5	97.1	96.6	96.7	97.0
	1000	83.4	83.0	86.9	91.8	97.1	97.5	97.6	97.8
	2000	81.7	83.4	87.9	92.4	95.7	95.7	95.5	95.1
	4000	74.9	77.7	83.5	88.9	89.7	89.1	88.4	87.9
	8000	55.5	57.6	63.5	70.3	70.4	70.6	69.4	69.1
	16000	7.9	13.2	18.9	24.7	27.2	26.6	27.5	29.0
Total apparent sound power level $L_{WA.k}$ [dB]		**90.4**	**90.7**	**95.3**	**100.5**	**103.0**	**103.0**	**103.0**	**103.0**

Table 1: Normal Operation Calculated Apparent Sound Power Level, 1.6-100 with LNTE with 80 m hub height as a function of 10 m wind speed (z_{0ref} = 0.05 m), the octave band spectra are for information only

* Simplified from IEC 61400-11, ed. 2.1: 2006 equation 7

1.6-100 with LNTE – Normal Operation Octave Spectra									
Standard wind speed at 10 m [m/s]		**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10-Cutout**
Hub height wind speed at 96 m [m/s]		**4.3**	**5.7**	**7.1**	**8.6**	**10.0**	**11.4**	**12.8**	**14-Cutout**
Frequency (Hz)	**31.5**	62.4	62.4	66.6	70.6	73.7	73.7	73.6	73.5
	63	72.1	72.0	76.5	80.8	84.1	84.1	84.1	84.0
	125	79.0	79.5	84.4	89.0	91.6	91.8	91.8	91.7
	250	84.0	84.9	90.1	95.0	95.3	95.3	95.5	95.5
	500	85.4	85.0	90.3	96.0	96.8	96.6	96.8	97.0
	1000	83.4	83.1	87.5	92.4	97.2	97.4	97.7	97.8
	2000	81.8	83.7	88.5	92.9	95.8	95.7	95.4	95.1
	4000	75.1	78.2	84.2	89.3	89.7	88.8	88.4	87.9
	8000	55.7	57.9	64.4	70.7	71.1	69.8	69.3	69.1
	16000	8.4	13.6	19.5	25.2	27.3	26.4	27.8	29.0
Total apparent sound power level $L_{WA,k}$ [dB]		**90.4**	**90.9**	**96.0**	**101.0**	**103.0**	**103.0**	**103.0**	**103.0**

Table 2: Normal Operation Calculated Apparent Sound Power Level, 1.6-100 with LNTE with 96 m hub height as a function of 10 m wind speed (z_{0ref} = 0.05 m), the octave band spectra are for information only

At 10 m wind speeds lower than 5 m/s the sound power levels decreases, and may get so low that the wind turbine noise becomes indistinguishable from the background noise. For a conservative calculation the data at 5 m/s may be used.

For 10 m wind speeds above 10 m/s, the wind turbine has reached rated power and the blade pitch regulation acts in a way that tends to decrease the noise levels. For a conservative calculation the data at 10 m/s may be used.

The highest normal operation calculated apparent sound power level for the 1.6-100 with LNTE is $L_{WA,k}$ = 103.0 dB.

3 Uncertainty Levels

The apparent sound power levels given above are calculated mean levels. If a wind turbine noise performance test is carried out, it needs to be done in accordance with the regulations of the international standard IEC 61400-11, ed. 2.1: 2006. Uncertainty levels associated with measurements are described in IEC/TS 61400-14.

Per IEC/TS 61400-14, L_{WAd} is the maximum apparent sound power level for 95 % confidence level resulting from n measurements performed according to IEC 61400-11 standard: $L_{Wad} = L_{WA} + K$, where L_{WA} is the mean apparent sound power level from IEC 61400-11 testing reports and $K = 1.645\ \sigma_T$.

The testing standard deviation values σ_T, σ_R and σ_P for measured apparent sound power level are described by IEC/TS 61400-14, where σ_T is the total standard deviation, σ_P is the standard deviation for product variation and σ_R is the standard deviation for test reproducibility.

Assuming $\sigma_R < 0.8$ dB and $\sigma_P < 0.8$ dB as typical values leads to a calculated $K < 2$ dB for 95 % confidence level.

4 Tonal Audibility

The tonal audibility ($\Delta L_{a,k}$), when measured in accordance with the IEC 61400-11 standard, for the GE's 1.6-100 with LNTE is less than or equal to 2 dB.

5 IEC 61400-11 and IEC/TS 61400-14 Terminology

- $L_{WA,K}$ is wind turbine apparent sound power level (referenced to 10^{-12}W) measured with A-weighting as function of reference wind speed v_{10m}. Derived from multiple measurement reports per IEC 61400-11, it is considered as a mean value
- σ_P is the product variation i.e. the 1.6-100 with LNTE unit-to-unit product variation; typically < 0.8 dB
- σ_R is the overall measurement testing reproducibility as defined per IEC 61400-11; typically < 0.8 dB with adequate measurement conditions and sufficient amount of data samples
- σ_T is the total standard deviation combining both σ_P and σ_R
- $K = 1.645\ \sigma_T$ is defined per IEC/TS 61400-14 for 95 % confidence level
- R_0 is the ground measuring distance from the wind turbine tower axis per IEC 61400-11, which shall equal the hub height plus half the rotor diameter
- $\Delta L_{a,k}$ is the tonal audibility according to IEC 61400-11, described as potentially audible narrow band sound

6 1/3rd Octave Band Spectra

The tables in Annex I are showing the 1/3rd octave band values for different hub heights in different wind speeds.

Reference:

- IEC 61400-1. Wind turbines – part 1: Design requirements. ed. 2. 1999
- IEC 61400-11, wind turbine generator systems part 11: Acoustic noise measurement techniques, ed. 2.1, 2006-11
- IEC/TS 61400-14, Wind turbines – part 14: Declaration of apparent sound power level and tonality values, ed. 1, 2005-03
- MNPT – Machine Noise Performance Test, Technical documentation, GE 2011

Appendix I - Calculated 1/3rd Octave Band Apparent Sound Power Level $L_{WA,k}$

1.6-100 with LNTE - Normal Operation 1/3rd Octave Band Spectra									
Standard wind speed at 10 m [m/s]		3	4	5	6	7	8	9	10-Cutout
Hub height wind speed at 80 m [m/s]		4.2	5.6	7.0	8.4	9.7	11.1	12.5	14-Cutout
Frequency (Hz)	25	52.2	52.1	55.8	59.7	63.0	63.2	63.1	62.9
	32	56.6	56.4	60.2	64.2	67.5	67.7	67.7	67.5
	40	60.6	60.3	64.2	68.3	71.6	71.9	71.8	71.7
	50	63.7	63.5	67.4	71.6	75.0	75.2	75.2	75.0
	63	66.5	66.2	70.3	74.6	78.1	78.3	78.3	78.2
	80	69.7	69.5	73.6	78.0	81.8	82.0	81.9	81.8
	100	72.3	72.2	76.5	81.0	84.8	84.9	84.9	84.7
	125	74.1	74.2	78.7	83.3	86.6	86.9	86.9	86.8
	160	75.6	76.1	80.8	85.6	88.3	88.5	88.6	88.5
	200	77.5	78.1	83.0	87.9	89.7	89.9	90.0	90.0
	250	79.5	80.1	85.0	90.2	91.0	90.9	91.0	91.1
	315	80.3	80.7	85.6	91.0	91.1	90.8	90.8	91.0
	400	80.7	80.6	85.4	91.1	91.5	91.0	91.0	91.2
	500	81.0	80.4	85.1	91.0	92.4	91.9	91.9	92.2
	630	80.3	79.4	84.0	89.9	92.9	92.6	92.7	93.0
	800	79.0	78.0	82.3	87.8	92.6	92.6	92.7	93.0
	1000	78.4	77.9	81.7	86.4	92.3	92.7	92.8	93.0
	1250	78.5	78.7	82.4	86.6	92.1	92.8	92.9	93.0
	1600	77.9	78.7	82.8	87.0	91.4	91.9	91.9	91.6
	2000	77.0	78.8	83.3	87.8	91.1	91.0	90.6	90.2
	2500	75.7	78.5	83.4	88.1	90.4	89.7	89.1	88.6
	3150	73.2	76.1	81.8	86.9	88.1	87.2	86.7	86.1
	4000	69.1	71.7	77.7	83.5	83.6	83.5	82.5	82.2
	5000	63.7	65.4	72.0	78.0	78.0	78.2	76.7	76.7
	6300	55.3	57.3	63.3	70.0	70.1	70.2	69.1	68.7
	8000	42.6	45.5	51.0	57.4	58.6	58.8	57.9	57.4
	10000	27.1	31.3	36.5	42.5	44.6	44.4	44.4	44.4
	12500	7.9	13.2	18.9	24.6	27.2	26.6	27.4	29.0
	16000	-19.0	-13.2	-6.1	-0.3	1.9	1.8	4.0	6.3
	20000	-47.8	-42.5	-34.1	-26.9	-25.9	-24.6	-21.8	-19.1
Total apparent sound power level $L_{WA,k}$ [dB]		90.4	90.7	95.3	100.5	103.0	103.0	103.0	103.0

Table 3: Calculated Apparent 1/3rd Octave Band Sound Power Level (A-weighted) 1.6-100 with LNTE with 80 m hub height as Function of Wind Speed v_{10m}

1.6-100 with LNTE - Normal Operation 1/3rd Octave Band Spectra									
Standard wind speed at 10 m [m/s]		**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10-Cutout**
Hub height wind speed at 96 m [m/s]		**4.3**	**5.7**	**7.1**	**8.6**	**10.0**	**11.4**	**12.8**	**14-Cutout**
Frequency (Hz)	**25**	52.1	52.2	56.4	60.2	63.2	63.2	63.1	62.9
	32	56.6	56.5	60.7	64.7	67.7	67.7	67.6	67.5
	40	60.6	60.5	64.7	68.8	71.8	71.9	71.8	71.7
	50	63.7	63.6	67.9	72.1	75.2	75.2	75.2	75.0
	63	66.5	66.4	70.8	75.1	78.3	78.3	78.3	78.2
	80	69.7	69.7	74.2	78.6	81.9	81.9	81.9	81.8
	100	72.3	72.4	77.0	81.5	84.9	84.9	84.9	84.7
	125	74.0	74.5	79.3	83.8	86.7	86.9	86.9	86.8
	160	75.6	76.4	81.4	86.1	88.3	88.5	88.6	88.5
	200	77.5	78.5	83.6	88.4	89.7	89.9	90.0	90.0
	250	79.5	80.4	85.6	90.6	90.9	90.9	91.1	91.1
	315	80.3	81.0	86.2	91.4	90.9	90.8	90.9	91.0
	400	80.7	80.8	86.1	91.5	91.2	90.9	91.1	91.2
	500	80.9	80.5	85.8	91.5	92.1	91.8	92.0	92.2
	630	80.3	79.4	84.7	90.5	92.7	92.6	92.8	93.0
	800	78.9	78.1	82.9	88.5	92.5	92.5	92.8	93.0
	1000	78.3	78.1	82.2	87.2	92.5	92.6	92.9	93.0
	1250	78.5	78.8	82.9	87.2	92.4	92.8	93.0	93.0
	1600	77.9	78.9	83.3	87.5	91.6	91.9	91.9	91.6
	2000	77.1	79.1	83.9	88.3	91.1	90.9	90.6	90.2
	2500	75.9	78.8	84.0	88.6	90.3	89.6	89.0	88.6
	3150	73.4	76.5	82.4	87.3	87.9	87.0	86.6	86.1
	4000	69.2	72.2	78.4	83.8	83.7	83.2	82.5	82.2
	5000	63.8	65.9	72.8	78.3	78.4	77.5	76.8	76.7
	6300	55.4	57.6	64.1	70.4	70.8	69.4	69.0	68.7
	8000	42.9	45.8	51.8	57.9	59.1	58.4	57.7	57.4
	10000	27.5	31.6	37.2	43.0	44.9	44.1	44.4	44.4
	12500	8.4	13.6	19.5	25.2	27.3	26.4	27.8	29.0
	16000	-18.5	-12.7	-5.4	0.2	1.8	2.0	4.6	6.3
	20000	-47.5	-41.9	-33.2	-26.3	-26.0	-24.1	-21.1	-19.1
Total apparent sound power level $L_{WA.k}$ [dB]		**90.4**	**90.9**	**96.0**	**101.0**	**103.0**	**103.0**	**103.0**	**103.0**

Table 4: Calculated Apparent 1/3rd Octave Band Sound Power Level (A-weighted), 1.6-100 with LNTE with 96 m hub height as Function of Wind Speed v_{10m}

Extract I of test report

Master Information „Noise", according to "Wind turbine generator systems - Part 11: Acoustic noise measurement techniques."

IEC 61400-11 ED. 2 from 2002 (published by: Central Office of the IEC, Geneva, Switzerland)

Extract of test report WICO 439SEC04/07 regarding noise emission of wind turbine (WT) type ENERCON E-48 (Mode I), hub height 75.6 m

General			Technical specifications (manufacturer)	
Manufacturer:	ENERCON GmbH		Rated power (generator):	800 kW
	Dreekamp 5		Rotor diameter:	48,0 m
	D-26605 AURICH		Hub height above ground:	75,6 m
Serial number:	48087		Kon. Stahlrohr	Tubular steel tower
WT-location:	WP Holtriem	RW 25.95.228	Pitch	pitch/stall/active-stall
		HW 59.42.988		

Complementations of rotor (manufacturer)		Complementations of gear and generator (manufacturer)	
Manufacturer of rotor blades	ENERCON GmbH	Manufacturer of gear:	No
Type of blades:	E48/1	Type of gear:	No
Pitch angle:	variabel	Manufacturer of generator:	ENERCON GmbH
Number of blades	3	Type of generator:	E-48
Rated speed(s)/speed range:	16 – 29,5 rpm (Mode I)	Rated speed(s):	16 – 29,5 rpm (Mode I)

Report power curve: calculated power curve, date: 31.08.2004

	Reference		Noise emission parameter	Remarks
	Standardized wind speed at 10 m above ground	Electric power		
Sound power level L_{WA}	*5 ms^{-1}*	*182 kW*	*94.0* dB(A)*	*(1)*
	6 ms^{-1}	315 kW	97.8 dB(A)	
	7 ms^{-1}	499 kW	100.3 dB(A)	
	8 ms^{-1}	671 kW	101.4 dB(A)	
	8.9 ms^{-1}	*760 kW*	*101.9 dB(A)*	*(2)*
	9 ms^{-1}	765 kW	102.0 dB(A)	
	9.6 ms^{-1}	*794 kW*	*102.1 dB(A)*	*(3)*
	10 ms^{-1}	800 kW	101.9 dB(A)	(4)
Tonal components ΔL_a (near proximity)	*5 ms^{-1}*	*182 kW*	No tone	*(1)*
	6 ms^{-1}	315 kW	No tone	
	7 ms^{-1}	499 kW	No tone	
	8 ms^{-1}	671 kW	No tone	
	8.9 ms^{-1}	*760 kW*	No tone	*(2)*
	9 ms^{-1}	765 kW	*No tone*	
	9.6 ms^{-1}	*794 kW*	No tone	*(3)*
	10 ms^{-1}	800 kW	*No tone*	(4)

One third octave sound power level at reference point v_{10} = 5 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	67.6	71.2	72.9	74.5	78.0	77.0	79.3	84.2	85.6	84.6	84.2	84.4
L_{WA}	75.8			81.5			88.5			89.2		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	82.6	82.0	81.4	79.2	78.5	76.6	75.2	74.8	73.1	72.4	70.9	67.4
L_{WA}	86.8			83.0			79.2			75.5		

One third octave sound power level at reference point v_{10} = 6 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	71.7	74.2	76.9	77.6	78.8	79.7	80.6	86.1	87.8	87.4	87.4	89.0
L_{WA}	79.5			83.6			90.5			92.8		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	88.3	88.1	86.9	84.0	82.4	80.9	79.4	79.0	78.1	77.3	74.9	72.9
L_{WA}	92.6			87.4			83.6			80.2		

One third octave sound power level at reference point v_{10} = 7 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	72.7	76.1	79.3	80.5	80.9	82.9	84.3	89.2	91.2	90.7	90.5	91.5
L_{WA}	81.6			86.3			93.8			95.7		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	90.2	89.7	87.9	85.5	84.1	82.6	81.7	81.6	80.7	80.2	79.2	76.3
L_{WA}	94.1			89.0			86.1			83.6		

One third octave sound power level at reference point v_{10} = 8 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	70.1	74.3	77.3	79.0	81.7	82.3	84.4	90.5	92.7	92.0	91.9	92.9
L_{WA}	79.6			86.0			95.1			97.1		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	91.7	90.9	89.1	86.0	83.9	82.1	80.9	81.6	80.6	79.7	79.2	77.3
L_{WA}	95.5			89.1			85.8			83.6		

One third octave sound power level at reference point v_{10} = 9 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	71.8	74.5	77.1	79.4	82.6	84.2	86.6	91.5	93.5	92.6	92.3	93.1
L_{WA}	79.8			87.3			96.1			97.5		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	91.4	90.5	88.7	86.2	85.0	84.3	83.9	84.4	83.9	83.7	82.5	80.1
L_{WA}	95.1			90.0			88.8			87.1		

One third octave sound power level at reference point v_{10} = 9.6 m/s [dB(A)]												
Frequency	50	63	80	100	125	160	200	250	315	400	500	630
L_{WA}	69.9	73.9	75.9	77.4	80.2	80.7	83.4	88.3	91.0	90.8	91.5	93.4
L_{WA}	78.6			84.4			93.3			96.8		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L_{WA}	93.2	93.6	92.6	89.9	87.4	85.0	83.2	83.3	82.0	81.1	79.9	77.8
L_{WA}	97.9			92.7			87.6			84.6		

(1) Because of the signal to noise ratio laying in between 3 dB to 6 dB the sound pressure level was corrected with 1.3 dB.
(2) Sound power level at 95% of the rated power.
(3) Wind speed at the maximum sound pressure level minute measured.
(4) One value was measured in the wind bin of 10 ms^{-1}.

This extract of test report is valid only in connection with the enclosed „Manufacturer's certificate" from 2004-08-31.

This declaration does not replace above-mentioned report.

measured by: WIND-consult GmbH
Reuterstraße 9
D-18211 Bargeshagen

- pdf - document was signed electronically -

date: 2006-01-24

Dipl.-Ing. A. Petersen

Dipl.-Ing. W. Wilke

Deutscher Akkreditierungs Rat
DAR
DAP-PL-2756.00
According to DIN EN ISO 17025 by the DAP German Accreditation System for Testing Ltd. accredited testing laboratory.
The accreditation is valid for test methods listed in the document.

Wind Shear Calculation

Night-time Monthly Average Wind Speed Data (2300 to 0700)

Data Set	Wind Speed Sensor	Height	Wind Speed (m/s)											
			Winter	Winter	Winter	Spring	Spring	Spring	Summer	Summer	Summer	Fall	Fall	Fall
			January	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	48.5m_W	48.50	6.61	6.13	6.31	6.86	5.91	4.80	4.70	4.98	5.82	6.41	6.80	7.56
2	48.5m_S	48.50	6.75	6.20	6.34	6.97	5.95	4.87	4.68	4.96	5.89	6.50	6.92	7.63
3	41.5m_W	41.00	6.49	5.94	6.03	6.54	5.63	4.58	4.45	4.62	5.43	6.08	6.50	7.34
4	41.5m_S	41.00	6.45	5.89	5.98	6.60	5.71	4.63	4.45	4.66	5.50	6.09	6.59	7.29
5	30m_W	30.00	6.04	5.52	5.56	6.00	5.22	4.26	4.07	4.15	4.96	5.59	6.03	6.97
6	10m_W	10.00	5.28	4.84	4.62	5.08	4.31	3.50	3.20	3.18	3.81	4.56	5.07	6.17

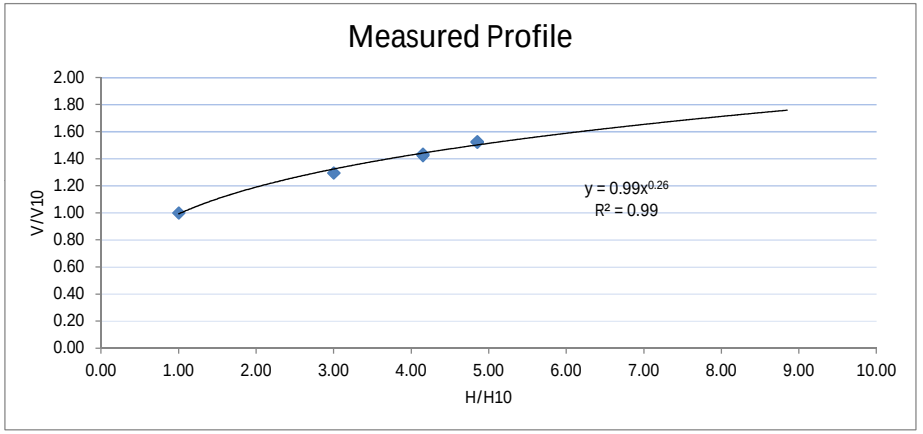
Summer Average Night-time Monthly Average Wind Speed - Based on Measurements

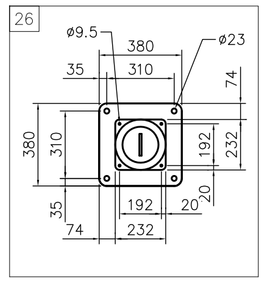
Data Set	Wind Speed Sensor	Height (m)	Vsavg (m/s)	H/H10	Vsavg/V10
1	spd_avg_48.5m_W_ch01	48.50	5.17	4.85	1.52
2	spd_avg_48.5m_S_ch02	48.50	5.18	4.85	1.53
3	spd_avg_41.5m_W_ch03	41.50	4.83	4.15	1.42
4	spd_avg_41.5m_S_ch04	41.50	4.87	4.15	1.44
5	spd_avg_30m_W_ch05	30.00	4.39	3.00	1.29
6	spd_avg_10m_W_ch06	10.00	3.39	1.00	1.00

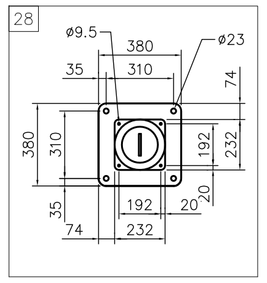
Model	Vsavg(hub) = Vsavg(10m)*k k=C*(H/H10)^(n)
Hub Height (m)	80
C	1
n	0.26
k	1.72

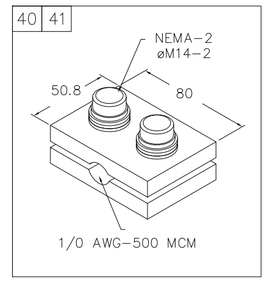
Vsavg - Summer Average Night-time Wind Speed (July, August and Sept)

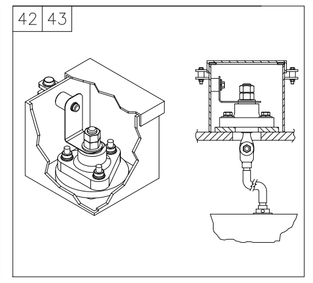
V10 - Vsavg at 10m height

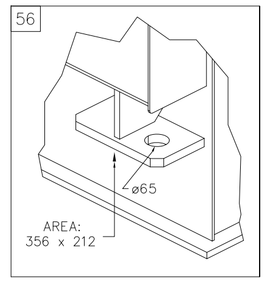


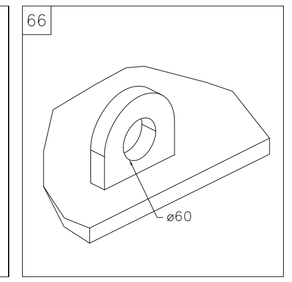


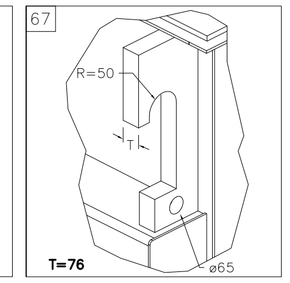


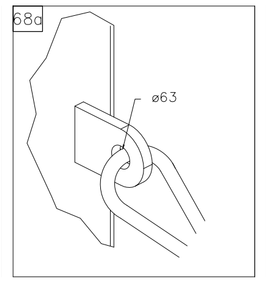


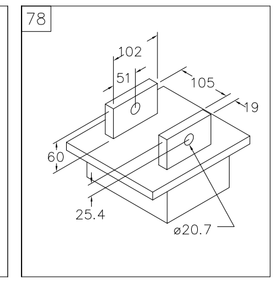


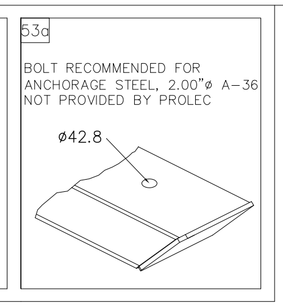












NOTES:

a) ITEMS REMOVED FOR SHIPMENT ARE MARKED WITH (*).

b) NUMBERING IS ACCORDING WITH G.E. PROLEC STD. LIST.

c) THE NUMBER IN COLUMN "GUIDE" CORRESPONDS TO THE "IN-FIELD ASSEMBLY GUIDE"

OPERATION CENTER OF GRAVITY

SHIPPING CENTER OF GRAVITY

TOLERANCES		
Centerline distance of not inclined bushings		±.25 [±6]
Centerline distance of inclined bushings		+1.00 [+25] -.60 [-15]
Bushings height (distance to floor)		±.50 [±12]
Outlet of control cabinet distance		±.25 [±6]
HV & LV bushings center line		±.25 [±6]
Bushings & surge arrester center line		±.25 [±6]
Surge arrester height (distance to floor)		±.50 [±12]
Center tank distance to short side		±.50 [±12]
Center tank distance to large side		±.50 [±12]
Conservator height		±.50 [±12]
Anchoring center line		±.12 [±3]
Bracing base center line		±.06 [±1]
Pattern distance		-.16 [-4]
Outline Dimensions	0-118.00 [0-3000]	±1.00 [±25]
	118.00-197.00 [3000-5000]	±1.50 [±40]
	197.00 & Above [5000 & Above]	±2.00 [±50]

GENERAL ELECTRIC CANADA
PO N° 512-03114
GE Req N° TD7-04340
01 BLUEWATER
PROLEC GE Serial N° G2992-01...03

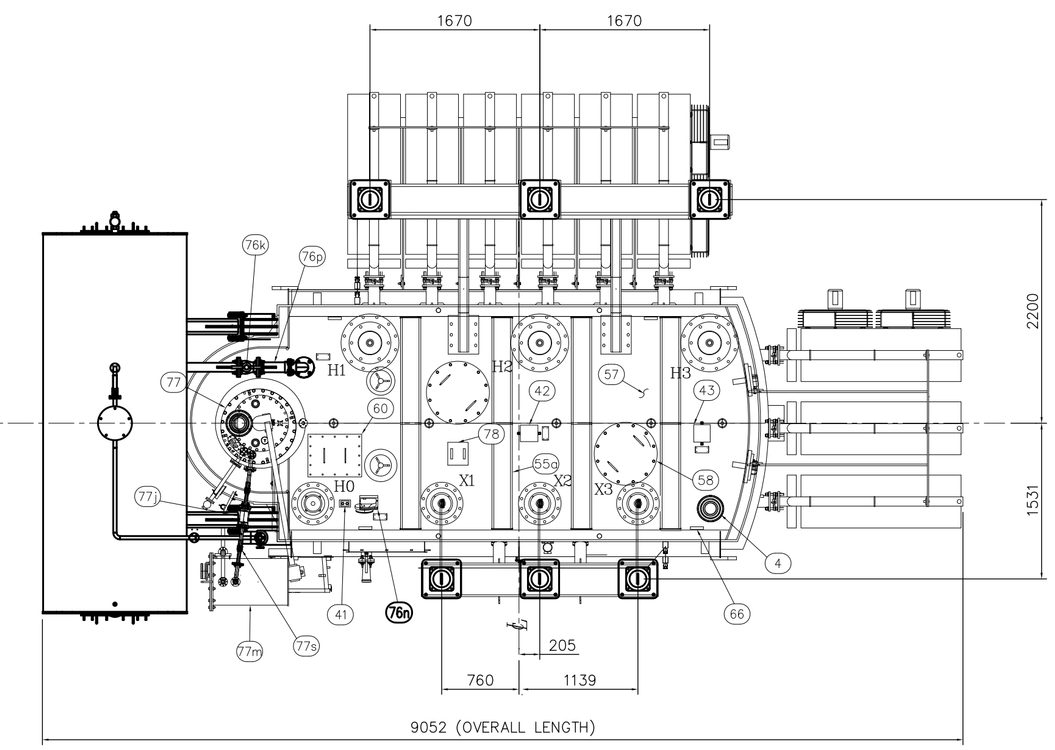
PROLEC

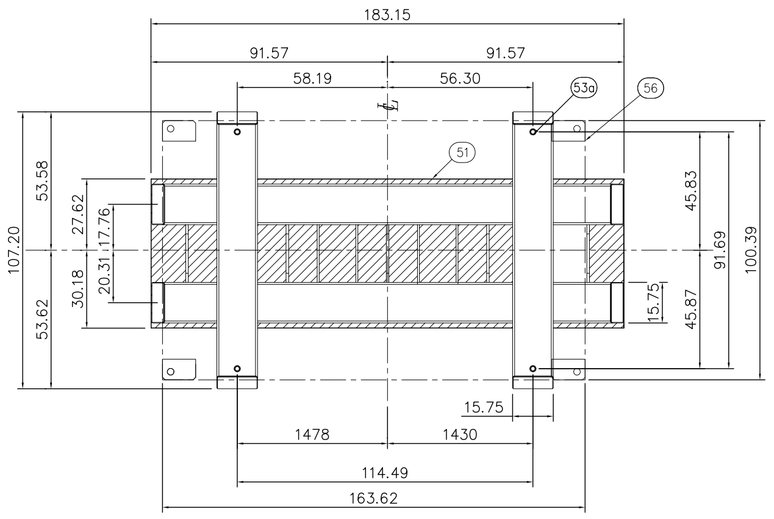
APPROVAL DRAWING
01 / 21 / 2013

DEAR CUSTOMER
WE WANT TO SERVE YOU BETTER. PLEASE REVIEW THIS DRAWING AND SEND BACK WITH YOUR COMMENTS TO PROLEC-GE IN THE TIMEFRAME OF 10 DAYS AFTER THE DATE MARKED IN THIS STAMP.

TRANSFORMER
ONAN/ONAF/ONAF, 51/68/85 MVA
60 HZ THREE PHASE, 65°C, 1000 MASL
121/69.86 KV Δ – 34.5 KV ◁

APPROXIMATE WEIGHTS (KGS)	
CORE AND COILS	44539
TANK AND FITTINGS	29282
MAIN TANK INSULATING LIQUID (28149 LTS)	25334
COOLING EQUIPMENT INSULATING LIQUID (3011 LTS)	2710
CONSERVATOR TANK INSULATING LIQUID (2003 LTS)	1803
LTC CONSERVATOR TANK INSULATING LIQUID (57 LTS)	51
LTC TANK INSULATING LIQUID (130 LTS)	117
TOTAL WEIGHT	103836
UNTANKING WEIGHT (HEAVIEST PIECE)	29282
SHIPPING WEIGHT (WITHOUT INSULATING LIQUID)	59106

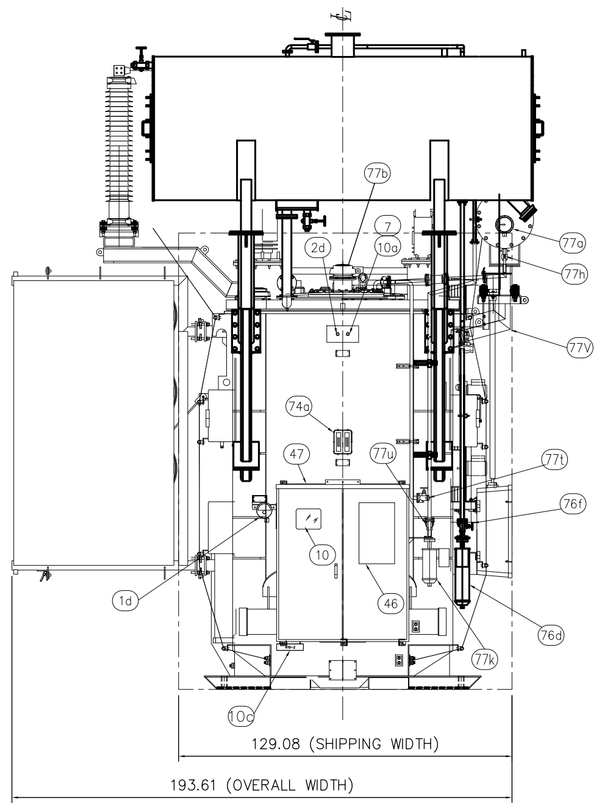


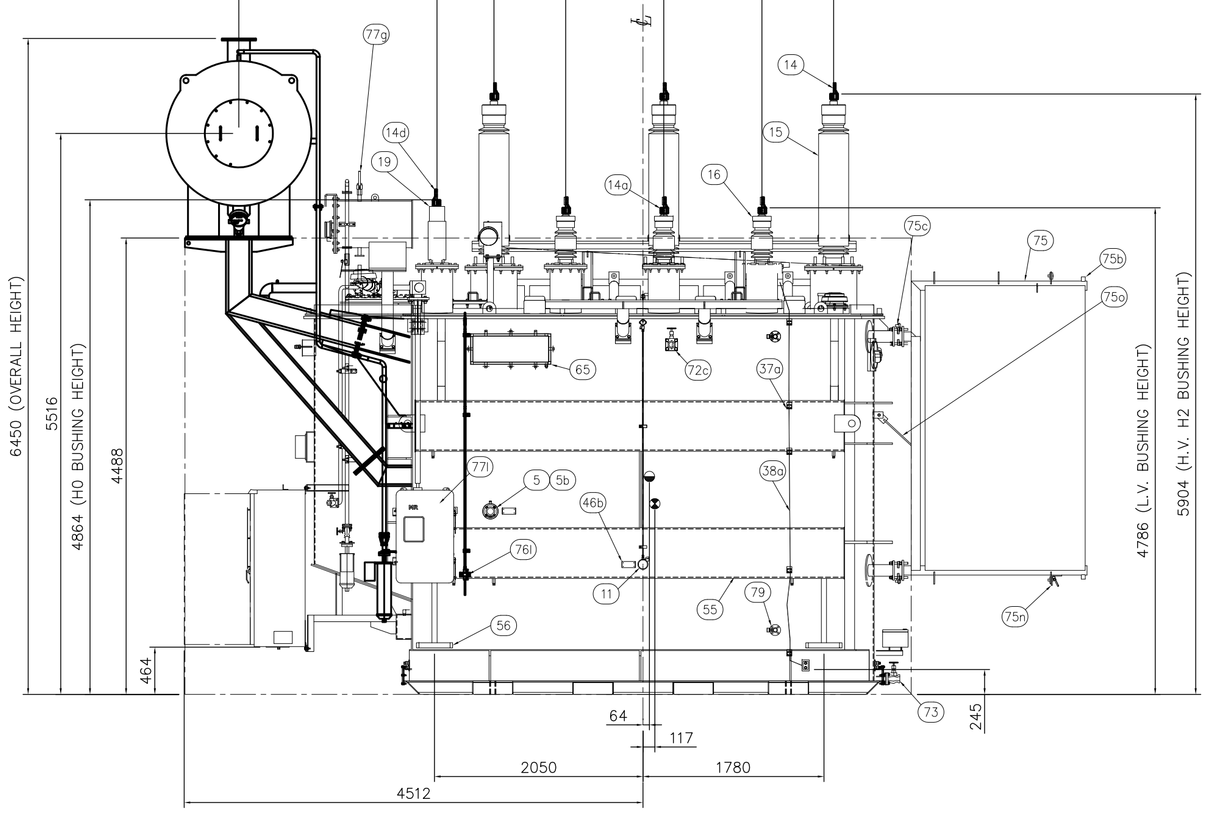


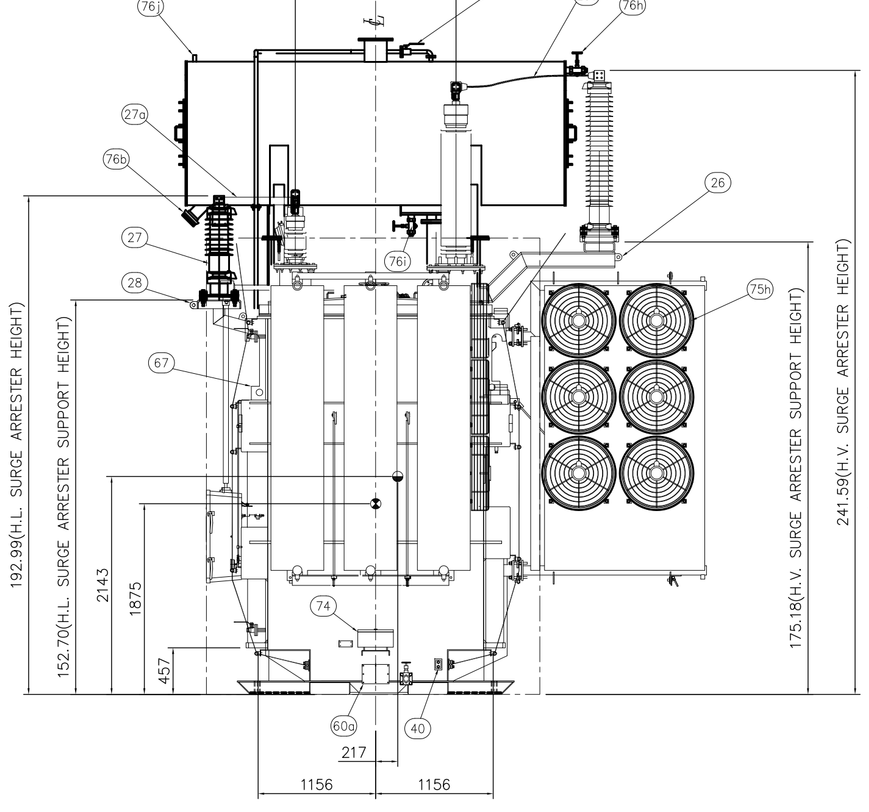
SECTION A – A

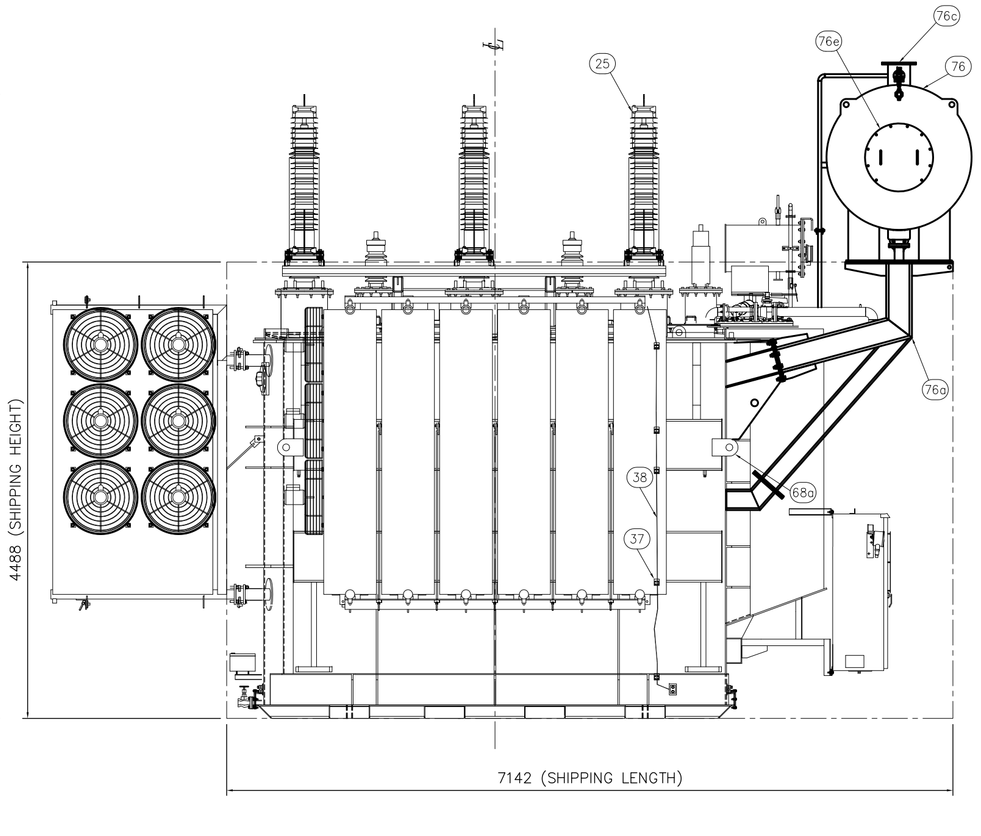
* THE HATCHED AREA REPRESENT THE BOTTOM OF THE TRANSFORMER, THIS AREA IS NOT IN CONTACT WITH FOUNDATION OR PAD

GUIDE		QTY.	ITEM	DESCRIPTION	CAT./MOD.
		1	1d	LIQUID TEMPERATURE INDICATOR (26Q-1)	QUALITROL, 104-685-03
		1	2d	THERMO-WELL FOR LIQUID TEMPERATURE INDICATOR	
5.4	*	1	4	PRESSURE RELIEF DEVICE WITH SEMAPHORE (63PR-1)	QUALITROL, 208-60F
5.6	*	1	5	RAPID PRESSURE RELAY (OIL) (63PR-1)	QUALITROL, 900-003-02
			5b	RAPID PRESSURE RELAY VALVE (2.00 ø) BALL-TYPE	
		1	7	THERMO-WELL FOR RESISTANCE TEMPERATURE DEVICE FOR ETM (TOP)	
		1	10	ELECTRONIC TEMPERATURE MONITOR (INSIDE CONTROL CABINET)	APT, ECLIPSE-000H
		1	10a	RESISTANCE TEMPERATURE DEVICE FOR ETM (TOP OIL) RTD-1	
		1	10c	RESISTANCE TEMPERATURE DEVICE FOR ETM (AMBIENT) RTD-2	
		1	11	PRESSURE-VACUUM GAUGE FOR SHIPPING	QUALITROL, 050-35E
5.15	*	3	14	H.V. BUSHING EXTERNAL CONNECTOR	BURNDY, FD67C12W
5.15	*	3	14a	L.V. BUSHING EXTERNAL CONNECTOR	BURNDY, FD67C12W
5.15	*	1	14d	NEUTRAL BUSHING HO EXTERNAL CONNECTOR	BURNDY, FD67C12W
3.2	*	3	15	H.V. BUSHING	PCORE, P0C6500G800S
3.2	*	3	16	L.V. BUSHING	PCORE, B88823-70
3.2	*	1	19	NEUTRAL BUSHING HO	ABB 034Z0412UT
4.2	*	3	25	H.V. SURGE-ARRESTERS	SIEMENS, 3EQ4 108-2PK31-4NH5
	*	3	25a	H.V. BUSHING TO SURGE-ARRESTER FLEXIBLE CONNECTOR	
4.1	*	1	26	H.V. SURGE-ARRESTER SUPPORT	
4.2	*	3	27	L.V. SURGE-ARRESTER	SIEMENS 3EQ4 045-2PD31-4NH5
	*	3	27a	L.V. BUSHING TO SURGE-ARRESTER FLEXIBLE CONNECTOR	
4.1	*	1	28	L.V. SURGE-ARRESTER SUPPORT	
	*	5	37	H.V. SURGE-ARRESTERS GROUND CABLE CONNECTOR	
	*	5	37a	L.V. SURGE-ARRESTERS GROUND CABLE CONNECTOR	
	*	1	38	H.V. SURGE-ARRESTERS COPPER GROUND CABLE	
	*	1	38a	L.V. SURGE-ARRESTERS COPPER GROUND CABLE	
		5	40	GROUND PAD	
		1	41	NEUTRAL HO GROUND PAD	
		1	42	CORE GROUND BUSHING TERMINAL BOX (MAIN UNIT)	
		1	43	FRAME GROUND BUSHING BOX	
		1	46	NAMEPLATE	
		1	46b	IDENTIFICATION NAMEPLATE	
		1	47	CONTROL CABINET	
		1	51	REINFORCED BASE WELDED TO TANK	
		4	53a	TRANSFORMER ANCHOR PADS EXTENSIONS	
		5	55	TANK BRACES	
		4	55a	COVER BRACES	
		4	56	JACKING PADS AND PULLING EYES	
		1	57	MAIN COVER	
		2	58	INSPECTION MANHOLE (COVER)	
		1	60	INSPECTION RECTANGULAR MANHOLE (COVER)	
		2	60a	INSPECTION RECTANGULAR HANDHOLE (WALL)	
		3	65	CT TERMINAL BOX	
		4	66	LIFTING EYE COVER ONLY	
		4	67	LIFTING HOOK FOR LIFTING COMPLETE UNIT	
		4	68a	SHIPPING LUGS FOR SECURING THE UNIT LONGITUDINALLY (LONG LUGS)	
		1	72c	TOP FILTER PRESS VALVE (50.8 ø) GLOBE-TYPE	
		1	73	MAIN TANK DRAIN VALVE (50.8ø) GLOBE-TYPE WITH SAMPLING DEVICE (9.65) AND PLUG	
		1	74	IMPACT RECORDER FOR SHIPPING	
			74a	ELECTRONIC IMPACT RECORDER FOR SHIPPING	
1.3	*	9	75	COOLING RADIATORS	
		18	75b	RADIATOR VENT AND DRAIN PLUG (25.4 ø)	
		18	75c	RADIATOR VALVE BUTTERFLY-TYPE (101.6 ø)	
		12	75h	COOLING FAN	KRENZ, F26D-A9712
1.4	*	4	75n	TOP/BOTTOM RADIATOR SUPPORTS	
1.2	*	7	75o	RADIATOR BRACE	
2.3	*	1	76	CONSERVATOR TANK WITH INTERNAL BLADDER	
2.1	*	2	76a	CONSERVATOR TANK SUPPORT	
2.2	*	1	76b	CONSERVATOR MAGNETIC LIQUID LEVEL GAUGE (71Q-1)	QUALITROL, 042-144-07
		1	76c	HANDHOLE TO INSTALL BLADDER	
5.8	*	1	76d	SILICA-GEL BREATHER WITH PIPE	MESSKO, DB200-RM-T
		1	76e	CONSERVATOR MANHOLE	
5.8	*	1	76f	SILICA-GEL SHUT OFF VALVE (12.7 ø) BALL-TYPE	
		1	76g	CONSERVATOR PRESSURE EQUALIZATION VALVE (25.4 ø) GLOBE-TYPE	
		1	76h	CONSERVATOR FILL VALVE (50.8 ø) GLOBE-TYPE	
		1	76i	CONSERVATOR DRAIN VALVE (50.8 ø) GLOBE-TYPE	
		1	76j	CONSERVATOR TANK NIPPLE FOR VENT WITH CAP	
2.2	*	1	76k	CONSERVATOR TANK TO MAIN TANK VALVE (76.2 ø) BALL-TYPE	
		1	76l	GAS SAMPLING DEVICE	
5.13	*	1	76n	GAS ACCUMULATION DEVICE (63Q-1)	QUALITROL, 038-002-02
2.4	*	1	76p	EXPANSION JOINT FOR PIPING	
		1	77	ON-LOAD TAP-CHANGER	MR, VMIII650Y-72.5-B18353W
		1	77a	LTC MAGNETIC LIQUID LEVEL GAUGE (71Q-2)	QUALITROL, 032-088-01 CS32146
5.4	*	1	77b	LTC PRESSURE RELIEF DEVICE (63PR-4)	QUALITROL, 208-607
		1	77g	LTC TOP FILTER PRESS VALVE (1.00 ø) BALL-TYPE	
		1	77h	LTC DRAIN VALVE (1.00 ø) BALL-TYPE WITH SAMPLING DEVICE (0.38 ø) AND PLUG	
	*	1	77j	LTC PROTECTIVE RELAY RS-2003	
5.8	*	1	77k	LTC SILICA-GEL BREATHER WITH PIPE (AFDB-1)	MESSKO, DB100RM-HT
		1	77l	LTC MOTOR DRIVE CABINET	
5.7	*	1	77m	LTC CONSERVATOR TANK	
		2	77s	LTC VALVE (1.00 ø) BALL-TYPE	
	*	1	77t	LTC SUCTION VALVE (1.00 ø) GLOBE-TYPE	
5.8	*	1	77u	SILICA-GEL SHUT OFF VALVE (1.00 ø) GLOBE-TYPE	
2.1	*	1	77v	LTC CONSERVATOR TANK SUPPORT	
		1	78	TETHER POLE MOUNTING PLATE	
		2	79	VALVES FOR INSTALLATION OF A KELMAN MINITRANS DGA MONITOR (BALL TYPE)	









REV	DESCRIPTION	DESIGN GROUP	3

PROLEC GE ENGINEERING POWER DIVISION
http://www.prolecge.com

TITLE: TRANSFORMER'S OUTLINE

DFTM: CTC 01/18/2013
CHKD: CSP 01/18/2013

PROJECTION
SCALE: 1:45
DIMENSIONS: IN
REVISION: INDICATED
DRAWING NO.: G299201D801
sheet: 1 of 1

D-ANSI PROLEC

AECOM

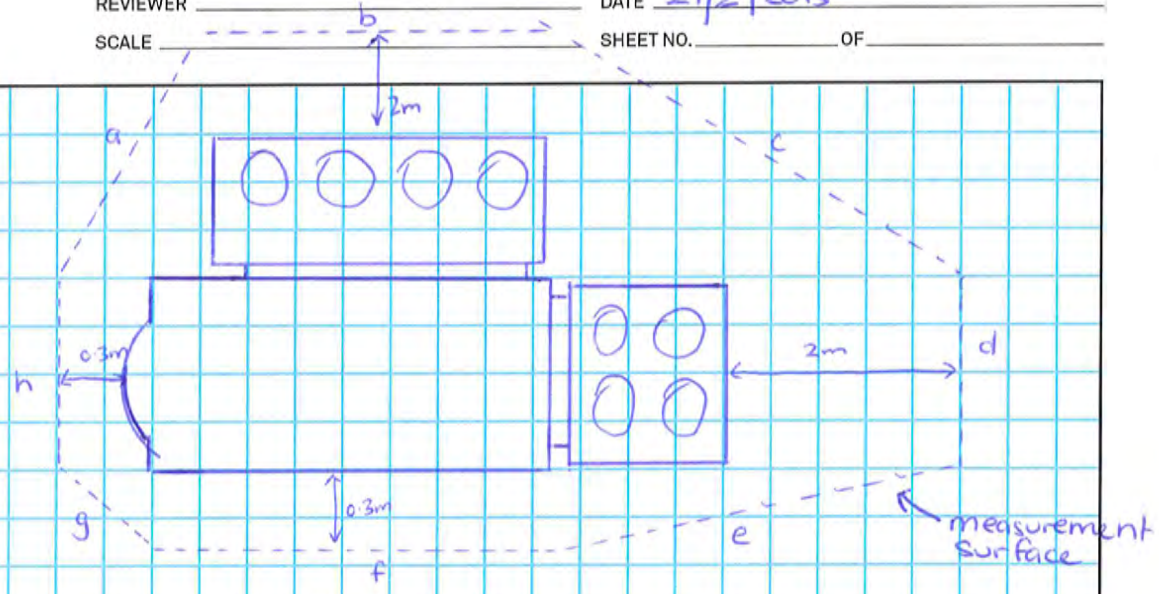
JOB TITLE Nextera - Bluewater

JOB NO. 60155032 CALCULATION NO. Measurement Area - Genset

ORIGINATOR AD DATE

REVIEWER DATE 21/2/2013

SCALE SHEET NO. OF



Vertical areas = Perimeter × [height + 0.3m]

$a = \sqrt{(2.03+2)^2 + (1.82+0.3)^2} = 4.46m$

$b = 3.53m$

$c = \sqrt{(2.37+2)^2 + (2.03+2)^2} = 5.94m$

$d = 2.30m$

$e = \sqrt{(2.37+2)^2 + (0.3)^2} = 4.38m$

$f = 4.50m$

$g = \sqrt{(0.3)^2 + (1.10+0.3)^2} = 1.43m$

$h = 2.30m$

Perimeter = a+b+c+d+e+f+g+h

= 28.84m

Height = 4.48m

∴ Vertical area = 28.84 × 4.78

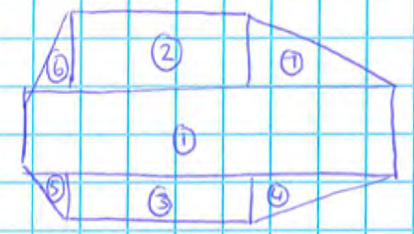
= ~~129.2m²~~ 137.86m²

Grid: 4x4 = 1"

AECOM

JOB TITLE Nextera - Bluewater
JOB NO. 60155032 CALCULATION NO. Measurement Area Genset
ORIGINATOR AD DATE
REVIEWER DATE 21/2/2013
SCALE SHEET NO. OF

Top Area Calc



① ... Area = [(1.1+0.3)+4.5+(2.37+2)] × 2.3
= 23.62m²

② ... Area = 3.53 × (2.03+2)
= 14.23m²

③ ... Area = 4.5 × 0.3
= 1.35m²

④ ... Area = ½[(2.37+2) × (0.3)]
= 0.66m²

⑤ ... Area = ½[(1.1+0.3) × (0.3)]
= 0.21m²

⑥ ... Area = ½[(2.03+2) × (1.62+0.3)]
= 3.87m²

⑦ ... Area = ½[(2.37+2) × (2.03+2)]
= 8.81m²

Cross-sectional area = 52.75m²

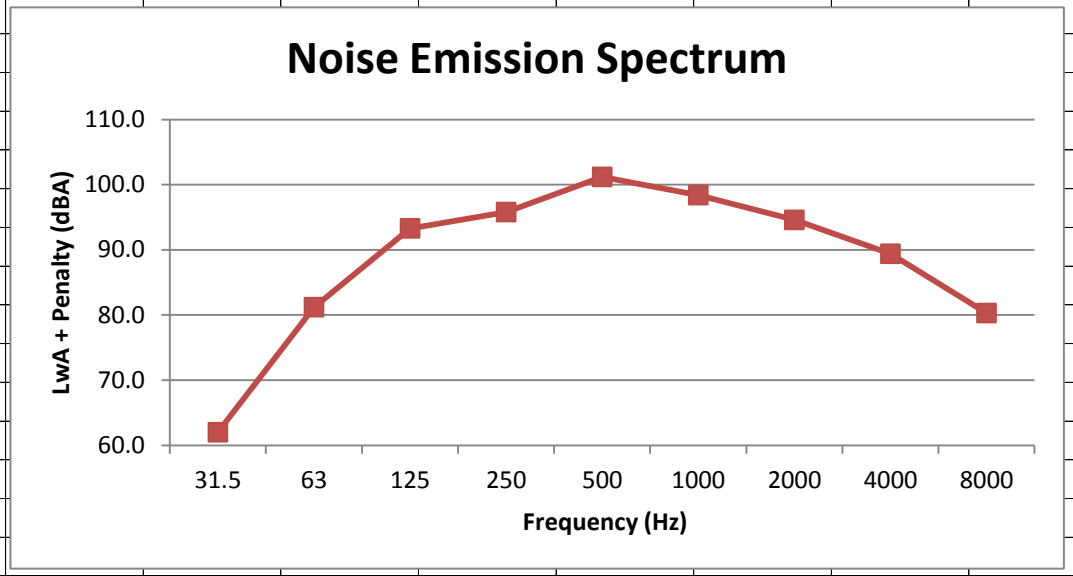
Total Area = 52.75+137.86

Total Area = 190.6m²

Grid: 4x4 = 1"

Transformer Noise Emissions

Noise Rating	**77.0**	**dBA**
Measurement Surface Area	190.6	m^2
Sound Power Level	99.8	dBA
Tonal Penalty	5.0	dB
Sound Power Level	104.8	dBA



Octave Band Emission Estimates

Centre Frequency	Corr[1]	Ncor[2]	Lw	LwA	Tonal Penalty	Lw + Penalty	LwA + Penalty
31.5	-1.0	-2.4	96.4	57.0	5.0	101.4	62.0
63	5.0	-2.4	102.4	76.2	5.0	107.4	81.2
125	7.0	-2.4	104.4	88.3	5.0	109.4	93.3
250	2.0	-2.4	99.4	90.8	5.0	104.4	95.8
500	2.0	-2.4	99.4	96.2	5.0	104.4	101.2
1000	-4.0	-2.4	93.4	93.4	5.0	98.4	98.4
2000	-9.0	-2.4	88.4	89.6	5.0	93.4	94.6
4000	-14.0	-2.4	83.4	84.4	5.0	88.4	89.4
8000	-21.0	-2.4	76.4	75.3	5.0	81.4	80.3
Overall Sound Power Level			108.4	**99.8**		113.4	**104.8**

1. Correction from "Engineering Noise Control", David A. Bies and Colin H. Hansen

2. Normalization correction to ensure total sound power after band corrections does not exceed measured overall value

Appendix C: Noise Impact Summary Table

Notes to Table:

1. As per section 6.1 a), of PIBS 4709e, points of reception up to 2000 metres are identified in the table and the project site plan. However, as per sections 6.3 and 6.4.1 noise levels have only been predicted for points of reception within 1500 metres of a Project wind turbine. Therefore the noise level results for points of reception at distances of greater than 1500 metres from the nearest Project wind turbine appear as dashes (-). The associated limits and compliance columns also appear as dashes (-) for these entries as compliance assessment is not required by the guideline.
2. Participating receptors are not subject to the MOE noise limits and in these cases the noise limit entries are represented as dashes (-), in such cases the associated compliance column also appears as a dash (-) since a compliance assessment is not required.

Table Abbreviations:

NP	–	Non-participating Point of Reception
VNP	–	Non-participating Vacant Lot Point of Reception
PR	–	Participating Point of Reception
VPR	–	Participating Vacant Lot Point of Reception
C	–	Compliant with MOE sound level limits for Wind Turbines in Class 3 areas (See Table 1)
NC	–	Not Compliant with MOE sound level limits for Wind Turbines in Class 3 areas (See Table 1)

Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW1001	NP	4.5	452716	4819982	1747.7	B_WTG33	5246.6	-	-	-	-	-	-	-	-	-	-	-	
BLW1008	NP	4.5	452861	4819810	1797.0	B_WTG33	5208.8	-	-	-	-	-	-	-	-	-	-	-	
BLW1009	NP	4.5	452975	4819923	1947.9	B_WTG33	5369.0	-	-	-	-	-	-	-	-	-	-	-	
BLW1015	NP	7.5	452028	4819238	824.3	B_WTG33	4236.0	34.2	34.3	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1016	NP	4.5	451901	4819226	697.5	B_WTG33	4149.2	35.2	35.2	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1021	NP	4.5	451880	4818508	874.1	B_WTG33	3585.7	34.4	34.4	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1024	NP	4.5	452003	4818344	1075.3	B_WTG33	3556.9	33.3	33.3	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1026	NP	4.5	452128	4818421	1122.7	B_WTG33	3700.8	32.7	32.7	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1027	NP	7.5	451823	4817878	1016.4	B_WTG34	3113.7	34.6	34.6	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1028	NP	4.5	452178	4817946	1364.0	B_WTG34	3435.7	32.3	32.3	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1030	NP	4.5	452194	4817967	1387.3	B_WTG34	3461.0	32.2	32.2	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1031	NP	4.5	452170	4818065	1390.9	B_WTG33	3501.4	32.3	32.3	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1046	NP	4.5	452189	4817338	1252.7	B_WTG34	3122.7	33.2	33.2	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1047	NP	4.5	452410	4817374	1473.0	B_WTG34	3336.3	32.1	32.1	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1050	NP	4.5	452481	4817018	1539.5	B_WTG35	3262.1	-	-	-	-	-	-	-	-	-	-	-	
BLW1055	NP	4.5	452231	4816587	1041.6	B_WTG35	2897.6	34.7	34.7	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1056	NP	4.5	452351	4816785	1273.1	B_WTG35	3065.3	33.6	33.6	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1058	NP	4.5	452456	4816598	1186.6	B_WTG35	3119.2	33.9	33.9	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1062	NP	4.5	452173	4816186	693.2	B_WTG35	2772.4	37.1	37.1	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1064	NP	4.5	452596	4816249	955.8	B_WTG37	3199.7	35.0	35.0	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1071	NP	4.5	452512	4815782	803.8	B_WTG37	3099.4	37.0	37.0	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1081	NP	4.5	452468	4815222	729.5	B_WTG36	3128.2	36.9	36.9	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1082	NP	4.5	452630	4814974	909.8	B_WTG37	3346.8	35.2	35.2	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1091	NP	4.5	452471	4814580	1073.7	B_WTG36	3330.5	33.5	33.5	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1092	NP	4.5	452720	4814614	1137.5	B_WTG37	3547.8	33.0	33.1	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1095	NP	7.5	452712	4814027	1657.5	B_WTG36	3793.9	-	-	-	-	-	-	-	-	-	-	-	
BLW1101	NP	7.5	452536	4813655	1894.1	B_WTG36	3846.9	-	-	-	-	-	-	-	-	-	-	-	
BLW1102	NP	4.5	452790	4813723	1939.6	B_WTG37	4018.4	-	-	-	-	-	-	-	-	-	-	-	
BLW1201	NP	4.5	454391	4816369	1342.0	B_WTG37	4997.7	28.1	28.1	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1202	NP	4.5	454202	4816342	1175.2	B_WTG37	4807.0	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1216	NP	4.5	454276	4814460	1501.6	B_WTG37	5070.9	-	-	-	-	-	-	-	-	-	-	-	
BLW1219	NP	4.5	454317	4814801	1295.6	B_WTG37	5024.6	28.3	28.3	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1456	NP	4.5	448480	4821106	573.4	B_WTG19	5285.4	36.2	36.2	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1457	NP	4.5	448504	4821445	898.5	B_WTG19	5615.4	32.3	32.3	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1459	NP	4.5	447506	4821041	857.4	B_WTG19	5480.2	34.0	34.0	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1460	NP	4.5	447506	4821060	867.6	B_WTG19	5498.1	33.9	33.9	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1462	NP	4.5	448851	4810775	841.3	B_WTG40	5159.9	33.7	33.7	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1464	NP	4.5	450246	4809056	1847.1	B_WTG31	6898.2	-	-	-	-	-	-	-	-	-	-	-	
BLW1466	NP	4.5	450316	4814708	878.5	B_WTG28	1497.4	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1503	NP	4.5	452223	4818521	1149.1	B_WTG33	3838.4	32.2	32.2	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1504	NP	4.5	450994	4818217	838.9	B_WTG34	2800.6	37.4	37.4	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1506	NP	7.5	450953	4820637	1579.6	B_WTG33	4976.6	-	-	-	-	-	-	-	-	-	-	-	
BLW1508	NP	4.5	451511	4816988	626.5	B_WTG41	2359.7	38.3	38.4	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1509	NP	4.5	451530	4816963	636.9	B_WTG41	2365.3	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1517	NP	7.5	448312	4815825	786.7	B_WTG24	1105.8	39.1	39.1	39.2	39.2	39.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1518	NP	4.5	444866	4815487	831.0	B_WTG02	4568.1	34.5	34.5	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1528	NP	4.5	446340	4822173	1343.6	B_WTG07	6982.5	28.6	28.6	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1535	NP	4.5	448490	4814964	700.4	B_WTG25	1318.8	39.0	39.0	39.1	39.1	39.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1536	NP	4.5	448465	4814070	835.3	B_WTG26	2065.4	38.5	38.6	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1540	NP	4.5	448512	4813159	1113.0	B_WTG27	2889.7	36.8	36.8	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1541	NP	4.5	448712	4813008	1071.9	B_WTG27	2980.1	36.5	36.5	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1543	NP	4.5	446743	4813748	848.2	B_WTG16	3433.4	37.3	37.3	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1545	NP	4.5	446361	4814325	848.9	B_WTG15	3438.0	35.9	35.9	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1554	NP	7.5	444925	4811345	963.8	B_WTG04	6398.8	33.7	33.7	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1556	NP	7.5	445271	4811107	786.1	B_WTG05	6339.1	35.5	35.5	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1571	NP	4.5	446754	4811638	1029.7	B_WTG18	5027.9	34.7	34.7	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1572	NP	4.5	446750	4811613	1052.6	B_WTG18	5051.2	34.7	34.7	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1573	NP	4.5	446761	4811539	1108.8	B_WTG18	5108.5	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1574	NP	4.5	446757	4811584	1072.9	B_WTG18	5072.2	34.6	34.6	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1575	NP	4.5	446815	4811680	960.8	B_WTG18	4960.1	34.9	34.9	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1576	NP	4.5	446825	4811467	1140.4	B_WTG18	5137.6	34.3	34.3	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1577	NP	4.5	446803	4811488	1132.0	B_WTG18	5130.7	34.3	34.3	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1578	NP	4.5	446621	4811482	1054.4	B_WTG05	5230.7	34.6	34.6	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1579	NP	4.5	446597	4811449	1013.7	B_WTG05	5271.4	34.7	34.7	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1580	NP	4.5	446681	4811491	1101.1	B_WTG05	5191.3	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1581	NP	4.5	446742	4811496	1146.9	B_WTG05	5155.1	34.4	34.4	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1582	NP	4.5	446771	4811465	1146.2	B_WTG05	5166.8	34.3	34.3	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1583	NP	4.5	446760	4811450	1127.9	B_WTG05	5185.3	34.3	34.3	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1584	NP	4.5	446771	4811500	1137.2	B_WTG18	5136.7	34.4	34.4	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1585	NP	4.5	446758	4811496	1147.2	B_WTG18	5146.9	34.4	34.4	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1586	NP	4.5	446702	4811492	1116.2	B_WTG05	5179.4	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1587	NP	4.5	446821	4811641	990.5	B_WTG18	4990.2	34.7	34.7	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1588	NP	4.5	451832	4819967	1078.2	B_WTG33	4727.6	31.6	31.6	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1589	NP	4.5	451814	4820152	1226.1	B_WTG33	4878.6	30.6	30.6	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1590	NP	4.5	452134	4820091	1363.6	B_WTG33	4992.4	29.6	29.6	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1591	NP	4.5	452087	4820099	1338.6	B_WTG33	4973.7	29.7	29.8	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1592	NP	4.5	452044	4820112	1321.2	B_WTG33	4961.7	29.9	29.9	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1593	NP	4.5	451964	4820159	1311.2	B_WTG33	4960.1	30.0	30.0	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1594	NP	4.5	451998	4820142	1317.1	B_WTG33	4963.1	29.9	29.9	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1595	NP	4.5	451922	4820170	1297.0	B_WTG33	4948.1	30.1	30.1	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1596	NP	4.5	451894	4820179	1289.7	B_WTG33	4941.8	30.2	30.2	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1597	NP	4.5	451871	4820189	1286.5	B_WTG33	4938.9	30.2	30.2	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1598	NP	4.5	451852	4820193	1280.4	B_WTG33	4933.0	30.2	30.3	30.4	30.4	30.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1599	NP	4.5	451817	4820125	1204.0	B_WTG33	4856.6	30.8	30.8	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1601	NP	4.5	451822	4820097	1182.3	B_WTG33	4834.8	30.9	30.9	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1602	NP	4.5	451735	4820234	1264.1	B_WTG33	4912.4	30.4	30.4	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1603	NP	4.5	451765	4820231	1273.9	B_WTG33	4924.0	30.4	30.4	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	C	

Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW1604	NP	4.5	451704	4820252	1268.4	B_WTG33	4913.7	30.4	30.4	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1605	NP	4.5	451812	4820175	1245.3	B_WTG33	4897.7	30.5	30.5	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1606	NP	4.5	451786	4820222	1275.0	B_WTG33	4926.1	30.3	30.3	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1607	NP	4.5	452154	4820146	1417.9	B_WTG33	5049.4	29.1	29.1	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1608	NP	4.5	452158	4820212	1470.8	B_WTG33	5107.1	28.8	28.8	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1609	NP	4.5	452094	4820218	1435.5	B_WTG33	5078.2	29.0	29.0	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1610	NP	4.5	452062	4820229	1425.1	B_WTG33	5070.7	29.1	29.1	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1611	NP	4.5	452036	4820238	1417.2	B_WTG33	5064.9	29.2	29.2	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1612	NP	4.5	451939	4820278	1397.7	B_WTG33	5050.0	29.3	29.3	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1613	NP	4.5	451877	4820298	1384.4	B_WTG33	5036.7	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1614	NP	4.5	451962	4820314	1440.4	B_WTG33	5092.7	29.1	29.1	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1615	NP	4.5	451694	4820296	1305.5	B_WTG33	4948.1	30.2	30.2	30.4	30.4	30.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1616	NP	4.5	451739	4820281	1308.7	B_WTG33	4955.7	30.2	30.2	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1617	NP	4.5	451765	4820270	1309.3	B_WTG33	4958.3	30.1	30.1	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1618	NP	4.5	451798	4820257	1311.7	B_WTG33	4962.6	30.1	30.1	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1619	NP	4.5	451828	4820287	1351.9	B_WTG33	5003.3	29.8	29.7	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1620	NP	4.5	451834	4820304	1369.8	B_WTG33	5021.1	29.6	29.6	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	C	
BLW1621	NP	4.5	451908	4820381	1472.2	B_WTG33	5124.3	28.9	28.9	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	C	
BLW1622	NP	4.5	451845	4820376	1439.3	B_WTG33	5089.6	29.2	29.2	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1623	NP	4.5	451848	4820341	1409.2	B_WTG33	5060.3	29.3	29.3	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1624	NP	4.5	451838	4820319	1385.0	B_WTG33	5036.2	29.6	29.5	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1625	NP	4.5	451886	4820340	1425.7	B_WTG33	5077.8	29.2	29.2	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1626	NP	4.5	451871	4820238	1328.9	B_WTG33	4981.5	29.9	29.9	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW1627	NP	4.5	451949	4820208	1343.6	B_WTG33	4994.6	29.8	29.8	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1628	NP	4.5	451997	4820200	1363.7	B_WTG33	5012.2	29.6	29.5	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1629	NP	4.5	451642	4820329	1318.7	B_WTG33	4953.8	30.1	30.1	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW1630	NP	4.5	452118	4820056	1326.9	B_WTG33	4954.3	29.8	29.8	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	C	
BLW1631	NP	4.5	451636	4820151	1149.3	B_WTG33	4792.7	31.3	31.3	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	C	
BLW1632	NP	4.5	451584	4820134	1115.4	B_WTG33	4753.7	31.6	31.6	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	C	
BLW1633	NP	4.5	452051	4820174	1374.4	B_WTG33	5018.1	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	
BLW1634	NP	4.5	452114	4820184	1421.2	B_WTG33	5059.9	29.1	29.1	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	
BLW1635	NP	4.5	452076	4820169	1385.8	B_WTG33	5027.0	29.4	29.4	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	C	
BLW1636	NP	4.5	451608	4820209	1194.1	B_WTG33	4831.4	31.0	31.0	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	C	
BLW193	NP	4.5	447325	4808497	1831.0	B_WTG06	7696.2	-	-	-	-	-	-	-	-	-	-	-	
BLW194	NP	4.5	447007	4808445	1676.4	B_WTG06	7838.1	-	-	-	-	-	-	-	-	-	-	-	
BLW197	NP	4.5	445422	4808224	1754.3	B_WTG06	8656.0	-	-	-	-	-	-	-	-	-	-	-	
BLW2005	NP	4.5	451862	4820147	1245.8	B_WTG33	4898.0	30.5	30.5	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	C	
BLW2006	NP	4.5	451859	4820127	1227.1	B_WTG33	4879.2	30.6	30.6	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	C	
BLW2007	NP	4.5	451827	4820107	1193.5	B_WTG33	4845.9	30.8	30.8	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	C	
BLW2008	NP	4.5	452020	4820139	1327.8	B_WTG33	4972.0	29.8	29.9	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW2009	NP	4.5	451922	4820215	1335.1	B_WTG33	4987.0	29.9	29.9	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW2010	NP	4.5	452015	4820181	1358.6	B_WTG33	5005.3	29.6	29.6	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	C	
BLW2011	NP	4.5	451908	4820235	1344.9	B_WTG33	4997.3	29.8	29.8	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW2012	NP	4.5	451930	4820280	1394.8	B_WTG33	5047.2	29.4	29.4	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	C	
BLW2018	NP	4.5	451823	4820250	1316.7	B_WTG33	4968.5	30.0	30.0	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	
BLW213	NP	4.5	443831	4811088	1991.9	B_WTG04	7373.9	-	-	-	-	-	-	-	-	-	-	-	
BLW298	NP	7.5	443586	4815418	1895.3	B_WTG02	5849.2	-	-	-	-	-	-	-	-	-	-	-	
BLW302	NP	4.5	443603	4815519	1840.9	B_WTG02	5824.7	-	-	-	-	-	-	-	-	-	-	-	
BLW304	NP	4.5	443804	4815876	1546.8	B_WTG02	5611.1	-	-	-	-	-	-	-	-	-	-	-	
BLW306	NP	7.5	443651	4815941	1686.5	B_WTG02	5764.1	-	-	-	-	-	-	-	-	-	-	-	
BLW311	NP	4.5	443795	4816282	1489.0	B_WTG01	5632.7	29.6	29.6	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	C	
BLW318	NP	7.5	443700	4816690	1566.4	B_WTG01	5768.8	-	-	-	-	-	-	-	-	-	-	-	
BLW319	NP	4.5	443702	4816651	1561.4	B_WTG01	5761.6	-	-	-	-	-	-	-	-	-	-	-	
BLW320	NP	4.5	443896	4816683	1370.7	B_WTG01	5573.7	30.1	30.1	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW321	NP	4.5	443838	4816870	1458.0	B_WTG01	5660.0	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	
BLW324	NP	7.5	443866	4817020	1471.7	B_WTG01	5660.1	29.9	29.9	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW325	NP	4.5	443783	4817526	1771.4	B_WTG01	5860.9	-	-	-	-	-	-	-	-	-	-	-	
BLW351	NP	4.5	444266	4821295	1994.5	B_WTG07	7454.9	-	-	-	-	-	-	-	-	-	-	-	
BLW404	NP	4.5	445243	4822570	1983.9	B_WTG07	7863.9	-	-	-	-	-	-	-	-	-	-	-	
BLW419	NP	4.5	445530	4822563	1855.0	B_WTG07	7709.4	-	-	-	-	-	-	-	-	-	-	-	
BLW422	NP	4.5	446033	4822298	1472.3	B_WTG07	7233.3	27.6	27.6	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	C	
BLW423	NP	4.5	446366	4822312	1484.5	B_WTG07	7096.4	27.7	27.7	27.8	27.8	27.8	40.0	43.0	45.0	49.0	51.0	C	
BLW428	NP	4.5	446945	4821981	1362.2	B_WTG07	6559.8	29.4	29.4	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	C	
BLW431	NP	4.5	446655	4821761	1027.8	B_WTG07	6474.7	31.4	31.4	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	C	
BLW436	NP	4.5	447388	4821837	1508.5	B_WTG19	6269.7	-	-	-	-	-	-	-	-	-	-	-	
BLW437	NP	4.5	447607	4821805	1369.0	B_WTG19	6171.8	29.8	29.8	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	
BLW441	NP	7.5	446828	4821122	683.7	B_WTG07	5824.1	35.8	35.8	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW442	NP	4.5	446779	4821263	713.8	B_WTG07	5972.2	34.9	34.9	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	
BLW443	NP	4.5	446780	4821304	739.8	B_WTG07	6008.6	34.5	34.5	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	
BLW444	NP	7.5	445565	4821061	680.3	B_WTG07	6435.6	35.1	35.1	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	C	
BLW445	NP	4.5	445406	4820631	826.8	B_WTG07	6198.1	33.7	33.7	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	
BLW446	NP	4.5	445332	4820631	898.7	B_WTG07	6246.2	33.0	33.0	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	C	
BLW452	NP	4.5	445538	4820277	871.8	B_WTG07	5844.2	34.4	34.4	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW456	NP	4.5	445714	4819842	808.4	B_WTG08	5404.2	35.7	35.7	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW461	NP	4.5	445289	4819595	1266.8	B_WTG08	5536.0	32.7	32.7	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	C	
BLW468	NP	4.5	445692	4819028	798.9	B_WTG09	4860.1	35.9	35.9	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW476	NP	4.5	445932	4818628	663.0	B_WTG10	4421.7	37.7	37.7	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	
BLW478	NP	4.5	445923	4818219	790.9	B_WTG10	4189.7	36.3	36.3	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	C	
BLW479	NP	4.5	445791	4818059	989.6	B_WTG10	4216.3	35.2	35.2	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	C	
BLW484	NP	7.5	446066	4817753	779.4	B_WTG11	3825.5	37.1	37.1	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	C	
BLW487	NP	4.5	445816	4817765	1027.9	B_WTG11	4051.7	35.3	35.3	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	
BLW497	NP	4.5	445924	4817452	921.5	B_WTG11	3818.8	36.2	36.1	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	C	
BLW502	NP	4.5	445999	4817050	893.4	B_WTG01	3603.1	37.2	37.2	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	C	
BLW506	NP	4.5	446013	4816820	800.6	B_WTG01	3523.2	37.8	37.8	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	C	
BLW511	NP	4.5	446220	4816599	687.1	B_WTG12	3269.7	38.3	38.3	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	C	
BLW516	NP	4.5	446341	4816200	775.1	B_WTG13	3088.2	38.1	38.1	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW517	NP	7.5	446062	4816126	744.2	B_WTG02	3360.3	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	

Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW521	NP	4.5	446143	4815818	900.3	B_WTG02	3273.1	36.8	36.8	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	C	
BLW533	NP	4.5	446230	4814992	1064.0	B_WTG15	3313.0	35.5	35.5	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	
BLW541	NP	4.5	446321	4814570	866.2	B_WTG15	3369.3	35.8	35.8	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	C	
BLW542	NP	4.5	446227	4814592	961.3	B_WTG15	3447.4	35.3	35.3	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	C	
BLW545	NP	4.5	446149	4814339	1053.5	B_WTG15	3621.6	34.8	34.8	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	
BLW558	NP	7.5	446307	4813995	1026.4	B_WTG15	3647.5	35.9	36.0	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	C	
BLW561	NP	4.5	446484	4814052	846.5	B_WTG15	3467.1	36.3	36.3	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	C	
BLW566	NP	4.5	446292	4813694	927.5	B_WTG03	3825.9	35.8	35.8	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	C	
BLW574	NP	4.5	446404	4813281	854.7	B_WTG03	3993.3	36.6	36.6	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	C	
BLW576	NP	4.5	446611	4813233	789.3	B_WTG17	3872.6	37.2	37.2	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	C	
BLW580	NP	4.5	446335	4812981	782.1	B_WTG03	4246.2	36.9	36.9	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	C	
BLW582	NP	4.5	446367	4812792	865.7	B_WTG03	4356.0	36.8	36.8	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	C	
BLW584	NP	4.5	446700	4812925	660.1	B_WTG17	4030.6	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW594	NP	4.5	446416	4812421	920.5	B_WTG04	4596.2	36.6	36.6	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	C	
BLW596	NP	4.5	446559	4811621	1085.1	B_WTG04	5147.9	34.9	34.9	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	
BLW604	NP	4.5	446959	4810489	1044.2	B_WTG05	5945.9	33.6	33.6	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	C	
BLW605	NP	4.5	447061	4810636	1129.0	B_WTG05	5770.0	33.0	33.0	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	C	
BLW617	NP	4.5	447100	4810072	1036.7	B_WTG06	6274.7	32.8	32.8	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	C	
BLW620	NP	4.5	446771	4810107	730.8	B_WTG06	6371.5	35.4	35.4	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	
BLW623	NP	4.5	446871	4809721	793.1	B_WTG06	6685.9	34.3	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	
BLW629	NP	4.5	446964	4809340	1012.1	B_WTG06	7006.7	33.2	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	C	
BLW630	NP	4.5	447034	4809421	1037.5	B_WTG06	6906.4	32.8	33.0	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	C	
BLW632	NP	7.5	447213	4809389	1214.7	B_WTG06	6877.1	32.4	32.6	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	
BLW635	NP	4.5	447005	4808850	1354.6	B_WTG06	7454.3	36.0	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	C	
BLW636	NP	4.5	447240	4808839	1530.7	B_WTG06	7392.2	-	-	-	-	-	-	-	-	-	-	-	
BLW639	NP	4.5	444207	4811147	1640.5	B_WTG04	7053.5	-	-	-	-	-	-	-	-	-	-	-	
BLW640	NP	4.5	444903	4811231	1065.1	B_WTG04	6495.8	32.8	32.8	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	C	
BLW644	NP	4.5	445503	4811497	569.7	B_WTG04	5892.8	37.4	37.4	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	C	
BLW648	NP	4.5	445923	4811283	600.1	B_WTG05	5792.0	37.4	37.4	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	C	
BLW653	NP	4.5	445339	4815611	572.3	B_WTG02	4086.5	37.5	37.5	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	C	
BLW654	NP	4.5	444862	4817567	1094.0	B_WTG01	4847.2	32.8	32.8	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	C	
BLW657	NP	4.5	444798	4821334	1494.4	B_WTG07	7127.5	27.8	27.8	27.9	27.9	27.9	40.0	43.0	45.0	49.0	51.0	C	
BLW662	NP	4.5	445105	4821803	1466.1	B_WTG07	7305.8	27.5	27.5	27.6	27.6	27.6	40.0	43.0	45.0	49.0	51.0	C	
BLW663	NP	4.5	445766	4821655	930.2	B_WTG07	6811.0	31.7	31.7	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	C	
BLW667	NP	4.5	444801	4810142	1254.6	B_WTG05	7381.7	31.0	31.0	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	C	
BLW669	NP	4.5	445032	4809792	1057.4	B_WTG06	7521.1	31.9	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	C	
BLW672	NP	4.5	445071	4809291	1159.1	B_WTG06	7912.1	30.5	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	C	
BLW674	NP	4.5	444967	4809319	1239.1	B_WTG06	7946.5	30.0	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW679	NP	4.5	445222	4808616	1505.1	B_WTG06	8408.1	-	-	-	-	-	-	-	-	-	-	-	
BLW691	NP	7.5	449249	4809313	1976.4	B_WTG40	6593.1	-	-	-	-	-	-	-	-	-	-	-	
BLW695	NP	7.5	449050	4809545	1790.1	B_WTG40	6369.5	-	-	-	-	-	-	-	-	-	-	-	
BLW696	NP	4.5	449163	4809875	1442.0	B_WTG40	6034.3	29.8	29.8	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	C	
BLW698	NP	4.5	449208	4809840	1465.3	B_WTG40	6067.5	29.7	29.7	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	C	
BLW702	NP	4.5	448949	4810029	1370.2	B_WTG40	5893.5	30.2	30.2	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW704	NP	4.5	448887	4810397	1084.6	B_WTG40	5532.3	31.8	31.8	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	C	
BLW708	NP	4.5	447570	4811761	758.4	B_WTG18	4535.2	35.5	35.5	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	
BLW709	NP	4.5	447565	4811745	772.2	B_WTG18	4551.9	35.4	35.4	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	
BLW710	NP	4.5	447794	4811706	900.3	B_WTG18	4500.1	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	
BLW713	NP	4.5	447593	4811429	1084.7	B_WTG18	4831.7	33.4	33.4	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	C	
BLW718	NP	4.5	448032	4811861	930.4	B_WTG18	4273.0	34.6	34.6	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	
BLW720	NP	4.5	448112	4811603	1170.7	B_WTG18	4494.0	33.4	33.4	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	C	
BLW724	NP	4.5	448654	4811732	992.6	B_WTG40	4240.8	34.2	34.2	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	C	
BLW726	NP	4.5	448805	4811757	875.6	B_WTG40	4191.6	34.8	34.8	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	C	
BLW727	NP	4.5	448827	4811729	841.8	B_WTG40	4216.2	34.9	34.9	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	C	
BLW731	NP	4.5	448726	4812252	1271.2	B_WTG40	3716.4	34.8	34.8	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	
BLW732	NP	4.5	448801	4812431	1284.2	B_WTG30	3526.9	35.2	35.2	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	
BLW733	NP	7.5	448854	4812387	1242.5	B_WTG30	3561.5	35.6	35.7	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW737	NP	4.5	449373	4811920	670.1	B_WTG40	3984.2	36.9	36.9	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	C	
BLW741	NP	4.5	448506	4812743	1171.8	B_WTG17	3289.1	35.8	35.8	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW744	NP	4.5	448793	4812839	1162.1	B_WTG27	3127.5	36.0	36.0	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	C	
BLW751	NP	4.5	448726	4813151	956.7	B_WTG27	2837.9	37.0	37.0	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	C	
BLW757	NP	4.5	448477	4813613	905.3	B_WTG16	2475.6	37.9	37.9	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	C	
BLW767	NP	4.5	448430	4814471	821.8	B_WTG25	1738.9	38.6	38.6	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	
BLW768	NP	4.5	448438	4814388	853.3	B_WTG25	1803.5	38.6	38.6	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	
BLW769	NP	4.5	448442	4814359	851.2	B_WTG26	1825.9	38.6	38.6	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	
BLW777	NP	4.5	448274	4814915	906.2	B_WTG25	1510.0	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW780	NP	4.5	448221	4815247	996.4	B_WTG14	1362.8	38.1	38.1	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	C	
BLW784	NP	4.5	448115	4815595	911.7	B_WTG14	1336.2	37.6	37.6	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	
BLW785	NP	4.5	448403	4815708	787.3	B_WTG24	1030.8	39.0	39.0	39.1	39.1	39.1	40.0	43.0	45.0	49.0	51.0	C	
BLW789	NP	4.5	448296	4815996	724.0	B_WTG24	1122.8	38.1	38.1	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW790	NP	4.5	448303	4816064	696.3	B_WTG24	1123.5	38.2	38.2	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	C	
BLW791	NP	4.5	448177	4816271	797.3	B_WTG24	1291.3	37.7	37.7	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	
BLW793	NP	7.5	448306	4816489	709.5	B_WTG24	1253.8	38.8	38.9	39.0	39.0	39.0	40.0	43.0	45.0	49.0	51.0	C	
BLW799	NP	4.5	447935	4816765	1003.0	B_WTG13	1712.2	37.0	37.0	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	C	
BLW800	NP	4.5	448015	4817322	1217.3	B_WTG11	1992.7	36.1	36.1	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	C	
BLW807	NP	4.5	448167	4817274	1264.4	B_WTG23	1853.2	36.2	36.2	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	C	
BLW808	NP	7.5	448162	4817660	1180.9	B_WTG38	2157.2	36.4	36.5	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	C	
BLW812	NP	4.5	448050	4817858	1243.2	B_WTG11	2383.6	35.8	35.8	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW813	NP	4.5	447892	4817780	1073.7	B_WTG11	2416.4	35.9	35.9	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	C	
BLW818	NP	4.5	448051	4817946	1255.0	B_WTG38	2455.7	35.8	35.8	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	C	
BLW820	NP	4.5	447478	4818154	845.2	B_WTG11	2968.9	36.6	36.6	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	C	
BLW826	NP	4.5	448002	4818473	1167.3	B_WTG22	2931.9	35.6	35.6	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW828	NP	4.5	447693	4818501	1106.3	B_WTG10	3116.0	35.7	35.7	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW835	NP	4.5	447726	4819318	1255.9	B_WTG09	3809.0	35.1	35.1	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	
BLW836	NP	4.5	447692	4819577	1147.1	B_WTG19	4057.1	35.1	35.1	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	
BLW838	NP	4.5	447701	4819706	1030.5	B_WTG19	4170.5	35.2	35.2	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	
BLW839	NP	4.5	447751	4819841	889.5	B_WTG19	4274.2	35.3	35.3	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	

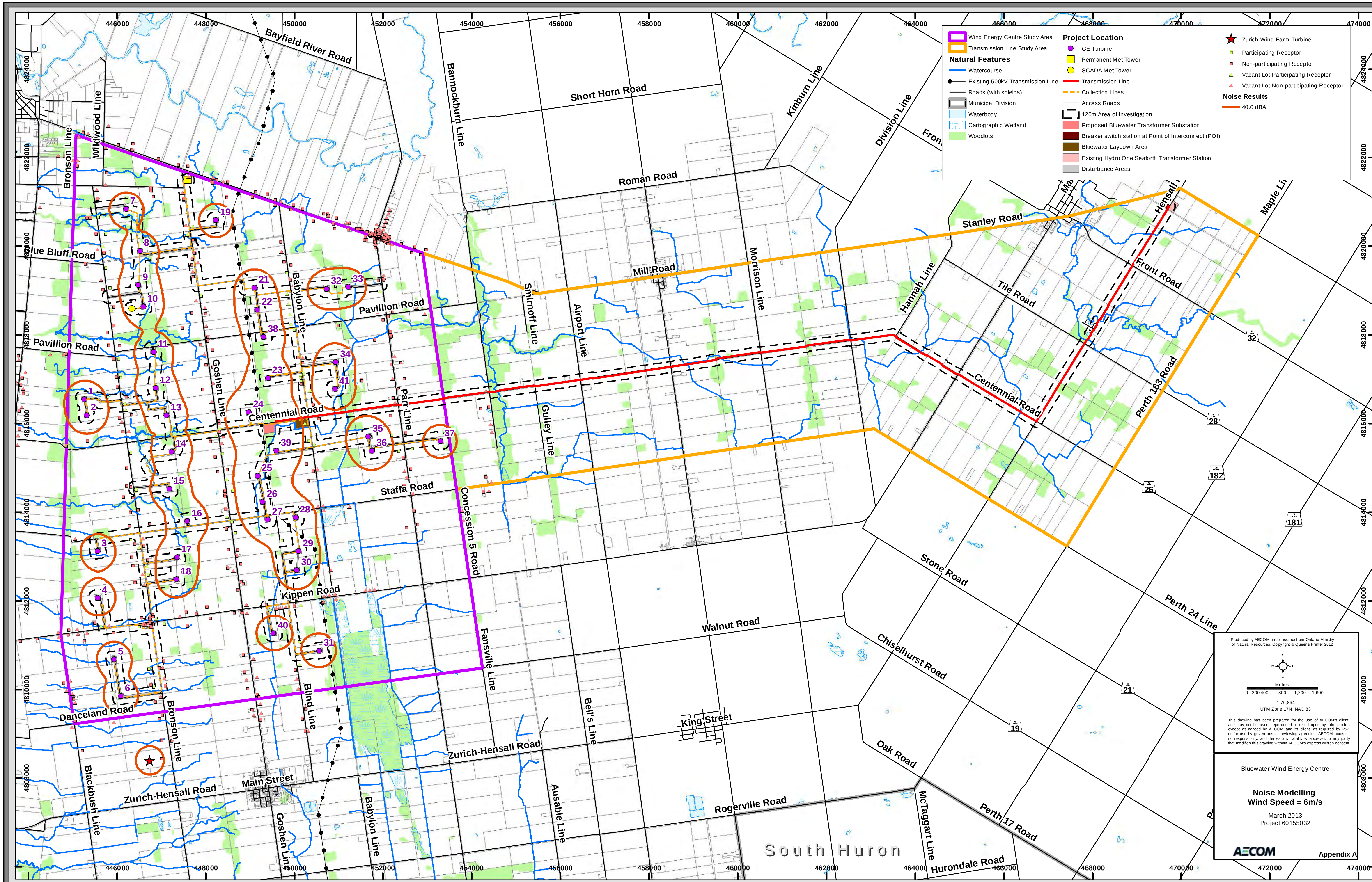
Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW843	NP	7.5	447722	4820143	678.4	B_WTG19	4564.6	36.7	36.7	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	C	
BLW849	NP	4.5	448136	4821461	878.5	B_WTG19	5702.3	32.6	32.6	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	C	
BLW850	NP	7.5	448161	4821425	840.2	B_WTG19	5661.6	33.4	33.4	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	C	
BLW851	NP	4.5	448254	4821507	919.2	B_WTG19	5722.0	32.2	32.2	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	C	
BLW854	NP	4.5	449056	4821111	974.3	B_WTG19	5219.4	32.0	32.0	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	C	
BLW855	NP	4.5	449141	4821227	1109.5	B_WTG19	5330.0	31.0	31.0	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	C	
BLW859	NP	4.5	449392	4821176	1298.7	B_WTG19	5272.1	30.1	30.1	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW862	NP	4.5	449576	4821054	1420.6	B_WTG19	5152.5	30.0	29.9	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW867	NP	4.5	449705	4820097	1198.1	B_WTG21	4203.0	33.2	33.2	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	C	
BLW873	NP	4.5	449771	4819651	890.4	B_WTG21	3763.9	35.5	35.5	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	
BLW874	NP	4.5	449925	4819579	970.4	B_WTG21	3710.2	35.6	35.6	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW879	NP	4.5	449918	4819237	832.0	B_WTG21	3370.7	37.2	37.2	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	C	
BLW884	NP	4.5	450135	4818082	839.0	B_WTG38	2293.9	37.7	37.7	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	C	
BLW894	NP	4.5	450086	4817495	828.3	B_WTG23	1726.7	38.5	38.5	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	C	
BLW895	NP	4.5	450192	4817377	745.0	B_WTG34	1665.4	38.7	38.7	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	
BLW906	NP	4.5	450162	4816901	765.6	B_WTG23	1245.8	39.2	39.2	39.3	39.3	39.3	40.0	43.0	45.0	49.0	51.0	C	
BLW912	NP	4.5	450434	4816422	603.6	B_WTG41	1143.1	39.3	39.3	39.4	39.4	39.4	40.0	43.0	45.0	49.0	51.0	C	
BLW920	NP	4.5	450275	4815091	736.6	B_WTG39	1183.5	38.7	38.7	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	
BLW922	NP	4.5	450438	4814928	954.3	B_WTG39	1413.9	37.6	37.6	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	
BLW933	NP	4.5	450060	4812047	647.0	B_WTG30	3910.6	37.6	37.6	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	
BLW934	NP	4.5	450005	4811883	775.1	B_WTG40	4064.1	37.1	37.1	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	C	
BLW945	NP	4.5	450025	4810446	691.2	B_WTG31	5492.0	35.6	35.6	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	
BLW950	NP	4.5	450230	4810100	845.1	B_WTG31	5860.9	33.2	33.2	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	C	
BLW953	NP	4.5	450268	4809636	1274.6	B_WTG31	6325.8	29.6	29.6	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	C	
BLW955	NP	4.5	450256	4809563	1348.4	B_WTG31	6396.5	29.0	29.0	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	C	
BLW956	NP	4.5	450179	4809331	1592.0	B_WTG31	6617.3	-	-	-	-	-	-	-	-	-	-	-	
BLW962	NP	4.5	450398	4809279	1604.9	B_WTG31	6697.5	-	-	-	-	-	-	-	-	-	-	-	
BLW963	NP	4.5	450561	4816114	756.6	B_WTG41	1165.1	38.5	38.5	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	C	
BLW968	NP	4.5	449927	4820832	1710.5	B_WTG19	4954.5	-	-	-	-	-	-	-	-	-	-	-	
BLW969	NP	4.5	449991	4820925	1789.0	B_WTG19	5053.9	-	-	-	-	-	-	-	-	-	-	-	
BLW973	NP	4.5	450195	4820836	1881.3	B_WTG32	4993.3	-	-	-	-	-	-	-	-	-	-	-	
BLW978	NP	4.5	450435	4820568	1563.5	B_WTG32	4774.2	-	-	-	-	-	-	-	-	-	-	-	
BLW979	NP	4.5	450673	4820728	1696.0	B_WTG32	4985.3	-	-	-	-	-	-	-	-	-	-	-	
BLW980	NP	4.5	450761	4820723	1690.2	B_WTG32	5003.4	-	-	-	-	-	-	-	-	-	-	-	
BLW981	NP	4.5	450781	4820696	1663.7	B_WTG32	4982.9	-	-	-	-	-	-	-	-	-	-	-	
BLW984	NP	4.5	450914	4820396	1350.9	B_WTG33	4735.5	31.2	31.2	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	C	
BLW986	NP	4.5	450883	4820494	1453.4	B_WTG33	4819.0	30.6	30.6	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	C	
BLW988	NP	4.5	451227	4820384	1304.0	B_WTG33	4832.6	30.8	30.8	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	C	
BLW989	NP	4.5	451241	4820513	1433.2	B_WTG33	4957.5	30.0	30.0	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	
BLW992	NP	4.5	451409	4820397	1330.6	B_WTG33	4915.6	30.3	30.3	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	C	
BLW993	NP	4.5	451468	4820403	1346.2	B_WTG33	4945.3	30.2	30.2	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	
BLW996	NP	7.5	452417	4820056	1545.2	B_WTG33	5123.6	-	-	-	-	-	-	-	-	-	-	-	
BLW999	NP	4.5	452649	4819856	1627.0	B_WTG33	5106.6	-	-	-	-	-	-	-	-	-	-	-	
BLW1070	PR	4.5	452203	4815739	534.8	B_WTG35	2792.9	39.7	39.7	39.8	39.8	39.8	-	-	-	-	-	-	
BLW1075	PR	4.5	452359	4815373	603.1	B_WTG36	2991.5	38.2	38.2	38.3	38.3	38.3	-	-	-	-	-	-	
BLW1077	PR	4.5	452659	4815428	656.8	B_WTG37	3278.7	37.1	37.1	37.2	37.2	37.2	-	-	-	-	-	-	
BLW1516	PR	7.5	450220	4817114	764.8	B_WTG34	1453.3	39.5	39.5	39.6	39.6	39.6	-	-	-	-	-	-	
BLW1539	PR	4.5	448600	4813787	801.2	B_WTG27	2268.5	38.6	38.6	38.7	38.7	38.7	-	-	-	-	-	-	
BLW447	PR	4.5	445586	4820650	648.3	B_WTG07	6098.0	35.6	35.6	35.8	35.8	35.8	-	-	-	-	-	-	
BLW453	PR	4.5	445746	4820274	726.9	B_WTG07	5706.0	36.1	36.1	36.3	36.3	36.3	-	-	-	-	-	-	
BLW462	PR	7.5	445755	4819508	824.4	B_WTG09	5136.6	36.6	36.6	36.7	36.7	36.7	-	-	-	-	-	-	
BLW469	PR	7.5	445851	4819063	637.0	B_WTG09	4762.5	37.9	37.9	38.0	38.0	38.0	-	-	-	-	-	-	
BLW492	PR	4.5	446046	4817448	802.3	B_WTG11	3706.0	36.8	36.8	36.9	36.9	36.9	-	-	-	-	-	-	
BLW501	PR	4.5	446089	4817042	824.3	B_WTG12	3515.3	37.5	37.5	37.6	37.6	37.6	-	-	-	-	-	-	
BLW509	PR	4.5	445797	4816599	539.4	B_WTG01	3684.1	39.5	39.5	39.7	39.7	39.7	-	-	-	-	-	-	
BLW527	PR	4.5	446312	4815333	920.7	B_WTG14	3155.1	36.3	36.3	36.4	36.4	36.4	-	-	-	-	-	-	
BLW550	PR	4.5	446423	4814463	765.5	B_WTG15	3320.9	36.4	36.4	36.5	36.5	36.5	-	-	-	-	-	-	
BLW551	PR	4.5	446442	4814492	744.7	B_WTG15	3291.3	36.5	36.5	36.7	36.7	36.7	-	-	-	-	-	-	
BLW571	PR	4.5	446319	4813381	798.6	B_WTG03	3993.8	36.5	36.5	36.6	36.6	36.6	-	-	-	-	-	-	
BLW590	PR	4.5	446703	4812580	645.2	B_WTG18	4290.0	38.1	38.1	38.2	38.2	38.2	-	-	-	-	-	-	
BLW599	PR	4.5	446513	4811421	938.6	B_WTG05	5340.3	34.9	34.9	35.1	35.1	35.1	-	-	-	-	-	-	
BLW602	PR	7.5	447075	4811477	1041.5	B_WTG18	5007.4	34.5	34.5	34.6	34.6	34.6	-	-	-	-	-	-	
BLW612	PR	4.5	446726	4810463	823.0	B_WTG05	6069.2	35.3	35.3	35.4	35.4	35.4	-	-	-	-	-	-	
BLW618	PR	4.5	446836	4810055	776.4	B_WTG06	6392.3	34.8	34.8	34.9	34.9	34.9	-	-	-	-	-	-	
BLW762	PR	4.5	448678	4813543	777.0	B_WTG27	2473.4	38.2	38.2	38.3	38.3	38.3	-	-	-	-	-	-	
BLW770	PR	4.5	448618	4814472	655.7	B_WTG25	1638.9	39.7	39.7	39.8	39.8	39.8	-	-	-	-	-	-	
BLW781	PR	4.5	448385	4815322	937.1	B_WTG25	1183.1	38.5	38.5	38.6	38.6	38.6	-	-	-	-	-	-	
BLW830	PR	4.5	447911	4818873	1208.6	B_WTG21	3328.2	35.3	35.3	35.5	35.5	35.5	-	-	-	-	-	-	
BLW872	PR	4.5	449835	4819402	806.1	B_WTG21	3523.1	36.6	36.6	36.8	36.8	36.8	-	-	-	-	-	-	
BLW883	PR	7.5	450004	4818106	714.6	B_WTG38	2279.4	38.7	38.7	38.8	38.8	38.8	-	-	-	-	-	-	
BLW901	PR	4.5	450162	4816963	758.3	B_WTG23	1296.0	39.2	39.2	39.3	39.3	39.3	-	-	-	-	-	-	
BLW902	PR	7.5	450146	4817041	740.2	B_WTG23	1351.7	39.5	39.5	39.6	39.6	39.6	-	-	-	-	-	-	
BLW911	PR	7.5	450200	4816364	831.5	B_WTG41	909.8	39.7	39.7	39.8	39.8	39.8	-	-	-	-	-	-	
BLW918	PR	4.5	450326	4815610	764.7	B_WTG39	957.3	39.0	39.0	39.1	39.1	39.1	-	-	-	-	-	-	
BLW930	PR	7.5	449737	4813367	438.9	B_WTG29	2557.4	42.7	42.8	42.9	42.9	42.9	-	-	-	-	-	-	
BLW941	PR	4.5	450125	4811083	488.5	B_WTG31	4873.0	39.4	39.4	39.5	39.5	39.5	-	-	-	-	-	-	
BLW1663	VNP	4.5	452018	4819347	842.4	B_WTG33	4316.2	33.6	33.6	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_1
BLW1673	VNP	4.5	454445	4814680	1471.0	B_WTG37	5176.8	27.2	27.2	27.3	27.3	27.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_2
BLW1674	VNP	4.5	452680	4814428	1319.6	B_WTG37	3583.1	32.2	32.2	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_3
BLW1676	VNP	4.5	446350	4822173	1344.6	B_WTG07	6978.2	28.6	28.6	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_4
BLW1677	VNP	4.5	454458	4815809	1183.3	B_WTG37	5043.9	29.0	29.0	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_5
BLW1678	VNP	4.5	454425	4815986	1196.4	B_WTG37	5010.7	29.0	29.0	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_6
BLW1680	VNP	4.5	454324	4816737	1537.1	B_WTG37	4979.2	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_7
BLW1683	VNP	4.5	452946	4818478	1828.9	B_WTG33	4369.6	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_8
BLW1684	VNP	4.5	452257	4817525	1327.9	B_WTG34	3271.8	32.6	32.6	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_9
BLW1686	VNP	4.5	452757	4818610	1608.2	B_WTG33	4300.2	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_10
BLW1689	VNP	4.5	451827	4820049	1144.0	B_WTG33	4795.7	31.2	31.2	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_11

Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW1694	VNP	4.5	450105	4818279	862.9	B_WTG38	2473.2	37.7	37.7	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_12
BLW1695	VNP	4.5	449973	4819121	764.1	B_WTG32	3265.0	37.6	37.6	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_13
BLW1697	VNP	4.5	450188	4817489	756.9	B_WTG34	1763.4	38.5	38.5	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_14
BLW1699	VNP	4.5	452273	4816476	975.5	B_WTG35	2914.7	35.0	35.0	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_15
BLW1700	VNP	4.5	452217	4817011	1317.4	B_WTG41	3012.7	33.6	33.6	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_16
BLW1704	VNP	4.5	450521	4814975	1008.5	B_WTG39	1444.4	37.4	37.4	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_17
BLW1706	VNP	4.5	450649	4814154	677.2	B_WTG28	2141.3	37.6	37.6	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_18
BLW1707	VNP	4.5	452546	4814790	986.6	B_WTG36	3323.3	34.4	34.4	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_19
BLW1708	VNP	4.5	452488	4814936	856.6	B_WTG36	3221.9	35.4	35.4	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_20
BLW1710	VNP	4.5	450667	4814042	657.1	B_WTG28	2243.8	37.7	37.7	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_21
BLW1711	VNP	4.5	451249	4814121	1242.2	B_WTG28	2557.9	34.6	34.6	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_22
BLW1712	VNP	4.5	447025	4810492	1108.6	B_WTG05	5916.2	33.2	33.2	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_23
BLW1715	VNP	4.5	450829	4812699	771.0	B_WTG30	3503.1	36.6	36.6	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_24
BLW1716	VNP	4.5	450926	4812149	1024.9	B_WTG30	4047.6	34.2	34.2	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_25
BLW1717	VNP	4.5	451611	4812236	1619.1	B_WTG30	4275.1	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_26
BLW1718	VNP	4.5	451700	4812247	1701.8	B_WTG30	4312.2	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_27
BLW1719	VNP	4.5	451811	4812262	1805.4	B_WTG30	4359.5	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_28
BLW1724	VNP	4.5	450939	4812043	1095.4	B_WTG30	4150.9	34.0	34.0	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_29
BLW1727	VNP	4.5	450098	4810023	972.6	B_WTG31	5920.5	32.3	32.3	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_30
BLW1728	VNP	4.5	450058	4810243	811.5	B_WTG31	5697.4	34.0	34.0	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_31
BLW1730	VNP	4.5	449808	4811873	664.1	B_WTG40	4050.1	37.5	37.5	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_32
BLW1731	VNP	4.5	449686	4811851	602.0	B_WTG40	4062.0	37.7	37.7	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_33
BLW1732	VNP	4.5	449595	4811840	574.5	B_WTG40	4068.0	37.8	37.8	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_34
BLW1734	VNP	4.5	448937	4811737	757.0	B_WTG40	4194.3	35.5	35.5	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_35
BLW1735	VNP	4.5	449076	4810697	731.5	B_WTG40	5218.0	34.6	34.6	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_36
BLW1736	VNP	4.5	449157	4810293	1045.6	B_WTG40	5616.9	32.0	32.0	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_37
BLW1741	VNP	4.5	450661	4811991	926.2	B_WTG30	4106.6	35.2	35.2	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_38
BLW1742	VNP	4.5	448926	4811913	884.3	B_WTG40	4020.8	35.1	35.1	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_39
BLW1745	VNP	4.5	450671	4812117	841.8	B_WTG30	3989.9	35.5	35.5	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_40
BLW1746	VNP	4.5	450793	4812135	923.4	B_WTG30	4013.0	34.9	34.9	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_41
BLW1750	VNP	4.5	450534	4814130	563.0	B_WTG28	2097.4	38.7	38.7	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_42
BLW1755	VNP	4.5	448363	4815556	924.6	B_WTG24	1108.1	38.6	38.6	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_43
BLW1759	VNP	4.5	448168	4816917	1046.2	B_WTG24	1606.6	36.7	36.7	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_44
BLW1761	VNP	4.5	448012	4818200	1209.1	B_WTG22	2690.7	35.7	35.7	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_45
BLW1762	VNP	4.5	447983	4818615	1184.2	B_WTG22	3066.0	35.6	35.6	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_46
BLW1763	VNP	4.5	450767	4820696	1663.4	B_WTG32	4979.1	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_47
BLW1764	VNP	4.5	447828	4819642	1029.4	B_WTG19	4060.9	35.0	35.0	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_48
BLW1765	VNP	4.5	449716	4819883	1025.0	B_WTG21	3990.4	34.3	34.3	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_49
BLW1770	VNP	4.5	449572	4820934	1382.0	B_WTG19	5032.4	30.4	30.4	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_50
BLW1772	VNP	4.5	447625	4821569	1154.7	B_WTG19	5941.1	31.2	31.2	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_51
BLW1775	VNP	4.5	445741	4821399	730.8	B_WTG07	6610.1	33.9	33.9	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_52
BLW1776	VNP	4.5	445749	4822221	1458.8	B_WTG07	7303.7	27.5	27.5	27.6	27.6	27.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_53
BLW1777	VNP	4.5	445135	4822483	1965.1	B_WTG07	7848.7	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_54
BLW1778	VNP	4.5	445113	4821941	1554.9	B_WTG07	7413.0	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_55
BLW1779	VNP	4.5	445007	4821947	1635.3	B_WTG07	7479.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_56
BLW1783	VNP	4.5	444265	4820892	1942.8	B_WTG07	7169.6	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_57
BLW1784	VNP	4.5	445543	4821280	798.8	B_WTG07	6625.2	33.2	33.2	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_58
BLW1787	VNP	4.5	445564	4819933	958.0	B_WTG08	5573.4	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_59
BLW1789	VNP	4.5	445647	4819246	846.7	B_WTG09	5036.5	35.4	35.4	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_60
BLW1791	VNP	4.5	447712	4819438	1262.9	B_WTG19	3922.9	35.1	35.1	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_61
BLW1792	VNP	4.5	447786	4818783	1200.0	B_WTG10	3307.9	35.4	35.4	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_62
BLW1796	VNP	4.5	447977	4817570	1145.7	B_WTG11	2200.8	35.9	35.9	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_63
BLW1799	VNP	4.5	448140	4816499	870.4	B_WTG24	1407.0	37.3	37.4	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_64
BLW1800	VNP	4.5	446270	4815828	918.6	B_WTG13	3145.9	37.1	37.1	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_65
BLW1802	VNP	4.5	443931	4817158	1462.3	B_WTG01	5625.5	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_66
BLW1803	VNP	4.5	443887	4816787	1393.6	B_WTG01	5598.1	29.9	29.9	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_67
BLW1804	VNP	4.5	443857	4816383	1412.7	B_WTG01	5578.6	30.0	30.0	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_68
BLW1805	VNP	4.5	443773	4815736	1610.3	B_WTG02	5644.5	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_69
BLW1806	VNP	4.5	443762	4815519	1693.6	B_WTG02	5666.1	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_70
BLW1812	VNP	4.5	445055	4813406	585.7	B_WTG03	5024.9	36.4	36.4	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_71
BLW1814	VNP	4.5	446585	4813414	887.5	B_WTG17	3769.5	36.8	36.8	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_72
BLW1818	VNP	4.5	446576	4812604	774.4	B_WTG18	4353.2	37.3	37.3	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_73
BLW1819	VNP	4.5	446616	4812365	734.7	B_WTG18	4512.1	37.1	37.1	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_74
BLW1821	VNP	4.5	448633	4812681	1306.9	B_WTG18	3316.5	35.6	35.6	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_75
BLW1824	VNP	4.5	448925	4810233	1200.7	B_WTG40	5692.1	31.1	31.1	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_76
BLW1825	VNP	4.5	447164	4809709	1084.8	B_WTG06	6591.3	32.2	32.3	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_77
BLW1826	VNP	4.5	447068	4810261	1063.9	B_WTG06	6111.6	33.0	33.0	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_78
BLW1828	VNP	4.5	446977	4809852	889.0	B_WTG06	6524.6	33.6	33.6	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_79
BLW1829	VNP	4.5	445050	4809429	1119.0	B_WTG06	7808.9	30.9	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_80
BLW1831	VNP	4.5	445056	4809701	1042.3	B_WTG06	7581.4	31.9	31.9	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_81
BLW1832	VNP	4.5	445002	4809910	1087.8	B_WTG06	7443.3	32.0	32.0	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_82
BLW1833	VNP	4.5	445127	4811258	917.9	B_WTG04	6322.4	34.3	34.3	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_83
BLW1834	VNP	4.5	446646	4811464	1057.5	B_WTG05	5232.7	34.6	34.6	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_84
BLW1837	VNP	4.5	444952	4810189	1098.4	B_WTG05	7251.2	32.2	32.2	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_85
BLW1838	VNP	4.5	447415	4811658	829.3	B_WTG18	4693.5	34.9	35.0	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_86
BLW1849	VNP	4.5	447479	4821208	976.9	B_WTG19	5646.3	33.1	33.1	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_87
BLW1850	VNP	4.5	446112	4816043	804.3	B_WTG02	3305.9	37.5	37.5	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_88
BLW1854	VNP	4.5	447552	4820477	691.0	B_WTG19	4937.9	36.0	36.0	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_89
BLW1858	VNP	4.5	444696	4811184	1238.2	B_WTG04	6674.4	31.5	31.5	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_90
BLW1859	VNP	4.5	444679	4811296	1174.1	B_WTG04	6607.8	31.6	31.6	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_91
BLW1861	VNP	4.5	444954	4809381	1226.0	B_WTG06	7902.5	30.1	30.2	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_92
BLW1862	VNP	4.5	444861	4809973	1233.5	B_WTG06	7477.7	31.1	31.1	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_93
BLW1863	VNP	4.5	444993	4809160	1292.7	B_WTG06	8064.5	29.5	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_94
BLW1876	VNP	4.5	443721	4816953	1591.4	B_WTG01	5789.8	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_95
BLW1877	VNP	4.5	443784	4817442	1725.6	B_WTG01	5837.3	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_96
BLW1878	VNP	4.5	444803	4817561	1111.3	B_WTG01	4900.6	32.6	32.6	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_97
BLW1888	VNP	4.5	444675	4822050	1954.7	B_WTG07	7761.5	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_98

Point of Reception ID	Description	Height	UTM Coordinates		Distance to Nearest Project Turbine (m)	Nearest Project Turbine ID	Distance to Project Transformer Substation (m)	Calculated Sound Level at Selected Wind Speeds (dBA)					Sound Level Limit (dBA)					Compliance Test	Vacant Lot Receptor ID
			X	Y				6	7	8	9	10	6	7	8	9	10		
BLW1889	VNP	4.5	444829	4822048	1835.2	B_WTG07	7666.8	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_99
BLW1891	VNP	4.5	445352	4822543	1909.2	B_WTG07	7783.6	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_100
BLW1892	VNP	4.5	445808	4822726	1931.7	B_WTG07	7716.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_101
BLW1895	VNP	4.5	448175	4821549	962.8	B_WTG19	5779.6	31.8	31.8	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_102
BLW1896	VNP	4.5	448410	4821468	897.4	B_WTG19	5654.0	32.3	32.3	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_103
BLW1897	VNP	4.5	449701	4821016	1528.2	B_WTG19	5120.0	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_104
BLW1898	VNP	4.5	451190	4820536	1456.3	B_WTG33	4960.4	30.0	30.0	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_105
BLW1899	VNP	4.5	451516	4820397	1350.1	B_WTG33	4960.0	30.0	30.0	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_106
BLW1900	VNP	4.5	452204	4820048	1381.0	B_WTG33	4995.1	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_107
BLW1914	VNP	4.5	454385	4814484	1557.8	B_WTG37	5168.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_108
BLW1915	VNP	4.5	453798	4814040	1635.6	B_WTG37	4762.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_109
BLW1916	VNP	4.5	453829	4813823	1852.0	B_WTG37	4880.0	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_110
BLW1932	VNP	4.5	449236	4809683	1613.4	B_WTG40	6223.6	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_111
BLW1933	VNP	4.5	449258	4809466	1823.7	B_WTG40	6439.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_112
BLW1936	VNP	4.5	449088	4809429	1892.8	B_WTG40	6483.3	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_113
BLW1937	VNP	4.5	447247	4808969	1454.0	B_WTG06	7266.0	33.0	33.3	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_114
BLW1940	VNP	4.5	445934	4809260	606.9	B_WTG06	7500.7	36.0	36.1	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_115
BLW1942	VNP	4.5	445110	4811363	836.5	B_WTG04	6257.3	34.5	34.5	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_116
BLW1943	VNP	4.5	445332	4811277	820.7	B_WTG04	6170.9	35.5	35.6	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_117
BLW1944	VNP	4.5	445829	4811447	669.0	B_WTG04	5720.5	37.1	37.1	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_118
BLW1947	VNP	4.5	450322	4809067	1824.5	B_WTG31	6896.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_119
BLW1956	VNP	4.5	452008	4820377	1518.1	B_WTG33	5170.2	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_120
BLW1957	VNP	4.5	452029	4820464	1603.6	B_WTG33	5256.1	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_121
BLW1958	VNP	4.5	452066	4820559	1704.4	B_WTG33	5356.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_122
BLW1959	VNP	4.5	452090	4820641	1787.6	B_WTG33	5440.1	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_123
BLW1960	VNP	4.5	452121	4820742	1891.0	B_WTG33	5543.3	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_124
BLW1961	VNP	4.5	452150	4820827	1979.6	B_WTG33	5631.7	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_125
BLW1964	VNP	4.5	451857	4820496	1553.1	B_WTG33	5200.9	-	-	-	-	-	-	-	-	-	-	-	BLW_VNP_126
BLW1985	VNP	4.5	446775	4811425	1122.3	B_WTG05	5199.1	34.3	34.3	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_127
BLW1986	VNP	4.5	446750	4811596	1066.7	B_WTG18	5065.7	34.6	34.6	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_128
BLW1987	VNP	4.5	448312	4815825	786.7	B_WTG24	1105.8	38.0	38.0	38.1	38.1	38.1	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_129
BLW1990	VNP	4.5	444499	4817564	1269.4	B_WTG01	5188.7	31.3	31.3	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_130
BLW2013	VNP	4.5	451781	4820263	1309.7	B_WTG33	4959.7	30.1	30.1	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_131
BLW2014	VNP	4.5	451935	4820319	1431.0	B_WTG33	5083.6	29.2	29.1	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_132
BLW2015	VNP	4.5	452048	4820281	1459.3	B_WTG33	5107.9	28.9	28.9	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_133
BLW2016	VNP	4.5	452076	4820270	1466.5	B_WTG33	5113.0	28.9	28.9	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_134
BLW2017	VNP	4.5	451904	4820288	1388.7	B_WTG33	5041.3	29.5	29.5	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	C	BLW_VNP_135
BLW1693	VPR	4.5	451937	4818988	723.9	B_WTG33	3983.9	35.0	35.0	35.2	35.2	35.2	-	-	-	-	-	-	
BLW1698	VPR	4.5	450358	4816752	562.7	B_WTG41	1268.2	39.7	39.7	39.9	39.9	39.9	-	-	-	-	-	-	
BLW1703	VPR	4.5	450455	4815530	871.2	B_WTG39	1105.2	38.3	38.3	38.4	38.4	38.4	-	-	-	-	-	-	
BLW1733	VPR	4.5	449459	4811814	549.9	B_WTG40	4090.2	37.9	37.9	38.0	38.0	38.0	-	-	-	-	-	-	
BLW1738	VPR	4.5	450121	4810562	544.9	B_WTG31	5388.5	37.4	37.4	37.5	37.5	37.5	-	-	-	-	-	-	
BLW1749	VPR	4.5	450550	4814023	539.1	B_WTG28	2196.9	38.9	38.9	39.1	39.1	39.1	-	-	-	-	-	-	
BLW1754	VPR	4.5	450241	4816011	902.3	B_WTG39	832.9	39.6	39.5	39.6	39.6	39.6	-	-	-	-	-	-	
BLW1756	VPR	4.5	448473	4814753	705.0	B_WTG25	1487.3	38.9	38.9	39.1	39.1	39.1	-	-	-	-	-	-	
BLW1758	VPR	4.5	448314	4815905	744.7	B_WTG24	1101.0	38.1	38.1	38.2	38.2	38.2	-	-	-	-	-	-	
BLW1766	VPR	4.5	449844	4818927	750.9	B_WTG21	3053.3	38.3	38.3	38.4	38.4	38.4	-	-	-	-	-	-	
BLW1767	VPR	4.5	449866	4818705	714.7	B_WTG22	2837.1	38.5	38.6	38.7	38.7	38.7	-	-	-	-	-	-	
BLW1768	VPR	4.5	449907	4818470	746.6	B_WTG22	2612.7	38.5	38.5	38.7	38.7	38.7	-	-	-	-	-	-	
BLW1769	VPR	4.5	449933	4818242	690.4	B_WTG38	2394.7	38.5	38.5	38.6	38.6	38.6	-	-	-	-	-	-	
BLW1785	VPR	4.5	447582	4820263	728.5	B_WTG19	4728.7	36.0	36.0	36.1	36.1	36.1	-	-	-	-	-	-	
BLW1786	VPR	4.5	445693	4820004	835.8	B_WTG08	5537.4	35.5	35.5	35.6	35.6	35.6	-	-	-	-	-	-	
BLW1794	VPR	4.5	445880	4818558	719.2	B_WTG10	4420.4	37.0	37.0	37.1	37.1	37.1	-	-	-	-	-	-	
BLW1797	VPR	4.5	446177	4816460	778.2	B_WTG12	3285.4	38.1	38.1	38.2	38.2	38.2	-	-	-	-	-	-	
BLW1798	VPR	4.5	446204	4816314	830.1	B_WTG12	3237.1	38.0	38.0	38.1	38.1	38.1	-	-	-	-	-	-	
BLW1810	VPR	4.5	448228	4815725	912.2	B_WTG24	1200.4	37.7	37.7	37.8	37.8	37.8	-	-	-	-	-	-	
BLW1813	VPR	4.5	448485	4813898	866.8	B_WTG26	2211.1	38.4	38.4	38.6	38.6	38.6	-	-	-	-	-	-	
BLW1815	VPR	4.5	446503	4813192	881.4	B_WTG17	3979.3	36.9	36.9	37.0	37.0	37.0	-	-	-	-	-	-	
BLW1817	VPR	4.5	446674	4812783	711.3	B_WTG17	4153.8	38.0	38.0	38.2	38.2	38.2	-	-	-	-	-	-	
BLW1822	VPR	4.5	445641	4811428	639.2	B_WTG04	5854.7	37.2	37.2	37.3	37.3	37.3	-	-	-	-	-	-	
BLW1853	VPR	4.5	447713	4820463	535.8	B_WTG19	4866.3	37.5	37.5	37.6	37.6	37.6	-	-	-	-	-	-	
BLW1922	VPR	4.5	450152	4811906	793.6	B_WTG30	4065.4	36.8	36.8	37.0	37.0	37.0	-	-	-	-	-	-	
BLW1941	VPR	4.5	449985	4818958	750.8	B_WTG32	3106.7	37.9	37.9	38.0	38.0	38.0	-	-	-	-	-	-	
BLW1945	VPR	4.5	446894	4811591	998.6	B_WTG18	4995.7	34.6	34.6	34.7	34.7	34.7	-	-	-	-	-	-	

Appendix D: Noise Contour Maps

Noise contours calculated at 4.5 metres above grade



Wind Energy Centre Study Area
Transmission Line Study Area
Natural Features
Watercourse
Existing 500kV Transmission Line
Roads (with shields)
Municipal Division
Waterbody
Cartographic Wetland
Woodlots
Project Location
GE Turbine
Permanent Met Tower
SCADA Met Tower
Transmission Line
Collection Lines
Access Roads
120m Area of Investigation
Proposed Bluewater Transformer Substation
Breaker switch station at Point of Interconnect (POI)
Bluewater Laydown Area
Existing Hydro One Seaforth Transformer Station
Disturbance Areas
Zurich Wind Farm Turbine
Participating Receptor
Non-participating Receptor
Vacant Lot Participating Receptor
Vacant Lot Non-participating Receptor
Noise Results
40.0 dBA
Bayfield River Road
Bannockburn Line
Short Horn Road
Kinburn Line
Division Line
Roman Road
Stanley Road
Mill Road
Morrison Line
Hannah Line
Tile Road
Front Road
Perth 183 Road
Centennial Road
Smirnoff Line
Airport Line
Gulley Line
Parr Line
Staffa Road
Concession 5 Road
Pavillion Road
Blue Bluff Road
Bronson Line
Wildwood Line
Goshen Line
Babylon Line
Kippen Road
Blind Line
Fansville Line
Danceland Road
Zurich-Hensall Road
Main Street
Blackbush Line
Walnut Road
King Street
Bell's Line
Ausable Line
Rogerville Road
McTaggart Line
Hurondale Road
Oak Road
Perth 17 Road
Chiselhurst Road
Stone Road
Perth 24 Line
Maple Line
Hensall
South Huron
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Metres
0 200 400 800 1,200 1,600
1:76,864
UTM Zone 17N, NAD 83
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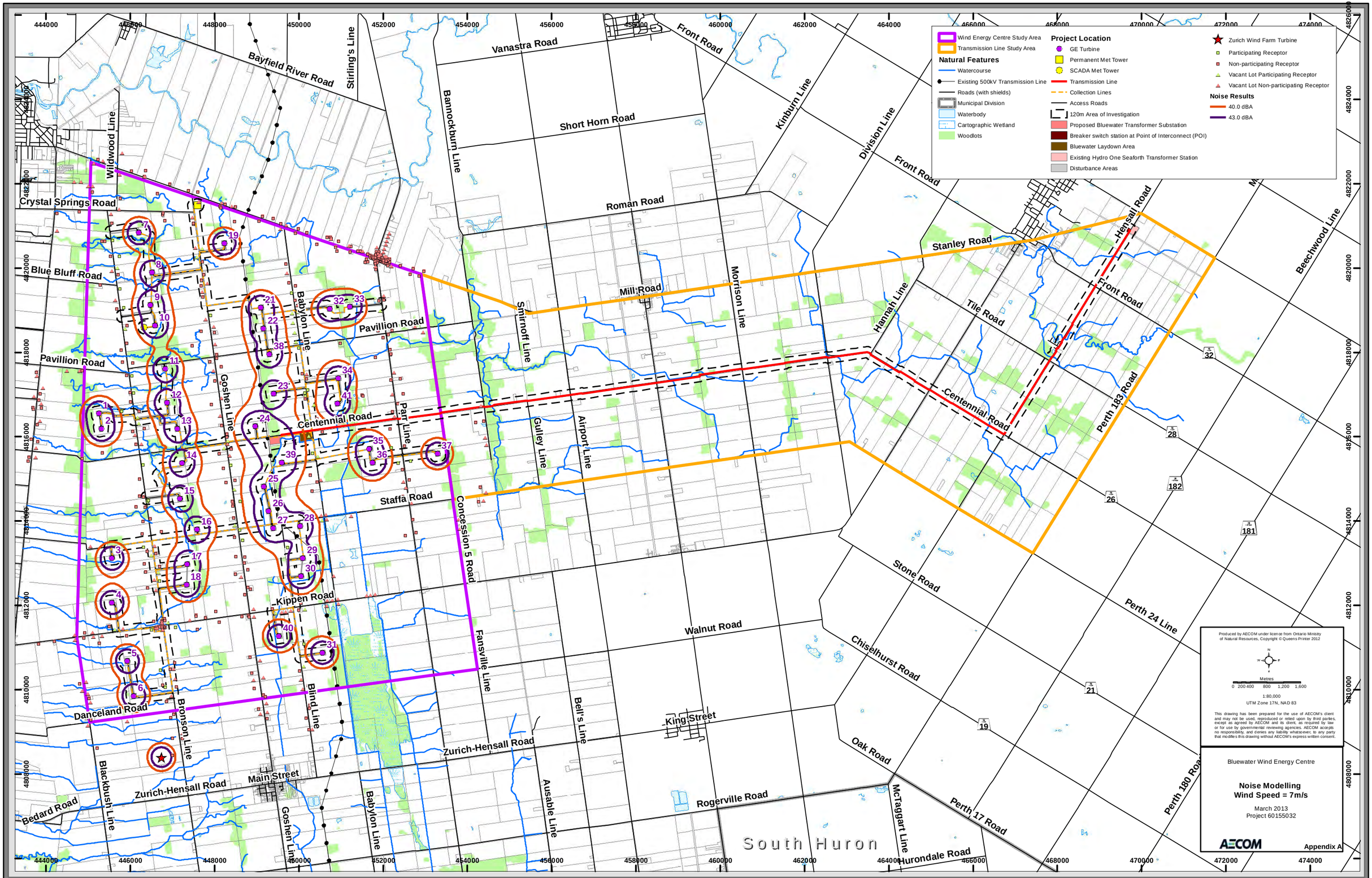
Bluewater Wind Energy Centre
Noise Modelling
Wind Speed = 6m/s
March 2013
Project 60155032
AECOM
Appendix A



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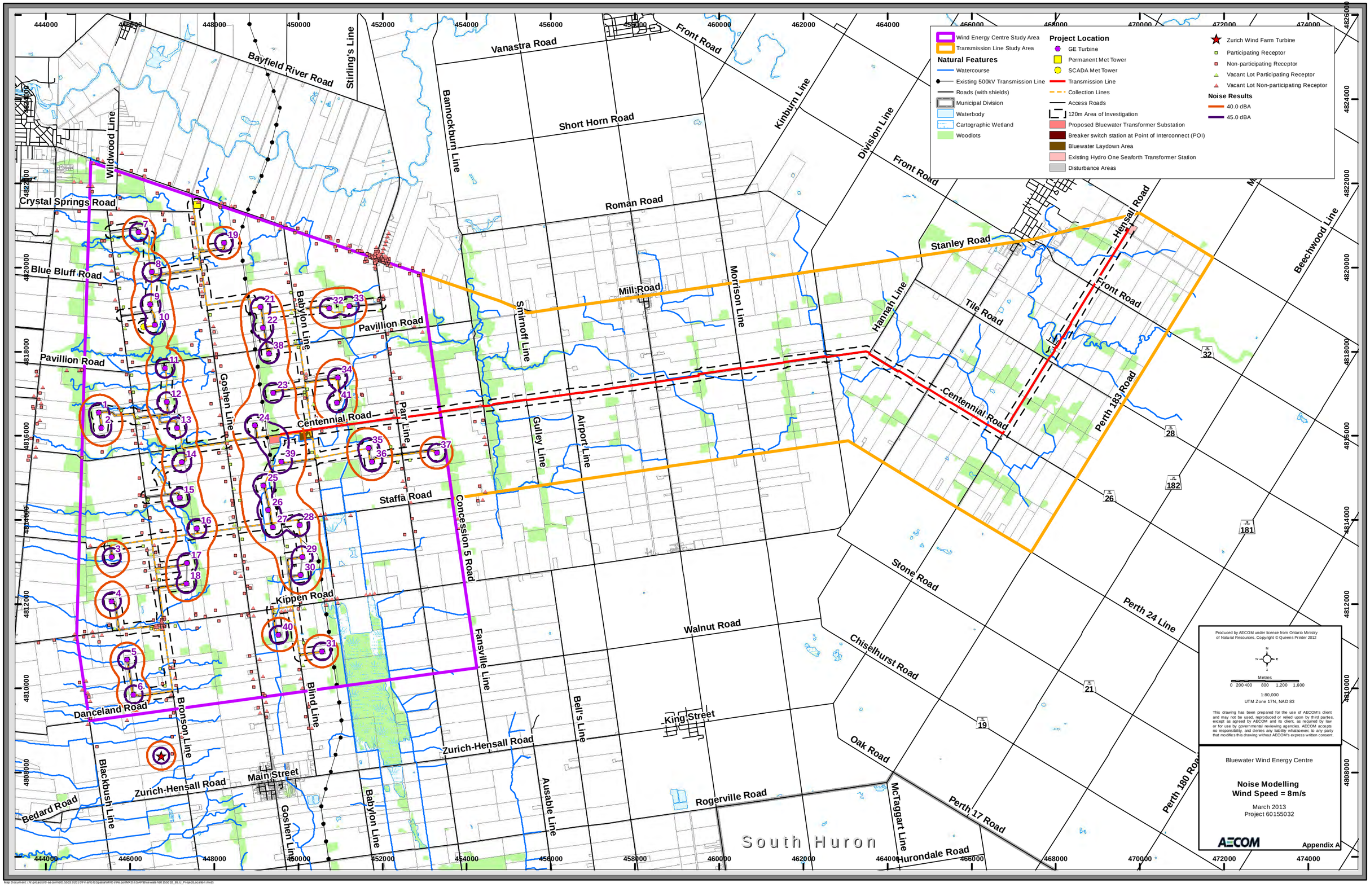

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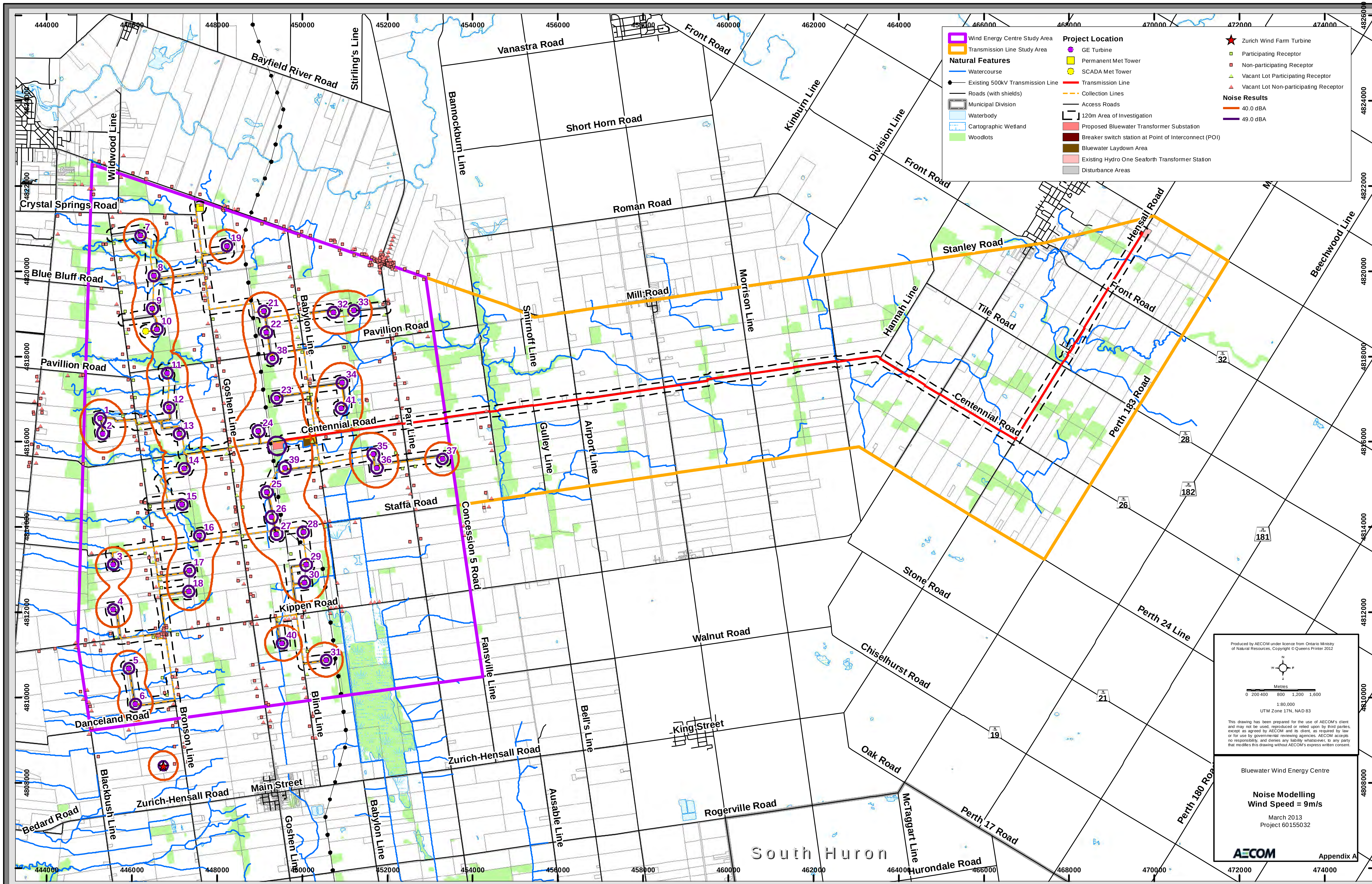

Wind Energy Centre Study Area
Transmission Line Study Area
Natural Features
Watercourse
Existing 500kV Transmission Line
Roads (with shields)
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120m Area of Investigation
Proposed Bluewater Transformer Substation
Breaker switch station at Point of Interconnect (POI)
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Existing Hydro One Seaforth Transformer Station
Disturbance Areas
Zurich Wind Farm Turbine
Participating Receptor
Non-participating Receptor
Vacant Lot Participating Receptor
Vacant Lot Non-participating Receptor
Noise Results
40.0 dBA
49.0 dBA
Vanastra Road
Bayfield River Road
Stirling's Line
Front Road
Kinburn Line
Division Line
Short Horn Road
Bannockburn Line
Wildwood Line
Crystal Springs Road
Roman Road
Stanley Road
Hensall Road
Beechwood Line
Blue Bluff Road
Mill Road
Morrison Line
Hannah Line
Tile Road
Babylon Line
Pavillion Road
Smirnoff Line
Goshen Line
Centennial Road
Parr Line
Gulley Line
Airport Line
Perth 183 Road
Staffa Road
Concession 5 Road
Stone Road
Perth 24 Line
Kippen Road
Walnut Road
Chiselhurst Road
Fansville Line
Danceland Road
Bronson Line
Blind Line
Bell's Line
King Street
Zurich-Hensall Road
Oak Road
Main Street
Blackbush Line
Bedard Road
Ausable Line
Rogerville Road
McTaggart Line
Perth 17 Road
Perth 180 Road
Hurondale Road
South Huron
Produced by AECOM under licence from Ontario Ministry of Natural Resources, Copyright © Queens Printer 2012
N
W
E
S
Metres
0 200 400 800 1,200 1,600
1:80,000
UTM Zone 17N, NAD 83
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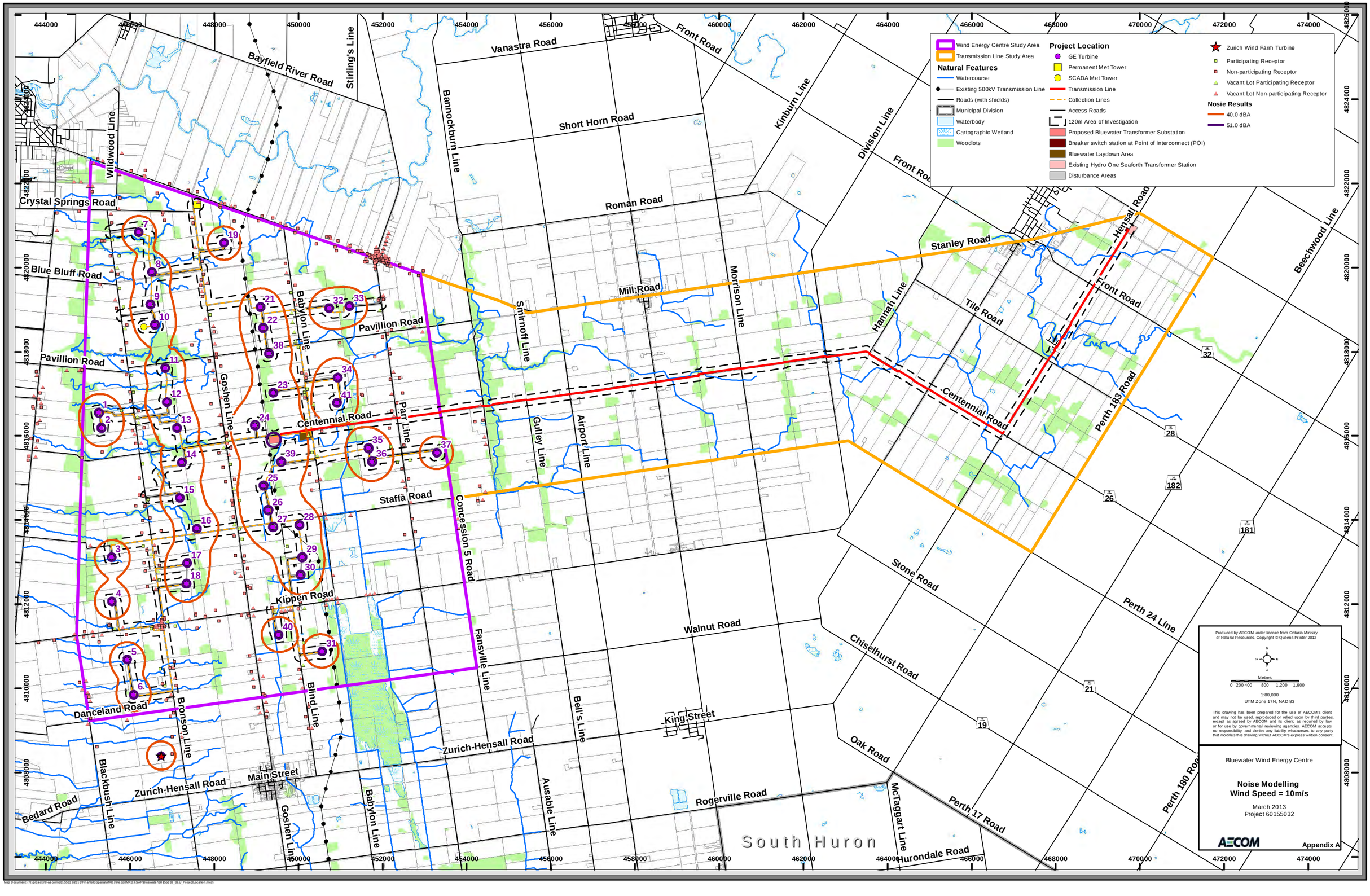
Bluewater Wind Energy Centre
Noise Modelling
Wind Speed = 9m/s
March 2013
Project 60155032
Appendix A



Map Document: (N:\projects\0-aecom\60155032\2010\FinalGIS\SpatialMXD\site.portMXD\SAR\Bluewater60155032_BLU_Projects.acadon.mxd)

Appendix E: Sample Calculations

Bluewater Noise Results

Receiver
Name: Bluewater
ID: BLW912
X: 450434.00
Y: 4816422.00
Z: 264.50

Point Source, ISO 9613, Name: "Bluewater Substation", ID: "B_Trans"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449415.00	4815904.00	259.74	0	0	106.7	106.7	0.0	0.0	72.2	2.5	-0.3	0.0	0.0	0.0	-0.0	-0.0	32.4	32.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG09"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446485.00	4819125.00	325.41	0	0	103.0	103.0	0.0	0.0	84.6	8.2	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.0	11.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG10"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446595.00	4818636.00	325.00	0	0	103.0	103.0	0.0	0.0	83.9	7.8	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.9	11.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG11"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446832.00	4817609.00	330.00	0	0	103.0	103.0	0.0	0.0	82.6	7.1	-0.6	0.0	0.0	0.0	-0.0	-0.0	13.9	13.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG12"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446877.00	4816800.00	332.52	0	0	103.0	103.0	0.0	0.0	82.1	6.9	-0.5	0.0	0.0	0.0	-0.0	-0.0	14.6	14.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG13"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447116.00	4816186.00	335.00	0	0	103.0	103.0	0.0	0.0	81.4	6.6	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.5	15.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG14"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447232.00	4815368.00	335.49	0	0	103.0	103.0	0.0	0.0	81.6	6.6	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.3	15.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG15"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447186.00	4814525.00	335.00	0	0	103.0	103.0	0.0	0.0	82.5	7.1	-0.6	0.0	0.0	0.0	-0.0	-0.0	14.0	14.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG16"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447590.00	4813794.00	340.00	0	0	103.0	103.0	0.0	0.0	82.8	7.2	-0.6	0.0	0.0	0.0	-0.0	-0.0	13.6	13.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG17"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447358.00	4812978.00	338.30	0	0	103.0	103.0	0.0	0.0	84.3	8.0	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.4	11.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG19"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	448234.00	4820588.00	345.03	0	0	103.0	103.0	0.0	0.0	84.5	8.1	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.2	11.2

(Wind Speed = 6m/s)

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG21"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449105.00	4819060.00	345.00	0	0	103.0	103.0	0.0	0.0	80.4	6.1	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.9	16.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG22"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449166.00	4818561.00	345.65	0	0	103.0	103.0	0.0	0.0	78.9	5.5	-0.3	0.0	0.0	0.0	-0.0	-0.0	18.9	18.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG23"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449406.00	4817022.00	342.47	0	0	103.0	103.0	0.0	0.0	72.5	3.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	27.6	27.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG24"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	448974.00	4816250.00	343.75	0	0	103.0	103.0	0.0	0.0	74.4	3.8	-0.4	0.0	0.0	0.0	-0.0	-0.0	25.2	25.2

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG25"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449175.00	4814818.00	336.48	0	0	103.0	103.0	0.0	0.0	77.2	4.8	-0.3	0.0	0.0	0.0	-0.0	-0.0	21.4	21.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG26"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449284.00	4814234.00	340.00	0	0	103.0	103.0	0.0	0.0	78.9	5.4	-0.3	0.0	0.0	0.0	-0.0	-0.0	19.0	19.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG27"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449400.00	4813830.00	340.00	0	0	103.0	103.0	0.0	0.0	79.9	5.9	-0.4	0.0	0.0	0.0	-0.0	-0.0	17.6	17.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG28"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450031.00	4813877.00	339.93	0	0	103.0	103.0	0.0	0.0	79.2	5.6	-0.3	0.0	0.0	0.0	-0.0	-0.0	18.5	18.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG29"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450097.00	4813116.00	336.21	0	0	103.0	103.0	0.0	0.0	81.4	6.6	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.5	15.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG30"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450058.00	4812694.00	335.29	0	0	103.0	103.0	0.0	0.0	82.5	7.1	-0.6	0.0	0.0	0.0	-0.0	-0.0	14.0	14.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG32"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450732.00	4819033.00	340.00	0	0	103.0	103.0	0.0	0.0	79.4	5.7	-0.3	0.0	0.0	0.0	-0.0	-0.0	18.3	18.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG33"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451219.00	4819080.00	340.00	0	0	103.0	103.0	0.0	0.0	79.9	5.8	-0.4	0.0	0.0	0.0	-0.0	-0.0	17.7	17.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG34"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450937.00	4817380.00	333.91	0	0	103.0	103.0	0.0	0.0	71.7	3.1	-0.5	0.0	0.0	0.0	-0.0	-0.0	28.7	28.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG35"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451669.00	4815710.00	334.17	0	0	103.0	103.0	0.0	0.0	74.1	3.8	-0.4	0.0	0.0	0.0	-0.0	-0.0	25.6	25.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG36"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451756.00	4815381.00	334.94	0	0	103.0	103.0	0.0	0.0	75.5	4.2	-0.4	0.0	0.0	0.0	-0.0	-0.0	23.7	23.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG37"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	453294.00	4815596.00	345.00	0	0	103.0	103.0	0.0	0.0	80.5	6.1	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.8	16.8

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG38"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449306.00	4817953.00	342.65	0	0	103.0	103.0	0.0	0.0	76.6	4.6	-0.3	0.0	0.0	0.0	-0.0	-0.0	22.2	22.2

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG39"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449597.00	4815379.00	335.20	0	0	103.0	103.0	0.0	0.0	73.5	3.6	-0.4	0.0	0.0	0.0	-0.0	-0.0	26.3	26.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG41"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450920.00	4816780.00	333.05	0	0	103.0	103.0	0.0	0.0	66.7	2.0	-0.5	0.0	0.0	0.0	-0.0	-0.0	34.9	34.9

Receiver
Name: Bluewater
ID: BLW785
X: 448403.00
Y: 4815708.00
Z: 279.50

Point Source, ISO 9613, Name: "Bluewater Substation", ID: "B_Trans"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449415.00	4815904.00	259.74	0	0	106.7	106.7	0.0	0.0	71.3	2.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	33.5	33.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG01"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	445260.00	4816548.00	300.00	0	0	103.0	103.0	0.0	0.0	81.3	6.5	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.8	15.8

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG02"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	445320.00	4816183.00	301.68	0	0	103.0	103.0	0.0	0.0	80.9	6.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.3	16.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG03"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	445565.00	4813118.00	300.89	0	0	103.0	103.0	0.0	0.0	82.7	7.2	-0.6	0.0	0.0	0.0	-0.0	-0.0	13.7	13.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG04"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	445568.00	4812063.00	301.26	0	0	103.0	103.0	0.0	0.0	84.3	8.0	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.4	11.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG08"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446521.00	4819890.00	325.00	0	0	103.0	103.0	0.0	0.0	84.2	8.0	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.5	11.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG09"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446485.00	4819125.00	325.41	0	0	103.0	103.0	0.0	0.0	82.9	7.3	-0.6	0.0	0.0	0.0	-0.0	-0.0	13.5	13.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG10"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446595.00	4818636.00	325.00	0	0	103.0	103.0	0.0	0.0	81.7	6.7	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.1	15.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG11"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446832.00	4817609.00	330.00	0	0	103.0	103.0	0.0	0.0	78.8	5.4	-0.3	0.0	0.0	0.0	-0.0	-0.0	19.1	19.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG12"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	446877.00	4816800.00	332.52	0	0	103.0	103.0	0.0	0.0	76.5	4.5	-0.4	0.0	0.0	0.0	-0.0	-0.0	22.4	22.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG13"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447116.00	4816186.00	335.00	0	0	103.0	103.0	0.0	0.0	73.8	3.7	-0.4	0.0	0.0	0.0	-0.0	-0.0	26.0	26.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG14"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447232.00	4815368.00	335.49	0	0	103.0	103.0	0.0	0.0	72.7	3.4	-0.4	0.0	0.0	0.0	-0.0	-0.0	27.4	27.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG15"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447186.00	4814525.00	335.00	0	0	103.0	103.0	0.0	0.0	75.6	4.2	-0.4	0.0	0.0	0.0	-0.0	-0.0	23.6	23.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG16"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447590.00	4813794.00	340.00	0	0	103.0	103.0	0.0	0.0	77.4	4.8	-0.3	0.0	0.0	0.0	-0.0	-0.0	21.1	21.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG17"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447358.00	4812978.00	338.30	0	0	103.0	103.0	0.0	0.0	80.3	6.0	-0.4	0.0	0.0	0.0	-0.0	-0.0	17.1	17.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG18"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	447341.00	4812484.00	335.00	0	0	103.0	103.0	0.0	0.0	81.6	6.6	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.3	15.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG19"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	448234.00	4820588.00	345.03	0	0	103.0	103.0	0.0	0.0	84.8	8.3	-0.7	0.0	0.0	0.0	-0.0	-0.0	10.7	10.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG21"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449105.00	4819060.00	345.00	0	0	103.0	103.0	0.0	0.0	81.7	6.7	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.2	15.2

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG22"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449166.00	4818561.00	345.65	0	0	103.0	103.0	0.0	0.0	80.4	6.1	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.9	16.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG23"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449406.00	4817022.00	342.47	0	0	103.0	103.0	0.0	0.0	75.4	4.2	-0.4	0.0	0.0	0.0	-0.0	-0.0	23.9	23.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG24"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	448974.00	4816250.00	343.75	0	0	103.0	103.0	0.0	0.0	69.0	2.5	-0.5	0.0	0.0	0.0	-0.0	-0.0	32.1	32.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG25"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449175.00	4814818.00	336.48	0	0	103.0	103.0	0.0	0.0	72.4	3.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	27.7	27.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG26"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449284.00	4814234.00	340.00	0	0	103.0	103.0	0.0	0.0	75.7	4.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	23.4	23.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG27"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449400.00	4813830.00	340.00	0	0	103.0	103.0	0.0	0.0	77.6	4.9	-0.3	0.0	0.0	0.0	-0.0	-0.0	20.9	20.9

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG28"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450031.00	4813877.00	339.93	0	0	103.0	103.0	0.0	0.0	78.8	5.4	-0.3	0.0	0.0	0.0	-0.0	-0.0	19.1	19.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG29"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450097.00	4813116.00	336.21	0	0	103.0	103.0	0.0	0.0	80.8	6.3	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.4	16.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG30"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450058.00	4812694.00	335.29	0	0	103.0	103.0	0.0	0.0	81.7	6.7	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.1	15.1

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG32"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450732.00	4819033.00	340.00	0	0	103.0	103.0	0.0	0.0	83.2	7.4	-0.6	0.0	0.0	0.0	-0.0	-0.0	13.0	13.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG33"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451219.00	4819080.00	340.00	0	0	103.0	103.0	0.0	0.0	83.9	7.8	-0.7	0.0	0.0	0.0	-0.0	-0.0	12.0	12.0

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG34"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450937.00	4817380.00	333.91	0	0	103.0	103.0	0.0	0.0	80.6	6.2	-0.4	0.0	0.0	0.0	-0.0	-0.0	16.6	16.6

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG35"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451669.00	4815710.00	334.17	0	0	103.0	103.0	0.0	0.0	81.3	6.5	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.7	15.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG36"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	451756.00	4815381.00	334.94	0	0	103.0	103.0	0.0	0.0	81.5	6.6	-0.5	0.0	0.0	0.0	-0.0	-0.0	15.4	15.4

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG37"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	453294.00	4815596.00	345.00	0	0	103.0	103.0	0.0	0.0	84.8	8.3	-0.7	0.0	0.0	0.0	-0.0	-0.0	10.7	10.7

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG38"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449306.00	4817953.00	342.65	0	0	103.0	103.0	0.0	0.0	78.7	5.4	-0.3	0.0	0.0	0.0	-0.0	-0.0	19.3	19.3

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG39"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449597.00	4815379.00	335.20	0	0	103.0	103.0	0.0	0.0	72.9	3.4	-0.4	0.0	0.0	0.0	-0.0	-0.0	27.2	27.2

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG40"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	449532.00	4811269.00	335.03	0	0	103.0	103.0	0.0	0.0	84.2	8.0	-0.7	0.0	0.0	0.0	-0.0	-0.0	11.5	11.5

Point Source, ISO 9613, Name: "Bluewater", ID: "B_WTG41"																			
Nr.	X	Y	Z	Refl.	Freq.	LxT	LxN	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	LrT	LrN
	(m)	(m)	(m)		(Hz)	dB(A)	dB(A)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)	dB(A)
1	450920.00	4816780.00	333.05	0	0	103.0	103.0	0.0	0.0	79.7	5.8	-0.3	0.0	0.0	0.0	-0.0	-0.0	17.8	17.8