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Noise  
Vibration

Grand Bend Wind Farm  
Grand Bend, ON

Grand Bend Wind Limited Partnership  
Northland Power Inc., as agent

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18 July 2013

## Executive Summary

The purpose of this environmental noise impact assessment, prepared for the Grand Bend Wind Limited Partnership, with Northland Power Inc. ("Northland") as agent, Grand Bend Wind Farm (the "Project"), is to fulfil Northland's requirements under Ontario Regulation 116/01 of the Environmental Assessment Act and to provide the basis for the Environmental Compliance Approval – Noise ["ECA (Noise)"] under Section 9 of the Environmental Protection Act ("EPA"). The objective of this assessment is to demonstrate, by means of technical assessment, that the noise impact from the operation of the Project will comply with the Ministry of the Environment's ("MOE") environmental noise guidelines for wind turbines.

Building upon the project specific guidelines, noise impact prediction modelling was undertaken. The noise impact from the Project's wind turbine array and transformers, as well as neighbouring wind turbines operating at maximum rated power was evaluated for the nearest points of reception using an acoustic model, ISO 9613, as required by the MOE.

The analysis shows that the noise impact from the Project does not exceed the most restrictive noise limits that apply for areas with acoustic designation of Class 3 (Rural) as defined by the MOE. There is no need for the application of any mitigation measures and no further studies are contemplated for environmental noise in relation to the Project.

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## Glossary

agl	above ground level
ECA	Environmental Compliance Approval
Northland	Northland Power Inc.
dBA	decibel A-weighted
ENIA	Environmental Noise Impact Assessment
EPA	Environmental Protection Act
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
kW	kilowatt
kV	kilovolt
LLA	Licence and Option to Lease Agreement
m	metre
m/s	metres per second
MOE	Ontario Ministry of the Environment
MW	Megawatt
PWL	Sound Power Level

## 1 Introduction

Northland and Neegan Burnside Ltd. have retained Aercoustics Engineering Limited (“Aercoustics”) to prepare an environmental noise impact assessment (“ENIA”) of the proposed nominal 100 megawatt (“MW”) Grand Bend Wind Farm (“Project”). The Project is situated near the eastern shore of Lake Huron, north of the village of Grand Bend in the municipalities of Bluewater and South Huron, in Huron County, Ontario.

The purpose of this ENIA is to fulfil Northland’s requirements under Ontario Regulation 116/01 of the Environmental Assessment Act and to provide the basis for the Environmental Compliance Approval [“ECA”] under Section 9 of the Environmental Protection Act (“EPA”). Consequently, in fulfilling these requirements, the objective of this assessment is to:

Predict the noise impacts from the Project at the nearest points of reception and to demonstrate, by means of technical assessment, that the noise impact from the operation of the Project will comply with the Ministry of the Environment’s (“MOE”) environmental noise guidelines for wind turbines.

The sound level limits and the noise assessment procedures are defined by the MOE in their October 2008 publication: “Noise Guidelines for Wind Farms, Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities ” [17]. For further reference, the MOE Interpretation was prepared to assist proponents of wind turbine installations in determining what information should be submitted when applying for an ECA, under the EPA.

The noise assessment was based on all of the recommended procedures outlined in the MOE’s “Noise Guidelines for Wind farms, October 2008” [17].

## 2 Discussion of Acoustic Terminology

In order to fully understand the analysis presented in this ENIA, a brief discussion of the technical terms utilized throughout the report is included below.

The noise data presented in this report has been given in terms of sound pressure level. Sound pressure levels are measured in decibels (“dB”). It is common practice to sum sound pressure levels over the entire audible spectrum to give an overall sound pressure level.

The MOE requires that instantaneous sound pressure be processed by a special filter (i.e., A-weighting). As human hearing is less sensitive to low frequency sound, the weighting emphasizes the frequencies in the range 500 Hertz (“Hz”) to 4000 Hz; while progressively diminishing the relative contributions at high and low frequencies. This corresponds approximately to the hearing response to humans at normal sound levels (e.g., 50 dB). The resulting “A-weighted” sound level is often used as a criterion to indicate a maximum allowable sound level.

The MOE defines a “point of reception” as any point on the premises of a person within 30 m of a dwelling or camping area, where sound or vibration originating from other than those premises is received. The MOE designates points of reception into three classes:

- Class 1 refers to an acoustical environment typical of a major population centre where the background noise is dominated by the urban hum. These areas are highly urbanized and have moderate to high noise levels throughout the day and night.

- Class 2 means an area with an acoustic environment that has low ambient sound levels between 19:00 hours and 07:00 hours; where the evening and night-time levels are defined by natural sounds and infrequent human activity and there are no clearly audible sounds from stationary sources (e.g., industrial, commercial, etc.).
- Class 3 refers to areas that are rural and/or small communities with a population of less than 1,000 with an acoustic environment that is dominated by natural sounds and has little or no road traffic during the night-time period.

### 3 Description of Wind Turbine Site and Surroundings

The Project is located near the shoreline of Lake Huron, in the municipalities of Bluewater and South Huron, in Huron County, Ontario. The closest communities in the vicinity of the Project are Grand Bend, Dashwood, and Zurich. The dominant environmental feature in the vicinity of the Project is Lake Huron, located west of the study area shown in Figure 1.

The wind farm has been approved for a nominal rated 100MW nameplate capacity (FIT Contract #F-002178-WIN-130-601), but based on current noise assessment requirements is anticipated to have a nominal rated nameplate capacity of 97.793 MW. Also included will be a transformer substation located south of Sararas Road, between Concession Road 15 and Bronson Line.

Within this agricultural / rural area, the main sources of ambient sound that currently exist include:

1. Vehicular traffic on County and Concession roads.
2. Sounds due to human activity, including agricultural and rural activities.
3. Sounds due to human domestic activities such as property maintenance and recreation.
4. Natural sounds from wind noise, waves breaking on shore, insects, wildlife, atmospheric effects, etc.

The acoustic classification of the area is generally Class 3 (rural).

#### 3.1 Description of Receptors

Noise receptors have been selected for this analysis based on two criteria: i) their spatial proximity to the Project (i.e., receptors within about 1.5 kilometers of a wind turbine); and ii) level of benefit derived from the Project (e.g., participating or non-participating receptors). In addition, vacant lots have been considered as a point of reception if they are accessible – i.e., if they are adjacent to a road. The location of the receptor within each vacant lot has been chosen to be consistent with the typical building pattern in the area (e.g., close to adjacent roads) or at the centre of the vacant lot as per MOE documentation. A total of 2529 receptor dwellings, 17 of which are participating, and 444 vacant lots, 23 of which are participating, have been included as receptors for this assessment.

All receptors in the study area were provided to Aercoustics by the Project development team. Each receptor has been assigned a unique identifier for modelling and reporting purposes. Their locations relative to the wind turbines and transformer station are shown in Figure 2. There will be four types of receptors used in this study labelled as shown:

- RXXXX: Existing Non-Participating Receptors and Vacant Lot Receptors
- RXXXX\_P: Participating Receptors and Participating Vacant Lot Receptors

For the purposes of this ENIA, points of reception have been modelled at the worst case scenario of either two storey dwelling, or single storey dwelling with one point of reception 4.5m above the centre of the house.

### 3.2 MOE Environmental Noise Limits

The sound limit requirements for a wind turbine or an array of such units, termed a “wind plant”, have been established in accordance with the existing MOE publications (NPC-205/232/233) as well as the wind induced background noise level. The specific definition of sound limits, expressed as a function of wind speed and ambient noise levels, as outlined in the MOE Interpretation, includes the following:

#### 3.2.1 Wind Turbine Installations in Class 1 & 2 Areas (Urban): Wind Speeds Below 8m/s

The lowest sound level limit at a Point of Reception in Class 1 and 2 Areas (Urban), under conditions of average wind speed up to 8 m/s (i.e., 29km/h), expressed in terms of the hourly  $L_{eq}$  is 45.0 dBA or the minimum hourly background sound level established in accordance with requirements in Publications NPC-205/NPC-233, whichever is higher.

#### 3.2.2 Wind Turbine Installations in Class 3 Areas (Rural): Wind Speeds Below 6m/s

The lowest sound level limit at a Point of Reception in Class 3 Areas (Rural), under conditions of average wind speed up to 6 m/s (i.e., 22km/h), expressed in terms of the hourly  $L_{eq}$  is 40.0 dBA or the minimum hourly background sound level established in accordance with requirements in Publications NPC-232/NPC-233, whichever is higher.

#### 3.2.3 Wind Turbine Installations in Class 1 & 2 and Class 3 Areas: Wind Speeds Above 8m/s and 6m/s Respectively

The sound level limit at a Point of Reception in Class Areas 1 & 2 (Urban) or in Class 3 Areas (Rural), under conditions of average wind speed above 8 m/s and 6m/s respectively, expressed in terms of the hourly  $L_{eq}$ , is the wind induced background sound level, expressed in terms of ninetieth percentile sound level ( $L_{A90}$ ) plus 7 dB, or the minimum hourly background sound level established in accordance with requirements in Publications NPC-205/NPC-232/NPC-233, whichever is higher. A summary of the above limits is shown in Table 1 for continued reference.

Table 1: MOE Sound Level Limits at Points of Reception for Wind Plants

Wind Speed (m/s)	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
Wind Turbine Noise Criterion NPC-232 (dBA) Class 3	40.0	40.0	40.0	43.0	45.0	49.0	51.0
Wind Turbine Noise Criterion NPC-205 (dBA) Class 1 & 2	45.0	45.0	45.0	45.0	45.0	49.0	51.0

The Project sound limits are ultimately a function of several variables:

1. Current ambient levels due to sound levels caused by both natural and human activity (e.g., traffic) sounds.
2. Acoustic classification of the study area (e.g., Class 2 and/or Class 3 as defined by MOE).
3. Wind induced background sound levels.

It should be noted that this study has opted to apply the more conservative Class 3 (Rural) values to all territories within the study area. Table 2 summarizes the sound level limits for Class 3 areas.

Table 2: Sound Level Limits for Class 3 Areas

Wind Speed (m/s)	4 m/s	5 m/s	6 m/s	7 m/s	8 m/s	9 m/s	10 m/s
Wind Turbine Sound Level Limit (dBA) (Class 3 Area, NPC-232)	40.0	40.0	40.0	43.0	45.0	49.0	51.0

## 4 Description of Sources

### 4.1 Transformer Station

Northland plans to build a transformer substation south of Sararas Road, between Concession Road 15 and Bronson Line. The substation will contain one transformer unit, and one reactor installation. The centroid coordinates of the substation are found in Table 3.

The transformer unit will be rated at 125MVA (ONAF2), and has been modelled with a height of 4.1m. The reactor unit has been modelled with a height of 11m.

Transformer noise is comprised of casing noise emitted from the operating transformer itself and cooling fan noise. Overall sound power level ratings of the transformer and reactor equipment installations will not exceed 84 dBA and 80 dBA, respectively. Both transformer and reactor noise have a pronounced audible tonal quality and therefore incur a 5dB penalty, as per MOE publication NPC-104[7]. As such, the transformer and reactor overall modelled sound power levels, including the tonal penalties, are 89 dBA and 85 dBA respectively.

In the event the rated overall sound power level of the transformer or reactor units exceed the above specified sound power levels, appropriate mitigation will be provisioned to ensure compliance with noise limits at all receptors.

The noise contribution from the transformer and reactor units is calculated using the DataKustik CadnaA version 4.3 environmental noise prediction software. The calculations are based on established prediction methods approved by the MOE: ISO 9613-2 standard entitled "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation". For this analysis, the noise contribution from the substation was added to the noise contributions of the wind turbines to assess the total cumulative effect of the Project.

Table 3: Transformer Substation Location

Identifier	UTM Coordinates		Remarks
	X (m)	Y (m)	
Transformer Substation	446771	4804804	Centroid

## 4.2 Wind Turbine Generators

The Project will utilize:

- 2 Siemens model SWT-2.3-113 1.824MW (1824kW) wind turbines
- up to 2 Siemens model SWT-2.3-113 1.903MW (1903kW) wind turbine
- 14 Siemens model SWT-2.3-113 2.03MW (2030kW) wind turbines
- up to 13 Siemens SWT-2.3-113 2.126MW (2126kW) wind turbines
- 10 Siemens model SWT-2.3-113 2.221MW (2221kW) wind turbines
- 7 Siemens SWT-2.3-113 2.3MW (2300kW) wind turbines

However, one each of the Siemens model SWT-2.3-113 1.903MW and model SWT-2.3-113 2.126MW wind turbines are currently considered as alternate/backup, and their noise contributions have been excluded from the total analysis, as their locations should only be used in the event another turbine location must be abandoned. Each turbine has three blades, a 113m rotor diameter, and a hub height of 99.5m. Additional information on each turbine model is provided in Attachment A. Turbine coordinates are listed in Table 10.

### 4.2.1 Wind Turbine Noise Emission Ratings

Siemens has provided Northland with noise emission performance for the different Siemens wind turbine models for wind speeds between 6m/s and 10m/s at a reference height of 10m. See Attachment A and Table 4 to Table 9 below. Under normal operation the turbine noise is not considered tonal. Please refer to the datasheets in Attachment A for the reported tonal audibility for the turbine models.

Table 4: SWT-2.3-113 1.824MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 1.824MW Electrical Rating: 1.824 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	83.9	83.3	82.7	82.8	82.5	83.3	83.3	83.3	83.3	83.3
125	89.4	88.2	87.3	86.8	85.9	88.2	88.2	88.2	88.2	88.2
250	94	93.1	92.8	92.2	91.4	93.1	93.1	93.1	93.1	93.1
500	92.1	92.4	92.9	92.7	92.4	92.4	92.4	92.4	92.4	92.4
1000	94.1	94.5	94.1	94	94.3	94.5	94.5	94.5	94.5	94.5
2000	92.9	93.2	93.3	93.5	94	93.2	93.2	93.2	93.2	93.2
4000	83.5	86.2	88.2	90.1	90.3	86.2	86.2	86.2	86.2	86.2
8000	66.7	69.9	72.1	72.1	72.0	69.9	69.9	69.9	69.9	69.9
Total dBA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 5: SWT-2.3-113 1.903MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 1.903MW Electrical Rating: 1.903 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	84.1	83.5	82.9	83	82.7	83.5	83.5	83.5	83.5	83.5
125	89.8	88.6	87.7	87.2	86.3	88.6	88.6	88.6	88.6	88.6
250	95.2	94.4	94	93.4	92.6	94.4	94.4	94.4	94.4	94.4
500	93.6	93.9	94.2	94	93.7	93.9	93.9	93.9	93.9	93.9
1000	95	95.4	95.1	95	95.3	95.4	95.4	95.4	95.4	95.4
2000	93.6	94	94.3	94.5	95	94	94	94	94	94
4000	83.6	86.7	88.8	90.7	90.8	86.7	86.7	86.7	86.7	86.7
8000	66.7	70.3	72.6	72.6	72.5	70.3	70.3	70.3	70.3	70.3
Total dBA	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0

Table 6: SWT-2.3-113 2.03MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 2.03MW Electrical Rating: 2.03 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	84.3	83.6	83.1	83.2	82.9	83.6	83.6	83.6	83.6	83.6
125	90.2	89	88.1	87.6	86.7	89	89	89	89	89
250	96.4	95.5	95.1	94.5	93.8	95.5	95.5	95.5	95.5	95.5
500	95.2	95.5	95.5	95.3	95.1	95.5	95.5	95.5	95.5	95.5
1000	96	96.3	96.1	96	96.3	96.3	96.3	96.3	96.3	96.3
2000	94.4	94.7	95.2	95.4	95.9	94.7	94.7	94.7	94.7	94.7
4000	83.8	87	89.3	91.2	91.4	87	87	87	87	87
8000	66.9	70.7	73.1	73.1	73.0	70.7	70.7	70.7	70.7	70.7
Total dBA	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0

Table 7: SWT-2.3-113 2.126MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 2.126MW Electrical Rating: 2.126 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	84.6	83.9	83.3	83.4	83.2	83.9	83.9	83.9	83.9	83.9
125	90.6	89.3	88.5	88	87.2	89.3	89.3	89.3	89.3	89.3
250	97	96.3	96.3	95.7	95	96.3	96.3	96.3	96.3	96.3
500	96.7	96.9	97	96.9	96.6	96.9	96.9	96.9	96.9	96.9
1000	97.4	97.7	97	97	97.3	97.7	97.7	97.7	97.7	97.7
2000	95	95.2	96	96.2	96.8	95.2	95.2	95.2	95.2	95.2
4000	84	87	89.3	91.2	91.4	87	87	87	87	87
8000	66.3	70.4	73.0	73.1	73.0	70.4	70.4	70.4	70.4	70.4
Total dBA	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

Table 8: SWT-2.3-113 2.221MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 2.221MW Electrical Rating: 2.221 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	84.8	83.6	83.5	83.7	83.4	83.6	83.6	83.6	83.6	83.6
125	90.9	91.3	88.8	88.3	87.5	91.3	91.3	91.3	91.3	91.3
250	97.6	97.7	97.2	96.7	95.9	97.7	97.7	97.7	97.7	97.7
500	98.2	98	97.8	97.7	97.4	98	98	98	98	98
1000	98.8	98.7	98	98	98.3	98.7	98.7	98.7	98.7	98.7
2000	95.6	95.4	97.1	97.4	97.9	95.4	95.4	95.4	95.4	95.4
4000	84.1	87.8	90.8	92.7	92.9	87.8	87.8	87.8	87.8	87.8
8000	65.6	71.2	74.5	74.6	74.5	71.2	71.2	71.2	71.2	71.2
Total dBA	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

Table 9: SWT-2.3-113 2.3MW, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

SWT-2.3-113 2.3MW Electrical Rating: 2.3 MW Hub Height (m): 99.5m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	85	84.6	83.7	83.9	83.6	84.6	84.6	84.6	84.6	84.6
125	91.3	92.4	89.2	88.7	87.9	92.4	92.4	92.4	92.4	92.4
250	96.8	97.6	98.4	97.8	97.1	97.6	97.6	97.6	97.6	97.6
500	98.9	99.4	99.3	99.2	98.9	99.4	99.4	99.4	99.4	99.4
1000	99.7	100.3	98.9	98.9	99.2	100.3	100.3	100.3	100.3	100.3
2000	95.3	95.9	97.9	98.2	98.7	95.9	95.9	95.9	95.9	95.9
4000	84.9	86.1	90.8	92.7	93	86.1	86.1	86.1	86.1	86.1
8000	67.4	68.1	74.4	74.5	74.4	68.1	68.1	68.1	68.1	68.1
Total dBA	104.4	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0

\* At 10m reference height.

\*\* The sound power levels corresponding to a wind speed of 7m/s were used for all adjusted emission models since it provides the worst case noise impact at the receptors. i.e. the worst case noise emission for each turbine model is used for all wind speed cases. It should be noted that the overall total sound emission is warranted by Siemens. The spectral data is for modelling purposes only and is not explicitly warranted.

Table 10: Grand Bend Wind Turbine Locations

Identifier	Equipment Make, Model	UTM Coordinates		Remarks
		X (m)	Y (m)	
T-01	SWT-2.3-113 2.126MW	444036	4811878	Grand Bend W.F.
T-02	SWT-2.3-113 1.824MW	444376	4811760	Grand Bend W.F.
T-03	SWT-2.3-113 2.126MW	445882	4810067	Grand Bend W.F.
T-04	SWT-2.3-113 2.221MW	443802	4810147	Grand Bend W.F.
T-05	SWT-2.3-113 2.03MW	444206	4809869	Grand Bend W.F.
T-06	SWT-2.3-113 2.03MW	444035	4809533	Grand Bend W.F.
T-07	SWT-2.3-113 2.126MW	443954	4809147	Grand Bend W.F.
T-08	SWT-2.3-113 2.03MW	443718	4808841	Grand Bend W.F.

T-09	SWT-2.3-113 1.824MW	444323	4808855	Grand Bend W.F.
T-10 (alternate)	SWT-2.3-113 2.126MW	444002	4808745	Grand Bend W.F.
T-11	SWT-2.3-113 2.126MW	444330	4808461	Grand Bend W.F.
T-12	SWT-2.3-113 2.126MW	444001	4808315	Grand Bend W.F.
T-13	SWT-2.3-113 2.221MW	444228	4808041	Grand Bend W.F.
T-14	SWT-2.3-113 2.3MW	443802	4807902	Grand Bend W.F.
T-15	SWT-2.3-113 1.903MW	444500	4807773	Grand Bend W.F.
T-16	SWT-2.3-113 2.03MW	443896	4807611	Grand Bend W.F.
T-17	SWT-2.3-113 2.126MW	443376	4805355	Grand Bend W.F.
T-18	SWT-2.3-113 2.03MW	443717	4805337	Grand Bend W.F.
T-19	SWT-2.3-113 2.3MW	446261	4804829	Grand Bend W.F.
T-20	SWT-2.3-113 2.3MW	446913	4804825	Grand Bend W.F.
T-21	SWT-2.3-113 2.126MW	443654	4804592	Grand Bend W.F.
T-22	SWT-2.3-113 2.03MW	443974	4804635	Grand Bend W.F.
T-23	SWT-2.3-113 2.126MW	443320	4804183	Grand Bend W.F.
T-24	SWT-2.3-113 2.3MW	443623	4804057	Grand Bend W.F.
T-25	SWT-2.3-113 2.3MW	443997	4804036	Grand Bend W.F.
T-26	SWT-2.3-113 2.126MW	443339	4803814	Grand Bend W.F.
T-27	SWT-2.3-113 2.221MW	443638	4803681	Grand Bend W.F.
T-28	SWT-2.3-113 2.03MW	443409	4803439	Grand Bend W.F.
T-29	SWT-2.3-113 2.03MW	443154	4802383	Grand Bend W.F.
T-30	SWT-2.3-113 2.3MW	443011	4802014	Grand Bend W.F.
T-31	SWT-2.3-113 2.221MW	443540	4801110	Grand Bend W.F.
T-32	SWT-2.3-113 2.03MW	442448	4800448	Grand Bend W.F.
T-33	SWT-2.3-113 2.03MW	442838	4800465	Grand Bend W.F.
T-34	SWT-2.3-113 2.126MW	442243	4800119	Grand Bend W.F.
T-35	SWT-2.3-113 2.3MW	442757	4800013	Grand Bend W.F.
T-36	SWT-2.3-113 2.03MW	442447	4799830	Grand Bend W.F.
T-37	SWT-2.3-113 2.221MW	442062	4799669	Grand Bend W.F.
T-38	SWT-2.3-113 2.126MW	442409	4799492	Grand Bend W.F.
T-39	SWT-2.3-113 2.03MW	441744	4799389	Grand Bend W.F.
T-40	SWT-2.3-113 2.126MW	441527	4798742	Grand Bend W.F.
T-41	SWT-2.3-113 2.03MW	441764	4798145	Grand Bend W.F.
T-42	SWT-2.3-113 2.221MW	441607	4797850	Grand Bend W.F.
T-43	SWT-2.3-113 2.03MW	442249	4797830	Grand Bend W.F.
T-44 (alternate)	SWT-2.3-113 1.903MW	441123	4797225	Grand Bend W.F.
T-45	SWT-2.3-113 2.221MW	440154	4796958	Grand Bend W.F.
T-46	SWT-2.3-113 2.221MW	440550	4796892	Grand Bend W.F.
T-47	SWT-2.3-113 2.221MW	440850	4796687	Grand Bend W.F.
T-48	SWT-2.3-113 2.221MW	440529	4796554	Grand Bend W.F.

#### 4.2.2 Bluewater Wind Energy Centre

The Bluewater Wind Energy Centre is a proposed 60MW wind farm located in the Municipalities of Bluewater and Huron East in Huron County, Ontario on private lands east of Highway 21 in the vicinity of the shoreline of Lake Huron. There are up to 41 wind turbine generator locations, but ultimately 37 GE 1.6 MW wind turbine generators will be constructed. The data for these turbines can be found in Attachment B and Table 11 below. The Bluewater Wind Energy Centre is currently in the proposal phase.

Table 11: General Electric Model 1.6-100 LNTE, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

GE 1.6-100 LNTE Electrical Rating: 1.6 MW Hub Height (m): 80m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	80.3	84.0	84.1	84.1	84.0	84.0	84.0	84.0	84.0	84.0
125	88.4	91.6	91.8	91.8	91.7	91.7	91.7	91.7	91.7	91.7
250	94.7	95.4	95.3	95.4	95.5	95.5	95.5	95.5	95.5	95.5
500	95.5	97.1	96.6	96.7	97.0	97.0	97.0	97.0	97.0	97.0
1000	91.8	97.1	97.5	97.6	97.8	97.8	97.8	97.8	97.8	97.8
2000	92.4	95.7	95.7	95.5	95.1	95.1	95.1	95.1	95.1	95.1
4000	88.9	89.7	89.1	88.4	87.9	87.9	87.9	87.9	87.9	87.9
8000	70.3	70.4	70.6	69.4	69.1	69.1	69.1	69.1	69.1	69.1
Total dBA	100.5	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

\* At 10m reference height.

\*\* The sound power levels corresponding to a wind speed of 10m/s were used for all adjusted emission models since it provides the worst case noise impact at the receptors. i.e. the worst case noise emission for each turbine model is used for all wind speed cases. It should be noted that the overall total sound emission is warranted by GE. The spectral data is for modelling purposes only and is not explicitly warranted.

As some of the Bluewater Wind Energy Centre wind turbines are located less than 5km away from some of the Grand Bend wind farm noise receptors, the total noise impact assessment on the Grand Bend Wind Farm includes the noise impact from 22 of the potential wind turbines from the Bluewater wind farm. These turbines and their respective locations are listed in Table 12 below.

Table 12: Bluewater Wind Turbine Locations within 5km of any Grand Bend Wind Farm point of reception

Identifier	Equipment Make, Model	UTM Coordinates		Remarks
		X (m)	Y (m)	
B_WTG01	GE 1.6 – 100 LNTE	445260	4816548	Bluewater W.E.C.
B_WTG02	GE 1.6 – 100 LNTE	445320	4816183	Bluewater W.E.C.
B_WTG03	GE 1.6 – 100 LNTE	445565	4813118	Bluewater W.E.C.
B_WTG04	GE 1.6 – 100 LNTE	445568	4812063	Bluewater W.E.C.
B_WTG05	GE 1.6 – 100 LNTE	445933	4810683	Bluewater W.E.C.
B_WTG06	GE 1.6 – 100 LNTE	446088	4809847	Bluewater W.E.C.
B_WTG12	GE 1.6 – 100 LNTE	446877	4816800	Bluewater W.E.C.
B_WTG13	GE 1.6 – 100 LNTE	447116	4816186	Bluewater W.E.C.
B_WTG14	GE 1.6 – 100 LNTE	447232	4815368	Bluewater W.E.C.
B_WTG15	GE 1.6 – 100 LNTE	447186	4814525	Bluewater W.E.C.
B_WTG16	GE 1.6 – 100 LNTE	447590	4813794	Bluewater W.E.C.

B_WTG17	GE 1.6 – 100 LNTE	447358	4812978	Bluewater W.E.C.
B_WTG18	GE 1.6 – 100 LNTE	447341	4812484	Bluewater W.E.C.
B_WTG25	GE 1.6 – 100 LNTE	449175	4814818	Bluewater W.E.C.
B_WTG26	GE 1.6 – 100 LNTE	449284	4814234	Bluewater W.E.C.
B_WTG27	GE 1.6 – 100 LNTE	449400	4813830	Bluewater W.E.C.
B_WTG28	GE 1.6 – 100 LNTE	450031	4813877	Bluewater W.E.C.
B_WTG29	GE 1.6 – 100 LNTE	450097	4813116	Bluewater W.E.C.
B_WTG30	GE 1.6 – 100 LNTE	450058	4812694	Bluewater W.E.C.
B_WTG31	GE 1.6 – 100 LNTE	450567	4810875	Bluewater W.E.C.
B_WTG39	GE 1.6 – 100 LNTE	449597	4815379	Bluewater W.E.C.
B_WTG40	GE 1.6 – 100 LNTE	449532	4811269	Bluewater W.E.C.

#### 4.2.3 Zurich Wind Farm

The Zurich Wind farm, operated by Magnum Wind Energy, is an existing 800kW wind farm located in the Municipality of Bluewater in Huron County, Ontario on private lands north of Zurich Road and east of Goshen Line, in the vicinity of the shoreline of Lake Huron. There is 1 wind turbine generator; an Enercon E-48 800 kW model. The data for this turbine can be found in Attachment B and Table 13 below.

Table 13: Enercon Model E-48, Sound Power Spectrums at wind speeds of 6m/s to 10m/s

Enercon E-48 Electrical Rating: 800 kW Hub Height (m): 76m	Octave Band Sound Power Level (dB)									
	Manufacturer's Emission Levels					Adjusted Emission Levels**				
	6	7	8	9	10	6	7	8	9	10
Wind Speed* (m/s)										
Frequency (Hz)										
63	79.5	81.6	79.6	79.8	78.6	78.6	78.6	78.6	78.6	78.6
125	83.6	86.3	86.0	87.3	84.4	84.4	84.4	84.4	84.4	84.4
250	90.5	93.8	95.1	96.1	93.3	93.3	93.3	93.3	93.3	93.3
500	92.8	95.7	97.1	97.5	96.8	96.8	96.8	96.8	96.8	96.8
1000	92.6	94.1	95.5	95.1	97.9	97.9	97.9	97.9	97.9	97.9
2000	87.4	89.0	89.1	90.0	92.7	92.7	92.7	92.7	92.7	92.7
4000	83.6	86.1	85.8	88.8	87.6	87.6	87.6	87.6	87.6	87.6
8000	80.2	83.6	83.6	87.1	84.6	84.6	84.6	84.6	84.6	84.6
Total dBA	97.8	100.3	101.4	102	102.1	102.1	102.1	102.1	102.1	102.1

\* At 10m reference height.

\*\* The sound power levels corresponding to a wind speed of 10m/s were used for all adjusted emission models since it provides the worst case noise impact at the receptors. i.e. the worst case noise emission for each turbine model is used for all wind speed cases. It should be noted that the overall total sound emission is warranted by Enercon. The spectral data is for modelling purposes only and is not explicitly warranted.

As the Zurich Wind Energy Centre wind turbine is located less than 5km away from some of the Grand Bend wind farm noise receptors, the total noise impact assessment on the Grand Bend Wind Farm includes the 1 wind turbine from the Zurich wind farm. The turbine location is listed in Table 14 below.

Table 14: Zurich Wind Turbine Location within 5km of any Grand Bend Wind Farm point of reception

Identifier	Equipment Make, Model	UTM Coordinates		Remarks
		X (m)	Y (m)	
ZurichWF_T01	Enercon E-48	446873	4808102	Zurich W.F.

## 5 Noise Assessment Results

### 5.1 Transformer Station Impact Assessment

The overall modelled sound power levels of the transformer and reactor installations, including the 5dB tonality penalty, are 89dBA and 85dBA respectively. DataKustik CadnaA environmental noise model generated the worst-case results shown in Table 15. These results include contributions of the wind turbines, and the effect of a local ground attenuation factor of  $G = 0.00$  in the vicinity of the transformer substation. As indicated in the table, and applying the conservative application of Class 3 (rural) area to all Points of Reception, the transformer substation is expected to meet the applicable noise guidelines. The receptor identified in Table 15 is the worst-case receptor closest to the transformer; it is a non-participating and non-vacant receptor.

Table 15: Worst-case receptor closest to the transformer

Receptor	Description	Distance to Transformer (m)	Calculated Sound Level (dBA)		Allowable Level (dBA)
			GB Turbines ON	GB Turbines OFF	
R0776	Residence	583	39.9	24.9	40.0

### 5.2 Wind Turbine Impact Assessment

The noise impact at 2529 receptor dwellings and 444 vacant lots has been predicted using a formula based on ISO 9613-2 Part 2; consistent with the MOE's modelling requirements. The locations and sound power levels of all the wind turbine sources, the transformer station and the location of the receptors were integrated into a master data file.

Noise was predicted based on the following noise modelling protocol:

- Temperature = 10°C
- Humidity = 70%
- $G = 0.70$  global ground attenuation factor
- Sound Level Limit = 40.0 dBA at 6m/s wind at 10m agl, i.e. precision to 1/10th of decibel
- Turbine noise emission corresponding to the manufacturer's cut-out sound power level at a wind speed of 10m/s at 10m agl
- Analysis to include only turbines within 5km of a receptor for those receptors whose closest turbine is within 1.5km
- Two storey dwelling = 4.5m receptor height at center of dwelling
- Single storey dwelling = 4.5m receptor height at center of dwelling
- Vacant lot = 4.5m receptor height at position described in section 3.1: Description of Receptors

The highest noise level for each receptor, which represents the worst-case prediction, is outlined in the assessment summary table at the end of this report.

The noise modelling software computes the octave band levels at the receptors from all the sound sources, including the transformer. The resultant A-weighted sound pressure levels are then

transferred as a noise contour to the site map that shows both source and receiver locations. Refer to Figure 2 for the noise contour.

Worst-case sound levels have been predicted at all 2529 dwellings and 444 vacant lots. A sample detailed calculation is provided in Attachment C. The worst-case predicted sound levels at all receptors are predicted to be within the MOE environmental noise limits for Class 3 (rural) areas.

### 5.3 Wind Turbine Summary Tables

The sound power emitted by the wind turbines and transformer station, as well as their locations with respect to the receptors determines the sound pressure levels induced by the operation of all Project components. The acoustic power of each wind turbine as provided by the manufacturers are shown in Attachments A and B.

The total noise impact at each receptor, including all wind turbines and transformer stations, has been summarized in the noise assessment summary tables below for all 2529 dwellings and 444 vacant lots. A concordance table has also been provided, indicating the common receptors and individual noise impact levels from the identified adjacent wind farms. The noise impact from the simultaneous operation of all 46 preferred wind turbine locations of the Grand Bend Wind Farm, the transformer substation, and the adjacent wind power projects outlined in section 4.2, is less than or equal to the sound level limit associated with NPC 232 (i.e., 40.0 dBA).

The closest receptor to a proposed Grand Bend Wind Farm turbine is R0068 (vacant property), which is located 551m from turbine T01. The closest participating receptor dwelling (non-vacant lot) is R0812 which is located 555m from turbine T21, and the closest non-participating receptor dwelling is R0827 which is located 560m from turbine T19. The non-participating and non-vacant receptors identified in Table 12 are the closest residence to a turbine and the overall worst-case receptor for the entire site, respectively.

Table 16: Non-participating residence closest to a turbine & overall worst-case for the entire site

Receptor	Description	Distance to Closest Turbine (m)	Turbine ID	Calculated Sound Level (dBA)	Allowable Level (dBA)
				Turbines ON	
R0827	Residence (closest to a turbine)	560	T-19	39.4	40.0
R0776	Residence (overall worst-case)	608	T-20	39.9	40.0

## 6 Conclusion

The project site is rural; therefore the MOE's Class 3 (rural) designation applies.

Building upon the project specific sound limit guidelines, noise impact prediction modelling was undertaken. The noise impact on the nearest points of reception was predicted using an acoustic model, ISO 9613, as required by the MOE, based on noise from the Project's wind turbine array and transformer station, coupled with noise contribution of the neighbouring Bluewater Wind Energy Centre and Zurich Wind Farm. The noise assessment was based on all of the recommended procedures outlined in the MOE's "Noise Guidelines for Wind farms, October 2008" [17].

The analysis shows that the cumulative noise impact from the Project does not exceed the most restrictive noise limits that apply for areas with an acoustic designation of Class 3 (Rural) as defined by the MOE. There is no need for the application of any mitigation measures and no further studies are contemplated for environmental noise in relation to the Project.

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17. PIBS 4709e - Noise Guidelines for Wind Farms, Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities, Ontario Ministry of Environment , October 2008
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Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
		Eastings	Northings	<=6			7	8	9	10	<=6	7	8	9	10		
R0001	4.5	Residence	443458	4813766	1975	T-01	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R0002	4.5	Residence	443428	4813550	1779	T-01	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R0003	4.5	Residence	443540	4813521	1717	T-01	29.5	29.5	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	Yes
R0008	4.5	Residence	443454	4813067	1324	T-01	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R0009	4.5	Residence	443388	4812932	1237	T-01	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R0012	4.5	Residence	442298	4812801	1968	T-01	27.0	27.0	27.0	27.0	27.0	40.0	43.0	45.0	49.0	51.0	Yes
R0013	4.5	Residence	443356	4812770	1122	T-01	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R0014	4.5	Residence	442321	4812769	1933	T-01	27.2	27.2	27.2	27.2	27.2	40.0	43.0	45.0	49.0	51.0	Yes
R0016	4.5	Residence	442319	4812728	1916	T-01	27.2	27.2	27.2	27.2	27.2	40.0	43.0	45.0	49.0	51.0	Yes
R0017	4.5	Residence	442247	4812708	1972	T-01	27.0	27.0	27.0	27.0	27.0	40.0	43.0	45.0	49.0	51.0	Yes
R0019	4.5	Residence	442248	4812680	1959	T-01	27.1	27.1	27.1	27.1	27.1	40.0	43.0	45.0	49.0	51.0	Yes
R0021	4.5	Residence	443442	4812627	957	T-01	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R0022	4.5	Residence	442264	4812614	1919	T-01	27.5	27.5	27.5	27.5	27.5	40.0	43.0	45.0	49.0	51.0	Yes
R0023	4.5	Residence	443416	4812522	895	T-01	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R0024	4.5	Residence	442141	4812478	1988	T-01	27.3	27.3	27.3	27.3	27.3	40.0	43.0	45.0	49.0	51.0	Yes
R0025	4.5	Residence	442131	4812454	1991	T-01	27.3	27.3	27.3	27.3	27.3	40.0	43.0	45.0	49.0	51.0	Yes
R0027	4.5	Residence	442225	4812429	1893	T-01	27.7	27.7	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	Yes
R0028	4.5	Residence	442142	4812426	1972	T-01	27.4	27.4	27.4	27.4	27.4	40.0	43.0	45.0	49.0	51.0	Yes
R0029	4.5	Residence	442286	4812415	1831	T-01	27.9	27.9	27.9	27.9	27.9	40.0	43.0	45.0	49.0	51.0	Yes
R0030	4.5	Residence	442141	4812395	1964	T-01	27.4	27.4	27.4	27.4	27.4	40.0	43.0	45.0	49.0	51.0	Yes
R0031	4.5	Residence	442277	4812382	1830	T-01	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R0032	4.5	Residence	442143	4812366	1955	T-01	27.5	27.5	27.5	27.5	27.5	40.0	43.0	45.0	49.0	51.0	Yes
R0033	4.5	Residence	442263	4812356	1836	T-01	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R0034	4.5	Residence	442140	4812332	1950	T-01	27.6	27.6	27.6	27.6	27.6	40.0	43.0	45.0	49.0	51.0	Yes
R0035	4.5	Residence	442260	4812324	1831	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0036	4.5	Residence	442258	4812302	1828	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0037	4.5	Residence	442141	4812300	1941	T-01	27.5	27.5	27.5	27.5	27.5	40.0	43.0	45.0	49.0	51.0	Yes
R0039	4.5	Residence	442120	4812275	1957	T-01	27.6	27.6	27.6	27.6	27.6	40.0	43.0	45.0	49.0	51.0	Yes
R0040	4.5	Residence	442226	4812246	1847	T-01	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R0042	4.5	Residence	442133	4812232	1935	T-01	27.7	27.7	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	Yes
R0044	4.5	Residence	442115	4812211	1950	T-01	27.7	27.7	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	Yes
R0046	4.5	Residence	442113	4812188	1948	T-01	27.7	27.7	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	Yes
R0047	4.5	Residence	442216	4812176	1844	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0048	4.5	Residence	442110	4812169	1948	T-01	27.7	27.7	27.7	27.7	27.7	40.0	43.0	45.0	49.0	51.0	Yes
R0049	4.5	Residence	442213	4812155	1844	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0050	4.5	Residence	443392	4812142	696	T-01	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0051	4.5	Residence	442210	4812136	1844	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0052	4.5	Residence	442131	4812120	1920	T-01	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R0053	4.5	Residence	442210	4812110	1841	T-01	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R0054	4.5	Residence	443282	4812089	783	T-01	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R0055	4.5	Residence	442155	4812081	1892	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0056	4.5	Residence	442196	4812067	1850	T-01	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R0058	4.5	Residence	443383	4812064	680	T-01	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R0059	4.5	Residence	442129	4812051	1915	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0061	4.5	Residence	442114	4812027	1928	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0062	4.5	Residence	442200	4812014	1841	T-01	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R0063	4.5	Residence	442141	4812000	1899	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0065	4.5	Residence	442140	4811979	1899	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0067	4.5	Residence	442102	4811963	1936	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0069	4.5	Residence	442200	4811947	1837	T-01	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R0070	4.5	Residence	442119	4811946	1918	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0071	4.5	Residence	442114	4811920	1923	T-01	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R0072	4.5	Residence	442205	4811902	1832	T-01	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R0073	4.5	Residence	442201	4811875	1835	T-01	28.7	28.7	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	Yes









Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10		
R0374	4.5	Residence	442981	4808173	865	T-14	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0376	4.5	Residence	442304	4808147	1518	T-14	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0379	4.5	Residence	442142	4808120	1674	T-14	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R0380	4.5	Residence	442245	4808118	1572	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0381	4.5	Residence	442208	4808114	1608	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0382	4.5	Residence	442156	4808103	1658	T-14	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R0383	4.5	Residence	442298	4808099	1517	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0384	4.5	Residence	442223	4808098	1591	T-14	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0385	4.5	Residence	442167	4808081	1645	T-14	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R0386	4.5	Residence	442243	4808080	1569	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0387	4.5	Residence	442296	4808077	1516	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0388	4.5	Residence	442183	4808058	1626	T-14	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R0389	4.5	Residence	442295	4808053	1514	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0390	4.5	Residence	442211	4808036	1597	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0391	4.5	Residence	442297	4808035	1510	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0392	4.5	Residence	442987	4808014	822	T-14	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R0393	4.5	Residence	442225	4808008	1580	T-14	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0394	4.5	Residence	442206	4807983	1598	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0396	4.5	Residence	442316	4807980	1488	T-14	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0397	4.5	Residence	442974	4807967	830	T-14	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0398	4.5	Residence	442312	4807962	1491	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0399	4.5	Residence	442217	4807958	1586	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0400	4.5	Residence	442314	4807935	1488	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0401	4.5	Residence	442221	4807923	1580	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0402	4.5	Residence	442317	4807908	1485	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0403	4.5	Residence	442223	4807902	1579	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0405	4.5	Residence	442312	4807888	1490	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0406	4.5	Residence	442243	4807875	1559	T-14	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0408	4.5	Residence	442877	4807850	926	T-14	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0411	4.5	Residence	442236	4807820	1568	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0413	4.5	Residence	442241	4807795	1565	T-14	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0414	4.5	Residence	442240	4807779	1566	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0415	4.5	Residence	442339	4807775	1469	T-14	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0416	4.5	Residence	442277	4807755	1531	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0417	4.5	Residence	442361	4807741	1450	T-14	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0418	4.5	Residence	442248	4807736	1563	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0419	4.5	Residence	442368	4807705	1447	T-14	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0420	4.5	Residence	442240	4807703	1574	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0421	4.5	Residence	442380	4807701	1436	T-14	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0422	4.5	Residence	442395	4807701	1421	T-14	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0423	4.5	Residence	442254	4807698	1562	T-14	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0424	4.5	Residence	442278	4807694	1538	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0425	4.5	Residence	442292	4807693	1524	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0426	4.5	Residence	442305	4807691	1511	T-14	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R0427	4.5	Residence	442419	4807691	1399	T-14	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R0428	4.5	Residence	442319	4807690	1497	T-14	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R0429	4.5	Residence	442333	4807689	1484	T-14	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R0430	4.5	Residence	442348	4807689	1469	T-14	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0431	4.5	Residence	442429	4807688	1389	T-14	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0432	4.5	Residence	442361	4807687	1457	T-14	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0433	4.5	Residence	442396	4807684	1422	T-14	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0434	4.5	Residence	442369	4807683	1449	T-14	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0435	4.5	Residence	442385	4807683	1433	T-14	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0436	4.5	Residence	442235	4807672	1584	T-14	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes





Point of Reception ID	Receptor Height [m]	Receptor Description		Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]	
						Windspeed [m/s]											
						<=6	7	8	9	10	<=6	7	8	9	10		
R0591	4.5	Residence	442343	4806834	1736	T-16	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R0592	4.5	Residence	442494	4806831	1604	T-16	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0593	4.5	Residence	442547	4806823	1562	T-16	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R0594	4.5	Residence	442566	4806822	1546	T-16	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0595	4.5	Residence	442863	4806821	1300	T-16	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0597	4.5	Residence	443430	4806820	918	T-16	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R0598	4.5	Residence	443574	4806816	858	T-16	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R0599	4.5	Residence	442342	4806814	1747	T-16	32.7	32.7	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	Yes
R0601	4.5	Residence	442301	4806806	1787	T-16	32.5	32.5	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	Yes
R0602	4.5	Residence	442368	4806786	1737	T-16	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R0603	4.5	Residence	442400	4806786	1708	T-16	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R0604	4.5	Residence	447326	4806771	1989	T-20	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R0609	4.5	Residence	442699	4806753	1473	T-16	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0610	4.5	Residence	442744	4806749	1439	T-16	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R0612	4.5	Residence	442784	4806743	1411	T-16	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R0613	4.5	Residence	442857	4806738	1357	T-16	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R0614	4.5	Residence	442378	4806735	1703	T-17	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R0615	4.5	Residence	442604	4806727	1565	T-16	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0616	4.5	Residence	442504	4806724	1623	T-17	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0617	4.5	Residence	442655	4806715	1531	T-16	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0618	4.5	Residence	442696	4806712	1500	T-16	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R0619	4.5	Residence	442729	4806712	1473	T-16	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0620	4.5	Residence	442380	4806704	1678	T-17	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R0621	4.5	Residence	442774	4806703	1443	T-16	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R0622	4.5	Residence	442512	4806690	1591	T-17	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R0623	4.5	Residence	442402	4806665	1633	T-17	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R0624	4.5	Residence	442583	4806655	1523	T-17	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0625	4.5	Residence	442517	4806653	1557	T-17	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R0626	4.5	Residence	442629	4806649	1495	T-17	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0627	4.5	Residence	442727	4806646	1445	T-17	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0630	4.5	Residence	442453	4806614	1562	T-17	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0632	4.5	Residence	442455	4806582	1534	T-17	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0633	4.5	Residence	442616	4806579	1441	T-17	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0634	4.5	Residence	442660	4806571	1411	T-17	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0635	4.5	Residence	442711	4806569	1385	T-17	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0636	4.5	Residence	442495	4806531	1470	T-17	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R0637	4.5	Residence	445467	4806529	1576	T-15	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0638	4.5	Residence	442601	4806515	1396	T-17	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0639	4.5	Residence	442516	4806494	1427	T-17	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R0640	4.5	Residence	442653	4806491	1348	T-17	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0641	4.5	Residence	442699	4806483	1316	T-17	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0643	4.5	Residence	442366	4806468	1504	T-17	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R0644	4.5	Residence	442575	4806456	1362	T-17	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R0645	4.5	Residence	442610	4806435	1324	T-17	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R0646	4.5	Residence	442375	4806429	1469	T-17	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R0647	4.5	Residence	442646	4806419	1291	T-17	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R0648	4.5	Residence	442675	4806402	1260	T-17	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R0649	4.5	Residence	442719	4806402	1236	T-17	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R0650	4.5	Residence	442382	4806390	1435	T-17	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0653	4.5	Residence	442392	4806348	1398	T-17	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0655	4.5	Residence	442455	4806322	1336	T-17	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R0656	4.5	Residence	442400	4806306	1363	T-17	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R0657	4.5	Residence	442475	4806291	1299	T-17	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R0658	4.5	Residence	442823	4806266	1066	T-17	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes



Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
			Easting	Northing			Windspeed [m/s]										
							<=6	7	8	9	10	<=6	7	8	9	10	
R0723	4.5	Residence	442512	4805896	1019	T-17	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0724	4.5	Residence	442561	4805891	976	T-17	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0725	4.5	Residence	442684	4805885	872	T-17	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0726	4.5	Residence	442620	4805883	922	T-17	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0727	4.5	Residence	442463	4805875	1051	T-17	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R0728	4.5	Residence	442471	4805856	1035	T-17	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R0729	4.5	Residence	445605	4805854	1217	T-19	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R0731	4.5	Residence	442575	4805844	939	T-17	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R0732	4.5	Residence	442540	4805843	968	T-17	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0733	4.5	Residence	442597	4805840	918	T-17	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0734	4.5	Residence	442479	4805831	1016	T-17	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0736	4.5	Residence	442550	4805820	948	T-17	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R0737	4.5	Residence	445498	4805820	1250	T-19	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R0738	4.5	Residence	442596	4805812	904	T-17	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R0739	4.5	Residence	442489	4805809	997	T-17	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R0740	4.5	Residence	442554	4805800	935	T-17	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0742	4.5	Residence	442606	4805785	882	T-17	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R0743	4.5	Residence	442668	4805771	822	T-17	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R0744	4.5	Residence	442565	4805770	912	T-17	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0745	4.5	Residence	442510	4805760	957	T-17	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R0746	4.5	Residence	442608	4805758	868	T-17	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0747	4.5	Residence	442669	4805747	809	T-17	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0748	4.5	Residence	442572	4805746	895	T-17	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R0749	4.5	Residence	442614	4805736	852	T-17	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R0750	4.5	Residence	442518	4805735	938	T-17	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0751	4.5	Residence	442578	4805725	880	T-17	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0753	4.5	Residence	442621	4805714	836	T-17	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R0754	4.5	Residence	442517	4805711	930	T-17	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0756	4.5	Residence	447593	4805706	1113	T-20	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R0757	4.5	Residence	442675	4805702	783	T-17	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R0758	4.5	Residence	442520	4805685	918	T-17	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0759	4.5	Residence	442671	4805672	773	T-17	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R0760	4.5	Residence	442532	4805665	899	T-17	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R0761	4.5	Residence	442595	4805660	839	T-17	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R0763	4.5	Residence	442644	4805654	791	T-17	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R0764	4.5	Residence	447848	4805654	1250	T-20	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R0765	4.5	Residence	442533	4805636	889	T-17	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0766	4.5	Residence	442540	4805629	880	T-17	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R0767	4.5	Residence	442616	4805611	803	T-17	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R0768	4.5	Residence	442662	4805609	758	T-17	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R0769	4.5	Residence	442554	4805583	854	T-17	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R0770	4.5	Residence	442571	4805558	831	T-17	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0771	4.5	Residence	442567	4805541	831	T-17	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0772	4.5	Residence	442654	4805537	745	T-17	37.0	37.0	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	Yes
R0773	4.5	Residence	442623	4805461	761	T-17	37.0	37.0	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	Yes
R0775	4.5	Residence	442621	4805398	757	T-17	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0776	4.5	Residence	446656	4805376	608	T-20	39.9	39.9	39.9	39.9	39.9	40.0	43.0	45.0	49.0	51.0	Yes
R0777	4.5	Residence	445568	4805372	881	T-19	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0778	4.5	Residence	442619	4805344	757	T-17	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0780	4.5	Residence	447202	4805305	561	T-20	39.0	39.0	39.0	39.0	39.0	40.0	43.0	45.0	49.0	51.0	Yes
R0781	4.5	Residence	442577	4805273	804	T-17	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0783	4.5	Residence	442734	4805251	651	T-17	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0785	4.5	Residence	442597	4805210	793	T-17	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0786	4.5	Residence	442627	4805169	772	T-17	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes



Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
		Receptor Description	Easting	Northing			<=6	7	8	9	10	<=6	7	8	9	10	
R0855	4.5	Residence	442513	4804261	811	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0856	4.5	Residence	442481	4804259	842	T-23	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0857	4.5	Residence	442505	4804231	816	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0858	4.5	Residence	442472	4804229	849	T-23	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0859	4.5	Residence	442395	4804227	926	T-23	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R0860	4.5	Residence	445704	4804227	821	T-19	36.9	36.9	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	Yes
R0864	4.5	Residence	447831	4804135	1148	T-20	32.2	32.2	32.2	32.2	32.2	40.0	43.0	45.0	49.0	51.0	Yes
R0865	4.5	Residence	447992	4804129	1284	T-20	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R0866	4.5	Residence	445858	4804114	821	T-19	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R0868	4.5	Residence	442471	4804110	852	T-23	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R0869	4.5	Residence	442498	4804103	826	T-23	38.8	38.8	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	Yes
R0870	4.5	Residence	442444	4804099	880	T-23	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0871	4.5	Residence	442421	4804086	905	T-23	38.1	38.1	38.1	38.1	38.1	40.0	43.0	45.0	49.0	51.0	Yes
R0872	4.5	Residence	442399	4804065	928	T-23	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R0873	4.5	Residence	442490	4804058	840	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0874	4.5	Residence	442379	4804050	950	T-23	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R0877	4.5	Residence	442367	4804034	965	T-23	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R0878	4.5	Residence	442359	4804014	975	T-23	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0879	4.5	Residence	442509	4804005	830	T-23	38.9	38.9	38.9	38.9	38.9	40.0	43.0	45.0	49.0	51.0	Yes
R0880	4.5	Residence	442426	4804001	912	T-23	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R0881	4.5	Residence	442368	4804000	969	T-23	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R0882	4.5	Residence	442359	4803981	982	T-23	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0883	4.5	Residence	442353	4803962	992	T-23	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0884	4.5	Residence	442487	4803953	864	T-26	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0886	4.5	Residence	442408	4803947	941	T-26	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R0887	4.5	Residence	442350	4803945	998	T-26	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0888	4.5	Residence	442355	4803928	991	T-26	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0889	4.5	Residence	442411	4803922	935	T-26	38.1	38.1	38.1	38.1	38.1	40.0	43.0	45.0	49.0	51.0	Yes
R0890	4.5	Residence	442337	4803908	1007	T-26	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R0891	4.5	Residence	442400	4803899	943	T-26	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R0893	4.5	Residence	442340	4803891	1002	T-26	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R0894	4.5	Residence	442391	4803874	950	T-26	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R0895	4.5	Residence	442345	4803873	996	T-26	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R0897	4.5	Residence	447893	4803864	1372	T-20	30.6	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	Yes
R0898	4.5	Residence	442336	4803852	1004	T-26	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0900	4.5	Residence	442475	4803843	865	T-26	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R0901	4.5	Residence	442332	4803838	1007	T-26	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0903	4.5	Residence	442398	4803827	942	T-26	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R0904	4.5	Residence	442326	4803818	1013	T-26	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0905	4.5	Residence	442397	4803807	942	T-26	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R0907	4.5	Residence	442476	4803795	863	T-26	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R0908	4.5	Residence	442299	4803789	1041	T-26	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0909	4.5	Residence	442389	4803788	951	T-26	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R0910	4.5	Residence	442475	4803775	865	T-26	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R0911	4.5	Residence	442388	4803769	953	T-26	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R0912	4.5	Residence	442415	4803766	926	T-26	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R0913	4.5	Residence	442447	4803761	894	T-26	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0914	4.5	Residence	442308	4803749	1034	T-26	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R0915	4.5	Residence	442291	4803734	1051	T-26	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0916	4.5	Residence	442298	4803714	1046	T-26	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0922	4.5	Residence	442293	4803698	1053	T-26	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0924	4.5	Residence	442372	4803695	974	T-26	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0926	4.5	Residence	445760	4803673	1260	T-19	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R0927	4.5	Residence	442299	4803636	1055	T-26	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes





Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
			Easting	Northing			<=6	7	8	9	10	<=6	7	8	9	10	
R1098	4.5	Residence	441595	4801537	1383	T-32	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1099	4.5	Residence	441532	4801530	1418	T-32	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1100	4.5	Residence	441584	4801507	1366	T-32	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1101	4.5	Residence	441520	4801494	1398	T-32	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1103	4.5	Residence	441515	4801461	1377	T-32	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1105	4.5	Residence	441503	4801442	1371	T-32	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1107	4.5	Residence	441495	4801420	1361	T-32	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1109	4.5	Residence	441456	4801351	1342	T-32	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1111	4.5	Residence	441527	4801316	1265	T-32	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1112	4.5	Residence	442099	4801304	924	T-32	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R1113	4.5	Residence	441452	4801303	1313	T-32	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1114	4.5	Residence	441487	4801299	1283	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1115	4.5	Residence	441498	4801295	1272	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1116	4.5	Residence	441445	4801289	1309	T-32	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1117	4.5	Residence	441517	4801283	1251	T-32	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1119	4.5	Residence	441448	4801266	1292	T-32	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R1120	4.5	Residence	441480	4801261	1264	T-32	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1122	4.5	Residence	441471	4801240	1257	T-32	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1123	4.5	Residence	441622	4801237	1142	T-32	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1124	4.5	Residence	441433	4801234	1283	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1125	4.5	Residence	441429	4801214	1274	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1126	4.5	Residence	441688	4801211	1077	T-32	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1127	4.5	Residence	441464	4801205	1241	T-32	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1128	4.5	Residence	441423	4801199	1270	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1129	4.5	Residence	441793	4801191	990	T-32	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R1130	4.5	Residence	441412	4801172	1264	T-32	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1131	4.5	Residence	441454	4801171	1229	T-32	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R1132	4.5	Residence	441408	4801154	1257	T-32	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1133	4.5	Residence	441404	4801137	1251	T-32	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1134	4.5	Residence	441395	4801117	1247	T-32	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1135	4.5	Residence	441380	4801083	1242	T-32	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1136	4.5	Residence	441412	4801049	1198	T-32	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1137	4.5	Residence	441363	4800998	1216	T-32	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1138	4.5	Residence	442081	4800970	638	T-32	39.4	39.4	39.4	39.4	39.4	40.0	43.0	45.0	49.0	51.0	Yes
R1139	4.5	Residence	441337	4800963	1224	T-32	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1140	4.5	Residence	444190	4800962	667	T-31	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1141	4.5	Residence	441325	4800939	1225	T-32	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1144	4.5	Residence	441365	4800919	1180	T-32	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1145	4.5	Residence	441314	4800912	1221	T-34	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1148	4.5	Residence	441302	4800897	1221	T-34	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1149	4.5	Residence	441377	4800880	1152	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1151	4.5	Residence	441294	4800875	1213	T-34	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R1154	4.5	Residence	441370	4800819	1119	T-34	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1156	4.5	Residence	441258	4800791	1192	T-34	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1157	4.5	Residence	441301	4800777	1149	T-34	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1158	4.5	Residence	441254	4800775	1187	T-34	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1159	4.5	Residence	441531	4800758	956	T-34	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1160	4.5	Residence	441249	4800757	1181	T-34	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1161	4.5	Residence	441294	4800744	1136	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1162	4.5	Residence	441244	4800738	1175	T-34	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1163	4.5	Residence	441284	4800722	1133	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1164	4.5	Residence	441237	4800720	1172	T-34	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1165	4.5	Residence	441279	4800707	1129	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1166	4.5	Residence	441231	4800705	1169	T-34	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes

Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
			Easting	Northing			Windspeed [m/s]										
							<=6	7	8	9	10	<=6	7	8	9	10	
R1167	4.5	Residence	441224	4800687	1166	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1168	4.5	Residence	441271	4800680	1122	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1169	4.5	Residence	441214	4800671	1168	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1170	4.5	Residence	441262	4800662	1121	T-34	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1171	4.5	Residence	441213	4800658	1162	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1172	4.5	Residence	441204	4800643	1164	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1173	4.5	Residence	441256	4800641	1116	T-34	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1174	4.5	Residence	441521	4800635	887	T-34	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R1176	4.5	Residence	441196	4800629	1164	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1177	4.5	Residence	441248	4800618	1113	T-34	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1178	4.5	Residence	441191	4800617	1164	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1179	4.5	Residence	441671	4800613	756	T-34	39.1	39.1	39.1	39.1	39.1	40.0	43.0	45.0	49.0	51.0	Yes
R1180	4.5	Residence	441187	4800603	1161	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1181	4.5	Residence	441234	4800596	1116	T-34	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1182	4.5	Residence	441182	4800586	1159	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1183	4.5	Residence	441177	4800563	1155	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1184	4.5	Residence	441224	4800559	1110	T-34	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1185	4.5	Residence	441169	4800547	1156	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1186	4.5	Residence	441215	4800539	1110	T-34	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1188	4.5	Residence	441160	4800531	1159	T-34	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1189	4.5	Residence	441206	4800520	1112	T-34	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1190	4.5	Residence	441157	4800514	1156	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1191	4.5	Residence	441151	4800497	1156	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1192	4.5	Residence	441199	4800496	1110	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1193	4.5	Residence	441143	4800482	1158	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1194	4.5	Residence	441446	4800474	872	T-34	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R1195	4.5	Residence	441189	4800472	1112	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1197	4.5	Residence	441134	4800467	1162	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1198	4.5	Residence	441131	4800454	1161	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1200	4.5	Residence	441119	4800441	1169	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1201	4.5	Residence	441117	4800428	1167	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1203	4.5	Residence	441112	4800412	1168	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1204	4.5	Residence	444266	4800402	1014	T-31	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1205	4.5	Residence	441100	4800400	1177	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1206	4.5	Residence	441149	4800390	1127	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1207	4.5	Residence	441094	4800389	1181	T-34	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1208	4.5	Residence	441079	4800368	1184	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1210	4.5	Residence	441072	4800354	1176	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1211	4.5	Residence	441062	4800339	1169	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1213	4.5	Residence	441054	4800327	1165	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1214	4.5	Residence	441120	4800326	1126	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1216	4.5	Residence	441050	4800311	1154	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1217	4.5	Residence	441109	4800307	1117	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1218	4.5	Residence	441038	4800300	1152	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1219	4.5	Residence	441031	4800284	1145	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1220	4.5	Residence	441096	4800279	1101	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1221	4.5	Residence	441019	4800264	1136	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1222	4.5	Residence	441084	4800261	1094	T-39	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1223	4.5	Residence	441012	4800251	1130	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1224	4.5	Residence	441005	4800239	1126	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1225	4.5	Residence	441055	4800230	1087	T-39	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1226	4.5	Residence	440991	4800227	1127	T-39	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1227	4.5	Residence	440989	4800210	1116	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1228	4.5	Residence	441047	4800210	1077	T-39	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes





Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]					Windspeed [m/s]					
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10		
R1351	4.5	Residence	440988	4799698	816	T-39	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1352	4.5	Residence	440948	4799696	854	T-39	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R1353	4.5	Residence	440883	4799694	914	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1354	4.5	Residence	440837	4799691	956	T-39	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1355	4.5	Residence	441000	4799691	802	T-39	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1356	4.5	Residence	440757	4799690	1032	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1357	4.5	Residence	440903	4799690	893	T-39	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R1358	4.5	Residence	440956	4799686	842	T-39	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1359	4.5	Residence	440871	4799683	921	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1360	4.5	Residence	440971	4799680	826	T-39	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1361	4.5	Residence	440754	4799679	1032	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1362	4.5	Residence	440827	4799678	961	T-39	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1363	4.5	Residence	440897	4799677	895	T-39	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R1364	4.5	Residence	440868	4799670	920	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1365	4.5	Residence	440983	4799670	811	T-39	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1366	4.5	Residence	440888	4799666	900	T-39	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R1367	4.5	Residence	440792	4799664	991	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1368	4.5	Residence	440859	4799659	925	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1369	4.5	Residence	440817	4799655	965	T-39	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1370	4.5	Residence	440882	4799653	902	T-39	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R1371	4.5	Residence	440665	4799650	1110	T-39	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1372	4.5	Residence	440851	4799647	930	T-39	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1373	4.5	Residence	440709	4799646	1066	T-39	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1374	4.5	Residence	440847	4799635	930	T-39	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1375	4.5	Residence	440713	4799631	1059	T-39	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R1376	4.5	Residence	440867	4799630	910	T-39	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R1377	4.5	Residence	440657	4799627	1113	T-39	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1378	4.5	Residence	440859	4799619	914	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1379	4.5	Residence	440750	4799612	1019	T-39	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R1380	4.5	Residence	440774	4799611	995	T-39	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1381	4.5	Residence	440712	4799610	1055	T-39	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1382	4.5	Residence	440648	4799607	1117	T-39	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1383	4.5	Residence	440731	4799607	1036	T-39	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1384	4.5	Residence	440853	4799606	917	T-39	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R1385	4.5	Residence	440774	4799604	993	T-39	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1386	4.5	Residence	440679	4799598	1086	T-39	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1387	4.5	Residence	444275	4799597	1575	T-35	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R1388	4.5	Residence	440763	4799590	1001	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1389	4.5	Residence	440710	4799588	1053	T-39	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R1390	4.5	Residence	440720	4799588	1043	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1391	4.5	Residence	440733	4799586	1030	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1392	4.5	Residence	440641	4799583	1120	T-39	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1393	4.5	Residence	440742	4799580	1021	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1394	4.5	Residence	440763	4799580	1000	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1395	4.5	Residence	440750	4799576	1011	T-39	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1396	4.5	Residence	440635	4799569	1124	T-39	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1397	4.5	Residence	440720	4799564	1039	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1398	4.5	Residence	440737	4799558	1021	T-39	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1399	4.5	Residence	440626	4799556	1130	T-39	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1400	4.5	Residence	440750	4799554	1008	T-39	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1401	4.5	Residence	440762	4799549	995	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1402	4.5	Residence	440621	4799543	1133	T-39	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1403	4.5	Residence	440768	4799543	988	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1404	4.5	Residence	440712	4799541	1043	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes







Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
			Easting	Northing			<=6	7	8	9	10	<=6	7	8	9	10	
R1597	4.5	Residence	442924	4798567	999	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1599	4.5	Residence	442856	4798563	951	T-43	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R1600	4.5	Residence	442893	4798563	975	T-43	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1601	4.5	Residence	442916	4798562	990	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1602	4.5	Residence	440085	4798558	1453	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1603	4.5	Residence	442927	4798556	993	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1604	4.5	Residence	440053	4798555	1485	T-40	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1605	4.5	Residence	442894	4798555	970	T-43	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1606	4.5	Residence	442859	4798553	946	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1607	4.5	Residence	440100	4798550	1439	T-40	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1608	4.5	Residence	442832	4798546	923	T-43	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R1609	4.5	Residence	442917	4798544	978	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1610	4.5	Residence	440115	4798543	1426	T-40	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1611	4.5	Residence	442895	4798543	962	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1613	4.5	Residence	442858	4798542	937	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1614	4.5	Residence	442835	4798538	919	T-43	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R1615	4.5	Residence	440072	4798536	1469	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1616	4.5	Residence	440128	4798533	1414	T-40	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1617	4.5	Residence	442858	4798533	930	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1618	4.5	Residence	442898	4798533	956	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1619	4.5	Residence	442920	4798529	968	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1620	4.5	Residence	440065	4798525	1478	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1621	4.5	Residence	440143	4798525	1400	T-40	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1622	4.5	Residence	442859	4798525	925	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1623	4.5	Residence	442898	4798522	948	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1624	4.5	Residence	440029	4798521	1513	T-40	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1625	4.5	Residence	442835	4798521	906	T-43	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R1626	4.5	Residence	442919	4798520	961	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1627	4.5	Residence	443483	4798519	1412	T-43	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1629	4.5	Residence	440158	4798514	1387	T-40	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1630	4.5	Residence	442900	4798514	944	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1631	4.5	Residence	442863	4798513	919	T-43	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1632	4.5	Residence	440110	4798511	1435	T-40	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1633	4.5	Residence	442837	4798509	898	T-43	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R1634	4.5	Residence	440054	4798508	1491	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1635	4.5	Residence	442925	4798508	956	T-43	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R1636	4.5	Residence	440019	4798505	1526	T-40	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1637	4.5	Residence	440177	4798505	1370	T-40	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1638	4.5	Residence	442901	4798505	938	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1639	4.5	Residence	442935	4798502	960	T-43	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R1640	4.5	Residence	442903	4798497	934	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1641	4.5	Residence	440047	4798496	1500	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1642	4.5	Residence	440192	4798496	1357	T-40	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1643	4.5	Residence	440008	4798495	1538	T-40	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R1644	4.5	Residence	442841	4798502	895	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1645	4.5	Residence	442864	4798492	903	T-43	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1646	4.5	Residence	442926	4798492	947	T-43	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R1647	4.5	Residence	442937	4798491	954	T-43	37.0	37.0	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	Yes
R1648	4.5	Residence	440216	4798489	1335	T-40	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1649	4.5	Residence	442884	4798489	915	T-43	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1650	4.5	Residence	442904	4798487	927	T-43	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1651	4.5	Residence	440143	4798485	1407	T-40	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1652	4.5	Residence	440096	4798484	1454	T-40	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1653	4.5	Residence	440037	4798482	1512	T-40	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes





Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
							<=6	7	8	9	10	<=6	7	8	9	10	
R1775	4.5	Residence	439621	4797956	1131	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1778	4.5	Residence	439614	4797938	1119	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1780	4.5	Residence	440002	4797937	991	T-45	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1781	4.5	Residence	439595	4797927	1119	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1782	4.5	Residence	440887	4797925	724	T-42	39.2	39.2	39.2	39.2	39.2	40.0	43.0	45.0	49.0	51.0	Yes
R1785	4.5	Residence	439537	4797890	1118	T-45	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1786	4.5	Residence	439571	4797878	1089	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1787	4.5	Residence	439540	4797868	1098	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1788	4.5	Residence	439715	4797864	1007	T-45	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1789	4.5	Residence	439644	4797856	1032	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1790	4.5	Residence	439533	4797848	1085	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1791	4.5	Residence	439619	4797846	1037	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1792	4.5	Residence	439681	4797840	1001	T-45	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1793	4.5	Residence	439847	4797831	926	T-45	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1794	4.5	Residence	439505	4797821	1080	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1795	4.5	Residence	439590	4797820	1030	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1797	4.5	Residence	439494	4797800	1070	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1798	4.5	Residence	439563	4797788	1018	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1799	4.5	Residence	439486	4797782	1061	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1802	4.5	Residence	439541	4797770	1017	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1803	4.5	Residence	439469	4797769	1062	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1804	4.5	Residence	439531	4797759	1015	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1805	4.5	Residence	439456	4797752	1057	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1807	4.5	Residence	439521	4797739	1005	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1808	4.5	Residence	439440	4797733	1054	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1809	4.5	Residence	439507	4797720	999	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1810	4.5	Residence	439430	4797719	1050	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1812	4.5	Residence	439496	4797701	993	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1813	4.5	Residence	439420	4797697	1042	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1815	4.5	Residence	439412	4797674	1031	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1816	4.5	Residence	439465	4797671	991	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1817	4.5	Residence	439445	4797659	997	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1818	4.5	Residence	439827	4797658	773	T-45	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R1820	4.5	Residence	439387	4797632	1021	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1821	4.5	Residence	439341	4797605	1039	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1824	4.5	Residence	439324	4797574	1034	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1825	4.5	Residence	439309	4797555	1034	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1827	4.5	Residence	439287	4797530	1038	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1828	4.5	Residence	439255	4797522	1061	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1829	4.5	Residence	439232	4797475	1056	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1830	4.5	Residence	439218	4797439	1052	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1831	4.5	Residence	439210	4797383	1035	T-45	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1832	4.5	Residence	439173	4797378	1067	T-45	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R1833	4.5	Residence	439198	4797345	1031	T-45	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1834	4.5	Residence	439167	4797333	1056	T-45	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1835	4.5	Residence	439667	4797331	613	T-45	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R1836	4.5	Residence	439123	4797312	1089	T-45	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R1837	4.5	Residence	439095	4797267	1103	T-45	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R1838	4.5	Residence	439062	4797239	1127	T-45	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R1840	4.5	Residence	439008	4797184	1168	T-45	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R1841	4.5	Residence	441952	4797175	719	T-43	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R1843	4.5	Residence	441923	4797142	761	T-43	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R1844	4.5	Residence	438977	4797125	1188	T-45	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R1845	4.5	Residence	438968	4797105	1195	T-45	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes

Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					
			Easting	Northing			<=6	7	8	9	10	<=6	7	8	9	10	
R1846	4.5	Residence	439061	4797103	1102	T-45	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R1847	4.5	Residence	441992	4797092	782	T-43	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R1848	4.5	Residence	438954	4797091	1207	T-45	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R1849	4.5	Residence	441886	4797090	775	T-44	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R1850	4.5	Residence	439029	4797073	1130	T-45	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R1851	4.5	Residence	438936	4797065	1222	T-45	32.7	32.7	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	Yes
R1852	4.5	Residence	439007	4797061	1151	T-45	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R1854	4.5	Residence	438902	4797044	1255	T-45	32.5	32.5	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	Yes
R1855	4.5	Residence	439050	4797040	1106	T-45	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R1856	4.5	Residence	439069	4797037	1087	T-45	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R1857	4.5	Residence	441861	4797033	763	T-44	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R1859	4.5	Residence	438989	4797028	1167	T-45	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R1861	4.5	Residence	439456	4797025	701	T-45	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1862	4.5	Residence	439350	4797024	806	T-45	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1863	4.5	Residence	438888	4797012	1266	T-45	32.4	32.4	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	Yes
R1864	4.5	Residence	438979	4797009	1176	T-45	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R1865	4.5	Residence	439108	4797008	1047	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1867	4.5	Residence	438967	4796985	1187	T-45	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R1868	4.5	Residence	439042	4796983	1112	T-45	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R1869	4.5	Residence	438875	4796975	1279	T-45	32.3	32.3	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	Yes
R1871	4.5	Residence	439094	4796954	1059	T-45	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R1872	4.5	Residence	438947	4796945	1207	T-45	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R1873	4.5	Residence	438842	4796940	1311	T-45	32.1	32.1	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	Yes
R1874	4.5	Residence	439024	4796937	1129	T-45	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R1877	4.5	Residence	438822	4796927	1332	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R1879	4.5	Residence	439066	4796918	1088	T-45	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R1880	4.5	Residence	442383	4796912	928	T-43	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R1881	4.5	Residence	438798	4796905	1357	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R1883	4.5	Residence	439208	4796903	947	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1884	4.5	Residence	438886	4796900	1268	T-45	32.4	32.4	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	Yes
R1885	4.5	Residence	439000	4796897	1155	T-45	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R1886	4.5	Residence	439386	4796896	771	T-45	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R1887	4.5	Residence	438770	4796891	1386	T-45	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R1888	4.5	Residence	439148	4796879	1009	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1889	4.5	Residence	442610	4796877	1019	T-43	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1890	4.5	Residence	442439	4796874	975	T-43	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1891	4.5	Residence	439144	4796873	1013	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1893	4.5	Residence	438925	4796868	1232	T-45	32.7	32.7	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	Yes
R1894	4.5	Residence	442499	4796865	997	T-43	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1895	4.5	Residence	439139	4796863	1019	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1896	4.5	Residence	439178	4796863	980	T-45	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1897	4.5	Residence	438837	4796861	1321	T-45	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R1898	4.5	Residence	438754	4796860	1403	T-45	31.4	31.4	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	Yes
R1899	4.5	Residence	438918	4796856	1240	T-45	32.6	32.6	32.6	32.6	32.6	40.0	43.0	45.0	49.0	51.0	Yes
R1900	4.5	Residence	439134	4796856	1025	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R1901	4.5	Residence	439172	4796855	987	T-45	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1902	4.5	Residence	438963	4796851	1196	T-45	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R1903	4.5	Residence	441752	4796851	732	T-44	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R1904	4.5	Residence	439167	4796846	993	T-45	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1905	4.5	Residence	438907	4796841	1252	T-45	32.5	32.5	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	Yes
R1906	4.5	Residence	439124	4796840	1036	T-45	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1907	4.5	Residence	438739	4796838	1419	T-45	31.3	31.3	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	Yes
R1908	4.5	Residence	438793	4796837	1366	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R1909	4.5	Residence	439163	4796837	998	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes



Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10		
R1965	4.5	Residence	438679	4796675	1501	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R1966	4.5	Residence	442584	4796675	1203	T-43	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R1967	4.5	Residence	438722	4796664	1461	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R1968	4.5	Residence	438823	4796659	1364	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R1969	4.5	Residence	438670	4796658	1514	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R1970	4.5	Residence	438605	4796652	1578	T-45	30.4	30.4	30.4	30.4	30.4	40.0	43.0	45.0	49.0	51.0	Yes
R1971	4.5	Residence	438626	4796650	1558	T-45	30.5	30.5	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	Yes
R1972	4.5	Residence	438661	4796649	1524	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R1973	4.5	Residence	438724	4796637	1465	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R1974	4.5	Residence	438651	4796630	1538	T-45	30.6	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	Yes
R1975	4.5	Residence	438787	4796629	1406	T-45	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R1976	4.5	Residence	438585	4796623	1604	T-45	30.2	30.2	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	Yes
R1977	4.5	Residence	438711	4796619	1482	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R1979	4.5	Residence	438682	4796612	1511	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R1980	4.5	Residence	438772	4796612	1424	T-45	31.4	31.4	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	Yes
R1981	4.5	Residence	438578	4796611	1613	T-45	30.1	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	Yes
R1982	4.5	Residence	442323	4796611	1222	T-43	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R1983	4.5	Residence	438942	4796608	1261	T-45	32.5	32.5	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	Yes
R1986	4.5	Residence	438806	4796603	1394	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R1987	4.5	Residence	442538	4796603	1261	T-43	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R1989	4.5	Residence	442615	4796599	1284	T-43	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R1990	4.5	Residence	438760	4796595	1440	T-45	31.3	31.3	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	Yes
R1991	4.5	Residence	438568	4796591	1628	T-45	30.1	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	Yes
R1993	4.5	Residence	442306	4796574	1257	T-43	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R1995	4.5	Residence	438552	4796571	1647	T-45	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R1996	4.5	Residence	438805	4796570	1403	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R1997	4.5	Residence	438687	4796569	1517	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R1998	4.5	Residence	438756	4796568	1451	T-45	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R1999	4.5	Residence	438625	4796563	1579	T-45	30.4	30.4	30.4	30.4	30.4	40.0	43.0	45.0	49.0	51.0	Yes
R2000	4.5	Residence	438855	4796563	1357	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2001	4.5	Residence	442401	4796556	1283	T-43	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R2002	4.5	Residence	438538	4796553	1665	T-45	29.8	29.8	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	Yes
R2003	4.5	Residence	438788	4796548	1425	T-45	31.4	31.4	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	Yes
R2004	4.5	Residence	442945	4796548	1458	T-43	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R2005	4.5	Residence	438669	4796540	1542	T-45	30.6	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	Yes
R2006	4.5	Residence	438516	4796527	1693	T-45	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R2007	4.5	Residence	438838	4796524	1385	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2008	4.5	Residence	438620	4796515	1596	T-45	30.3	30.3	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	Yes
R2009	4.5	Residence	442580	4796515	1357	T-43	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R2010	4.5	Residence	438764	4796514	1459	T-45	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R2012	4.5	Residence	438651	4796513	1567	T-45	30.5	30.5	30.5	30.5	30.5	40.0	43.0	45.0	49.0	51.0	Yes
R2014	4.5	Residence	438553	4796497	1666	T-45	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R2016	4.5	Residence	438480	4796491	1737	T-45	29.5	29.5	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	Yes
R2017	4.5	Residence	438446	4796489	1770	T-45	29.3	29.3	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	Yes
R2018	4.5	Residence	438625	4796482	1601	T-45	30.3	30.3	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	Yes
R2019	4.5	Residence	442453	4796476	1369	T-43	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R2020	4.5	Residence	438490	4796475	1732	T-45	29.5	29.5	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	Yes
R2021	4.5	Residence	438734	4796473	1501	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R2023	4.5	Residence	438529	4796460	1699	T-45	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R2024	4.5	Residence	438893	4796459	1355	T-45	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R2025	4.5	Residence	442395	4796457	1381	T-43	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R2026	4.5	Residence	438620	4796452	1615	T-45	30.2	30.2	30.2	30.2	30.2	40.0	43.0	45.0	49.0	51.0	Yes
R2027	4.5	Residence	438711	4796447	1531	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2030	4.5	Residence	442254	4796434	1381	T-44	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes







Point of Reception ID	Receptor Height [m]	Receptor Description		Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]	
						Windspeed [m/s]											
						<=6	7	8	9	10	<=6	7	8	9	10		
R2194	4.5	Residence	438388	4796184	1928	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2195	4.5	Residence	439177	4796183	1247	T-45	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R2196	4.5	Residence	439490	4796183	1020	T-45	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2197	4.5	Residence	438536	4796182	1794	T-45	29.2	29.2	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	Yes
R2198	4.5	Residence	438316	4796181	1995	T-45	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R2199	4.5	Residence	439275	4796181	1173	T-45	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2200	4.5	Residence	439455	4796181	1045	T-45	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R2201	4.5	Residence	439068	4796180	1335	T-45	32.4	32.4	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	Yes
R2202	4.5	Residence	439118	4796180	1295	T-45	32.7	32.7	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	Yes
R2203	4.5	Residence	439023	4796179	1373	T-45	32.1	32.1	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	Yes
R2204	4.5	Residence	438384	4796177	1934	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2205	4.5	Residence	438426	4796177	1896	T-45	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R2206	4.5	Residence	439319	4796176	1144	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R2207	4.5	Residence	438456	4796175	1869	T-45	28.7	28.7	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	Yes
R2209	4.5	Residence	439192	4796174	1240	T-45	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R2210	4.5	Residence	438606	4796173	1735	T-45	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R2211	4.5	Residence	439351	4796173	1123	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R2212	4.5	Residence	439221	4796172	1220	T-45	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R2213	4.5	Residence	439368	4796171	1111	T-45	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R2214	4.5	Residence	439397	4796171	1091	T-45	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R2215	4.5	Residence	439507	4796171	1018	T-45	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R2216	4.5	Residence	438487	4796170	1844	T-45	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R2217	4.5	Residence	438347	4796169	1971	T-45	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R2218	4.5	Residence	439087	4796169	1327	T-45	32.5	32.5	32.5	32.5	32.5	40.0	43.0	45.0	49.0	51.0	Yes
R2219	4.5	Residence	439134	4796169	1289	T-45	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R2220	4.5	Residence	438417	4796167	1908	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R2221	4.5	Residence	438378	4796166	1944	T-45	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R2222	4.5	Residence	438559	4796166	1780	T-45	29.3	29.3	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	Yes
R2223	4.5	Residence	439204	4796165	1237	T-45	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R2224	4.5	Residence	439304	4796165	1162	T-45	33.9	33.9	33.9	33.9	33.9	40.0	43.0	45.0	49.0	51.0	Yes
R2225	4.5	Residence	439267	4796163	1191	T-45	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R2226	4.5	Residence	439446	4796163	1064	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R2227	4.5	Residence	439474	4796163	1046	T-45	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R2228	4.5	Residence	438319	4796162	2000	T-45	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R2229	4.5	Residence	438519	4796162	1818	T-45	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R2230	4.5	Residence	439052	4796162	1359	T-45	32.2	32.2	32.2	32.2	32.2	40.0	43.0	45.0	49.0	51.0	Yes
R2231	4.5	Residence	439150	4796161	1281	T-45	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R2232	4.5	Residence	439385	4796161	1107	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R2233	4.5	Residence	439104	4796160	1318	T-45	32.6	32.6	32.6	32.6	32.6	40.0	43.0	45.0	49.0	51.0	Yes
R2234	4.5	Residence	438341	4796159	1981	T-45	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R2235	4.5	Residence	439525	4796159	1016	T-45	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R2236	4.5	Residence	441247	4796158	662	T-47	38.8	38.8	38.8	38.8	38.8	40.0	43.0	45.0	49.0	51.0	Yes
R2237	4.5	Residence	438440	4796157	1891	T-45	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R2238	4.5	Residence	438476	4796157	1859	T-45	28.8	28.8	28.8	28.8	28.8	40.0	43.0	45.0	49.0	51.0	Yes
R2239	4.5	Residence	438413	4796156	1916	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R2240	4.5	Residence	438600	4796155	1748	T-45	29.5	29.5	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	Yes
R2241	4.5	Residence	439292	4796155	1177	T-45	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2242	4.5	Residence	439216	4796154	1235	T-45	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R2243	4.5	Residence	438372	4796153	1954	T-45	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R2244	4.5	Residence	438513	4796153	1827	T-45	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R2245	4.5	Residence	438538	4796153	1805	T-45	29.2	29.2	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	Yes
R2246	4.5	Residence	439250	4796153	1210	T-45	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R2247	4.5	Residence	439397	4796153	1105	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R2248	4.5	Residence	439466	4796153	1058	T-45	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes





Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10		
R2357	4.5	Residence	438425	4796080	1939	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2358	4.5	Residence	438539	4796080	1838	T-45	29.0	29.0	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	Yes
R2359	4.5	Residence	439210	4796079	1289	T-45	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R2360	4.5	Residence	439039	4796078	1420	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2361	4.5	Residence	439393	4796078	1163	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R2362	4.5	Residence	438570	4796077	1812	T-45	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R2363	4.5	Residence	438646	4796077	1746	T-45	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R2364	4.5	Residence	438845	4796076	1578	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2365	4.5	Residence	439009	4796076	1445	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2366	4.5	Residence	439273	4796075	1247	T-45	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R2367	4.5	Residence	438867	4796074	1561	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2368	4.5	Residence	439154	4796074	1334	T-45	32.6	32.6	32.6	32.6	32.6	40.0	43.0	45.0	49.0	51.0	Yes
R2369	4.5	Residence	439656	4796074	996	T-48	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R2370	4.5	Residence	438613	4796073	1777	T-45	29.4	29.4	29.4	29.4	29.4	40.0	43.0	45.0	49.0	51.0	Yes
R2371	4.5	Residence	439243	4796073	1269	T-45	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R2372	4.5	Residence	438506	4796072	1871	T-45	28.8	28.8	28.8	28.8	28.8	40.0	43.0	45.0	49.0	51.0	Yes
R2373	4.5	Residence	438390	4796071	1974	T-45	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R2374	4.5	Residence	438534	4796070	1846	T-45	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R2375	4.5	Residence	438856	4796070	1572	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2376	4.5	Residence	439322	4796070	1216	T-45	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R2377	4.5	Residence	439340	4796070	1204	T-45	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2378	4.5	Residence	439532	4796070	1083	T-45	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R2379	4.5	Residence	439450	4796069	1133	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R2380	4.5	Residence	439490	4796068	1110	T-45	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R2381	4.5	Residence	438458	4796067	1915	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R2382	4.5	Residence	438863	4796065	1570	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2383	4.5	Residence	439173	4796065	1326	T-45	32.7	32.7	32.7	32.7	32.7	40.0	43.0	45.0	49.0	51.0	Yes
R2384	4.5	Residence	439670	4796065	989	T-48	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R2385	4.5	Residence	439010	4796063	1452	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R2386	4.5	Residence	438870	4796061	1566	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2387	4.5	Residence	439034	4796061	1434	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2388	4.5	Residence	439384	4796061	1182	T-45	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R2389	4.5	Residence	439547	4796061	1082	T-45	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R2390	4.5	Residence	438566	4796060	1824	T-45	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R2391	4.5	Residence	438607	4796059	1789	T-45	29.4	29.4	29.4	29.4	29.4	40.0	43.0	45.0	49.0	51.0	Yes
R2392	4.5	Residence	438937	4796059	1512	T-45	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R2393	4.5	Residence	439505	4796059	1108	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2394	4.5	Residence	439686	4796059	977	T-48	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R2395	4.5	Residence	442631	4796058	1813	T-43	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2396	4.5	Residence	438729	4796057	1686	T-45	30.0	30.0	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	Yes
R2397	4.5	Residence	439250	4796056	1277	T-45	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R2398	4.5	Residence	439350	4796056	1208	T-45	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2399	4.5	Residence	438779	4796055	1645	T-45	30.3	30.3	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	Yes
R2400	4.5	Residence	438880	4796055	1561	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R2401	4.5	Residence	438946	4796055	1508	T-45	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R2402	4.5	Residence	438846	4796053	1590	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2403	4.5	Residence	438909	4796053	1539	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2404	4.5	Residence	439049	4796053	1428	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2405	4.5	Residence	438379	4796052	1992	T-45	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R2406	4.5	Residence	438469	4796052	1913	T-45	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R2407	4.5	Residence	438674	4796052	1735	T-45	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R2408	4.5	Residence	439328	4796052	1225	T-45	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R2409	4.5	Residence	439566	4796052	1079	T-45	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R2410	4.5	Residence	438887	4796051	1558	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes

Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
							<=6	7	8	9	10	<=6	7	8	9	10	
R2411	4.5	Residence	438418	4796050	1959	T-45	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R2412	4.5	Residence	438954	4796050	1504	T-45	31.3	31.3	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	Yes
R2413	4.5	Residence	439366	4796050	1201	T-45	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2414	4.5	Residence	438478	4796049	1906	T-45	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R2415	4.5	Residence	439702	4796048	969	T-48	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R2416	4.5	Residence	438524	4796047	1867	T-45	28.8	28.8	28.8	28.8	28.8	40.0	43.0	45.0	49.0	51.0	Yes
R2417	4.5	Residence	438553	4796047	1842	T-45	29.0	29.0	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	Yes
R2418	4.5	Residence	439520	4796047	1109	T-45	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2419	4.5	Residence	438856	4796046	1586	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2420	4.5	Residence	438916	4796046	1537	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2421	4.5	Residence	438961	4796046	1501	T-45	31.3	31.3	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	Yes
R2422	4.5	Residence	438897	4796045	1553	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R2423	4.5	Residence	439208	4796045	1315	T-45	32.8	32.8	32.8	32.8	32.8	40.0	43.0	45.0	49.0	51.0	Yes
R2424	4.5	Residence	439065	4796044	1422	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2425	4.5	Residence	439442	4796042	1160	T-45	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R2426	4.5	Residence	439534	4796042	1106	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R2427	4.5	Residence	438487	4796041	1902	T-45	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes
R2428	4.5	Residence	438904	4796041	1549	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2429	4.5	Residence	438926	4796041	1532	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R2430	4.5	Residence	439249	4796041	1287	T-45	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R2431	4.5	Residence	439473	4796041	1142	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R2432	4.5	Residence	438594	4796040	1810	T-45	29.2	29.2	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	Yes
R2433	4.5	Residence	438865	4796040	1582	T-45	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2434	4.5	Residence	439008	4796039	1468	T-45	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R2435	4.5	Residence	438445	4796038	1940	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2436	4.5	Residence	439280	4796038	1269	T-45	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R2437	4.5	Residence	438510	4796037	1884	T-45	28.7	28.7	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	Yes
R2438	4.5	Residence	439643	4796037	1026	T-48	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R2439	4.5	Residence	438913	4796036	1546	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2440	4.5	Residence	438933	4796036	1529	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R2441	4.5	Residence	438967	4796035	1504	T-45	31.3	31.3	31.3	31.3	31.3	40.0	43.0	45.0	49.0	51.0	Yes
R2442	4.5	Residence	439712	4796035	967	T-48	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R2443	4.5	Residence	438407	4796034	1976	T-45	28.2	28.2	28.2	28.2	28.2	40.0	43.0	45.0	49.0	51.0	Yes
R2444	4.5	Residence	438766	4796034	1667	T-45	30.1	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	Yes
R2445	4.5	Residence	438874	4796034	1578	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2446	4.5	Residence	439328	4796033	1240	T-45	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R2447	4.5	Residence	438548	4796032	1853	T-45	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R2448	4.5	Residence	438941	4796032	1526	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R2449	4.5	Residence	438921	4796031	1542	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2450	4.5	Residence	439077	4796031	1421	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2451	4.5	Residence	439021	4796030	1464	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R2452	4.5	Residence	439489	4796030	1141	T-45	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R2453	4.5	Residence	439548	4796030	1108	T-45	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R2454	4.5	Residence	439368	4796029	1216	T-45	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R2455	4.5	Residence	438882	4796028	1575	T-45	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2456	4.5	Residence	438439	4796027	1951	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2457	4.5	Residence	439097	4796027	1408	T-45	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R2458	4.5	Residence	438544	4796026	1860	T-45	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R2459	4.5	Residence	438585	4796026	1825	T-45	29.1	29.1	29.1	29.1	29.1	40.0	43.0	45.0	49.0	51.0	Yes
R2460	4.5	Residence	438929	4796026	1539	T-45	31.1	31.1	31.1	31.1	31.1	40.0	43.0	45.0	49.0	51.0	Yes
R2461	4.5	Residence	439251	4796026	1297	T-45	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R2462	4.5	Residence	439310	4796025	1257	T-45	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R2463	4.5	Residence	439661	4796025	1016	T-48	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R2464	4.5	Residence	439433	4796024	1180	T-45	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes













Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
							<=6	7	8	9	10	<=6	7	8	9	10	
R2791	4.5	Residence	438820	4795855	1730	T-45	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R2792	4.5	Residence	439691	4795855	1091	T-48	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2793	4.5	Residence	439404	4795854	1325	T-48	33.1	33.1	33.1	33.1	33.1	40.0	43.0	45.0	49.0	51.0	Yes
R2794	4.5	Residence	439496	4795854	1248	T-48	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R2795	4.5	Residence	439635	4795854	1135	T-48	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R2796	4.5	Residence	438518	4795853	1973	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2797	4.5	Residence	439164	4795853	1483	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2798	4.5	Residence	439272	4795853	1413	T-45	32.3	32.3	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	Yes
R2799	4.5	Residence	439873	4795853	960	T-48	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R2800	4.5	Residence	438826	4795852	1728	T-45	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R2801	4.5	Residence	438907	4795852	1666	T-45	30.3	30.3	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	Yes
R2802	4.5	Residence	438707	4795851	1821	T-45	29.3	29.3	29.3	29.3	29.3	40.0	43.0	45.0	49.0	51.0	Yes
R2803	4.5	Residence	439109	4795851	1522	T-45	31.4	31.4	31.4	31.4	31.4	40.0	43.0	45.0	49.0	51.0	Yes
R2804	4.5	Residence	439175	4795850	1478	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2805	4.5	Residence	439209	4795849	1457	T-45	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R2806	4.5	Residence	439382	4795847	1348	T-48	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R2807	4.5	Residence	439124	4795846	1515	T-45	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R2808	4.5	Residence	439158	4795846	1492	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2809	4.5	Residence	439225	4795845	1450	T-45	32.1	32.1	32.1	32.1	32.1	40.0	43.0	45.0	49.0	51.0	Yes
R2811	4.5	Residence	439170	4795843	1487	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2812	4.5	Residence	439618	4795843	1155	T-48	34.3	34.3	34.3	34.3	34.3	40.0	43.0	45.0	49.0	51.0	Yes
R2813	4.5	Residence	438536	4795842	1965	T-45	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R2814	4.5	Residence	438806	4795842	1749	T-45	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R2815	4.5	Residence	439481	4795842	1267	T-48	33.5	33.5	33.5	33.5	33.5	40.0	43.0	45.0	49.0	51.0	Yes
R2816	4.5	Residence	439704	4795842	1089	T-48	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R2817	4.5	Residence	439773	4795842	1038	T-48	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R2818	4.5	Residence	439263	4795841	1428	T-45	32.2	32.2	32.2	32.2	32.2	40.0	43.0	45.0	49.0	51.0	Yes
R2819	4.5	Residence	438548	4795839	1957	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R2820	4.5	Residence	438697	4795839	1837	T-45	29.2	29.2	29.2	29.2	29.2	40.0	43.0	45.0	49.0	51.0	Yes
R2821	4.5	Residence	439205	4795838	1467	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2822	4.5	Residence	439217	4795837	1460	T-45	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R2823	4.5	Residence	439866	4795837	977	T-48	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R2824	4.5	Residence	439153	4795836	1503	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R2825	4.5	Residence	439165	4795835	1496	T-45	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2826	4.5	Residence	439601	4795835	1174	T-48	34.1	34.1	34.1	34.1	34.1	40.0	43.0	45.0	49.0	51.0	Yes
R2827	4.5	Residence	439470	4795834	1281	T-48	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R2828	4.5	Residence	438823	4795831	1743	T-45	29.8	29.8	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	Yes
R2829	4.5	Residence	439201	4795831	1476	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2830	4.5	Residence	439438	4795831	1309	T-48	33.2	33.2	33.2	33.2	33.2	40.0	43.0	45.0	49.0	51.0	Yes
R2831	4.5	Residence	439721	4795831	1085	T-48	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2832	4.5	Residence	438560	4795830	1952	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R2833	4.5	Residence	439257	4795830	1440	T-45	32.2	32.2	32.2	32.2	32.2	40.0	43.0	45.0	49.0	51.0	Yes
R2834	4.5	Residence	439148	4795829	1512	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R2835	4.5	Residence	439212	4795829	1470	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2836	4.5	Residence	439585	4795827	1191	T-48	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R2837	4.5	Residence	439160	4795826	1506	T-45	31.6	31.6	31.6	31.6	31.6	40.0	43.0	45.0	49.0	51.0	Yes
R2838	4.5	Residence	439194	4795824	1485	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2839	4.5	Residence	439527	4795824	1239	T-48	33.6	33.6	33.6	33.6	33.6	40.0	43.0	45.0	49.0	51.0	Yes
R2840	4.5	Residence	439543	4795824	1226	T-48	33.7	33.7	33.7	33.7	33.7	40.0	43.0	45.0	49.0	51.0	Yes
R2841	4.5	Residence	439568	4795821	1209	T-48	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2842	4.5	Residence	439208	4795820	1479	T-45	31.9	31.9	31.9	31.9	31.9	40.0	43.0	45.0	49.0	51.0	Yes
R2843	4.5	Residence	439740	4795820	1078	T-48	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2844	4.5	Residence	439857	4795820	995	T-48	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R2845	4.5	Residence	438571	4795819	1949	T-45	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes



Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]					Windspeed [m/s]					
		Eastings	Northings	<=6			7	8	9	10	<=6	7	8	9	10		
R2906	4.5	Residence	438970	4796194	1409	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2907	4.5	Residence	438974	4796174	1416	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2908	4.5	Residence	438698	4796029	1726	T-45	29.8	29.8	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	Yes
R2909	4.5	Residence	438692	4796018	1737	T-45	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R2910	4.5	Residence	438686	4796009	1748	T-45	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R2911	4.5	Residence	438679	4796000	1758	T-45	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R2912	4.5	Residence	438673	4795988	1770	T-45	29.5	29.5	29.5	29.5	29.5	40.0	43.0	45.0	49.0	51.0	Yes
R2913	4.5	Residence	438573	4795961	1868	T-45	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R2915	4.5	Residence	438849	4796544	1369	T-45	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2916	4.5	Residence	438871	4796771	1297	T-45	32.2	32.2	32.2	32.2	32.2	40.0	43.0	45.0	49.0	51.0	Yes
R2918	4.5	Residence	446754	4811638	1797	T-03	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R2919	4.5	Residence	446761	4811539	1715	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2920	4.5	Residence	446815	4811680	1864	T-03	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R2921	4.5	Residence	446803	4811488	1694	T-03	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R2922	4.5	Residence	446771	4811465	1657	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2923	4.5	Residence	446760	4811450	1638	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2924	4.5	Residence	446959	4810489	1157	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2925	4.5	Residence	447034	4809421	1320	T-03	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R2935	4.5	Residence	442057	4810286	1750	T-04	30.7	30.7	30.7	30.7	30.7	40.0	43.0	45.0	49.0	51.0	Yes
R2938	4.5	Residence	441967	4809418	1843	T-08	30.6	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	Yes
R2940	4.5	Residence	441957	4808434	1807	T-08	31.8	31.8	31.8	31.8	31.8	40.0	43.0	45.0	49.0	51.0	Yes
R2955	4.5	Residence	438772	4796401	1489	T-45	31.0	31.0	31.0	31.0	31.0	40.0	43.0	45.0	49.0	51.0	Yes
R2974	4.5	Residence	442785	4807864	1017	T-14	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R2975	4.5	Residence	442218	4811927	1819	T-01	28.6	28.6	28.6	28.6	28.6	40.0	43.0	45.0	49.0	51.0	Yes

Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]
							Windspeed [m/s]										
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10		
R0004	4.5	Vacant Lot	443536	4813451	1651	T-01	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R0005	4.5	Vacant Lot	443378	4813236	1509	T-01	30.0	30.0	30.0	30.0	30.0	40.0	43.0	45.0	49.0	51.0	Yes
R0006	4.5	Vacant Lot	443372	4813136	1423	T-01	30.3	30.3	30.3	30.3	30.3	40.0	43.0	45.0	49.0	51.0	Yes
R0007	4.5	Vacant Lot	443505	4813121	1352	T-01	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R0010	4.5	Vacant Lot	442311	4812890	2000	T-01	26.9	26.9	26.9	26.9	26.9	40.0	43.0	45.0	49.0	51.0	Yes
R0011	4.5	Vacant Lot	442298	4812860	1996	T-01	26.9	26.9	26.9	26.9	26.9	40.0	43.0	45.0	49.0	51.0	Yes
R0015	4.5	Vacant Lot	442272	4812758	1972	T-01	27.0	27.0	27.0	27.0	27.0	40.0	43.0	45.0	49.0	51.0	Yes
R0018	4.5	Vacant Lot	442286	4812705	1936	T-01	27.2	27.2	27.2	27.2	27.2	40.0	43.0	45.0	49.0	51.0	Yes
R0020	4.5	Vacant Lot	442223	4812654	1973	T-01	27.1	27.1	27.1	27.1	27.1	40.0	43.0	45.0	49.0	51.0	Yes
R0026	4.5	Vacant Lot	442266	4812433	1855	T-01	27.8	27.8	27.8	27.8	27.8	40.0	43.0	45.0	49.0	51.0	Yes
R0038	4.5	Vacant Lot	443298	4812277	839	T-01	34.0	34.0	34.0	34.0	34.0	40.0	43.0	45.0	49.0	51.0	Yes
R0041	4.5	Vacant Lot	442169	4812245	1903	T-01	27.8	27.8	27.8	27.8	27.8	40.0	43.0	45.0	49.0	51.0	Yes
R0043	4.5	Vacant Lot	442206	4812230	1864	T-01	28.0	28.0	28.0	28.0	28.0	40.0	43.0	45.0	49.0	51.0	Yes
R0045	4.5	Vacant Lot	442205	4812207	1860	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0057	4.5	Vacant Lot	442153	4812066	1892	T-01	28.1	28.1	28.1	28.1	28.1	40.0	43.0	45.0	49.0	51.0	Yes
R0060	4.5	Vacant Lot	442194	4812047	1850	T-01	28.3	28.3	28.3	28.3	28.3	40.0	43.0	45.0	49.0	51.0	Yes
R0064	4.5	Vacant Lot	442191	4812000	1850	T-01	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R0066	4.5	Vacant Lot	442188	4811979	1851	T-01	28.4	28.4	28.4	28.4	28.4	40.0	43.0	45.0	49.0	51.0	Yes
R0068	4.5	Vacant Lot	443489	4811948	551	T-01	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0083	4.5	Vacant Lot	442162	4811770	1877	T-01	28.7	28.7	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	Yes
R0086	4.5	Vacant Lot	443266	4811742	782	T-01	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R0088	4.5	Vacant Lot	442154	4811724	1888	T-01	28.7	28.7	28.7	28.7	28.7	40.0	43.0	45.0	49.0	51.0	Yes
R0089	4.5	Vacant Lot	442071	4811708	1972	T-01	28.5	28.5	28.5	28.5	28.5	40.0	43.0	45.0	49.0	51.0	Yes
R0100	4.5	Vacant Lot	442126	4811562	1936	T-01	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R0101	4.5	Vacant Lot	445829	4811447	1381	T-03	38.1	38.1	38.1	38.1	38.1	40.0	43.0	45.0	49.0	51.0	Yes
R0102	4.5	Vacant Lot	446700	4811528	1675	T-03	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0103	4.5	Vacant Lot	442116	4811515	1954	T-01	28.9	28.9	28.9	28.9	28.9	40.0	43.0	45.0	49.0	51.0	Yes
R0112	4.5	Vacant Lot	446758	4811496	1676	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R0116	4.5	Vacant Lot	442099	4811441	1986	T-01	29.0	29.0	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	Yes
R0118	4.5	Vacant Lot	446775	4811425	1626	T-03	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R0120	4.5	Vacant Lot	442236	4811395	1864	T-01	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R0122	4.5	Vacant Lot	442173	4811380	1929	T-01	29.4	29.4	29.4	29.4	29.4	40.0	43.0	45.0	49.0	51.0	Yes
R0123	4.5	Vacant Lot	445110	4811363	835	T-02	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0124	4.5	Vacant Lot	444925	4811345	688	T-02	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0126	4.5	Vacant Lot	442229	4811337	1886	T-01	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R0129	4.5	Vacant Lot	442221	4811274	1913	T-01	29.8	29.8	29.8	29.8	29.8	40.0	43.0	45.0	49.0	51.0	Yes
R0130	4.5	Vacant Lot	445332	4811277	1071	T-02	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R0131	4.5	Vacant Lot	445127	4811258	903	T-02	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0132	4.5	Vacant Lot	442164	4811246	1972	T-04	29.6	29.6	29.6	29.6	29.6	40.0	43.0	45.0	49.0	51.0	Yes
R0134	4.5	Vacant Lot	443325	4811205	979	T-01	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0136	4.5	Vacant Lot	444696	4811184	659	T-02	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R0137	4.5	Vacant Lot	442157	4811172	1938	T-04	29.7	29.7	29.7	29.7	29.7	40.0	43.0	45.0	49.0	51.0	Yes
R0142	4.5	Vacant Lot	444045	4811092	745	T-02	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0144	4.5	Vacant Lot	443210	4811084	1108	T-04	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R0145	4.5	Vacant Lot	442216	4811077	1838	T-04	30.1	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	Yes
R0146	4.5	Vacant Lot	443308	4810995	981	T-04	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0150	4.5	Vacant Lot	442087	4810764	1823	T-04	30.1	30.1	30.1	30.1	30.1	40.0	43.0	45.0	49.0	51.0	Yes
R0152	4.5	Vacant Lot	443081	4810701	908	T-04	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0157	4.5	Vacant Lot	441927	4810587	1926	T-04	29.0	29.0	29.0	29.0	29.0	40.0	43.0	45.0	49.0	51.0	Yes
R0158	4.5	Vacant Lot	443128	4810582	802	T-04	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0169	4.5	Vacant Lot	447068	4810261	1202	T-03	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R0170	4.5	Vacant Lot	444952	4810189	812	T-05	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0173	4.5	Vacant Lot	442054	4810357	1761	T-04	30.6	30.6	30.6	30.6	30.6	40.0	43.0	45.0	49.0	51.0	Yes





R0694	4.5	Vacant Lot	442648	4806054	1010	T-17	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R0695	4.5	Vacant Lot	442704	4806043	962	T-17	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R0701	4.5	Vacant Lot	442699	4806016	946	T-17	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R0707	4.5	Vacant Lot	442568	4805979	1021	T-17	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0710	4.5	Vacant Lot	442530	4805962	1042	T-17	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R0713	4.5	Vacant Lot	445453	4805952	1383	T-19	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R0722	4.5	Vacant Lot	442441	4805901	1083	T-17	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R0730	4.5	Vacant Lot	447679	4805847	1277	T-20	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R0735	4.5	Vacant Lot	442671	4805829	850	T-17	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R0741	4.5	Vacant Lot	442666	4805793	834	T-17	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R0752	4.5	Vacant Lot	442673	4805724	794	T-17	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R0755	4.5	Vacant Lot	445610	4805707	1093	T-19	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0762	4.5	Vacant Lot	442619	4805654	814	T-17	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0779	4.5	Vacant Lot	447760	4805328	985	T-20	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R0782	4.5	Vacant Lot	445552	4805252	826	T-19	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R0784	4.5	Vacant Lot	442591	4805239	794	T-17	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R0787	4.5	Vacant Lot	444923	4805163	1086	T-22	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R0789	4.5	Vacant Lot	447783	4805126	921	T-20	34.2	34.2	34.2	34.2	34.2	40.0	43.0	45.0	49.0	51.0	Yes
R0791	4.5	Vacant Lot	447664	4805114	805	T-20	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0794	4.5	Vacant Lot	442570	4805061	859	T-17	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0795	4.5	Vacant Lot	442711	4805046	734	T-17	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R0806	4.5	Vacant Lot	442542	4804868	967	T-17	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0813	4.5	Vacant Lot	445625	4804735	644	T-19	38.4	38.4	38.4	38.4	38.4	40.0	43.0	45.0	49.0	51.0	Yes
R0815	4.5	Vacant Lot	442511	4804701	960	T-23	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R0834	4.5	Vacant Lot	442496	4804443	864	T-23	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R0835	4.5	Vacant Lot	442539	4804441	823	T-23	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R0836	4.5	Vacant Lot	442559	4804439	803	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0839	4.5	Vacant Lot	442420	4804417	930	T-23	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R0843	4.5	Vacant Lot	442539	4804366	802	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0861	4.5	Vacant Lot	442375	4804188	945	T-23	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes
R0863	4.5	Vacant Lot	442397	4804139	924	T-23	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R0875	4.5	Vacant Lot	442492	4804045	840	T-23	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0876	4.5	Vacant Lot	445723	4804036	959	T-19	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R0885	4.5	Vacant Lot	445856	4803953	965	T-19	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R0892	4.5	Vacant Lot	442477	4803896	866	T-26	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R0896	4.5	Vacant Lot	442475	4803869	866	T-26	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R0899	4.5	Vacant Lot	442401	4803849	939	T-26	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R0902	4.5	Vacant Lot	445751	4803837	1116	T-19	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0917	4.5	Vacant Lot	442344	4803710	1001	T-26	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0918	4.5	Vacant Lot	442392	4803706	953	T-26	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R0919	4.5	Vacant Lot	442415	4803704	931	T-26	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R0920	4.5	Vacant Lot	442438	4803701	909	T-26	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R0921	4.5	Vacant Lot	442461	4803699	886	T-26	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0923	4.5	Vacant Lot	442484	4803696	863	T-26	38.5	38.5	38.5	38.5	38.5	40.0	43.0	45.0	49.0	51.0	Yes
R0925	4.5	Vacant Lot	447871	4803678	1495	T-20	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R0931	4.5	Vacant Lot	442275	4803468	1119	T-26	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R0932	4.5	Vacant Lot	442178	4803465	1213	T-26	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R0933	4.5	Vacant Lot	442379	4803453	1026	T-26	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R0935	4.5	Vacant Lot	442154	4803388	1257	T-28	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R0936	4.5	Vacant Lot	442311	4803386	1099	T-28	36.9	36.9	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	Yes
R0939	4.5	Vacant Lot	442146	4803358	1266	T-28	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R0941	4.5	Vacant Lot	442142	4803339	1272	T-28	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0945	4.5	Vacant Lot	442525	4803323	892	T-28	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0946	4.5	Vacant Lot	442139	4803320	1276	T-28	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R0951	4.5	Vacant Lot	442221	4803293	1197	T-28	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R0952	4.5	Vacant Lot	442429	4803293	991	T-28	37.6	37.6	37.6	37.6	37.6	40.0	43.0	45.0	49.0	51.0	Yes

R0954	4.5	Vacant Lot	444963	4803115	1335	T-25	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R0960	4.5	Vacant Lot	444174	4802929	919	T-28	38.7	38.7	38.7	38.7	38.7	40.0	43.0	45.0	49.0	51.0	Yes
R0961	4.5	Vacant Lot	442365	4802908	948	T-29	37.1	37.1	37.1	37.1	37.1	40.0	43.0	45.0	49.0	51.0	Yes
R0963	4.5	Vacant Lot	442507	4802805	773	T-29	38.2	38.2	38.2	38.2	38.2	40.0	43.0	45.0	49.0	51.0	Yes
R0965	4.5	Vacant Lot	442356	4802788	895	T-29	37.2	37.2	37.2	37.2	37.2	40.0	43.0	45.0	49.0	51.0	Yes
R0966	4.5	Vacant Lot	443822	4802766	770	T-29	39.5	39.5	39.5	39.5	39.5	40.0	43.0	45.0	49.0	51.0	Yes
R0967	4.5	Vacant Lot	442465	4802665	745	T-29	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R0969	4.5	Vacant Lot	441880	4802553	1253	T-30	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R0971	4.5	Vacant Lot	441872	4802528	1250	T-30	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0974	4.5	Vacant Lot	441867	4802505	1246	T-30	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0975	4.5	Vacant Lot	442171	4802498	969	T-30	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R0977	4.5	Vacant Lot	441862	4802487	1243	T-30	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R0979	4.5	Vacant Lot	441997	4802474	1114	T-30	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R0983	4.5	Vacant Lot	442158	4802461	964	T-30	36.6	36.6	36.6	36.6	36.6	40.0	43.0	45.0	49.0	51.0	Yes
R0985	4.5	Vacant Lot	443988	4802452	837	T-29	37.9	37.9	37.9	37.9	37.9	40.0	43.0	45.0	49.0	51.0	Yes
R0986	4.5	Vacant Lot	441913	4802442	1178	T-30	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0993	4.5	Vacant Lot	441906	4802396	1169	T-30	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R0995	4.5	Vacant Lot	442130	4802387	957	T-30	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R0997	4.5	Vacant Lot	442038	4802378	1038	T-30	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R0999	4.5	Vacant Lot	441902	4802371	1165	T-30	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1001	4.5	Vacant Lot	441899	4802348	1162	T-30	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1008	4.5	Vacant Lot	442102	4802312	956	T-30	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1011	4.5	Vacant Lot	441953	4802294	1094	T-30	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1019	4.5	Vacant Lot	441935	4802247	1101	T-30	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R1020	4.5	Vacant Lot	441993	4802245	1044	T-30	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1023	4.5	Vacant Lot	442075	4802232	961	T-30	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1030	4.5	Vacant Lot	442060	4802183	966	T-30	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1034	4.5	Vacant Lot	441959	4802168	1063	T-30	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R1035	4.5	Vacant Lot	441989	4802168	1034	T-30	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1037	4.5	Vacant Lot	442026	4802162	996	T-30	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1038	4.5	Vacant Lot	441927	4802161	1094	T-30	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1039	4.5	Vacant Lot	441894	4802152	1126	T-30	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1040	4.5	Vacant Lot	444030	4802152	906	T-29	37.4	37.4	37.4	37.4	37.4	40.0	43.0	45.0	49.0	51.0	Yes
R1044	4.5	Vacant Lot	444566	4802139	1433	T-29	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1048	4.5	Vacant Lot	441816	4802107	1199	T-30	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1049	4.5	Vacant Lot	441971	4802105	1044	T-30	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1051	4.5	Vacant Lot	444579	4802063	1410	T-31	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1052	4.5	Vacant Lot	444044	4802053	950	T-29	37.3	37.3	37.3	37.3	37.3	40.0	43.0	45.0	49.0	51.0	Yes
R1054	4.5	Vacant Lot	444592	4801988	1370	T-31	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1061	4.5	Vacant Lot	444601	4801916	1332	T-31	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1063	4.5	Vacant Lot	441742	4801900	1274	T-30	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1073	4.5	Vacant Lot	443959	4801799	806	T-31	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes
R1076	4.5	Vacant Lot	442380	4801777	674	T-30	38.9	38.9	38.9	38.9	38.9	40.0	43.0	45.0	49.0	51.0	Yes
R1077	4.5	Vacant Lot	441665	4801759	1370	T-30	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1080	4.5	Vacant Lot	441651	4801729	1390	T-30	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R1083	4.5	Vacant Lot	441642	4801691	1406	T-30	34.7	34.7	34.7	34.7	34.7	40.0	43.0	45.0	49.0	51.0	Yes
R1087	4.5	Vacant Lot	441575	4801638	1476	T-32	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1088	4.5	Vacant Lot	443982	4801638	688	T-31	38.3	38.3	38.3	38.3	38.3	40.0	43.0	45.0	49.0	51.0	Yes
R1093	4.5	Vacant Lot	441606	4801595	1423	T-32	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1096	4.5	Vacant Lot	444185	4801562	788	T-31	37.0	37.0	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	Yes
R1102	4.5	Vacant Lot	442228	4801490	943	T-30	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R1104	4.5	Vacant Lot	444129	4801453	682	T-31	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R1106	4.5	Vacant Lot	444158	4801437	1337	T-32	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1108	4.5	Vacant Lot	442175	4801405	994	T-32	37.7	37.7	37.7	37.7	37.7	40.0	43.0	45.0	49.0	51.0	Yes
R1110	4.5	Vacant Lot	441449	4801319	1325	T-32	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1118	4.5	Vacant Lot	441586	4801273	1193	T-32	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes

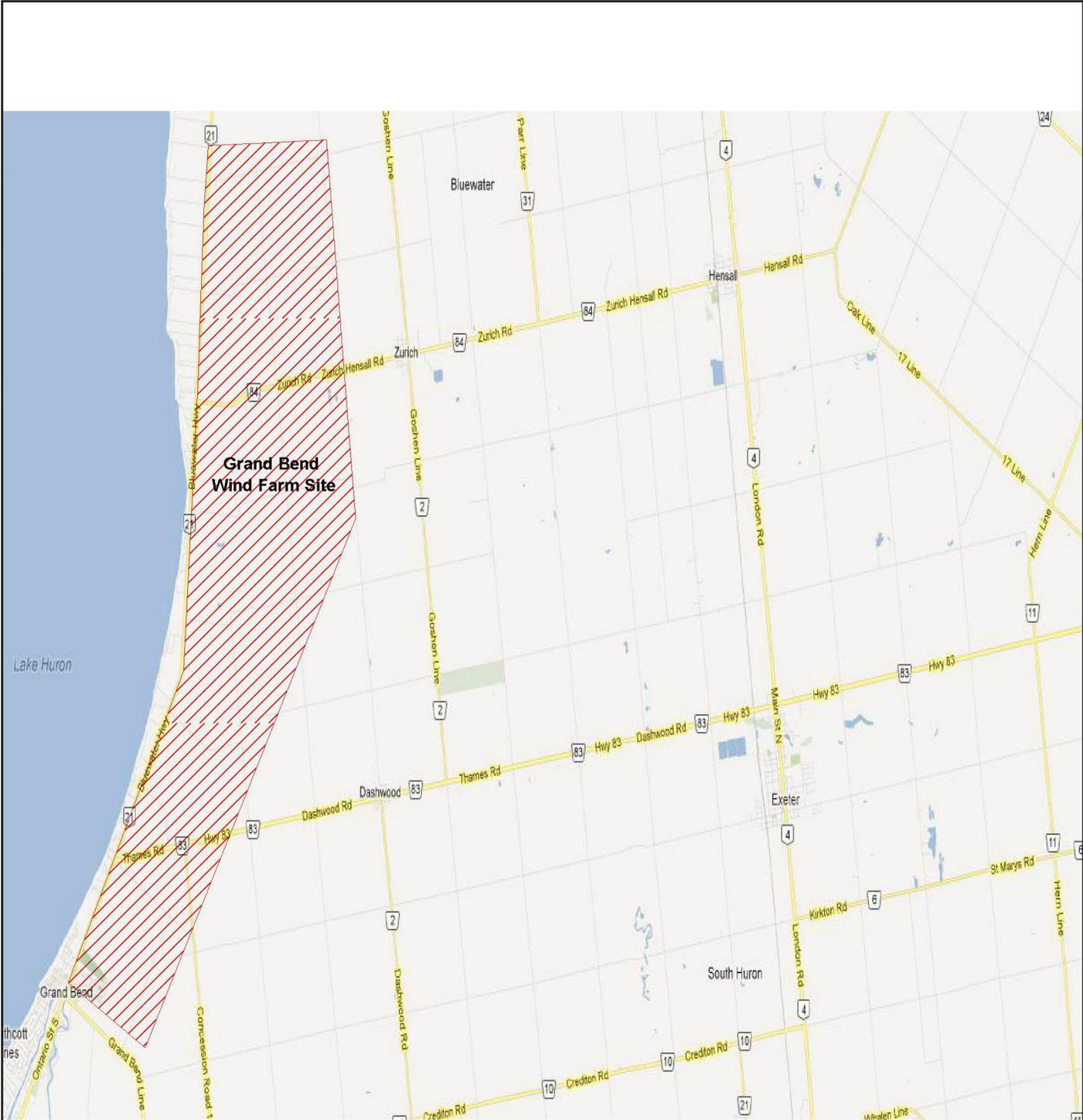
R1121	4.5	Vacant Lot	441426	4801251	1300	T-32	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R1142	4.5	Vacant Lot	441372	4800939	1182	T-32	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1143	4.5	Vacant Lot	444081	4800937	568	T-31	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R1147	4.5	Vacant Lot	441355	4800898	1181	T-34	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1150	4.5	Vacant Lot	441347	4800877	1173	T-34	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1152	4.5	Vacant Lot	441339	4800856	1167	T-34	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1153	4.5	Vacant Lot	441262	4800836	1215	T-34	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1155	4.5	Vacant Lot	441441	4800794	1048	T-34	36.8	36.8	36.8	36.8	36.8	40.0	43.0	45.0	49.0	51.0	Yes
R1175	4.5	Vacant Lot	441353	4800633	1028	T-34	36.9	36.9	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	Yes
R1187	4.5	Vacant Lot	444136	4800539	825	T-31	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1196	4.5	Vacant Lot	443636	4800472	645	T-31	39.6	39.6	39.6	39.6	39.6	40.0	43.0	45.0	49.0	51.0	Yes
R1199	4.5	Vacant Lot	441173	4800447	1119	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1202	4.5	Vacant Lot	441164	4800424	1121	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1209	4.5	Vacant Lot	441132	4800358	1137	T-34	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1212	4.5	Vacant Lot	441123	4800339	1135	T-39	36.5	36.5	36.5	36.5	36.5	40.0	43.0	45.0	49.0	51.0	Yes
R1215	4.5	Vacant Lot	444167	4800320	1009	T-31	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1231	4.5	Vacant Lot	441031	4800181	1065	T-39	36.4	36.4	36.4	36.4	36.4	40.0	43.0	45.0	49.0	51.0	Yes
R1232	4.5	Vacant Lot	441269	4800181	923	T-39	38.1	38.1	38.1	38.1	38.1	40.0	43.0	45.0	49.0	51.0	Yes
R1242	4.5	Vacant Lot	440938	4800133	1096	T-39	36.0	36.0	36.0	36.0	36.0	40.0	43.0	45.0	49.0	51.0	Yes
R1243	4.5	Vacant Lot	444194	4800120	1187	T-31	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1244	4.5	Vacant Lot	440892	4800095	1107	T-39	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1255	4.5	Vacant Lot	440932	4800017	1026	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1257	4.5	Vacant Lot	440920	4799997	1024	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1259	4.5	Vacant Lot	440908	4799978	1022	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1266	4.5	Vacant Lot	440873	4799919	1019	T-39	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1287	4.5	Vacant Lot	441036	4799800	819	T-39	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R1322	4.5	Vacant Lot	444369	4799736	1605	T-31	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R1343	4.5	Vacant Lot	440651	4799711	1140	T-39	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1439	4.5	Vacant Lot	440739	4799411	1006	T-39	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R1442	4.5	Vacant Lot	440596	4799394	1137	T-40	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1444	4.5	Vacant Lot	440588	4799381	1136	T-40	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1447	4.5	Vacant Lot	440708	4799357	1024	T-40	36.1	36.1	36.1	36.1	36.1	40.0	43.0	45.0	49.0	51.0	Yes
R1452	4.5	Vacant Lot	440609	4799318	1084	T-40	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1456	4.5	Vacant Lot	440664	4799284	1019	T-40	35.9	35.9	35.9	35.9	35.9	40.0	43.0	45.0	49.0	51.0	Yes
R1457	4.5	Vacant Lot	440524	4799276	1136	T-40	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1459	4.5	Vacant Lot	440513	4799259	1138	T-40	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R1461	4.5	Vacant Lot	440719	4799250	955	T-40	36.3	36.3	36.3	36.3	36.3	40.0	43.0	45.0	49.0	51.0	Yes
R1471	4.5	Vacant Lot	440457	4799167	1151	T-40	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1473	4.5	Vacant Lot	440446	4799150	1155	T-40	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R1478	4.5	Vacant Lot	440600	4799083	988	T-40	35.8	35.8	35.8	35.8	35.8	40.0	43.0	45.0	49.0	51.0	Yes
R1486	4.5	Vacant Lot	440508	4799046	1064	T-40	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R1490	4.5	Vacant Lot	440533	4799031	1035	T-40	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1499	4.5	Vacant Lot	440512	4798993	1045	T-40	35.4	35.4	35.4	35.4	35.4	40.0	43.0	45.0	49.0	51.0	Yes
R1508	4.5	Vacant Lot	440540	4798951	1009	T-40	35.7	35.7	35.7	35.7	35.7	40.0	43.0	45.0	49.0	51.0	Yes
R1514	4.5	Vacant Lot	440522	4798924	1021	T-40	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R1516	4.5	Vacant Lot	440432	4798921	1109	T-40	35.1	35.1	35.1	35.1	35.1	40.0	43.0	45.0	49.0	51.0	Yes
R1519	4.5	Vacant Lot	440457	4798906	1082	T-40	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1520	4.5	Vacant Lot	440505	4798895	1033	T-40	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1526	4.5	Vacant Lot	440489	4798868	1046	T-40	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R1534	4.5	Vacant Lot	440435	4798827	1095	T-40	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R1536	4.5	Vacant Lot	443582	4798822	1351	T-38	34.9	34.9	34.9	34.9	34.9	40.0	43.0	45.0	49.0	51.0	Yes
R1561	4.5	Vacant Lot	440244	4798726	1283	T-40	34.4	34.4	34.4	34.4	34.4	40.0	43.0	45.0	49.0	51.0	Yes
R1571	4.5	Vacant Lot	440253	4798685	1275	T-40	34.5	34.5	34.5	34.5	34.5	40.0	43.0	45.0	49.0	51.0	Yes
R1589	4.5	Vacant Lot	440328	4798616	1206	T-40	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R1594	4.5	Vacant Lot	440312	4798590	1225	T-40	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes
R1598	4.5	Vacant Lot	440295	4798564	1244	T-40	35.0	35.0	35.0	35.0	35.0	40.0	43.0	45.0	49.0	51.0	Yes



R2657	4.5	Vacant Lot	441213	4795927	843	T-47	37.0	37.0	37.0	37.0	37.0	40.0	43.0	45.0	49.0	51.0	Yes
R2810	4.5	Vacant Lot	441138	4795845	890	T-47	36.7	36.7	36.7	36.7	36.7	40.0	43.0	45.0	49.0	51.0	Yes
R2863	4.5	Vacant Lot	441085	4795759	958	T-47	36.2	36.2	36.2	36.2	36.2	40.0	43.0	45.0	49.0	51.0	Yes
R2866	4.5	Vacant Lot	441056	4795669	1030	T-48	35.5	35.5	35.5	35.5	35.5	40.0	43.0	45.0	49.0	51.0	Yes
R2875	4.5	Vacant Lot	440863	4795582	1028	T-48	35.2	35.2	35.2	35.2	35.2	40.0	43.0	45.0	49.0	51.0	Yes
R2887	4.5	Vacant Lot	442005	4795244	1848	T-47	29.9	29.9	29.9	29.9	29.9	40.0	43.0	45.0	49.0	51.0	Yes
R2892	4.5	Vacant Lot	440530	4795034	1521	T-48	31.2	31.2	31.2	31.2	31.2	40.0	43.0	45.0	49.0	51.0	Yes
R2894	4.5	Vacant Lot	440631	4794970	1588	T-48	30.8	30.8	30.8	30.8	30.8	40.0	43.0	45.0	49.0	51.0	Yes
R2914	4.5	Vacant Lot	438774	4796338	1513	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R2917	4.5	Vacant Lot	445055	4813406	1781	T-02	36.9	36.9	36.9	36.9	36.9	40.0	43.0	45.0	49.0	51.0	Yes
R2926	4.5	Vacant Lot	447025	4810492	1219	T-03	34.8	34.8	34.8	34.8	34.8	40.0	43.0	45.0	49.0	51.0	Yes
R2927	4.5	Vacant Lot	446977	4809852	1116	T-03	35.3	35.3	35.3	35.3	35.3	40.0	43.0	45.0	49.0	51.0	Yes
R2933	4.5	Vacant Lot	447247	4808969	1751	T-03	33.4	33.4	33.4	33.4	33.4	40.0	43.0	45.0	49.0	51.0	Yes
R2934	4.5	Vacant Lot	443240	4811519	873	T-01	34.6	34.6	34.6	34.6	34.6	40.0	43.0	45.0	49.0	51.0	Yes
R2936	4.5	Vacant Lot	442105	4809728	1748	T-04	31.7	31.7	31.7	31.7	31.7	40.0	43.0	45.0	49.0	51.0	Yes
R2937	4.5	Vacant Lot	442031	4809612	1850	T-04	31.5	31.5	31.5	31.5	31.5	40.0	43.0	45.0	49.0	51.0	Yes
R2939	4.5	Vacant Lot	441987	4808394	1787	T-08	32.0	32.0	32.0	32.0	32.0	40.0	43.0	45.0	49.0	51.0	Yes
R2941	4.5	Vacant Lot	442193	4808044	1615	T-14	33.0	33.0	33.0	33.0	33.0	40.0	43.0	45.0	49.0	51.0	Yes
R2942	4.5	Vacant Lot	442239	4808033	1569	T-14	33.3	33.3	33.3	33.3	33.3	40.0	43.0	45.0	49.0	51.0	Yes
R2943	4.5	Vacant Lot	442301	4807281	1625	T-14	32.9	32.9	32.9	32.9	32.9	40.0	43.0	45.0	49.0	51.0	Yes
R2944	4.5	Vacant Lot	442425	4806837	1662	T-16	32.3	32.3	32.3	32.3	32.3	40.0	43.0	45.0	49.0	51.0	Yes
R2948	4.5	Vacant Lot	442488	4802979	894	T-29	37.8	37.8	37.8	37.8	37.8	40.0	43.0	45.0	49.0	51.0	Yes
R2954	4.5	Vacant Lot	438784	4796314	1514	T-45	30.9	30.9	30.9	30.9	30.9	40.0	43.0	45.0	49.0	51.0	Yes
R2959	4.5	Vacant Lot	442734	4797535	568	T-43	37.5	37.5	37.5	37.5	37.5	40.0	43.0	45.0	49.0	51.0	Yes
R2960	4.5	Vacant Lot	442457	4798653	841	T-38	39.7	39.7	39.7	39.7	39.7	40.0	43.0	45.0	49.0	51.0	Yes
R2961	4.5	Vacant Lot	442724	4798684	867	T-38	38.6	38.6	38.6	38.6	38.6	40.0	43.0	45.0	49.0	51.0	Yes
R2962	4.5	Vacant Lot	444334	4799954	1403	T-31	33.8	33.8	33.8	33.8	33.8	40.0	43.0	45.0	49.0	51.0	Yes
R2964	4.5	Vacant Lot	444838	4803000	1335	T-25	35.6	35.6	35.6	35.6	35.6	40.0	43.0	45.0	49.0	51.0	Yes
R2965	4.5	Vacant Lot	445848	4803125	1754	T-19	32.4	32.4	32.4	32.4	32.4	40.0	43.0	45.0	49.0	51.0	Yes
R2971	4.5	Vacant Lot	445208	4807838	711	T-15	38.0	38.0	38.0	38.0	38.0	40.0	43.0	45.0	49.0	51.0	Yes

Point of Reception ID	Receptor Height [m]	Receptor Description			Distance to nearest Turbine [m]	Turbine ID	Calculated Sound Pressure Level [dBA] at Selected Windspeed [m/s]					Sound Level Limit [dBA] at Selected Windspeed [m/s]					Compliance with Limit [Yes/No]			
							Windspeed [m/s]													
		Easting	Northing	<=6			7	8	9	10	<=6	7	8	9	10					
R0098	4.5	Vacant Lot - Participating w/ nextEra BLW1945			446894	4811591	1830	T-03	35.3	35.3	35.3	35.3	35.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0111	4.5	Residence - Participating w/ nextEra BLW602			447075	4811477	1847	T-03	34.8	34.8	34.8	34.8	34.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0117	4.5	Residence - Participating w/ nextEra BLW599			446513	4811421	1494	T-03	35.9	35.9	35.9	35.9	35.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0121	4.5	Vacant Lot - Participating w/ nextEra BLW1822			445641	4811428	1308	T-02	38.3	38.3	38.3	38.3	38.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0164	4.5	Residence - Participating			443247	4810513	664	T-04	37.6	37.6	37.6	37.6	37.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0166	4.5	Residence - Participating w/ nextEra BLW612			446726	4810463	932	T-03	37.0	37.0	37.0	37.0	37.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0214	4.5	Residence - Participating w/ nextEra BLW618			446836	4810055	954	T-03	36.6	36.6	36.6	36.6	36.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0278	4.5	Residence - Participating			443112	4809183	695	T-08	38.9	38.9	38.9	38.9	38.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0316	4.5	Residence - Participating			443079	4808803	640	T-08	39.1	39.1	39.1	39.1	39.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0404	4.5	Residence - Participating			442969	4807890	833	T-14	38.2	38.2	38.2	38.2	38.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0774	4.5	Residence - Participating			445734	4805400	777	T-19	37.0	37.0	37.0	37.0	37.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0812	4.5	Residence - Participating			443121	4804745	555	T-21	42.5	42.5	42.5	42.5	42.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0867	4.5	Residence - Participating			442643	4804111	681	T-23	40.1	40.1	40.1	40.1	40.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R0906	4.5	Residence - Participating			442636	4803801	703	T-26	40.1	40.1	40.1	40.1	40.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1027	4.5	Residence - Participating			442413	4802199	626	T-30	39.4	39.4	39.4	39.4	39.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1146	4.5	Residence - Participating			442001	4800900	636	T-32	39.5	39.5	39.5	39.5	39.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1237	4.5	Residence - Participating			441374	4800160	845	T-37	39.0	39.0	39.0	39.0	39.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1238	4.5	Residence - Participating			441374	4800160	845	T-37	39.0	39.0	39.0	39.0	39.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1468	4.5	Residence - Participating			440779	4799183	868	T-40	36.9	36.9	36.9	36.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1469	4.5	Residence - Participating			440779	4799183	868	T-40	36.9	36.9	36.9	36.9	36.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1581	4.5	Residence - Participating			442152	4798653	631	T-40	41.1	41.1	41.1	41.1	41.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1628	4.5	Residence - Participating			442177	4798517	555	T-41	41.1	41.1	41.1	41.1	41.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R1876	4.5	Residence - Participating			441682	4796931	632	T-44	38.3	38.3	38.3	38.3	38.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2928	4.5	Vacant Lot - Participating			445002	4809910	797	T-05	38.7	38.7	38.7	38.7	38.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2929	4.5	Vacant Lot - Participating			444679	4811296	554	T-02	37.8	37.8	37.8	37.8	37.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2930	4.5	Vacant Lot - Participating			444954	4809381	821	T-09	39.1	39.1	39.1	39.1	39.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2931	4.5	Vacant Lot - Participating			444861	4809973	663	T-05	39.1	39.1	39.1	39.1	39.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2932	4.5	Vacant Lot - Participating			444993	4809160	736	T-09	39.1	39.1	39.1	39.1	39.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2945	4.5	Vacant Lot - Participating			442734	4805450	649	T-17	38.0	38.0	38.0	38.0	38.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2947	4.5	Vacant Lot - Participating			442551	4803629	810	T-26	39.0	39.0	39.0	39.0	39.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2949	4.5	Vacant Lot - Participating			442470	4802750	776	T-29	38.1	38.1	38.1	38.1	38.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2950	4.5	Vacant Lot - Participating			441724	4800700	766	T-32	39.0	39.0	39.0	39.0	39.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2951	4.5	Vacant Lot - Participating			441299	4800017	769	T-39	38.9	38.9	38.9	38.9	38.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2952	4.5	Vacant Lot - Participating			440916	4799367	829	T-39	37.5	37.5	37.5	37.5	37.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2953	4.5	Vacant Lot - Participating			441456	4798412	337	T-40	44.1	44.1	44.1	44.1	44.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2956	4.5	Vacant Lot - Participating			441281	4796242	619	T-47	39.3	39.3	39.3	39.3	39.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2957	4.5	Vacant Lot - Participating			442508	4797408	495	T-43	38.6	38.6	38.6	38.6	38.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2958	4.5	Vacant Lot - Participating			442517	4797309	586	T-43	37.6	37.6	37.6	37.6	37.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2963	4.5	Vacant Lot - Participating			444057	4801133	517	T-31	39.3	39.3	39.3	39.3	39.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2966	4.5	Vacant Lot - Participating			445740	4804672	545	T-19	39.5	39.5	39.5	39.5	39.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2967	4.5	Vacant Lot - Participating			445674	4805154	671	T-19	38.0	38.0	38.0	38.0	38.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2968	4.5	Vacant Lot - Participating			442949	4807489	947	T-14	37.1	37.1	37.1	37.1	37.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2969	4.5	Vacant Lot - Participating			443000	4808143	837	T-14	38.6	38.6	38.6	38.6	38.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2970	4.5	Vacant Lot - Participating			445260	4807322	884	T-15	36.2	36.2	36.2	36.2	36.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2972	4.5	Vacant Lot - Participating			446727	4805245	460	T-20	41.8	41.8	41.8	41.8	41.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
R2973	4.5	Vacant Lot - Participating			443212	4810162	590	T-04	38.8	38.8	38.8	38.8	38.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A

POR UTM coordinates		POR ID		Distance to nearest source (m)			Nearest source ID			Level of wind farm (dBA)			Level (dBA)
Easting (m)	Northing (m)	Grand Bend	Bluewater	Grand Bend	Bluewater	Zurich	Grand Bend	Bluewater	Zurich	Grand Bend	Bluewater	Zurich	TOTAL
446821	4811641	R0093	BLW1587	1833	990	3539	T-03	B_WTG18	ZurichWF_T01	27.1	34.8	12.8	35.5
446559	4811621	R0095	BLW596	1695	1085	3533	T-03	B_WTG04	ZurichWF_T01	28.0	35.0	12.8	35.8
446750	4811613	R0096	BLW1572	1773	1053	3513	T-03	B_WTG18	ZurichWF_T01	27.4	34.7	12.9	35.5
446750	4811596	R0097	BLW1986	1758	1067	3496	T-03	B_WTG18	ZurichWF_T01	27.5	34.7	12.9	35.4
446894	4811591	R0098	BLW1945	1829	999	3489	T-03	B_WTG18	ZurichWF_T01	27.0	34.6	13.0	35.3
446757	4811584	R0099	BLW1574	1751	1073	3484	T-03	B_WTG18	ZurichWF_T01	27.5	34.6	13.0	35.4
445829	4811447	R0101	BLW1944	1381	669	3504	T-03	B_WTG04	ZurichWF_T01	30.9	37.2	12.9	38.1
446771	4811500	R0104	BLW1584	1686	1137	3400	T-03	B_WTG18	ZurichWF_T01	27.7	34.4	13.3	35.3
446742	4811496	R0105	BLW1581	1668	1147	3397	T-03	B_WTG05	ZurichWF_T01	27.8	34.5	13.3	35.3
446702	4811492	R0106	BLW1586	1644	1116	3394	T-03	B_WTG05	ZurichWF_T01	28.0	34.5	13.3	35.4
446681	4811491	R0107	BLW1580	1633	1101	3394	T-03	B_WTG05	ZurichWF_T01	28.1	34.6	13.3	35.5
445503	4811497	R0108	BLW644	1157	570	3661	T-02	B_WTG04	ZurichWF_T01	31.9	37.5	12.3	38.6
446621	4811482	R0110	BLW1578	1596	1054	3389	T-03	B_WTG05	ZurichWF_T01	28.3	34.7	13.4	35.6
447075	4811477	R0111	BLW602	1847	1042	3381	T-03	B_WTG18	ZurichWF_T01	26.7	34.1	13.4	34.8
446758	4811496	R0112	BLW1585	1676	1147	3396	T-03	B_WTG18	ZurichWF_T01	27.8	34.4	13.3	35.3
446646	4811464	R0113	BLW1834	1592	1058	3370	T-03	B_WTG05	ZurichWF_T01	28.3	34.6	13.4	35.5
446825	4811466	R0114	BLW1576	1688	1140	3365	T-03	B_WTG18	ZurichWF_T01	27.6	34.3	13.5	35.2
446597	4811449	R0115	BLW1579	1556	1014	3358	T-03	B_WTG05	ZurichWF_T01	28.5	34.7	13.5	35.7
446513	4811421	R0117	BLW599	1494	939	3338	T-03	B_WTG05	ZurichWF_T01	28.9	35.0	13.6	35.9
446775	4811425	R0118	BLW1985	1625	1122	3324	T-03	B_WTG05	ZurichWF_T01	28.0	34.3	13.6	35.2
445641	4811428	R0121	BLW1822	1308	639	3547	T-02	B_WTG04	ZurichWF_T01	31.5	37.2	12.7	38.3
445110	4811363	R0123	BLW1942	834	837	3707	T-02	B_WTG04	ZurichWF_T01	33.9	34.5	12.1	37.3
444925	4811345	R0124	BLW1554	688	964	3783	T-02	B_WTG04	ZurichWF_T01	35.1	33.3	11.8	37.3
444925	4811345	R0125	BLW1554	688	964	3783	T-02	B_WTG04	ZurichWF_T01	35.1	33.3	11.8	37.3
445923	4811283	R0127	BLW648	1217	600	3320	T-03	B_WTG05	ZurichWF_T01	31.3	37.5	13.7	38.4
445332	4811277	R0130	BLW1943	1071	821	3529	T-02	B_WTG04	ZurichWF_T01	33.0	35.6	12.8	37.5
445127	4811258	R0131	BLW1833	903	918	3607	T-02	B_WTG04	ZurichWF_T01	33.8	34.3	12.5	37.1
444903	4811231	R0133	BLW640	747	1065	3698	T-02	B_WTG04	ZurichWF_T01	35.0	32.9	12.1	37.1
444696	4811184	R0136	BLW1858	659	1238	3773	T-02	B_WTG04	ZurichWF_T01	36.0	31.5	11.9	37.3
444207	4811147	R0138	BLW639	636	1641	4047	T-02	B_WTG04	ZurichWF_T01	37.3	28.6	10.8	37.9
445271	4811107	R0140	BLW1556	1108	786	3405	T-02	B_WTG05	ZurichWF_T01	33.5	35.2	13.3	37.4
443831	4811088	R0143	BLW213	816	1992	4263	T-01	B_WTG04	ZurichWF_T01	36.8	26.8	10.1	37.2
447061	4810636	R0153	BLW605	1309	1129	2541	T-03	B_WTG05	ZurichWF_T01	29.2	32.9	17.2	34.5
446726	4810464	R0166	BLW612	932	823	2367	T-03	B_WTG05	ZurichWF_T01	32.0	35.3	18.1	37.0
447068	4810261	R0169	BLW1826	1202	1064	2168	T-03	B_WTG06	ZurichWF_T01	29.9	32.7	19.3	34.7
444952	4810189	R0170	BLW1837	812	1098	2837	T-05	B_WTG05	ZurichWF_T01	37.2	32.1	15.8	38.4
444801	4810142	R0202	BLW667	655	1255	2908	T-05	B_WTG05	ZurichWF_T01	38.2	30.9	15.4	39.0
446771	4810107	R0207	BLW620	890	731	2008	T-03	B_WTG06	ZurichWF_T01	32.5	35.2	20.3	37.2
447100	4810072	R0212	BLW617	1218	1037	1983	T-03	B_WTG06	ZurichWF_T01	29.9	32.4	20.4	34.5
446836	4810055	R0214	BLW618	954	776	1953	T-03	B_WTG06	ZurichWF_T01	31.9	34.6	20.6	36.6
445032	4809792	R0228	BLW669	830	1057	2499	T-05	B_WTG06	ZurichWF_T01	37.7	31.8	17.4	38.7
446871	4809721	R0231	BLW623	1048	793	1619	T-03	B_WTG06	ZurichWF_T01	31.4	33.8	23.0	36.0
445056	4809701	R0236	BLW1831	866	1042	2420	T-05	B_WTG06	ZurichWF_T01	37.7	31.7	17.8	38.7
447164	4809709	R0238	BLW1825	1331	1085	1633	T-03	B_WTG06	ZurichWF_T01	29.5	31.4	22.9	33.9
445050	4809429	R0250	BLW1829	926	1119	2255	T-09	B_WTG06	ZurichWF_T01	37.9	30.6	18.8	38.7
447213	4809389	R0252	BLW632	1494	1215	1331	T-03	B_WTG06	ZurichWF_T01	28.9	30.1	25.4	33.3
446964	4809340	R0256	BLW629	1304	1012	1241	T-03	B_WTG06	ZurichWF_T01	30.1	31.3	26.2	34.5
444967	4809319	R0258	BLW674	794	1239	2261	T-09	B_WTG06	ZurichWF_T01	38.5	29.5	18.7	39.1
445071	4809291	R0261	BLW672	866	1159	2159	T-09	B_WTG06	ZurichWF_T01	37.9	30.1	19.3	38.6
445934	4809260	R0263	BLW1940	809	607	1491	T-03	B_WTG06	ZurichWF_T01	35.0	35.6	24.0	38.5
447005	4808850	R0311	BLW635	1656	1355	760	T-03	B_WTG06	ZurichWF_T01	29.2	28.5	31.6	34.8
447240	4808839	R0313	BLW636	1831	1531	823	T-03	B_WTG06	ZurichWF_T02	28.3	27.6	30.8	33.9
445222	4808616	R0329	BLW679	905	1505	1729	T-11	B_WTG06	ZurichWF_T03	37.7	27.0	22.2	39.2
447007	4808445	R0346	BLW194	1974	1676	368	T-03	B_WTG06	ZurichWF_T04	29.0	26.3	38.9	39.6
445422	4808224	R0370	BLW197	1026	1754	1456	T-15	B_WTG06	ZurichWF_T05	36.4	25.2	24.3	36.9




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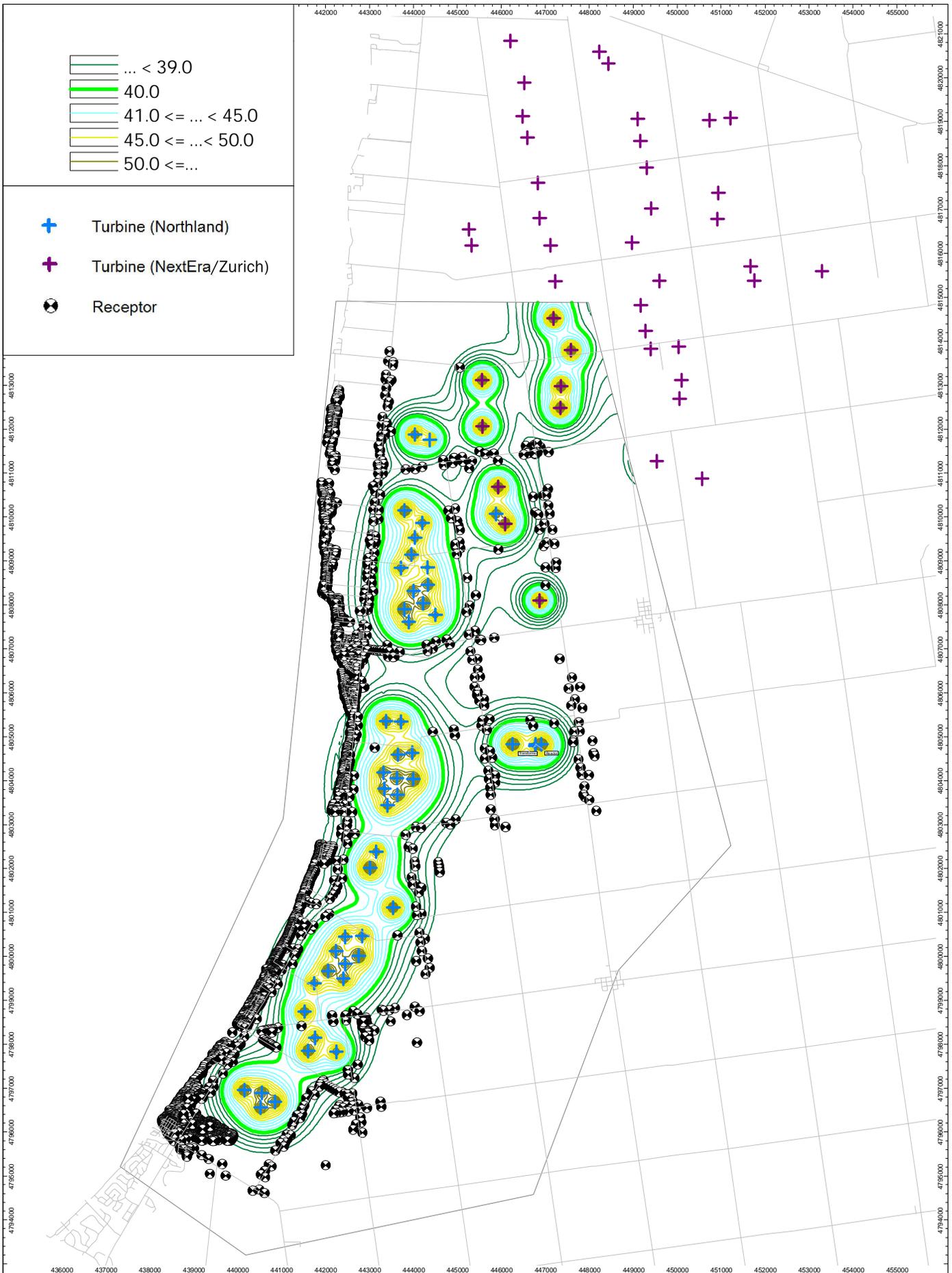
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 Drawn: ST  
 Eng: PA  
 Date: August 7, 2012

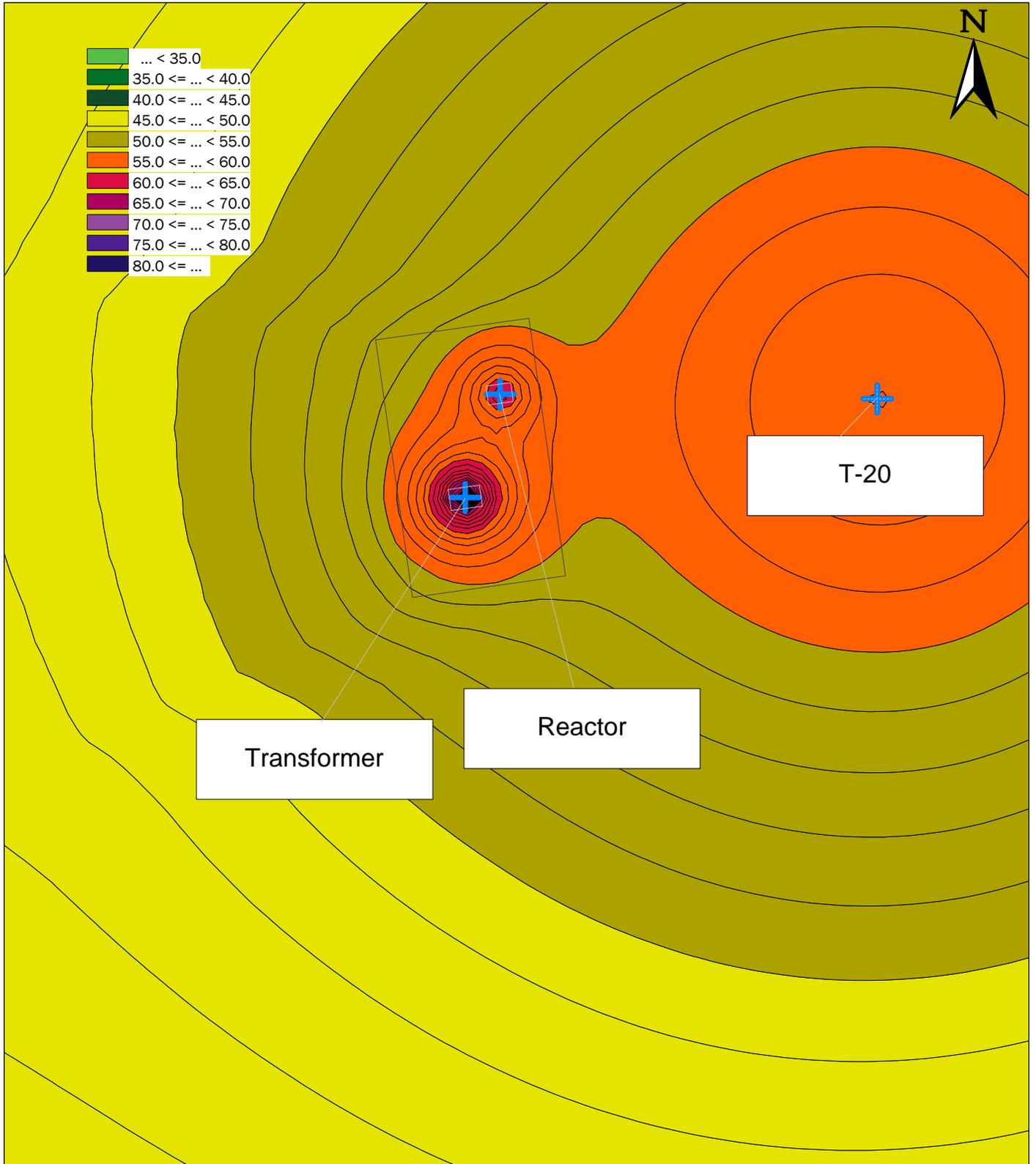
The scope of the work outlined in this document is limited to the acoustic, noise, and/or vibration control aspects of the design. Contractors to verify all dimensions

Project Name:  
 Grand Bend Wind Farm      AEL Project Number 11167

Figure Title:  
 Key Plan

Figure 1





 50 Ronson Dr, Suite 165, Toronto ON P: 416 249 3361 F: 416 249 9813	Scale: NTS Drawn: MM Eng: PA Date: July 17, 2013	Project Name: Grand Bend Wind Farm AEL Project Number 11167
	The scope of the work outlined in this document is limited to the acoustic, noise, and/or vibration control aspects of the design. Contractors to verify all dimensions	Figure Title: Tranformer Substation



Acoustics  
Noise  
Vibration

## Attachment A

**SWT-2.3-113 1824kW Turbine Data**  
**SWT-2.3-113 1903kW Turbine Data**  
**SWT-2.3-113 2030kW Turbine Data**  
**SWT-2.3-113 2126kW Turbine Data**  
**SWT-2.3-113 2221kW Turbine Data**  
**SWT-2.3-113 2300kW Turbine Data**

**For the Northland Grand Bend Wind Farm**



SIEMENS

# SWT - 2.3 - 113

Turning moderate wind into maximum results

[www.siemens.com/energy](http://www.siemens.com/energy)

Answers for energy.

# At the leading edge of evolution

The new Siemens SWT-2.3-113 wind turbine is the ultimate choice for low to moderate wind conditions. The revolutionary direct drive generator and the new, optimized Quantum Blade are paired to extract as much energy as possible from the wind.

Efficient. Quiet. Robust and reliable. The Siemens SWT-2.3-113 is the new benchmark wind turbine for low to medium wind speeds. As a result of more than 30 years of research and development, it is designed to harvest more energy out of moderate wind conditions than anyone thought possible.

## Proven design

The SWT-2.3-113 is built around the same revolutionizing direct drive generator as the SWT-3.0-101. The direct drive turbine offers exceptional reliability and efficiency – with only 50% of the parts normally required for a conventional wind turbine. By using the same proven design and sharing the majority of components with its larger sibling, production costs and lead times can be kept down.

## Unique aerodynamics

The Quantum Blade combines exceptional aerodynamic performance with patented manufacturing technology. Based on innovative aerodynamic solutions in the root and tip sections, the Quantum Blade offers maximum efficiency at low to medium wind speeds.

## Maximum availability

Simplicity is the ultimate sophistication. With the simple and robust direct drive concept with 50% fewer parts, the SWT-2.3-113 wind turbine is designed for maximum availability. Furthermore, the spacious nacelle and the ergonomic working conditions facilitate serviceability and contribute to minimizing downtime for scheduled maintenance.

“

You cannot change the wind.  
It may be strong, it may be light.  
This leaves it up to us to extract  
as much energy as we can from it.

*Anne Schannong Vinther, Quality Engineer*



# Innovation for efficiency

Siemens direct drive technology and the new Quantum Blade represent groundbreaking wind turbine design and technology. The result of these two key innovations is a turbine with maximum efficiency and reliability, which helps to enable a solid return on investment.

## Maximized performance with 50% fewer parts

The Siemens direct drive design incorporates a permanent magnet generator with fewer moving parts than ever before.

The simple permanent magnet design offers increased efficiency directly by minimizing energy losses and indirectly by reducing maintenance needs. The outer rotor arrangement leads to a more compact and light-weight generator, making transportation and installation easier and faster.

## The B55 Quantum Blade

The new generation of Siemens wind turbine blades is lighter than previous designs but retains the superior

strength known from earlier generations of blades. Thanks to unique airfoils and redesigned tip and root sections, the blade offers superior performance at low to medium wind speeds. The root section uses Siemens "flatback" profiles to minimize root leakage and provide higher lift. The tip has also undergone a fine-tuning process to give enhanced lift and acoustic performance.

## One-piece moulding

Like other Siemens blades, the new Quantum Blades are manufactured in Siemens proprietary IntegralBlade® process. Each blade is moulded in one single production step from fiberglass-reinforced epoxy resin, resulting in a stronger, lighter blade without any joints.



## Lower noise

With a low 105 dB noise level, the SWT-2.3-113 is one of the quietest wind turbines on the market. As a result, this turbine type has an extremely high ratio of energy output per noise affected area, resulting in fewer disturbances to people and wildlife.

## Superior grid compliance

The Siemens NetConverter® is designed for maximum flexibility in the turbine's response to voltage and frequency variations, fault ride-through capability and output adjustment. The advanced wind farm control system provides state-of-the-art fleet management.

# Technical specification

## Rotor

- Type: 3-bladed, horizontal axis
- Position: Upwind
- Diameter: 113 m
- Swept area: 10,000 m<sup>2</sup>
- Speed range: 6–13 rpm
- Power regulation: Pitch regulation with variable speed
- Rotor tilt: 6 degrees

## Blade

- Type: Self-supporting
- Blade length: 55 m
- Tip chord: 0.63 m
- Root chord: 4.2 m
- Aerodynamic profile: NB 1-7, SWPNA1\_XX12, FFAxxx
- Material: GRE
- Surface gloss: Semi-mat, <30 / ISO2813
- Surface colour: Light grey, RAL 7035

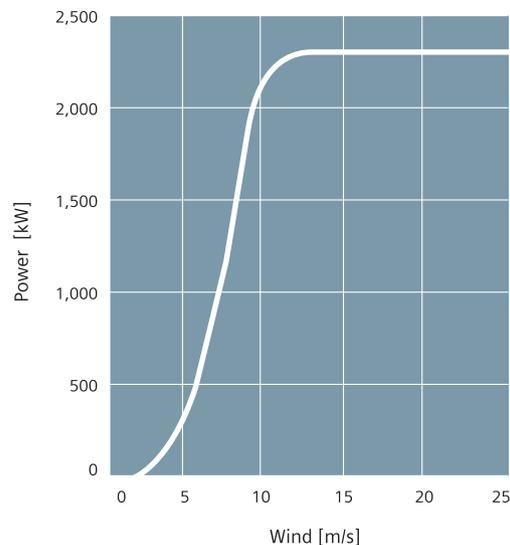
## Aerodynamic brake

- Type: Full span pitching
- Activation: Active, hydraulic

## Load-supporting parts

- Hub: Nodular cast iron
- Main shaft: Cast
- Nacelle bed plate: Cast

## Sales power curve



## Mechanical brake

- Type: Hydraulic disc brake
- Position: Generator rear end
- Number of callipers: 3

## Canopy

- Type: Totally enclosed
- Surface gloss: Silk mat, 30–40 / ISO2813
- Colour: Light grey, RAL 7035

## Generator

- Type: Synchronous, PMG
- Nominal power: 2,300 kW

## Grid terminals (LV)

- Nominal power: 2,300 kW
- Voltage: 690 V
- Frequency: 50 Hz or 60 Hz

## Yaw system

- Type: Active
- Yaw bearing: Externally geared
- Yaw drive: 8 (optional 10) electric gear motors
- Yaw brake: Passive friction brake

## Controller

- Type: Microprocessor
- SCADA system: WPS
- Controller designation: SWTC, STC-1, SCS-1

## Tower

- Type: Cylindrical and/or tapered tubular
- Hub height: 99.5 m or site-specific
- Corrosion protection: Painted
- Surface gloss: Silk mat, 30–40 / ISO2813
- Colour: Light grey, RAL 7035

## Operational data

- Cut-in wind speed: 3 m/s
- Nominal power at: 12–13 m/s
- Cut-out wind speed: 25 m/s
- Maximum 3 s gust: 59.5 m/s (IEC version)

## Weights (approximately)

- Rotor: 66,700 kg
- Nacelle: 73,000 kg
- Tower: Site-specific

### 1 Quantum Blade

- Unique design and manufacturing process
- IntegralBlade® one-piece moulding for maximum strength
- Optimized aerodynamics for low to medium wind conditions
- Increased length for higher energy yield
- Blade root – designed for minimized root leakage and increased lift

### 2 Direct drive generator

- Permanent magnet design
- Totally enclosed, easy to handle and lightweight design
- Optimum reliability and efficiency

### 3 Nacelle

- Solid, compact and lightweight structure
- Spacious, ergonomic design – maximum serviceability
- 50% fewer parts compared to geared turbines

### 4 Cooling

- Simple and robust LiquidLink® water cooling system
- Top-mounted passive cooling radiators
- High-efficient two-stage cooling as function of power



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Order No. E50001-W310-A174-V1-4A00

Printed in Germany

Dispo 34804, c4bs No. 7491

fb 3867 WÜ WS 04113.0

Printed on elementary chlorine-free  
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The information in this document contains  
general descriptions of the technical options  
available, which may not apply in all cases.

The required technical options should therefore  
be specified in the contract.

## SWT-2.3-113, Rev. 1, Max. Power 1824 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (L<sub>WA</sub>) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 1824kW	96.0	99.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 1: Acoustic emission, L<sub>WA</sub> [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for L<sub>WA</sub> in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	83.9	83.3	82.7	82.8	82.5
125	89.4	88.2	87.3	86.8	85.9
250	94.0	93.1	92.8	92.2	91.4
500	92.1	92.4	92.9	92.7	92.4
1000	94.1	94.5	94.1	94.0	94.3
2000	92.9	93.2	93.3	93.5	94.0
4000	83.5	86.2	88.2	90.1	90.3
8000	66.7	69.9	72.1	72.1	72.0

Table 2: Typical octave bands for 6-10 m/s, L<sub>WA</sub> [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.

## SWT-2.3-113, Rev. 1, Max. Power 1903 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (LWA) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 1903kW	96.2	100.4	101.0	101.0	101.0	101.0	101.0	101.0	101.0	101.0

Table 1: Acoustic emission,  $L_{WA}$  [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for  $L_{WA}$  in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	84.1	83.5	82.9	83.0	82.7
125	89.8	88.6	87.7	87.2	86.3
250	95.2	94.4	94.0	93.4	92.6
500	93.6	93.9	94.2	94.0	93.7
1000	95.0	95.4	95.1	95.0	95.3
2000	93.6	94.0	94.3	94.5	95.0
4000	83.6	86.7	88.8	90.7	90.8
8000	66.7	70.3	72.6	72.6	72.5

Table 2: Typical octave bands for 6-10 m/s,  $L_{WA}$  [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.

## SWT-2.3-113, Rev. 1, Max. Power 2030 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (L<sub>WA</sub>) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 2030kW	96.4	101.3	102.0	102.0	102.0	102.0	102.0	102.0	102.0	102.0

Table 1: Acoustic emission, L<sub>WA</sub> [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for L<sub>WA</sub> in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	84.3	83.6	83.1	83.2	82.9
125	90.2	89.0	88.1	87.6	86.7
250	96.4	95.5	95.1	94.5	93.8
500	95.2	95.5	95.5	95.3	95.1
1000	96.0	96.3	96.1	96.0	96.3
2000	94.4	94.7	95.2	95.4	95.9
4000	83.8	87.0	89.3	91.2	91.4
8000	66.9	70.7	73.1	73.1	73.0

Table 2: Typical octave bands for 6-10 m/s, L<sub>WA</sub> [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.

## SWT-2.3-113, Rev. 1, Max. Power 2126 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (L<sub>WA</sub>) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 2126kW	96.5	102.3	103.0	103.0	103.0	103.0	103.0	103.0	103.0	103.0

Table 1: Acoustic emission, L<sub>WA</sub> [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for L<sub>WA</sub> in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	84.6	83.9	83.3	83.4	83.2
125	90.6	89.3	88.5	88.0	87.2
250	97.0	96.3	96.3	95.7	95.0
500	96.7	96.9	97.0	96.9	96.6
1000	97.4	97.7	97.0	97.0	97.3
2000	95.0	95.2	96.0	96.2	96.8
4000	84.0	87.0	89.3	91.2	91.4
8000	66.3	70.4	73.0	73.1	73.0

Table 2: Typical octave bands for 6-10 m/s, L<sub>WA</sub> [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.

## SWT-2.3-113, Rev. 1, Max. Power 2221 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (LWA) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 2221kW	96.6	102.6	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

Table 1: Acoustic emission,  $L_{WA}$  [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for  $L_{WA}$  in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	84.8	83.6	83.5	83.7	83.4
125	90.9	91.3	88.8	88.3	87.5
250	97.6	97.7	97.2	96.7	95.9
500	98.2	98.0	97.8	97.7	97.4
1000	98.8	98.7	98.0	98.0	98.3
2000	95.6	95.4	97.1	97.4	97.9
4000	84.1	87.8	90.8	92.7	92.9
8000	65.6	71.2	74.5	74.6	74.5

Table 2: Typical octave bands for 6-10 m/s,  $L_{WA}$  [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.

## SWT-2.3-113, Rev. 1, Max. Power 2300 kW Contract Acoustic Emission, Hub Height 99.5 m Ontario - Canada

### Sound Power Levels

The warranted sound power level is presented with reference to the code IEC 61400-11:2002 with amendment 1 dated 2006-05 based on a hub height of 99.5 m and a roughness length of 0.05 m as described in the IEC code. The sound power levels (L<sub>WA</sub>) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	4	5	6	7	8	9	10	11	12	Up to cut-out
Max. Power 2300kW	96.6	102.6	104.4	105.0	105.0	105.0	105.0	105.0	105.0	105.0

Table 1: Acoustic emission, L<sub>WA</sub> [dB(A) re 1 pW]

### Typical Sound Power Frequency Distribution

Typical spectra for L<sub>WA</sub> in dB(A) re 1pW for the corresponding centre frequencies are tabulated below for 6 - 10 m/s referenced to a height of 10.0 m above ground level.

Octave band, centre frequency [Hz]	Wind Speed (m/s)				
	6	7	8	9	10
63	85.0	84.6	83.7	83.9	83.6
125	91.3	92.4	89.2	88.7	87.9
250	96.8	97.6	98.4	97.8	97.1
500	98.9	99.4	99.3	99.2	98.9
1000	99.7	100.3	98.9	98.9	99.2
2000	95.3	95.9	97.9	98.2	98.7
4000	84.9	86.1	90.8	92.7	93.0
8000	67.4	68.1	74.4	74.5	74.4

Table 2: Typical octave bands for 6-10 m/s, L<sub>WA</sub> [dB(A) re 1 pW]

### Tonality

Typical tonal audibility for the Siemens wind turbine generators has not exceeded 2 dB as determined in accordance with IEC 61400-11:2002.

### Measurement Uncertainty

A measurement uncertainty range of -1.5dB(A) to +1.5dB(A) is applicable.



# Attachment B

Wind Turbine Data for:  
NextEra Bluewater Wind Energy Centre (GE 1.6-100 LNTE)  
& Magnum Zurich Wind Farm (Enercon E-48)

# 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. 1/3<sup>rd</sup> 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.

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

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	
<b>Total apparent sound power level <math>L_{WA,k}</math> [dB]</b>	<b>90.4</b>	<b>90.7</b>	<b>95.3</b>	<b>100.5</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>

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
<b>Total apparent sound power level L<sub>WA,k</sub> [dB]</b>	<b>90.4</b>	<b>90.9</b>	<b>96.0</b>	<b>101.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>

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  $\sigma_T$ ,  $\sigma_R$  and  $\sigma_P$  for measured apparent sound power level are described by IEC/TS 61400-14, where  $\sigma_T$  is the total standard deviation,  $\sigma_P$  is the standard deviation for product variation and  $\sigma_R$  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
- $\sigma_P$  is the product variation i.e. the 1.6-100 with LNTE unit-to-unit product variation; typically  $< 0.8$  dB
- $\sigma_R$  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
- $\sigma_T$  is the total standard deviation combining both  $\sigma_P$  and  $\sigma_R$
- $K = 1.645 \sigma_T$  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 1/3<sup>rd</sup> Octave Band Spectra

The tables in Annex I are showing the 1/3<sup>rd</sup> 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 1/3<sup>rd</sup> Octave Band Apparent Sound Power Level  $L_{WA,k}$**

1.6-100 with LNTE - Normal Operation 1/3 <sup>rd</sup> 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	
<b>Total apparent sound power level <math>L_{WA,k}</math> [dB]</b>	<b>90.4</b>	<b>90.7</b>	<b>95.3</b>	<b>100.5</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>

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

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1.6-100 with LNTE - Normal Operation 1/3 <sup>rd</sup> 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	
<b>Total apparent sound power level L<sub>WA,k</sub> [dB]</b>	<b>90.4</b>	<b>90.9</b>	<b>96.0</b>	<b>101.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	<b>103.0</b>	

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

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# Extract I of test report

Extract 1 Page 1 of 2

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 Dreikamp 5 D-26605 AURICH	Rated power (generator):	800 kW
Serial number:	48087	Rotor diameter:	48,0 m
WT-location:	WP Holtriem RW 25.95.228 HW 59.42.988	Hub height above ground:	75,6 m
Complementations of rotor (manufacturer)		Kon. Stahlrohr	Tubular steel tower
Manufacturer of rotor blades: ENERCON GmbH		Pitch	pitch/stall/active-stall
Type of blades:	E48/1	Complementations of gear and generator (manufacturer)	
Pitch angle:	variabel	Manufacturer of gear:	No
Number of blades:	3	Type of gear:	No
Rated speed(s)/speed range:	16 – 29,5 rpm (Mode I)	Manufacturer of generator:	ENERCON GmbH
		Type of generator:	E-48
		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)
Tonal components $\Delta L_a$ (near proximity)	10 $ms^{-1}$	800 kW	101.9 dB(A)	(4)
	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		



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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.

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 <sub>WA</sub>	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 <sub>WA</sub>	81.6			86.3			93.8			95.7		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	79.6			86.0			95.1			97.1		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	79.8			87.3			96.1			97.5		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	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 <sub>WA</sub>	78.6			84.4			93.3			96.8		
Frequency	800	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	10000
L <sub>WA</sub>	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 <sub>WA</sub>	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<sup>-1</sup>.

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 -

Dipl.-Ing. A. Petersen

Dipl.-Ing. W. Wilke

date: 2006-01-24



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.



# Attachment C

## Sample Calculation for Night Time Noise Impact on R0776

# ISO 9613-2 Sample Calculation

Receiver: R0776

Project: Grand Bend Wind Farm

Project Number: 11167

Time Period	Total (dBA)
Night	39.9

Receiver Name	Receiver ID	X	Y	Z	Ground
R0776	R0776	446656	4805376	216.5	212

Source ID	X	Y	Z	Ground	ReflOrd	LxN	L/A	Dist.	hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	Afol	Ahou	Cmet	CmetN	Dc	RL	LtotN
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	85	1.0	617	50.2	63	66.8	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	20.7
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	92	1.0	617	50.2	125	66.8	0	1.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	23.8
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	98	1.0	617	50.2	250	66.8	0	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	30.1
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	99	1.0	617	50.2	500	66.8	0	-0.9	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	32.3
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	100	1.0	617	50.2	1000	66.8	0	-0.9	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	32.1
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	96	1.0	617	50.2	2000	66.8	0	-0.9	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	86	1.0	617	50.2	4000	66.8	0	-0.9	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	68	1.0	617	50.2	8000	66.8	0	-0.9	0.0	0.0	72.1	0.0	0.0	0.0	0.0	0.0	0.0	-69.9
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	85	1.0	682	49.9	63	67.7	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	19.9
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	92	1.0	682	49.9	125	67.7	0	1.6	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	22.9
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	98	1.0	682	49.9	250	67.7	0	0.1	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	29.2
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	99	1.0	682	49.9	500	67.7	0	-0.9	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	31.3
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	100	1.0	682	49.9	1000	67.7	0	-0.9	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	31.0
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	96	1.0	682	49.9	2000	67.7	0	-0.9	0.0	0.0	6.6	0.0	0.0	0.0	0.0	0.0	0.0	22.5
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	86	1.0	682	49.9	4000	67.7	0	-0.9	0.0	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0	-3.0
46T_Sie7_T-19	446261	4804829	314.9	215.42	0	68	1.0	682	49.9	8000	67.7	0	-0.9	0.0	0.0	79.7	0.0	0.0	0.0	0.0	0.0	0.0	-78.3
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	85	1.0	2979	50.9	63	80.5	0	-3.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.8
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	92	1.0	2979	50.9	125	80.5	0	1.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	8.9
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	98	1.0	2979	50.9	250	80.5	0	0.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	13.9
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	99	1.0	2979	50.9	500	80.5	0	-0.9	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	14.1
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	100	1.0	2979	50.9	1000	80.5	0	-0.9	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	9.8
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	96	1.0	2979	50.9	2000	80.5	0	-0.9	0.0	0.0	28.8	0.0	0.0	0.0	0.0	0.0	0.0	-12.5
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	86	1.0	2979	50.9	4000	80.5	0	-0.9	0.0	0.0	97.6	0.0	0.0	0.0	0.0	0.0	0.0	-91.1
46T_Sie7_T-25	443997	4804036	304.3	204.81	0	68	1.0	2979	50.9	8000	80.5	0	-0.9	0.0	0.0	348.1	0.0	0.0	0.0	0.0	0.0	0.0	-359.6
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	85	1.0	3308	50.5	63	81.4	0	-3.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	6.0
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	92	1.0	3308	50.5	125	81.4	0	1.7	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	7.9
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	98	1.0	3308	50.5	250	81.4	0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	12.7
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	99	1.0	3308	50.5	500	81.4	0	-1.0	0.0	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	12.6
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	100	1.0	3308	50.5	1000	81.4	0	-1.0	0.0	0.0	12.1	0.0	0.0	0.0	0.0	0.0	0.0	7.8
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	96	1.0	3308	50.5	2000	81.4	0	-1.0	0.0	0.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0	-16.5



# ISO 9613-2 Sample Calculation

**Receiver: R0776**

Project: Grand Bend Wind Farm

Project Number: 11167

Time Period	Total (dBA)
Night	39.9

Receiver Name	Receiver ID	X	Y	Z	Ground
R0776	R0776	446656	4805376	216.5	212

Source ID	X	Y	Z	Ground	ReflOrd	LxN	L/A	Dist.	hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotN
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	85	1.0	617	50.2	63	66.8	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	20.7
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	86	1.0	3308	50.5	4000	81.4	0	-1.0	0.0	0.0	108.4	0.0	0.0	0.0	0.0	0.0	0.0	-102.8
46T_Sie7_T-24	443623	4804057	300.9	201.4	0	68	1.0	3308	50.5	8000	81.4	0	-1.0	0.0	0.0	386.7	0.0	0.0	0.0	0.0	0.0	0.0	-399.0
Trans	446769	4804791	221.9	217.79	0	46	1.0	596	2.8	32	66.5	0	-4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-15.5
Trans	446769	4804791	221.9	217.79	0	66	1.0	596	2.8	63	66.5	0	-4.7	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Trans	446769	4804791	221.9	217.79	0	78	1.0	596	2.8	125	66.5	0	1.8	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Trans	446769	4804791	221.9	217.79	0	80	1.0	596	2.8	250	66.5	0	-0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	13.3
Trans	446769	4804791	221.9	217.79	0	86	1.0	596	2.8	500	66.5	0	-1.9	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	19.8
Trans	446769	4804791	221.9	217.79	0	83	1.0	596	2.8	1000	66.5	0	-1.9	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	15.9
Trans	446769	4804791	221.9	217.79	0	79	1.0	596	2.8	2000	66.5	0	-1.9	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	0.0	8.6
Trans	446769	4804791	221.9	217.79	0	74	1.0	596	2.8	4000	66.5	0	-1.9	0.0	0.0	19.5	0.0	0.0	0.0	0.0	0.0	0.0	-10.4
Trans	446769	4804791	221.9	217.79	0	65	1.0	596	2.8	8000	66.5	0	-1.9	0.0	0.0	69.7	0.0	0.0	0.0	0.0	0.0	0.0	-69.7
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	85	1.0	3812	48.8	63	82.6	0	-3.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	5.1
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	92	1.0	3812	48.8	125	82.6	0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	6.6
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	98	1.0	3812	48.8	250	82.6	0	-0.1	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	99	1.0	3812	48.8	500	82.6	0	-1.1	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	10.5
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	100	1.0	3812	48.8	1000	82.6	0	-1.1	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	4.8
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	96	1.0	3812	48.8	2000	82.6	0	-1.1	0.0	0.0	36.8	0.0	0.0	0.0	0.0	0.0	0.0	-22.5
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	86	1.0	3812	48.8	4000	82.6	0	-1.1	0.0	0.0	124.9	0.0	0.0	0.0	0.0	0.0	0.0	-120.4
46T_Sie7_T-14	443802	4807902	303.5	203.98	0	68	1.0	3812	48.8	8000	82.6	0	-1.1	0.0	0.0	445.6	0.0	0.0	0.0	0.0	0.0	0.0	-459.0
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	79	1.0	2736	37.9	63	79.7	0	-3.4	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	1.9
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	84	1.0	2736	37.9	125	79.7	0	1.7	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	93	1.0	2736	37.9	250	79.7	0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	10.7
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	97	1.0	2736	37.9	500	79.7	0	-1.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	12.8
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	98	1.0	2736	37.9	1000	79.7	0	-1.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	93	1.0	2736	37.9	2000	79.7	0	-1.0	0.0	0.0	26.4	0.0	0.0	0.0	0.0	0.0	0.0	-12.5
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	88	1.0	2736	37.9	4000	79.7	0	-1.0	0.0	0.0	89.7	0.0	0.0	0.0	0.0	0.0	0.0	-80.8
ZurichWF_10ms_T01	446873	4808102	307.0	231	0	85	1.0	2736	37.9	8000	79.7	0	-1.0	0.0	0.0	319.8	0.0	0.0	0.0	0.0	0.0	0.0	-314.0
46T_Sie7_T-27	443638	4803681	302.6	203.05	0	84	1.0	3462	50.4	63	81.8	0	-3.3	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	4.7
46T_Sie7_T-27	443638	4803681	302.6	203.05	0	91	1.0	3462	50.4	125	81.8	0	1.7	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	6.4





# ISO 9613-2 Sample Calculation

**Receiver: R0776**

Project: Grand Bend Wind Farm

Project Number: 11167

Time Period	Total (dBA)
Night	39.9

Receiver Name	Receiver ID	X	Y	Z	Ground
R0776	R0776	446656	4805376	216.5	212

Source ID	X	Y	Z	Ground	ReflOrd	LxN	L/A	Dist.	hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	Afol	Ahou	Cmet	CmetN	Dc	RL	LtotN
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	85	1.0	617	50.2	63	66.8	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	20.7
46T_Sie7_T-13	444228	4808041	306.5	207	0	71	1.0	3606	48.6	8000	82.1	0	-1.0	0.0	0.0	421.5	0.0	0.0	0.0	0.0	0.0	0.0	-431.4
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	84	1.0	3281	51.0	63	81.3	0	-3.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	5.3
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	89	1.0	3281	51.0	125	81.3	0	1.7	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	4.9
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	96	1.0	3281	51.0	250	81.3	0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	11.5
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	97	1.0	3281	51.0	500	81.3	0	-0.9	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	10.2
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	98	1.0	3281	51.0	1000	81.3	0	-0.9	0.0	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	95	1.0	3281	51.0	2000	81.3	0	-0.9	0.0	0.0	31.7	0.0	0.0	0.0	0.0	0.0	0.0	-16.9
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	87	1.0	3281	51.0	4000	81.3	0	-0.9	0.0	0.0	107.5	0.0	0.0	0.0	0.0	0.0	0.0	-100.9
46T_Sie7_T-17	443376	4805355	299.1	199.59	0	70	1.0	3281	51.0	8000	81.3	0	-0.9	0.0	0.0	383.5	0.0	0.0	0.0	0.0	0.0	0.0	-393.4
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	84	1.0	2940	51.3	63	80.4	0	-3.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	5.9
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	89	1.0	2940	51.3	125	80.4	0	1.8	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	5.6
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	96	1.0	2940	51.3	250	80.4	0	0.1	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	12.0
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	96	1.0	2940	51.3	500	80.4	0	-0.9	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0	10.4
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	96	1.0	2940	51.3	1000	80.4	0	-0.9	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0	0.0	6.1
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	95	1.0	2940	51.3	2000	80.4	0	-0.9	0.0	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0	-13.2
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	87	1.0	2940	51.3	4000	80.4	0	-0.9	0.0	0.0	96.4	0.0	0.0	0.0	0.0	0.0	0.0	-88.8
46T_Sie7_T-18	443717	4805337	300.9	201.42	0	71	1.0	2940	51.3	8000	80.4	0	-0.9	0.0	0.0	343.7	0.0	0.0	0.0	0.0	0.0	0.0	-352.4
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	84	1.0	3543	49.9	63	82.0	0	-3.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	4.8
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	89	1.0	3543	49.9	125	82.0	0	1.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	4.2
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	96	1.0	3543	49.9	250	82.0	0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0	0.0	0.0	10.7
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	97	1.0	3543	49.9	500	82.0	0	-1.0	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0	9.1
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	98	1.0	3543	49.9	1000	82.0	0	-1.0	0.0	0.0	13.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	95	1.0	3543	49.9	2000	82.0	0	-1.0	0.0	0.0	34.2	0.0	0.0	0.0	0.0	0.0	0.0	-20.0
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	87	1.0	3543	49.9	4000	82.0	0	-1.0	0.0	0.0	116.1	0.0	0.0	0.0	0.0	0.0	0.0	-110.1
46T_Sie7_T-23	443320	4804183	297.4	197.91	0	70	1.0	3543	49.9	8000	82.0	0	-1.0	0.0	0.0	414.2	0.0	0.0	0.0	0.0	0.0	0.0	-424.8
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	84	1.0	3667	50.3	63	82.3	0	-3.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	4.6
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	89	1.0	3667	50.3	125	82.3	0	1.7	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	3.9
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	96	1.0	3667	50.3	250	82.3	0	-0.1	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	10.3
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	97	1.0	3667	50.3	500	82.3	0	-1.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	8.6



# ISO 9613-2 Sample Calculation

**Receiver: R0776**

Project: Grand Bend Wind Farm

Project Number: 11167

Time Period	Total (dBA)
Night	39.9

Receiver Name	Receiver ID	X	Y	Z	Ground
R0776	R0776	446656	4805376	216.5	212

Source ID	X	Y	Z	Ground	RefIOrd	LxN	L/A	Dist.	hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotN
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	85	1.0	617	50.2	63	66.8	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	20.7
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	98	1.0	3667	50.3	1000	82.3	0	-1.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0	3.0
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	95	1.0	3667	50.3	2000	82.3	0	-1.0	0.0	0.0	35.4	0.0	0.0	0.0	0.0	0.0	0.0	-21.5
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	87	1.0	3667	50.3	4000	82.3	0	-1.0	0.0	0.0	120.2	0.0	0.0	0.0	0.0	0.0	0.0	-114.4
46T_Sie7_T-26	443339	4803814	299.9	200.39	0	70	1.0	3667	50.3	8000	82.3	0	-1.0	0.0	0.0	428.6	0.0	0.0	0.0	0.0	0.0	0.0	-439.5
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	84	1.0	3865	48.5	63	82.7	0	-3.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	4.3
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	89	1.0	3865	48.5	125	82.7	0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	3.4
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	96	1.0	3865	48.5	250	82.7	0	-0.1	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	97	1.0	3865	48.5	500	82.7	0	-1.1	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	7.8
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	98	1.0	3865	48.5	1000	82.7	0	-1.1	0.0	0.0	14.1	0.0	0.0	0.0	0.0	0.0	0.0	1.9
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	95	1.0	3865	48.5	2000	82.7	0	-1.1	0.0	0.0	37.4	0.0	0.0	0.0	0.0	0.0	0.0	-23.8
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	87	1.0	3865	48.5	4000	82.7	0	-1.1	0.0	0.0	126.7	0.0	0.0	0.0	0.0	0.0	0.0	-121.3
46T_Sie7_T-11	444330	4808461	307.7	208.16	0	70	1.0	3865	48.5	8000	82.7	0	-1.1	0.0	0.0	451.7	0.0	0.0	0.0	0.0	0.0	0.0	-463.0
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	85	1.0	4959	49.8	63	84.9	0	-4.1	0.0	-0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	3.2
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	92	1.0	4959	49.8	125	84.9	0	1.5	0.0	-0.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	98	1.0	4959	49.8	250	84.9	0	-0.3	0.0	-0.1	5.2	0.0	0.0	0.0	0.0	0.0	0.0	7.8
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	99	1.0	4959	49.8	500	84.9	0	-1.2	0.0	-0.1	9.6	0.0	0.0	0.0	0.0	0.0	0.0	6.2
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	100	1.0	4959	49.8	1000	84.9	0	-1.2	0.0	-0.1	18.1	0.0	0.0	0.0	0.0	0.0	0.0	-1.5
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	96	1.0	4959	49.8	2000	84.9	0	-1.2	0.0	-0.1	47.9	0.0	0.0	0.0	0.0	0.0	0.0	-35.7
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	86	1.0	4959	49.8	4000	84.9	0	-1.2	0.0	-0.1	162.5	0.0	0.0	0.0	0.0	0.0	0.0	-160.1
46T_Sie7_T-30	443011	4802014	297.4	197.85	0	68	1.0	4959	49.8	8000	84.9	0	-1.2	0.0	-0.1	579.6	0.0	0.0	0.0	0.0	0.0	0.0	-595.2
46T_Sie7_T-12	444001	4808315	305.5	206	0	84	1.0	3962	48.6	63	83.0	0	-3.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	4.1
46T_Sie7_T-12	444001	4808315	305.5	206	0	89	1.0	3962	48.6	125	83.0	0	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	3.1
46T_Sie7_T-12	444001	4808315	305.5	206	0	96	1.0	3962	48.6	250	83.0	0	-0.1	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	9.3
46T_Sie7_T-12	444001	4808315	305.5	206	0	97	1.0	3962	48.6	500	83.0	0	-1.1	0.0	0.0	7.6	0.0	0.0	0.0	0.0	0.0	0.0	7.4
46T_Sie7_T-12	444001	4808315	305.5	206	0	98	1.0	3962	48.6	1000	83.0	0	-1.1	0.0	0.0	14.5	0.0	0.0	0.0	0.0	0.0	0.0	1.3
46T_Sie7_T-12	444001	4808315	305.5	206	0	95	1.0	3962	48.6	2000	83.0	0	-1.1	0.0	0.0	38.3	0.0	0.0	0.0	0.0	0.0	0.0	-25.0
46T_Sie7_T-12	444001	4808315	305.5	206	0	87	1.0	3962	48.6	4000	83.0	0	-1.1	0.0	0.0	129.8	0.0	0.0	0.0	0.0	0.0	0.0	-124.7
46T_Sie7_T-12	444001	4808315	305.5	206	0	70	1.0	3962	48.6	8000	83.0	0	-1.1	0.0	0.0	463.0	0.0	0.0	0.0	0.0	0.0	0.0	-474.5
46T_Sie7_T-16	443896	4807611	304.7	205.21	0	84	1.0	3552	49.7	63	82.0	0	-3.4	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	4.5









# ISO 9613-2 Sample Calculation

**Receiver: R0776**

Project: Grand Bend Wind Farm

Project Number: 11167

Time Period	Total (dBA)
Night	39.9

Receiver Name	Receiver ID	X	Y	Z	Ground
R0776	R0776	446656	4805376	216.5	212

Source ID	X	Y	Z	Ground	RefLOrd	LxN	L/A	Dist.	hm	Freq	Adiv	KOb	Agr	Abar	z	Aatm	Afol	Ahous	Cmet	CmetN	Dc	RL	LtotN	
46T_Sie7_T-20	446913	4804825	320.0	220.49	0	85	1.0	617	50.2	63	66.8	0	-3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.7
46T_Sie7_T-09	444323	4808855	308.1	208.6	0	70	1.0	4190	48.5	8000	83.4	0	-1.1	0.0	0.0	489.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-502.1



