DNV·GL

NORTH KENT 1 WIND PROJECT

Renewable Energy Approval Application - Noise Impact Assessment

North Kent Wind 1 LP

Document No.: 800809-CAOT-R-01
Issue: F**, Status:** FINAL
Date: 9 May 2016

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Project name:	North Kent 1 Wind Project	DNV GL - Energy
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Date of issue:	9 May 2016	Enterprise No.: 860480037
Project No.:	800809	
Document No.:	800809-CAOT-R-01	
Issue/Status	F/FINAL	

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Keywords:
Noise Impact Assessment,
Wind Energy,
Advisory Americas

Issue	Date	Reason for Issue	Prepared by	Verified by	Approved by
A	4 August 2015	Original Release	A.Danaitis	A. Nercessian	D. Faghani
B	3 November 2015	Update receptor centre locations with new aerial imagery and update VLR status using municipal building permits	A.Danaitis	A. Nercessian	S. Dokouzian
C	18 November 2015	Update to gravel pad and ground factor justification	A.Danaitis	A. Nercessian	S. Dokouzian
D	11 January 2016	Minor modifications after MOECC comments	A.Danaitis	A. Nercessian	S. Dokouzian
E	26 February 2016	Minor modifications after MOECC comments	A. Danaitis	A. Nercessian	S. Dokouzian
F	9 May 2016	Removal of Turbine 9	A. Danaitis	A. Nercessian	S. Dokouzian

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1 INTRODUCTION

GL Garrad Hassan Canada, Inc. ("DNV GL") was retained by North Kent Wind 1 LP (the "Proponent" or "Pattern") to prepare a Noise Impact Assessment (NIA) of the North Kent 1 Wind Project (the "Project") in accordance with the Ontario Regulation 359/09 (Renewable Energy Approvals [REA] under Part V.0.1 of the Ontario Environmental Protection Act [EPA]) [1]. This NIA also follows the Ontario Ministry of the Environment and Climate Change (MOECC) 2008 NPC Noise Interpretation Guidelines [2] (the Noise Guidelines).

The proposed Project is located in the Municipality of Chatham-Kent, Ontario, approximately 100 km southwest of London, and northwest of the City of Chatham. The layout being evaluated was provided by the Proponent [3] and consists of 45 wind turbine locations. The nameplate capacity of the Project is up to 100 MW which would result in the construction of approximately 36 turbines. The proposed layout contains three different Siemens wind turbine models. The substation transformer location has been determined and it has been included in this assessment.

The objective of this assessment is twofold:

1. Confirm the sound level limit requirements for the Project by providing an assessment of the existing baseline environmental noise conditions in the vicinity of the wind farm; and
2. Predict the noise levels generated by the Project at all Points of Reception (PoR) and Participants within 1,500 m of the Project turbines.

2 GENERAL DESCRIPTION OF PROJECT SITE

2.1 General characteristics

A map of the Project area is shown in Appendix A. Project components will be installed on privately owned agricultural lots within the area. Energy generated by the Project will be collected via overhead or underground cabling and directed to an on-site substation.

The Project lies on predominantly flat, open, agricultural lands that include various natural features such as woodlands. Figure 2-1 shows an example of a typical view of the land and features of the study area.

2.2 Land use description

The development pattern is typical of most rural areas in southern Ontario with dwellings built near the roadways. The Project Area is dotted with residential farm houses and related buildings. There are two wind farms in operation within 5 km of the project area. The zoning map index can be found on the Municipality of Chatham-Kent website [4]. Figure 2-1 presents typical views of the land and features of the study area, including existing wind farms. Figure 2-2 presents the annual wind rose of the project.

Figure 2-1 Sample photo of the Project study area

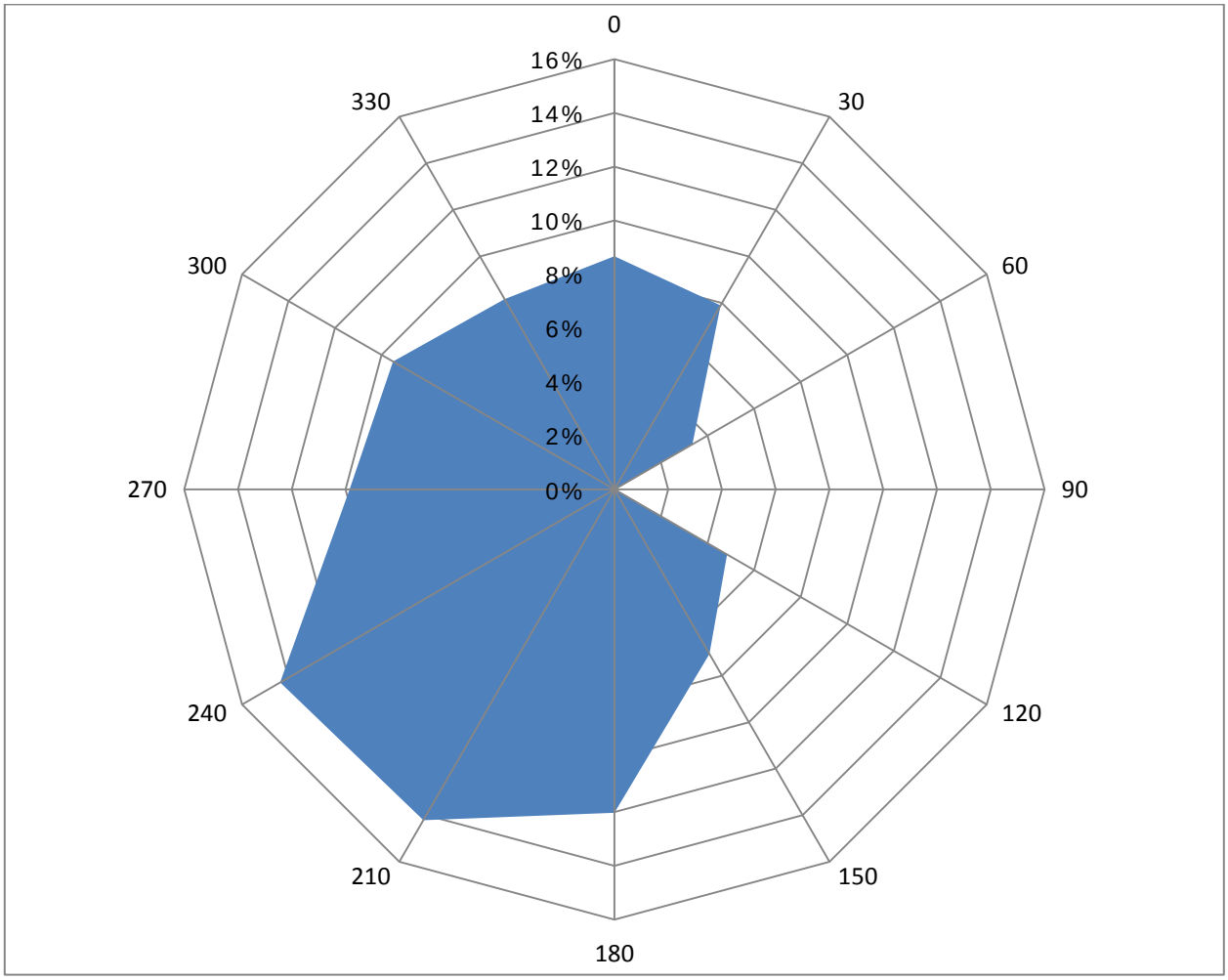

Figure 2-2 Annual Wind Rose at 60m agl

2.3 Points of reception

PoR locations for the Project, also referred to as receptors, were identified by DNV GL using base data from recent aerial photos and field reconnaissance completed in March and April 2015 to verify locations and building types. The height of each PoR, taken to be 1.5 m, 4.5 m, and 7.5 m for one, two, and three storey houses, respectively, was also noted. All PoR, as per the definition from the Noise Guidelines, were considered in this NIA. Building permits issued between January 2014 and September 2015 from the Municipality of Chatham-Kent were reviewed to locate any receptors that could have been missed during the site visit.

The Noise Guidelines generally define a PoR as a house, campground, church, school or other sensitive building that is not located on the same premises as the wind farm, including its turbines and ancillary structures. A PoR can also be located on a vacant lot that has residence as a permitted use. DNV GL has identified Vacant Lot Receptors (VLR) on such lots in a location consistent with the building pattern in the area, as per the O. Reg. 359/09 and the Noise Guidelines.

A residence or VLR located on the same premises as the wind turbine(s) or other Project infrastructure is not a PoR as defined by the Noise Guidelines, and considered a "Participating Receptor" and thus MOECC noise limits do not apply.

The coordinates of all receptors and Participating Receptors are listed in Appendix C and Appendix D, respectively.

3 DESCRIPTION OF POINTS OF RECEPTION

There are 810 receptors located within 1,500 m of a Project wind turbine or the substation, among which 294 are VLRs. There are 44 Participants within 1,500 m, of which 29 are VLRs.

3.1 Receptor classes

The MOECC categorizes PoR into three classes: 1, 2, and 3. Class 1 refers to an acoustic 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 areas have an acoustic environment characterized by low ambient sound levels between 19:00 and 07:00, whereby the evening and nighttime levels are defined by natural sounds, infrequent human activity and no clearly audible sounds from stationary sources (e.g., industrial and commercial facilities). Class 3 areas are typical of rural and/or small communities (i.e., with populations of less than 1000) and an acoustic environment that is dominated by natural sounds with little or no road traffic.

Within the study area the main sources of ambient sound that currently exist include:

- Vehicular traffic on the local concession and side roads, some of which are gravel roads;
- Occasional sounds due to logging and aggregate extraction activities;
- Occasional sounds due to anthropogenic domestic activities; and
- Natural sounds.

Based on these conditions, **all PoR are considered as having a Class 3 acoustic environment.**

3.2 Determination of applicable noise limits

As stated in the MOECC guidelines [2], the noise limits for a wind farm are set according to the Noise Guidelines in NPC-205/NPC-232 while taking into account the wind-generated background noise.

For a Class 3 area, the sound level limits as defined in the Noise Guidelines are described in the sections below.

3.2.1 Wind turbine installations in Class 3 areas (rural), wind speeds below 6 m/s

The lowest sound level limit expressed in terms of L_{eq} is: i) 40 dBA; or ii) the minimum hourly background sound level established in accordance with Publications NPC-232/NPC-233, whichever is higher.

3.2.2 Class 3 areas, wind speeds above 6 m/s

The lowest sound level limit expressed in terms of L_{eq} is: i) the wind-induced background sound level, expressed in terms of ninetieth percentile sound level (L_{A90}) plus 7 dB; or ii) the minimum hourly background sound level established in accordance with Publications NPC-205/NPC-232/NPC-233, whichever is higher.

The applicable noise limits should be those defined by the MOECC as summarized below in Table 3-1.

Table 3-1 Summary of noise limits for points of reception (Class 3)

Wind Turbine Noise Criterion NPC-232 [dBA]	Wind Speed [m/s]				
	6	7	8	9	10
	40	43	45	49	51

4 DESCRIPTION OF SOURCES

4.1 Turbine description

Three Siemens turbine models are under consideration, as described in Table 4-1. The proposed turbine models are all 3-bladed, upwind, horizontal-axis turbines. The rotor diameter of each wind turbine model is 113 m.

Table 4-1 Summary of turbine models used at the North Kent 1 site

Turbine model nameplate	Maximum rated power [kW]	Hub height [m]	Peak sound power level [dBA]	Number of turbines
SWT-3.2-113 2A, Rev. 0, max. power 3200 kW	3200	99.5	106.0	11
SWT-3.2-113 2A, Rev. 0, max. power 2942 kW	2942	99.5	105.0	8
SWT-3.2-113 2A, Rev. 0, max. power 2772 kW	2772	99.5	104.0	26
			Total	**45**

Full noise specifications as provided by the manufacturer to the Proponent can be found in Appendix E. Coordinates of all turbines are listed in Appendix F, including a description of which turbine model is used at each wind turbine location for the Project.

4.2 Substation

The Project includes one substation located in the Project Area and in close proximity to the wind turbines. The substation is planned to include one transformer [5]. It is estimated that an area around the substation of approximately 12,000 m^2 will be covered with gravel, and has been included to the modeling. The estimated noise emissions of the North Kent 1 transformer are described in Section 5.3.

The transformer coordinates, as provided by the Proponent, are included in Appendix F.

4.3 Adjacent wind farms

DNV GL has identified two operational wind farms adjacent to the Project, as described in Table 4-2. These two wind farms have turbines within 5 km of North Kent 1 receptors. All turbines and transformers from the adjacent wind farms have been considered as noise sources in this report.

Table 4-2 Turbine models used at adjacent wind projects

Adjacent project	Turbine type	Number of turbines	Turbine hub height [m]	Turbine broadband sound power level [dBA]
Marsh Line [7]	Enercon E-82	5	78	104.0
East Lake St. Clair [9][10]	Vestas V90-1.8	55	80	104.5

Table 4-3 summarizes the substations at the adjacent wind farms. The Marsh Line Wind Farm is reported to not include a substation [7]. The East Lake St. Clair project has a substation which is adjacent to the North Kent Project [9].

The noise emissions of the adjacent wind turbines and substations are detailed in Section 5.

Table 4-3 Substation transformers used at adjacent wind projects

Adjacent project	Substation adjacent to North Kent	Number of transformers	Transformer broadband sound power level [dBA]
Marsh Line [7]	No	-	-
East Lake St. Clair [9][10]	Yes	1	98.5

4.4 Sound barrier

A sound barrier is planned for the North Kent 1 Project substation. The type of barrier used in this noise study is one that can be described as of absorptive type with an Absorptive Coefficient of 0.8. The acoustic barriers should have a surface density of at least 20 kg/m^2 and have a closed surface free of gaps and cracks, such as Armtec's Durisol. A 7.0 m tall barrier was modeled on three sides of the transformer, several meters away from its surface on each side, with an opening on the north side to allow for equipment access. The total barrier length is 62.0 m as illustrated in Figure 4-1. The corner coordinates of the North Kent substation barrier are shown in Table 4-4.

Table 4-4 North Kent substation barrier coordinates

Description	Easting [m]	Northing [m]
Barrier point 1	400584.5	4704212.2
Barrier point 2	400569.8	4704198.5
Barrier point 3	400583.5	4704183.8
Barrier point 4	400599.4	4704198.7

Figure 4-1 North Kent 1 Wind Project substation barrier

DNV GL has not modelled any acoustic barriers for neighbouring substations.

5 NOISE EMISSION RATINGS

5.1 North Kent 1 turbines

Guaranteed broadband sound power levels and octave band sound power levels were provided by Siemens [11] for each of the three wind turbine models under consideration and are shown in Appendix E. For each model, Siemens has provided octave band sound power levels corresponding to 10 m height wind speeds of 6, 7, 8, 9, and 10 m/s. Siemens has also provided a letter [12], included in Appendix E, which guarantees the maximum broadband sound power level of each turbine model.

A noise measurement campaign of the SWT-3.2-113 2A turbine has been carried out in accordance with IEC 61400−11 Ed. 2.1 [13] for the standard model and two low noise models. Siemens has provided three measurement reports for the SWT-3.2-113 2A turbine, included here in Appendix E.

DNV GL has determined that the octave band sound power levels corresponding to a 10 m wind speed of 7 m/s contribute the greatest sound pressure level at all receptors for the standard Siemens wind turbine model with a broadband sound power level (PWL) of 106 dBA. For the remaining two low-noise models, the octave band PWL corresponding to a 10 m wind speed of 10 m/s contribute the greatest sound pressure level at all receptors.

The 7 m/s octave band levels of the standard turbine and the 10 m/s octave band levels of the reduced turbines were used to calculate the sound levels at all receptors in this report.

Siemens has confirmed [11] that the Siemens turbines to be supplied for the Project should not be tonal since the SWT-3.2-113 turbines have not been found to produce tonal audibility levels above 3 dB as stated in the acoustic emissions documents (Appendix E) and calculated using the criteria specified in accordance with IEC 61400-11:2002. In addition, Siemens has indicated that no test uncertainty needs to be included in the calculated tonal audibility per IEC 61400-11:2002. Therefore a tonality penalty has not been applied to noise from the Siemens turbines.

The acoustic emissions of the three turbine models under consideration are shown in Table 5-1 to Table 5-3.

Table 5-1 Siemens SWT-3.2-113 2A, max. power 3200 kW wind turbine acoustic emission summary

Make and Model: SWT-3.2-113 2A, Rev.0, Max. Power 3200 kW										
Electrical Rating: 3.200 MW										
Hub Height (m): 99.5 m										
Wind Shear Coefficient: 0.39, Worst case summer night time shear of the region										
	Octave band sound power level [dB]									
	Manufacturer's emission levels					Adjusted emission levels				
Wind speed [m/s]	6	7	8	9	10	6	7	8	9	10
Frequency [Hz]										
63	116.9	118.1	117.0	116.9	117.4	118.1	118.1	118.1	118.1	118.1
125	110.4	110.6	110.5	110.8	111.0	110.6	110.6	110.6	110.6	110.6
250	106.0	106.4	105.3	105.3	105.1	106.4	106.4	106.4	106.4	106.4
500	100.7	101.6	101.6	101.3	101.1	101.6	101.6	101.6	101.6	101.6
1000	98.5	100.0	100.1	100.2	100.0	100.0	100.0	100.0	100.0	100.0
2000	96.5	97.9	98.3	98.2	98.7	97.9	97.9	97.9	97.9	97.9
4000	93.3	94.7	95.7	95.8	95.3	94.7	94.7	94.7	94.7	94.7
8000	86.2	87.9	87.2	87.2	87.1	87.9	87.9	87.9	87.9	87.9
A-weighted	104.9	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0	106.0

Table 5-2 Siemens SWT-3.2-113 2A, max. power 2942 kW wind turbine acoustic emission summary

Make and Model: SWT-3.2-113 2A, Rev.0, Max. Power 2942 kW										
Electrical Rating: 2.942 MW										
Hub Height (m): 99.5 m										
Wind Shear Coefficient: 0.39, Worst case summer night time shear in the region										
	Octave band sound power level [dB]									
	Manufacturer's emission levels					Adjusted emission levels				
Wind speed [m/s]	6	7	8	9	10	6	7	8	9	10
Frequency [Hz]										
63	116.2	117.0	117.6	117.6	117.4	117.4	117.4	117.4	117.4	117.4
125	108.9	109.0	109.5	110.0	109.8	109.8	109.8	109.8	109.8	109.8
250	104.5	104.6	104.4	104.8	104.7	104.7	104.7	104.7	104.7	104.7
500	100.7	100.8	100.3	99.9	100.5	100.5	100.5	100.5	100.5	100.5
1000	98.6	98.8	98.5	98.2	98.9	98.9	98.9	98.9	98.9	98.9
2000	96.9	97.2	97.8	97.9	97.3	97.3	97.3	97.3	97.3	97.3
4000	94.3	95.3	95.0	94.9	94.8	94.8	94.8	94.8	94.8	94.8
8000	84.5	85.2	85.2	84.9	83.1	83.1	83.1	83.1	83.1	83.1
A-weighted	104.7	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0	105.0

Table 5-3 Siemens SWT-3.2-113 2A, max. power 2772 kW wind turbine acoustic emission summary

Make and Model: SWT-3.2-113 2A, Rev.0, max. power 2772 kW										
Electrical Rating: 2.772 MW										
Hub Height (m): 99.5 m										
Wind Shear Coefficient: 0.39, Worst case summer night time shear of the region										
	Octave band sound power level [dB]									
	Manufacturer's emission levels					Adjusted emission levels				
Wind speed [m/s]	6	7	8	9	10	6	7	8	9	10
Frequency [Hz]										
63	116.0	117.2	117.5	117.4	117.7	117.7	117.7	117.7	117.7	117.7
125	107.4	109.1	109.7	109.3	109.8	109.8	109.8	109.8	109.8	109.8
250	103.5	103.4	102.9	103.6	103.8	103.8	103.8	103.8	103.8	103.8
500	99.7	99.5	98.7	98.8	99.4	99.4	99.4	99.4	99.4	99.4
1000	97.7	97.6	97.5	97.6	97.4	97.4	97.4	97.4	97.4	97.4
2000	96.0	96.1	95.9	96.0	95.7	95.7	95.7	95.7	95.7	95.7
4000	93.4	94.3	95.1	94.6	94.0	94.0	94.0	94.0	94.0	94.0
8000	83.8	84.6	84.3	84.1	85.7	85.7	85.7	85.7	85.7	85.7
A-weighted	103.8	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

5.2 Adjacent wind farm turbines

Noise emissions from two adjacent wind farms have been considered in this analysis.

5.2.1 East Lake St. Clair Wind Farm

The East Lake St. Clair Wind Farm consists of 55 Vestas V90-1.8 turbines with a number of High Power mode and Standard mode turbines. GDF Suez has not made public which turbines are in High Power mode. Therefore, to be conservative, DNV GL assumes all East Lake St. Clair turbines to be in High Power mode in the current analysis. Broadband and octave band sound power levels for the High Power mode were obtained with permission from GDF Suez on a similar project, Pointe-Aux-Roches Wind Farm [6], which includes the same turbine type and are summarized in Table 5-4.

The octave band sound power levels corresponding to 10 m wind speeds of 8 to 10 m/s correspond to the highest broadband sound power level. These were used in the Pointe-Aux-Roches noise report, and for all calculations in the current analysis.

Table 5-4 Vestas V90-1.8 High Power wind turbine acoustic emission summary

Make and Model: Vestas V90-1.8, High Power mode										
Electrical Rating: 1.8 MW										
Hub Height (m): 80 m										
Wind Shear Coefficient: 0.39, Worst case summer night time shear in the region										
	Octave band sound power level [dB]									
	Manufacturer's emission levels					Adjusted emission levels				
Wind speed [m/s]	6	7	8	9	10	6	7	8	9	10
Frequency [Hz]										
31.5	112.1	114.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8	115.8
63	107.6	110.8	112.6	112.6	112.6	112.6	112.6	112.6	112.6	112.6
125	106.3	108.9	109.7	109.7	109.7	109.7	109.7	109.7	109.7	109.7
250	100.7	102.6	103.3	103.3	103.3	103.3	103.3	103.3	103.3	103.3
500	98.9	100.5	101.2	101.2	101.2	101.2	101.2	101.2	101.2	101.2
1000	96.8	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5	98.5
2000	94.4	95.7	96.1	96.1	96.1	96.1	96.1	96.1	96.1	96.1
4000	91.8	93.6	94.2	94.2	94.2	94.2	94.2	94.2	94.2	94.2
8000	82.5	85.5	85.7	85.7	85.7	85.7	85.7	85.7	85.7	85.7
A-weighted	102.3	104.0	104.5	104.5	104.5	104.5	104.5	104.5	104.5	104.5

5.2.2 Marsh Line Wind Farm

The Marsh Line Wind Farm consists of five Enercon E-82 turbines. The turbine locations are included in Appendix F. Broadband and octave band sound power levels for each mode were obtained from the Marsh Line noise report [7], and are summarized in Table 5-5. The octave band sound power levels corresponding to 10 m wind speeds of 8 to 10 m/s correspond to the highest broadband sound power level. Therefore, the 8-10 m/s levels were used in the current analysis.

Table 5-5 Enercon E82 wind turbine acoustic emission summary

Make and Model: Enercon E-82										
Electrical Rating: 2.0 MW										
Hub Height (m): 78 m										
Wind Shear Coefficient: 0.39, Worst case summer night time shear in the region										
	Octave band sound power level [dB]									
	Manufacturer's emission levels					Adjusted emission levels				
Wind speed [m/s]	6	7	8	9	10	6	7	8	9	10
Frequency [Hz]										
63	108.3	110.5	110.9	110.9	110.9	110.9	110.9	110.9	110.9	110.9
125	103.8	106.2	108.3	108.3	108.3	108.3	108.3	108.3	108.3	108.3
250	102.8	104.8	103.6	103.6	103.6	103.6	103.6	103.6	103.6	103.6
500	99.1	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5
1000	95.3	98.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
2000	87.8	91.3	93.6	93.6	93.6	93.6	93.6	93.6	93.6	93.6
4000	77.0	80.2	82.1	82.1	82.1	82.1	82.1	82.1	82.1	82.1
8000	78.4	78.8	79.3	79.3	79.3	79.3	79.3	79.3	79.3	79.3
A-weighted	100.7	103.3	104.0	104.0	104.0	104.0	104.0	104.0	104.0	104.0

5.3 North Kent 1 substation transformer

The noise contribution of the North Kent 1 substation has been considered in this analysis. Noise emission from the Project substation mainly originates from one transformer. The transformer rating is estimated to be 112 MVA-230 kV. The choice of transformer has not yet been finalized, but will be sourced in accordance with permitted specifications. The Proponent has specified that the final transformer sound power level will not exceed what has been modeled in this report.

The broadband sound power level of the North Kent 1 transformer has been conservatively calculated to be 106.5 dBA, based on an audible noise level of 78 dBA, as guaranteed and will be sourced by the Proponent, in accordance with the application of standard IEEE C57.12.90 [16]. This includes a 5 dBA tonal penalty, as prescribed in Publication NPC-104.

The transformer's measurement surface area, as defined in standard IEEE C57.12.90, has been estimated to be 223 m^2. This calculation is based on a four sided polygon perimeter that includes a 2 m offset from all fan-cooled surfaces, as well as the top area of the measurement surface. A sketch of the plan view of the transformer, showing the approximate perimeter of the measurement surface area, is included in Appendix G. The substation coordinates, as provided by the Proponent, are included in Appendix F.

The transformer's broadband sound power level L_W has been estimated as a function of its sound pressure level and measurement surface area using the following equation, as defined by IEEE C57.12.90.

$$L_W = L_P + 10 * logS$$

A broadband sound power level of 106.5 dBA was used for the transformer for all noise modeling. The calculation of the broadband level is summarized in Table 5-6.

Table 5-6 North Kent 1 transformer sound power level calculation summary

Transformer Power Rating [MVA]	112
Transformer Voltage Rating [kV]	230
Sound Pressure Level L_P [dBA]	78
Sound measurement area S (m^2)	223
Sound Power Level [dBA] (without penalty)	101.5
Sound Power Level L_W [dBA] (with penalty)	**106.5**

Table 5-7 provides the octave band sound power levels of the North Kent 1 substation transformer using a typical octave band sound distribution for a large transformer [16],[17].

Table 5-8 details the octave band calculation. The transformer has been conservatively modeled as a point source at a height of 4 m.

Table 5-7 North Kent 1 Wind Project substation transformer sound power level

	Octave band sound power level* (dB Lin)									
Frequency (Hz)	32	63	125	250	500	1000	2000	4000	8000	Broadband (dBA)
PWL	103.1	109.1	111.1	106.1	106.1	100.1	95.1	90.1	83.1	106.5

* Includes 5 dB penalty to account for tonality

Table 5-8 North Kent 1 transformer octave band calculation details

32	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**Frequency [Hz]**
-1	5	7	2	2	-4	-9	-14	-21	**Typical Outdoor Transformer Octave band relative distribution [dB Lin]**
-39.4	-26.2	-16.1	-8.6	-3.2	0.0	1.2	1.0	-1.1	**dB Lin to dBA Conversion Scale**
-40.4	-21.2	-9.1	-6.6	-1.2	-4.0	-7.8	-13.0	-22.1	**Typical Outdoor Transformer Octave band relative distribution [dBA]**
63.7	82.9	95.0	97.5	102.9	100.1	96.3	91.1	82.0	**Scaled to 106.5 dBA Transformer**

5.4 Adjacent wind farm substation transformers

Noise emissions from two adjacent wind farms have been considered in this analysis. The Marsh Line Wind Farm does not have a substation as the wind turbines will directly connect to the grid [7]. The East Lake St. Clair Wind Farm substation is adjacent to the North Kent Wind 1 Project.

5.4.1 East Lake St.Clair Wind Farm

Noise emission from the East Lake St. Clair substation, owned by GDF Suez, mainly originates from a 240/34.5 kV, 110 MVA transformer. This transformer is currently operational. The noise report for the transformer was not provided to DNV GL. For this reason, conservative assumptions were made based on publicly available information.

According to its permit [8], its NEMA sound pressure level will not exceed 68 dBA. DNV GL has estimated a measurement surface area of 223 m^2 and has thus calculated a sound power level of 98.5 dBA, including a 5 dB tonal penalty, as per [14]. This value also includes a 2 dB uncertainty buffer to account for any discrepancies with the as-built dimensions of the transformer, which were not provided.

Here, DNV GL has taken the conservative approach of modelling the transformer as a point source at 4 m, representing the top height of the transformer. The transformer's octave band sound power levels used by DNV GL are shown in Table 5-9.

Table 5-9 East Lake St-Clair substation transformer sound power level, as modelled by DNV GL

	Octave Band Sound Power Level* (dB Lin)									
Frequency (Hz)	32	63	125	250	500	1000	2000	4000	8000	Broadband (dBA)
PWL (dB)	95.1	101.1	103.1	98.1	98.1	92.1	87.1	82.1	75.1	98.5

* Includes 5 dB penalty to account for tonality and 2 dB uncertainty buffer

6 NOISE IMPACT ASSESSMENT

The sound pressure levels at each PoR, Participant, and VLR for the aggregate of all wind turbines and substation associated with the Project were calculated based on the ISO 9613-2 method.

The International Standards Organization (ISO) 9613 standard [18], [19] provides a prediction of the equivalent continuous A-weighted sound pressure level at a distance from one or more point sources under meteorological conditions favorable to propagation from sources of sound emission. These conditions are for downwind propagation or, equivalently, propagation under a well-developed moderate ground-based temperature inversion, commonly occurring at night.

The method consists of octave-band algorithms (i.e., with nominal mid-band frequencies from 63 Hz to 8 kHz) for calculating the attenuation of the emitted sound. The algorithm takes into account the following physical effects:

- Geometrical divergence – attenuation due to spherical spreading from the sound source;
- Atmospheric absorption – attenuation due to absorption by the atmosphere; and
- Ground effect – attenuation due to the acoustical properties of the ground.

ISO-9613-2 parameters were set as follows:

- Ambient air temperature: 10ºC;
- Ambient barometric pressure: 101.32 kPa;
- Humidity: 70%;
- Source ground factor: 0.7;
- Middle ground factor: 0.7;
- Receptor ground factor: 0.7;
- Substation gravel area ground factor: 0;
- The effect of topography was considered.

A global ground factor of 0.7 is considered appropriate for such a site, which is primarily covered with vegetation. DNV GL has therefore applied a global ground factor of 0.7, with the exception of the gravel pad around the transformer.

Additional calculations concerning propagation through foliage were not performed in this NIA, implying that the values calculated for sound attenuation are likely to be conservative in areas where there is foliage present in the line of sight between any turbine and a PoR. The estimated accuracy of the ISO 9613 method, as stated in ISO 9613-2, is ± 3 dB.

The wind turbine and transformer noise emission ratings used for each octave band were those specified in Section 5. The noise impact was calculated for each PoR and Participant located within 1,500 m of one or more turbines or substation, and the calculated noise level was then compared with the applicable noise limit for each PoR as stated in Table 3-1.

Noise levels were calculated at 4.5 m above ground level for 2-storey PoR/Participants, 7.5 m above ground level for 3-storey PoR/Participants, and at 1.5 m above ground level at 16 points along a 30-m radius circle for each 1-storey PoR/Participant. For the latter, the highest of these 16 values was chosen and presented in the table of noise levels.

6.1 Justification of global ground factor G

In order to evaluate the suitability of using a global ground factor of 0.7, DNV GL has undertaken a refined estimate of the ground factor around the Project substation and the Receptor representing an actual dwelling that is located closest to the transformer.

Ground attenuation from the substation to R3052 has been investigated, as shown in Figure 6-1. This part of the site is expected to be most sensitive to ground factor assumptions; it will have the largest area of hard ground, as well as the shortest source-receiver distance. An area of 12,000 m^2 will be covered with gravel. The gravel area has been assumed to have a ground factor of 0. Based on aerial photography, there is an additional area of hard ground near R3052. Hence, hard ground covers 11% of the area between the substation and R3052. The remaining 89% of the area between the substation and R3052 can be categorized as soft ground, with a ground factor of 1.0, as defined by ISO 9613-2 [19]. A general ground absorption coefficient of 0.7 is therefore considered appropriate and conservative.

Ground attenuation from the worst case Receptor R3403 has been investigated as well. The highest partial sound pressure level is between Turbine 16 and R3403. The ground cover is 99% soft ground, with a ground factor of 1.0. A general ground absorption coefficient of 0.7 is therefore considered appropriate and conservative.

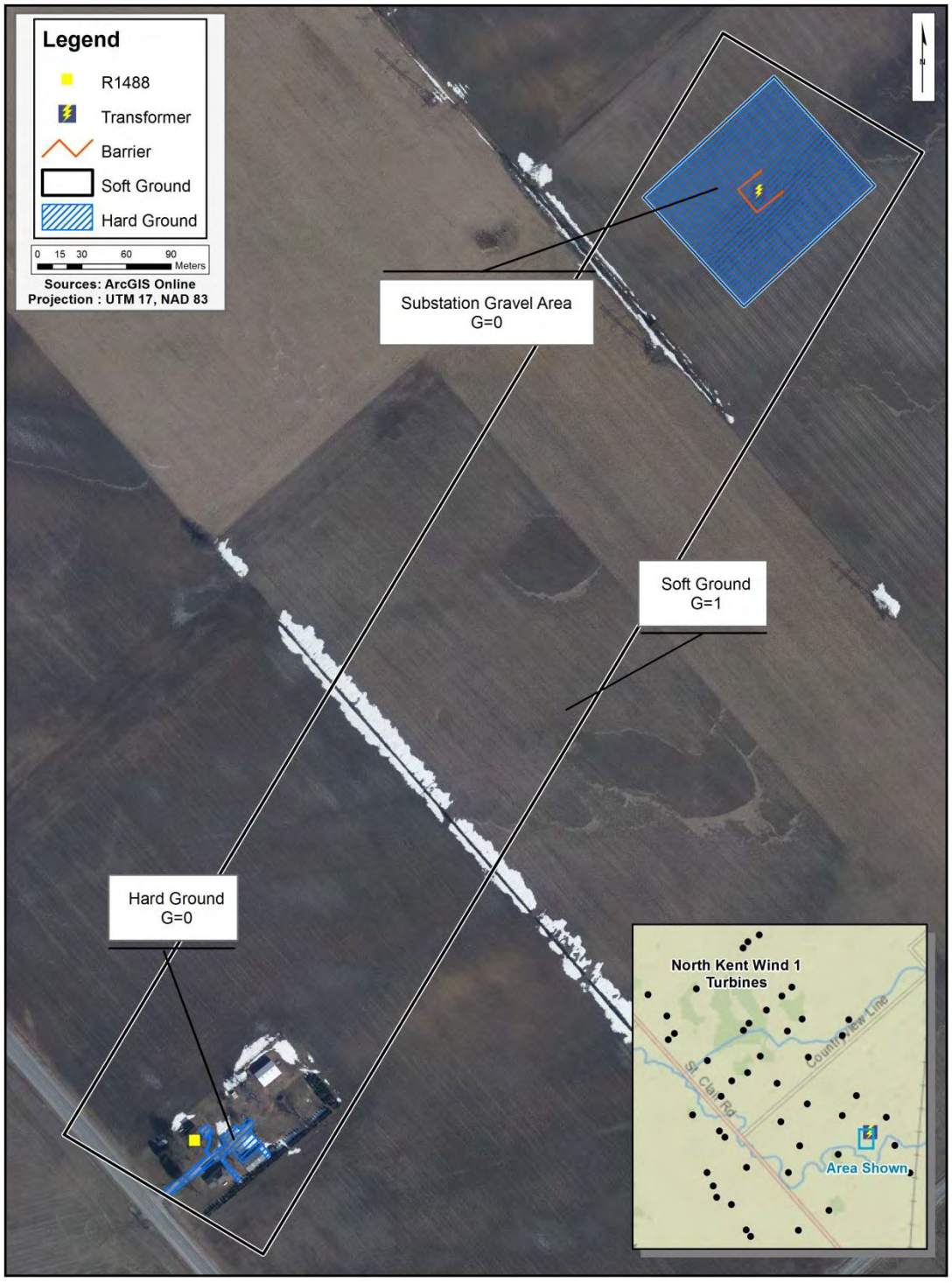

Figure 6-1 Ground factor near the North Kent Wind 1 substation

6.2 Evaluation of site topography

Section 7.3.1 of ISO 9613-2 [19] states that when calculating the ground attenuation A_{gr}, the General method of calculation is applicable only to ground which is approximately flat, either horizontally or with a constant slope. DNV GL has reviewed the topography at the North Kent 1 site to determine if a correction is needed to account for different ground conditions, such as concave terrain.

The Institute of Acoustics (UK) has published a good practice guide (the "Guide") for the assessment of wind turbine noise [20], with Sections 4.3.9 and 4.3.10 of the Guide proposing a 2-step methodology for assessing whether or not a correction to the modelling is needed to account for concave topography. As a first-step, the Guide recommends the use of the criterion shown below to quantitatively evaluate the level of concavity between a turbine and a receptor.

$$h_m \geq 1.5 \cdot Abs(h_s - h_r)/2$$

In this criterion, h_m is the mean height above ground of the direct line of sight from the receiver to the source, as defined in ISO 9613-2. h_s is the height of the source, and h_r is the height of the receiver.

If the criterion is met, then examination of ground profiles between sources and receivers is necessary, as a second-step, to assist with determining the application of a correction factor. The Guide states that the increase in sound level caused by concave terrain can be explained by the reduced ground effect and the potential for additional reflection paths that may exist, as shown in Figure 6-2, taken directly from [20].

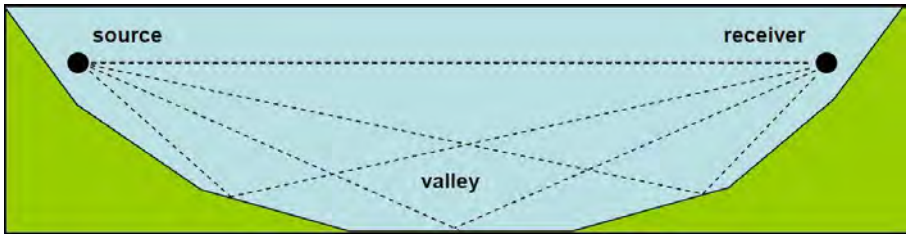

Figure 6-2 Diagram of multiple reflection paths for sound propagation across concave ground

DNV GL has reviewed the topography at the North Kent site and evaluated the above criterion for each turbine-receptor pair. It was found that for all turbine to receiver paths, h_m is well below the criterion, indicating that concave paths are not present.

Considering all receptors, the minimum difference between h_m and the criterion is 7.3 m, which occurs between East Lake St Clair Turbine 146 and Receptor 3488. This is the worst-case profile at the site. The topographic profile between East Lake St Clair Turbine 146 and Receptor 3488 is shown in Figure 6-3.

Figure 6-3 Topographic profile between East Lake St Clair Turbine 146 and Receptor 3488

Even in the worst-case profile shown in Figure 6-3, the terrain is flat and exhibits minimal to no concavity. DNV GL does not consider it appropriate to apply any topographical correction at the North Kent 1 site.

7 NOISE IMPACT ASSESSMENT RESULTS

The noise level at each PoR within 1,500 m of any turbine or substation of the Project, for wind speeds between 6 m/s and 10 m/s, is tabulated in Table 7-1. For each PoR, the following information is provided:

- The distance to the closest wind turbine or substation;
- For PoR at 1.5 m above ground level, the sound pressure level presented for wind speeds from 6 m/s to 10 m/s is the maximum noise level on the circumference of a 30-m radius circle centered on the PoR;
- For PoR at 4.5 m or 7.5 m above ground level, the sound pressure level presented for wind speeds from 6 m/s to 10 m/s is the noise level at the PoR location at its respective height;
- The sound level limit for that PoR according to the Noise Guidelines at each wind speed from 6 m/s to 10 m/s;
- The applicable background sound level; and
- Whether or not the noise levels at the PoR comply with the Noise Guidelines (for continued reference, compliance is confirmed for all PoR).

The closest distance between a wind turbine and a PoR for this project is 551 m between Turbine 23 and Receptor 3219. Turbine 19 is 550 m from VLR 6322.

The highest calculated noise level at a PoR was found at Receptor 3403 at 39.9 dBA. The modelled sound level at VLR 6038 and VLR 6046 is 39.8 dBA. Receptor sound levels are listed in Table 7-1.

It can also be noted that sound pressure levels for all single storey receptors within 1,500 m comply with the 40.0 dBA noise limit at a receptor height of 4.5 m (at the centre of the dwelling).

The results show that the Project complies with the applicable MOECC environmental Noise Guidelines at all wind speeds modelled (i.e., 6, 7, 8, 9 and 10 m/s). Noise iso-contour maps illustrating the maximum noise contribution of the Project are shown in Appendix A.

Similarly, the maximum noise level at each Participant within 1,500 m of any Project turbine or substation is tabulated in Table 7-2.

Of the 810 reported receptors, there are 80 within 1500 m of the East Lake St. Clair project. The sound level contributions of North Kent 1 and East Lake St. Clair at these shared receptors are shown as a concordance table in Table 7-3.

It is noted that there are no shared receptors with the Marsh Line Wind Farm.

Table 7-1 Noise impact assessment summary

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R2247	1.5	1492	T73	29.0	29.0	29.0	29.0	29.0	40	43	45	49	51	40	Yes
R2491	1.5	1398	T50	29.3	29.3	29.3	29.3	29.3	40	43	45	49	51	40	Yes
R2556	7.5	1331	T50	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
R2560	7.5	1031	T73	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
R2568	4.5	995	T73	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R2667	1.5	788	T73	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R2676	4.5	1055	T50	33.1	33.1	33.1	33.1	33.1	40	43	45	49	51	40	Yes
R2689	1.5	1334	T73	31.1	31.1	31.1	31.1	31.1	40	43	45	49	51	40	Yes
R2691	4.5	653	T73	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R2694	4.5	895	T50	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
R2699	4.5	605	T73	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R2702	4.5	591	T73	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R2705	4.5	812	T50	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R2709	1.5	842	T50	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
R2734	7.5	784	T50	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R2735	4.5	1496	T36	30.3	30.3	30.3	30.3	30.3	40	43	45	49	51	40	Yes
R2739	4.5	1463	T36	30.2	30.2	30.2	30.2	30.2	40	43	45	49	51	40	Yes
R2743	1.5	1436	T36	29.0	29.0	29.0	29.0	29.0	40	43	45	49	51	40	Yes
R2752	4.5	883	T50	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R2757	4.5	1304	T36	31.3	31.3	31.3	31.3	31.3	40	43	45	49	51	40	Yes
R2765	4.5	1249	T36	32.1	32.1	32.1	32.1	32.1	40	43	45	49	51	40	Yes
R2768	1.5	705	T50	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R2780	4.5	857	T50	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2785	4.5	1045	T36	33.4	33.4	33.4	33.4	33.4	40	43	45	49	51	40	Yes
R2789	4.5	991	T50	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2790	4.5	789	T50	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R2794	4.5	964	T50	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R2796	7.5	1019	T50	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R2797	1.5	740	T72	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R2798	4.5	918	T50	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R2799	1.5	759	T72	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R2801	1.5	891	T36	32.9	32.9	32.9	32.9	32.9	40	43	45	49	51	40	Yes
R2807	1.5	1462	T42	31.4	31.4	31.4	31.4	31.4	40	43	45	49	51	40	Yes
R2808	4.5	866	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2811	1.5	883	T50	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
R2812	1.5	869	T50	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R2813	1.5	823	T36	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R2815	7.5	1057	T50	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2816	1.5	842	T72	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R2818	1.5	893	T72	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2820	7.5	962	T48	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R2821	1.5	817	T50	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2822	4.5	940	T48	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R2823	1.5	617	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2831	1.5	585	T50	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
R2834	4.5	1050	T73	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R2835	4.5	1065	T42	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R2841	4.5	835	T48	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R2843	1.5	826	T48	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2844	1.5	874	T48	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2845	4.5	1107	T72	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R2846	4.5	756	T36	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R2849	4.5	828	T48	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R2850	1.5	761	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2851	4.5	825	T36	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R2852	1.5	829	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2853	4.5	596	T72	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
R2856	1.5	739	T36	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R2857	4.5	553	T36	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R2858	1.5	748	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R2859	1.5	715	T36	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R2860	1.5	692	T36	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2861	1.5	725	T36	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R2862	1.5	669	T36	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R2864	1.5	703	T36	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R2866	1.5	647	T36	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2867	1.5	680	T36	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2869	1.5	623	T36	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R2870	1.5	658	T36	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R2871	1.5	601	T36	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R2872	1.5	635	T36	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2873	1.5	579	T36	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R2874	1.5	614	T36	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R2875	1.5	556	T36	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R2876	1.5	591	T36	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R2878	1.5	570	T36	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R2881	1.5	676	T42	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R2883	4.5	1004	T72	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2885	4.5	881	T36	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R2886	1.5	621	T42	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R2896	1.5	1078	T50	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R2901	1.5	1204	T36	29.6	29.6	29.6	29.6	29.6	40	43	45	49	51	40	Yes
R2902	4.5	1123	T36	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
R2904	1.5	1000	T36	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
R2907	1.5	1241	T50	32.8	32.8	32.8	32.8	32.8	40	43	45	49	51	40	Yes
R2908	4.5	1267	T50	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R2910	1.5	1302	T35	28.6	28.6	28.6	28.6	28.6	40	43	45	49	51	40	Yes
R2915	1.5	1212	T35	29.4	29.4	29.4	29.4	29.4	40	43	45	49	51	40	Yes
R2917	4.5	881	T48	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R2919	4.5	1172	T1	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R2922	1.5	1372	T35	29.0	29.0	29.0	29.0	29.0	40	43	45	49	51	40	Yes
R2923	1.5	901	T36	33.4	33.4	33.4	33.4	33.4	40	43	45	49	51	40	Yes
R2924	1.5	1394	T1	32.8	32.8	32.8	32.8	32.8	40	43	45	49	51	40	Yes
R2925	4.5	751	T48	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R2927	1.5	884	T48	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R2931	1.5	1354	T1	32.8	32.8	32.8	32.8	32.8	40	43	45	49	51	40	Yes
R2932	1.5	1049	T35	30.8	30.8	30.8	30.8	30.8	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R2935	4.5	904	T36	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
R2936	4.5	962	T35	33.0	33.0	33.0	33.0	33.0	40	43	45	49	51	40	Yes
R2937	4.5	1053	T35	32.5	32.5	32.5	32.5	32.5	40	43	45	49	51	40	Yes
R2938	4.5	953	T35	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
R2940	1.5	834	T48	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R2942	4.5	898	T40	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R2944	1.5	937	T36	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
R2945	4.5	782	T1	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R2946	1.5	769	T1	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
R2947	4.5	952	T36	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
R2948	1.5	919	T40	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R2949	1.5	999	T36	32.6	32.6	32.6	32.6	32.6	40	43	45	49	51	40	Yes
R2950	1.5	877	T35	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
R2951	4.5	798	T48	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R2952	4.5	881	T48	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R2953	4.5	876	T35	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R2954	4.5	762	T35	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R2956	4.5	1099	T36	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
R2958	4.5	587	T35	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R2960	7.5	654	T35	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R2961	1.5	768	T35	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
R2962	4.5	883	T35	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
R2963	4.5	1000	T39	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R2967	1.5	1411	T35	29.7	29.7	29.7	29.7	29.7	40	43	45	49	51	40	Yes
R2968	1.5	1348	T35	30.0	30.0	30.0	30.0	30.0	40	43	45	49	51	40	Yes
R2969	1.5	1258	T37	31.9	31.9	31.9	31.9	31.9	40	43	45	49	51	40	Yes
R2970	4.5	1001	T35	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
R2971	1.5	763	T39	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R2974	4.5	820	T41	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
R2975	7.5	1096	T39	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R2976	1.5	608	T39	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R2978	4.5	601	T1	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R2979	4.5	835	T40	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R2980	4.5	647	T39	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R2982	4.5	914	T35	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R2984	1.5	1121	T37	31.3	31.3	31.3	31.3	31.3	40	43	45	49	51	40	Yes
R2985	4.5	1479	T35	28.4	28.4	28.4	28.4	28.4	40	43	45	49	51	40	Yes
R2986	4.5	944	T37	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R2987	4.5	1169	T35	32.5	32.5	32.5	32.5	32.5	40	43	45	49	51	40	Yes
R2989	4.5	1217	T35	30.6	30.6	30.6	30.6	30.6	40	43	45	49	51	40	Yes
R2990	4.5	769	T39	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
R2991	4.5	853	T39	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
R2992	1.5	1266	T35	28.8	28.8	28.8	28.8	28.8	40	43	45	49	51	40	Yes
R2993	7.5	716	T1	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R2994	1.5	791	T37	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
R2995	4.5	1364	T39	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
R2997	1.5	757	T39	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3000	4.5	1391	T35	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
R3002	4.5	781	T41	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3003	1.5	781	T1	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R3004	1.5	666	T35	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R3005	4.5	1170	T35	31.1	31.1	31.1	31.1	31.1	40	43	45	49	51	40	Yes
R3007	7.5	845	T41	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3008	1.5	1399	NK1-Transf	30.8	30.8	30.8	30.8	30.8	40	43	45	49	51	40	Yes
R3009	1.5	673	T41	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3010	1.5	1014	T35	31.3	31.3	31.3	31.3	31.3	40	43	45	49	51	40	Yes
R3011	1.5	715	T41	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3012	4.5	629	T39	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3013	1.5	706	T41	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3014	4.5	1326	NK1-Transf	32.4	32.4	32.4	32.4	32.4	40	43	45	49	51	40	Yes
R3015	1.5	698	T41	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3016	4.5	789	T41	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3017	1.5	692	T41	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3019	4.5	651	T35	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3020	4.5	714	T39	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3021	1.5	802	T38	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3022	1.5	680	T41	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3023	4.5	1231	NK1-Transf	32.8	32.8	32.8	32.8	32.8	40	43	45	49	51	40	Yes
R3024	1.5	760	T41	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3026	1.5	915	T41	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R3027	7.5	678	T39	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3028	4.5	720	T39	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3029	7.5	937	T37	34.5	34.5	34.5	34.5	34.5	40	43	45	49	51	40	Yes
R3030	4.5	794	T38	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3031	4.5	728	T39	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R3032	7.5	927	T51	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3033	4.5	766	T41	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3035	1.5	854	T35	33.4	33.4	33.4	33.4	33.4	40	43	45	49	51	40	Yes
R3037	4.5	789	T51	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3039	4.5	977	T39	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3043	1.5	969	T38	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3046	1.5	939	T41	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R3047	4.5	916	T41	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3049	4.5	1061	T38	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3050	4.5	1212	T35	31.9	31.9	31.9	31.9	31.9	40	43	45	49	51	40	Yes
R3052	4.5	743	NK1-Transf	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
R3055	1.5	1039	T41	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3056	4.5	585	T37	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R3057	4.5	1058	T2	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3058	1.5	1484	T35	28.4	28.4	28.4	28.4	28.4	40	43	45	49	51	40	Yes
R3060	4.5	823	NK1-Transf	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3062	4.5	1229	T23	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3065	1.5	627	T38	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R3066	1.5	638	T51	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3067	4.5	1009	T19	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R3068	4.5	1445	T35	31.2	31.2	31.2	31.2	31.2	40	43	45	49	51	40	Yes
R3070	1.5	553	T51	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3071	4.5	1487	T12	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
R3073	4.5	744	T51	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3074	1.5	1136	T23	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
R3076	4.5	768	T2	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
R3083	4.5	906	NK1-Transf	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3084	1.5	763	T51	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R3086	7.5	795	NK1-Transf	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R3089	1.5	854	T37	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3090	1.5	819	T12	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R3093	4.5	859	T31	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3095	4.5	1027	T12	33.2	33.2	33.2	33.2	33.2	40	43	45	49	51	40	Yes
R3096	1.5	899	T51	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R3097	1.5	836	T31	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3098	1.5	871	NK1-Transf	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3099	4.5	554	T51	39.3	39.3	39.3	39.3	39.3	40	43	45	49	51	40	Yes
R3100	1.5	926	T51	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3101	1.5	642	T51	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R3102	1.5	956	T51	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
R3103	1.5	824	T23	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3104	1.5	980	T51	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
R3107	1.5	1021	T51	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3108	4.5	743	T31	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3110	1.5	656	T12	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3111	7.5	1117	T12	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
R3116	4.5	1169	T51	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3117	4.5	626	T31	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3120	4.5	793	T38	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3123	1.5	576	T12	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3124	1.5	1243	T2	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
R3125	4.5	599	T23	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
R3126	4.5	921	T38	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3128	1.5	632	T19	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3129	4.5	620	T31	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3130	4.5	928	T6	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3131	4.5	659	T23	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3135	4.5	663	T23	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3136	1.5	1224	T23	33.2	33.2	33.2	33.2	33.2	40	43	45	49	51	40	Yes
R3138	4.5	1310	T23	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R3139	4.5	1188	T23	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
R3141	4.5	1163	T23	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
R3142	1.5	821	T2	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3144	4.5	1268	T23	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R3145	1.5	607	T19	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3146	4.5	1117	T23	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3147	4.5	1190	T23	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
R3148	1.5	1092	T23	33.7	33.7	33.7	33.7	33.7	40	43	45	49	51	40	Yes
R3149	4.5	600	T19	39.3	39.3	39.3	39.3	39.3	40	43	45	49	51	40	Yes
R3150	1.5	1066	T23	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
R3151	1.5	683	T31	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3153	1.5	1148	T23	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R3156	1.5	1042	T23	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R3157	1.5	696	T6	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3158	1.5	1019	T23	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
R3159	4.5	604	T19	39.3	39.3	39.3	39.3	39.3	40	43	45	49	51	40	Yes
R3160	1.5	1117	T23	33.7	33.7	33.7	33.7	33.7	40	43	45	49	51	40	Yes
R3161	1.5	705	T31	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3162	1.5	999	T23	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
R3164	4.5	1062	T23	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R3165	1.5	978	T23	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R3168	4.5	956	T23	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R3169	4.5	1036	T23	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3170	4.5	689	T19	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
R3171	1.5	737	T6	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3172	1.5	621	T6	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3173	1.5	791	NK1-Transf	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R3174	4.5	1017	T23	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3175	1.5	916	T23	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3176	1.5	986	T23	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3178	7.5	902	T23	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3179	1.5	657	T6	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3180	1.5	962	T23	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R3181	4.5	884	T23	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3183	1.5	709	T19	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3184	1.5	768	T23	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3185	4.5	833	T23	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3186	7.5	920	T23	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3187	1.5	750	T2	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R3190	4.5	835	T23	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3191	4.5	744	T23	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3193	4.5	886	T23	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R3197	4.5	922	T23	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3198	1.5	760	T7	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3200	1.5	653	T15	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3201	4.5	798	T15	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
R3202	4.5	661	T31	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3203	4.5	772	T12	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
R3204	4.5	694	T2	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3205	1.5	561	T15	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3206	4.5	805	T31	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R3207	4.5	1435	T12	30.4	30.4	30.4	30.4	30.4	40	43	45	49	51	40	Yes
R3210	1.5	561	T15	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3214	4.5	751	T23	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
R3216	1.5	556	T15	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3218	4.5	649	T15	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3219	4.5	551	T23	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
R3221	1.5	1292	T23	34.5	34.5	34.5	34.5	34.5	40	43	45	49	51	40	Yes
R3222	1.5	873	T31	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3223	1.5	674	T12	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3224	1.5	1236	T23	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R3225	4.5	614	T23	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
R3226	4.5	746	T12	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3228	1.5	837	T2	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3229	1.5	741	T12	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3231	1.5	773	T31	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3234	4.5	785	T12	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R3235	4.5	873	T31	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3237	4.5	787	T31	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3239	1.5	567	T15	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3241	1.5	809	T14	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3244	1.5	592	T6	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3247	1.5	922	T23	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3248	7.5	970	T23	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R3251	4.5	662	T7	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3252	1.5	749	T14	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3255	4.5	861	T14	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
R3257	1.5	822	T49	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3260	1.5	1202	T12	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
R3263	4.5	770	T26	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3265	4.5	826	T7	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3267	4.5	1412	T12	32.1	32.1	32.1	32.1	32.1	40	43	45	49	51	40	Yes
R3268	4.5	1297	T15	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R3272	4.5	662	T26	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
R3273	4.5	1233	T44	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3281	7.5	632	T7	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3283	4.5	777	T15	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
R3289	4.5	699	T26	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
R3291	1.5	841	T14	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3292	1.5	638	T26	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3293	7.5	1136	T44	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R3294	4.5	698	T14	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
R3296	4.5	821	T32	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3297	7.5	1242	T44	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3298	1.5	1150	T44	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
R3302	1.5	698	T49	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3303	1.5	1269	T44	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
R3306	4.5	1456	T5	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3308	1.5	553	T14	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3309	4.5	1241	T7	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3311	4.5	1369	T7	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
R3314	1.5	1281	T44	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R3315	4.5	645	T14	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
R3317	4.5	707	T32	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R3318	4.5	743	T49	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
R3319	1.5	933	T32	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
R3321	4.5	717	T14	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
R3324	4.5	801	T32	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3328	4.5	777	T26	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3331	4.5	1209	T30	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3332	4.5	1055	T5	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
R3336	4.5	925	T32	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3337	4.5	1064	T30	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3340	4.5	1082	T32	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3342	4.5	1444	T5	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R3343	4.5	1210	T5	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3345	7.5	876	T30	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3346	1.5	910	T30	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
R3349	4.5	1195	T5	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3350	4.5	838	T30	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3351	1.5	677	T44	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3352	7.5	573	T5	39.4	39.4	39.4	39.4	39.4	40	43	45	49	51	40	Yes
R3353	4.5	849	T27	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3354	4.5	911	T5	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3355	1.5	680	T27	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
R3358	7.5	860	T5	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3359	1.5	712	T27	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3361	1.5	641	T44	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3363	1.5	614	T30	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3364	1.5	637	T27	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3366	1.5	673	T44	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3367	1.5	637	T44	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3368	1.5	574	T27	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3370	4.5	710	T32	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
R3374	1.5	772	T27	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3376	1.5	811	T32	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3380	1.5	695	T30	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R3381	4.5	605	T30	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
R3382	4.5	912	T4	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3383	4.5	901	T30	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
R3384	1.5	825	T4	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3386	4.5	952	T5	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
R3387	4.5	777	T17	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R3388	1.5	820	T4	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3389	4.5	925	T16	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3390	4.5	1028	T3	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
R3391	1.5	717	T28	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R3393	1.5	778	T28	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3394	1.5	994	T3	34.5	34.5	34.5	34.5	34.5	40	43	45	49	51	40	Yes
R3395	4.5	738	T16	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
R3398	1.5	566	T52	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3399	4.5	924	T28	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3400	1.5	960	T30	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
R3402	4.5	1322	T34	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R3403	4.5	606	T16	39.9	39.9	39.9	39.9	39.9	40	43	45	49	51	40	Yes
R3404	1.5	1233	T34	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3405	1.5	1130	T34	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3406	4.5	622	T16	39.8	39.8	39.8	39.8	39.8	40	43	45	49	51	40	Yes
R3407	4.5	1260	T28	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
R3408	1.5	713	T3	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3409	7.5	1388	T28	31.7	31.7	31.7	31.7	31.7	40	43	45	49	51	40	Yes
R3410	4.5	1044	T33	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3411	1.5	714	T16	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3412	1.5	1129	T34	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
R3413	4.5	930	T34	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3414	4.5	596	T4	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
R3415	1.5	629	T28	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3416	1.5	710	T17	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3417	4.5	800	T34	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
R3418	4.5	597	T4	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
R3419	4.5	667	T17	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
R3420	1.5	608	T4	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3422	4.5	699	T34	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
R3423	4.5	576	T28	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
R3424	1.5	648	T4	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3425	1.5	846	T4	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R3426	4.5	1312	T34	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
R3428	1.5	602	T34	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3429	4.5	706	T17	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
R3430	1.5	773	T46	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R3431	4.5	1439	T34	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3432	4.5	1332	T34	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3433	1.5	967	T28	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R3435	4.5	842	T24	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3436	4.5	831	T34	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
R3437	4.5	1049	T28	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R3441	4.5	782	T34	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3442	1.5	1119	T28	32.4	32.4	32.4	32.4	32.4	40	43	45	49	51	40	Yes
R3443	4.5	1393	T24	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
R3444	1.5	813	T46	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R3445	4.5	1273	T28	33.2	33.2	33.2	33.2	33.2	40	43	45	49	51	40	Yes
R3446	4.5	700	T45	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
R3447	4.5	1041	T24	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R3448	4.5	1049	T34	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R3449	4.5	1373	T28	31.2	31.2	31.2	31.2	31.2	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3450	1.5	621	T45	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3451	1.5	912	T34	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R3453	1.5	928	T24	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R3454	4.5	669	T45	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
R3456	1.5	849	T24	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
R3457	4.5	649	T45	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
R3459	4.5	821	T24	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3460	1.5	911	T24	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
R3461	7.5	797	T24	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3462	1.5	762	T24	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R3463	1.5	619	T24	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3465	1.5	706	T46	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
R3466	4.5	770	T34	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
R3469	4.5	809	T34	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3471	1.5	558	T46	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
R3472	4.5	894	T34	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
R3474	1.5	701	T24	34.5	34.5	34.5	34.5	34.5	40	43	45	49	51	40	Yes
R3475	4.5	1324	T20	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
R3477	4.5	684	T24	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
R3480	1.5	990	T34	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
R3482	1.5	1026	T34	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
R3483	4.5	1138	T34	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
R3484	1.5	768	T46	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R3487	7.5	834	T46	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R3488	7.5	917	T24	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
R3489	4.5	978	T24	33.5	33.5	33.5	33.5	33.5	40	43	45	49	51	40	Yes
R3490	1.5	1352	T34	29.8	29.8	29.8	29.8	29.8	40	43	45	49	51	40	Yes
R3491	1.5	1103	T24	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
R3492	4.5	1351	T46	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
R3493	4.5	858	T20	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
R3496	4.5	1466	T34	30.7	30.7	30.7	30.7	30.7	40	43	45	49	51	40	Yes
R3497	1.5	1432	T46	29.9	29.9	29.9	29.9	29.9	40	43	45	49	51	40	Yes
R3501	1.5	1441	T46	30.0	30.0	30.0	30.0	30.0	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R3502	4.5	1485	T24	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
R3503	4.5	1449	T46	31.4	31.4	31.4	31.4	31.4	40	43	45	49	51	40	Yes
R3504	4.5	1477	T24	32.3	32.3	32.3	32.3	32.3	40	43	45	49	51	40	Yes
R3508	1.5	885	T20	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3509	1.5	895	T21	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R3512	1.5	1194	T20	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
R3521	4.5	999	T20	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
R3522	4.5	1115	T20	33.9	33.9	33.9	33.9	33.9	40	43	45	49	51	40	Yes
R3523	1.5	896	T20	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
R3525	4.5	785	T43	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R3527	1.5	692	T20	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R3529	4.5	607	T20	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
R3531	7.5	1311	T43	32.9	32.9	32.9	32.9	32.9	40	43	45	49	51	40	Yes
R3540	1.5	1347	T43	30.5	30.5	30.5	30.5	30.5	40	43	45	49	51	40	Yes
R3545	4.5	880	T43	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R3546	4.5	959	T43	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R3547	4.5	605	T43	39.5	39.5	39.5	39.5	39.5	40	43	45	49	51	40	Yes
R3548	1.5	942	T43	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
R3550	7.5	644	T43	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
R3556	7.5	822	T43	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
R3557	4.5	971	T43	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R3559	1.5	1007	T43	32.6	32.6	32.6	32.6	32.6	40	43	45	49	51	40	Yes
R3560	4.5	1023	T43	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
R3561	1.5	1157	T43	31.4	31.4	31.4	31.4	31.4	40	43	45	49	51	40	Yes
R3564	4.5	1289	T43	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
R3567	4.5	1439	T43	30.6	30.6	30.6	30.6	30.6	40	43	45	49	51	40	Yes
R3654	4.5	830	T30	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
R3656	4.5	784	T36	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
R3664	1.5	767	T24	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R3669	1.5	1155	T2	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
R4000	1.5	677	T46	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
R4001	4.5	618	T46	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
R4002	4.5	1224	T15	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
R4003	4.5	827	T33	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R5015	4.5	1223	T43	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
R5016	7.5	767	T21	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
R5017	4.5	930	T24	33.7	33.7	33.7	33.7	33.7	40	43	45	49	51	40	Yes
R5019	4.5	1443	T23	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
R5020	1.5	867	T23	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
R5021	1.5	712	T23	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R5022	1.5	862	T27	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
R5023	4.5	652	T15	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
R5024	4.5	1037	T51	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
R5025	1.5	688	T41	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
R5026	4.5	1096	T30	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
R5027	1.5	604	T1	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
R5028	4.5	652	T1	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
R5029	4.5	856	NK1-Transf	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
R5030	4.5	757	NK1-Transf	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R5031	1.5	1233	T12	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
R5033	1.5	717	T73	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
R5034	1.5	895	T50	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
R5035	4.5	892	T36	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
R5037	1.5	798	T36	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
R5038	1.5	1080	T50	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
R5039	1.5	1155	T50	31.0	31.0	31.0	31.0	31.0	40	43	45	49	51	40	Yes
V6000	4.5	1447	T43	31.0	31.0	31.0	31.0	31.0	40	43	45	49	51	40	Yes
V6002	4.5	706	T4	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6003	4.5	559	T44	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
V6004	4.5	837	T26	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6005	4.5	805	T3	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6006	4.5	650	T3	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6012	4.5	1396	T33	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6013	4.5	868	T5	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6014	4.5	1094	T44	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
V6015	4.5	1209	T3	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6016	4.5	1027	T24	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
V6017	4.5	773	T3	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6018	4.5	868	T24	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
V6019	4.5	846	T24	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
V6020	4.5	1057	T4	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
V6021	4.5	795	T44	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
V6022	4.5	794	T4	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
V6023	4.5	703	T4	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6024	4.5	854	T4	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6026	4.5	987	T5	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6028	4.5	567	T44	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6029	4.5	687	T4	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
V6030	4.5	834	T16	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
V6031	4.5	700	T11	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6033	4.5	598	T11	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6034	4.5	934	T46	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
V6035	4.5	1161	T46	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
V6036	4.5	752	T11	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6037	4.5	786	T4	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6038	4.5	1457	T24	39.8	39.8	39.8	39.8	39.8	40	43	45	49	51	40	Yes
V6039	4.5	680	T11	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6040	4.5	709	T11	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6041	4.5	764	T45	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
V6042	4.5	1014	T20	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
V6043	4.5	867	T20	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6044	4.5	862	T20	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
V6045	4.5	666	T46	37.8	37.8	37.8	37.8	37.8	40	43	45	49	51	40	Yes
V6046	4.5	629	T16	39.8	39.8	39.8	39.8	39.8	40	43	45	49	51	40	Yes
V6047	4.5	788	T16	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
V6048	4.5	718	T11	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6049	4.5	1396	T46	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
V6050	4.5	897	T43	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6051	4.5	1272	T46	32.4	32.4	32.4	32.4	32.4	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6052	4.5	766	T27	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6053	4.5	1415	T46	32.3	32.3	32.3	32.3	32.3	40	43	45	49	51	40	Yes
V6054	4.5	1321	T46	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
V6055	4.5	649	T16	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
V6056	4.5	1202	T20	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6058	4.5	1471	T46	31.3	31.3	31.3	31.3	31.3	40	43	45	49	51	40	Yes
V6059	4.5	1414	T43	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
V6060	4.5	709	T33	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6062	4.5	731	T24	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6063	4.5	846	T24	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
V6064	4.5	1014	T34	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
V6066	4.5	630	T34	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
V6067	4.5	659	T24	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
V6070	4.5	617	T34	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6071	4.5	770	T24	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
V6072	4.5	733	T24	35.3	35.3	35.3	35.3	35.3	40	43	45	49	51	40	Yes
V6073	4.5	886	T24	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
V6075	4.5	933	T33	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
V6076	4.5	1135	T5	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
V6077	4.5	1262	T24	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6078	4.5	1196	T24	32.9	32.9	32.9	32.9	32.9	40	43	45	49	51	40	Yes
V6080	4.5	1189	T20	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6081	4.5	970	T20	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6082	4.5	875	T20	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6083	4.5	771	T20	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6084	4.5	734	T43	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6085	4.5	1378	T20	32.8	32.8	32.8	32.8	32.8	40	43	45	49	51	40	Yes
V6086	4.5	884	T20	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
V6087	4.5	733	T20	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6088	4.5	628	T21	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
V6090	4.5	1339	T20	33.2	33.2	33.2	33.2	33.2	40	43	45	49	51	40	Yes
V6091	4.5	915	T43	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
V6094	4.5	610	T72	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6095	4.5	559	T73	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
V6096	4.5	902	T73	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
V6100	4.5	772	T73	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6101	4.5	790	T50	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6102	4.5	753	T50	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
V6103	4.5	561	T1	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6104	4.5	845	T38	37.3	37.3	37.3	37.3	37.3	40	43	45	49	51	40	Yes
V6105	4.5	829	T38	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6106	4.5	604	T38	39.5	39.5	39.5	39.5	39.5	40	43	45	49	51	40	Yes
V6107	4.5	817	T37	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6114	4.5	726	T50	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
V6115	4.5	866	T50	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6116	4.5	553	T72	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
V6117	4.5	979	T1	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
V6118	4.5	1095	T72	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
V6119	4.5	706	T37	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
V6120	4.5	798	T37	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
V6121	4.5	819	T31	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6122	4.5	696	T38	39.4	39.4	39.4	39.4	39.4	40	43	45	49	51	40	Yes
V6126	4.5	845	T50	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
V6127	4.5	1141	T73	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
V6129	4.5	905	T38	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6130	4.5	640	T38	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
V6131	4.5	618	T2	39.3	39.3	39.3	39.3	39.3	40	43	45	49	51	40	Yes
V6132	4.5	837	T6	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
V6133	4.5	687	T6	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6135	4.5	785	T32	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6136	4.5	562	T28	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
V6137	4.5	785	T28	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6138	4.5	1030	T28	34.2	34.2	34.2	34.2	34.2	40	43	45	49	51	40	Yes
V6139	4.5	1018	T44	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6144	4.5	1073	T36	33.0	33.0	33.0	33.0	33.0	40	43	45	49	51	40	Yes
V6147	4.5	681	T50	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6150	4.5	889	T35	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
V6151	4.5	884	T35	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
V6152	4.5	832	T35	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
V6154	4.5	580	T35	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6157	4.5	846	T50	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
V6158	4.5	1236	T50	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
V6160	4.5	1222	T50	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
V6163	4.5	903	T35	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
V6168	4.5	1415	T50	30.8	30.8	30.8	30.8	30.8	40	43	45	49	51	40	Yes
V6169	4.5	1000	T72	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6170	4.5	738	T50	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6172	4.5	1437	T35	28.8	28.8	28.8	28.8	28.8	40	43	45	49	51	40	Yes
V6179	4.5	591	T42	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6181	4.5	1256	T73	33.1	33.1	33.1	33.1	33.1	40	43	45	49	51	40	Yes
V6182	4.5	1232	T39	34.3	34.3	34.3	34.3	34.3	40	43	45	49	51	40	Yes
V6187	4.5	721	T36	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
V6188	4.5	1485	T42	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
V6190	4.5	1264	T36	30.9	30.9	30.9	30.9	30.9	40	43	45	49	51	40	Yes
V6191	4.5	1401	T36	30.5	30.5	30.5	30.5	30.5	40	43	45	49	51	40	Yes
V6192	4.5	1117	T37	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
V6193	4.5	930	T37	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
V6194	4.5	681	T37	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
V6196	4.5	749	T38	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
V6197	4.5	684	T37	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6199	4.5	671	T31	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
V6201	4.5	770	T6	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6202	4.5	620	T6	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
V6203	4.5	720	T1	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6204	4.5	931	T42	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6205	4.5	804	T31	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6206	4.5	763	T36	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6207	4.5	1366	NK1-Transf	32.4	32.4	32.4	32.4	32.4	40	43	45	49	51	40	Yes
V6208	4.5	848	T36	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6212	4.5	1257	T42	34.1	34.1	34.1	34.1	34.1	40	43	45	49	51	40	Yes
V6214	4.5	911	T41	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
V6216	4.5	565	T7	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
V6217	4.5	942	T32	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6218	4.5	823	T32	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6219	4.5	849	T32	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6220	4.5	1359	T30	34.8	34.8	34.8	34.8	34.8	40	43	45	49	51	40	Yes
V6221	4.5	998	T32	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6222	4.5	800	T7	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
V6224	4.5	929	T28	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6226	4.5	869	T36	35.1	35.1	35.1	35.1	35.1	40	43	45	49	51	40	Yes
V6227	4.5	972	T36	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
V6228	4.5	1412	T35	32.0	32.0	32.0	32.0	32.0	40	43	45	49	51	40	Yes
V6229	4.5	830	T37	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
V6230	4.5	587	T36	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
V6231	4.5	812	T36	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
V6232	4.5	1399	T35	31.6	31.6	31.6	31.6	31.6	40	43	45	49	51	40	Yes
V6233	4.5	1187	T12	31.8	31.8	31.8	31.8	31.8	40	43	45	49	51	40	Yes
V6234	4.5	621	NK1-Transf	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
V6235	4.5	1102	T12	32.3	32.3	32.3	32.3	32.3	40	43	45	49	51	40	Yes
V6237	4.5	1315	T12	32.3	32.3	32.3	32.3	32.3	40	43	45	49	51	40	Yes
V6241	4.5	707	NK1-Transf	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
V6242	4.5	828	T12	34.7	34.7	34.7	34.7	34.7	40	43	45	49	51	40	Yes
V6253	4.5	1430	T23	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
V6254	4.5	665	T17	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
V6255	4.5	706	T17	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
V6258	4.5	763	T46	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
V6261	4.5	970	T12	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
V6264	4.5	1245	T36	33.2	33.2	33.2	33.2	33.2	40	43	45	49	51	40	Yes
V6265	4.5	912	T31	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
V6266	4.5	1062	T36	33.6	33.6	33.6	33.6	33.6	40	43	45	49	51	40	Yes
V6267	4.5	1270	T35	32.2	32.2	32.2	32.2	32.2	40	43	45	49	51	40	Yes
V6268	4.5	857	NK1-Transf	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6269	4.5	551	T7	39.6	39.6	39.6	39.6	39.6	40	43	45	49	51	40	Yes
V6270	4.5	887	T31	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
V6271	4.5	1110	T7	34.9	34.9	34.9	34.9	34.9	40	43	45	49	51	40	Yes
V6272	4.5	1151	T28	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
V6273	4.5	885	T15	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6274	4.5	889	T2	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
V6276	4.5	734	T49	38.3	38.3	38.3	38.3	38.3	40	43	45	49	51	40	Yes
V6278	4.5	614	T15	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6280	4.5	796	T15	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
V6281	4.5	643	T15	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6282	4.5	609	T14	39.4	39.4	39.4	39.4	39.4	40	43	45	49	51	40	Yes
V6283	4.5	686	T26	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6284	4.5	617	T27	39.3	39.3	39.3	39.3	39.3	40	43	45	49	51	40	Yes
V6285	4.5	745	T27	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
V6287	4.5	747	T14	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6288	4.5	695	T2	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
V6293	4.5	1118	T23	35.9	35.9	35.9	35.9	35.9	40	43	45	49	51	40	Yes
V6295	4.5	659	T49	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
V6296	4.5	676	T27	39.2	39.2	39.2	39.2	39.2	40	43	45	49	51	40	Yes
V6297	4.5	818	T49	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
V6298	4.5	690	T14	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
V6300	4.5	551	T30	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
V6301	4.5	899	T28	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6302	4.5	902	T32	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6304	4.5	963	T46	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
V6305	4.5	623	T28	38.5	38.5	38.5	38.5	38.5	40	43	45	49	51	40	Yes
V6307	4.5	754	T32	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
V6308	4.5	1331	T28	33.1	33.1	33.1	33.1	33.1	40	43	45	49	51	40	Yes
V6309	4.5	1115	T28	34.0	34.0	34.0	34.0	34.0	40	43	45	49	51	40	Yes
V6312	4.5	917	T49	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6313	4.5	659	T19	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6317	4.5	718	T23	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6318	4.5	827	T23	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6319	4.5	746	T39	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6320	4.5	904	T15	37.2	37.2	37.2	37.2	37.2	40	43	45	49	51	40	Yes
V6321	4.5	673	T19	39.4	39.4	39.4	39.4	39.4	40	43	45	49	51	40	Yes
V6322	4.5	550	T19	39.7	39.7	39.7	39.7	39.7	40	43	45	49	51	40	Yes
V6324	4.5	1099	T19	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6326	4.5	1031	T48	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes
V6327	4.5	1151	T48	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
V6328	4.5	668	T1	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
V6331	4.5	588	T51	38.9	38.9	38.9	38.9	38.9	40	43	45	49	51	40	Yes
V6332	4.5	871	T40	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6333	4.5	687	T72	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6335	4.5	844	T39	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6336	4.5	611	T23	38.8	38.8	38.8	38.8	38.8	40	43	45	49	51	40	Yes
V6337	4.5	779	T48	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
V6338	4.5	696	T51	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6339	4.5	691	T39	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
V6346	4.5	776	T42	37.6	37.6	37.6	37.6	37.6	40	43	45	49	51	40	Yes
V6347	4.5	1298	T73	32.5	32.5	32.5	32.5	32.5	40	43	45	49	51	40	Yes
V6348	4.5	1436	T42	33.3	33.3	33.3	33.3	33.3	40	43	45	49	51	40	Yes
V6354	4.5	1296	T43	31.7	31.7	31.7	31.7	31.7	40	43	45	49	51	40	Yes
V6355	4.5	1018	T50	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
V6356	4.5	1496	T36	29.9	29.9	29.9	29.9	29.9	40	43	45	49	51	40	Yes
V6357	4.5	573	T73	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6358	4.5	956	T50	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6366	4.5	805	T36	36.9	36.9	36.9	36.9	36.9	40	43	45	49	51	40	Yes
V6369	4.5	965	T30	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6371	4.5	1173	T35	32.0	32.0	32.0	32.0	32.0	40	43	45	49	51	40	Yes
V6373	4.5	1250	T35	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
V6376	4.5	826	T23	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6377	4.5	850	T23	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6380	4.5	970	T28	35.0	35.0	35.0	35.0	35.0	40	43	45	49	51	40	Yes
V6381	4.5	620	T19	39.1	39.1	39.1	39.1	39.1	40	43	45	49	51	40	Yes
V6382	4.5	831	T51	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6383	4.5	799	T28	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6384	4.5	894	T28	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6385	4.5	748	T24	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6386	4.5	972	T15	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6387	4.5	828	T48	37.1	37.1	37.1	37.1	37.1	40	43	45	49	51	40	Yes
V6412	4.5	1268	T34	31.5	31.5	31.5	31.5	31.5	40	43	45	49	51	40	Yes
V6413	4.5	1104	T34	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
V6430	4.5	906	T43	35.5	35.5	35.5	35.5	35.5	40	43	45	49	51	40	Yes
V6442	4.5	553	T4	39.5	39.5	39.5	39.5	39.5	40	43	45	49	51	40	Yes
V6443	4.5	715	T26	38.6	38.6	38.6	38.6	38.6	40	43	45	49	51	40	Yes
V6444	4.5	777	T27	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
V6445	4.5	842	T17	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
V6446	4.5	850	T28	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6447	4.5	624	T30	39.0	39.0	39.0	39.0	39.0	40	43	45	49	51	40	Yes
V6448	4.5	873	T28	35.2	35.2	35.2	35.2	35.2	40	43	45	49	51	40	Yes
V6449	4.5	1144	T28	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
V6450	4.5	1336	T28	31.3	31.3	31.3	31.3	31.3	40	43	45	49	51	40	Yes
V6455	4.5	1451	T7	32.7	32.7	32.7	32.7	32.7	40	43	45	49	51	40	Yes
V6456	4.5	1275	T7	34.5	34.5	34.5	34.5	34.5	40	43	45	49	51	40	Yes
V6457	4.5	784	T31	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6458	4.5	928	T6	37.5	37.5	37.5	37.5	37.5	40	43	45	49	51	40	Yes
V6460	4.5	889	T35	33.8	33.8	33.8	33.8	33.8	40	43	45	49	51	40	Yes
V6461	4.5	1172	T38	36.3	36.3	36.3	36.3	36.3	40	43	45	49	51	40	Yes
V6462	4.5	867	T41	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6463	4.5	631	T51	38.4	38.4	38.4	38.4	38.4	40	43	45	49	51	40	Yes
V6464	4.5	923	T51	36.7	36.7	36.7	36.7	36.7	40	43	45	49	51	40	Yes
V6466	4.5	676	T26	38.7	38.7	38.7	38.7	38.7	40	43	45	49	51	40	Yes
V6467	4.5	758	T14	38.2	38.2	38.2	38.2	38.2	40	43	45	49	51	40	Yes
V6468	4.5	728	T2	38.0	38.0	38.0	38.0	38.0	40	43	45	49	51	40	Yes
V6486	4.5	1225	T50	31.9	31.9	31.9	31.9	31.9	40	43	45	49	51	40	Yes
V6487	4.5	998	T48	35.8	35.8	35.8	35.8	35.8	40	43	45	49	51	40	Yes
V6488	4.5	849	T50	36.4	36.4	36.4	36.4	36.4	40	43	45	49	51	40	Yes
V6538	4.5	795	T24	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes

Point of Reception ID	Receptor height [m]	Distance to nearest source [m]	Nearest source [ID]	Calculated sound pressure level at receptor [dB(A)] at selected wind speed in m/s					Sound level limit [dB(A)] at selected wind speed in m/s					Applicable background sound level	Compliant (Yes/No)
				≤6	7	8	9	10	≤6	7	8	9	10	NPC 232 (C 3)	
V6541	4.5	678	T5	37.9	37.9	37.9	37.9	37.9	40	43	45	49	51	40	Yes
V6550	4.5	1387	T34	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6601	4.5	878	T34	34.4	34.4	34.4	34.4	34.4	40	43	45	49	51	40	Yes
V6602	4.5	1409	T43	31.0	31.0	31.0	31.0	31.0	40	43	45	49	51	40	Yes
V6609	4.5	1029	T38	36.8	36.8	36.8	36.8	36.8	40	43	45	49	51	40	Yes
V6611	4.5	1410	T23	34.6	34.6	34.6	34.6	34.6	40	43	45	49	51	40	Yes
V6623	4.5	887	T23	36.5	36.5	36.5	36.5	36.5	40	43	45	49	51	40	Yes
V6628	4.5	899	T39	36.0	36.0	36.0	36.0	36.0	40	43	45	49	51	40	Yes
V6634	4.5	748	T43	38.1	38.1	38.1	38.1	38.1	40	43	45	49	51	40	Yes
V6635	4.5	1153	T24	35.4	35.4	35.4	35.4	35.4	40	43	45	49	51	40	Yes
V6636	4.5	1365	T36	30.8	30.8	30.8	30.8	30.8	40	43	45	49	51	40	Yes
V6637	4.5	1277	T34	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6638	4.5	885	T24	35.6	35.6	35.6	35.6	35.6	40	43	45	49	51	40	Yes
V6639	4.5	745	T12	36.1	36.1	36.1	36.1	36.1	40	43	45	49	51	40	Yes
V6640	4.5	865	T12	37.7	37.7	37.7	37.7	37.7	40	43	45	49	51	40	Yes
V6641	4.5	871	T12	37.0	37.0	37.0	37.0	37.0	40	43	45	49	51	40	Yes
V6642	4.5	734	T12	37.4	37.4	37.4	37.4	37.4	40	43	45	49	51	40	Yes
V6644	4.5	787	T7	36.6	36.6	36.6	36.6	36.6	40	43	45	49	51	40	Yes
V6645	4.5	890	T7	35.7	35.7	35.7	35.7	35.7	40	43	45	49	51	40	Yes
V6646	4.5	1010	T30	36.2	36.2	36.2	36.2	36.2	40	43	45	49	51	40	Yes

1. For single storey receptors, the sound levels were considered at 1.5 m above grade and 30 m horizontally from the dwelling, in 16 evenly spaced directions. In this way, a circle of 16 dummy receptors was created around each single storey receptor. The reported sound level at each receptor is then taken to be the maximum sound level from the circle of dummy receptors. The coordinates of the circle point with the maximum sound level for each of the 235 one-storey receptors are shown in a table in Appendix C (UTM17-NAD83 projection).

Table 7-2 Noise impact assessment summary – participants

Participant ID	Height [m]	Distance to nearest source [m]	Nearest source ID	Max Calculated sound pressure level [dBA]
R2964	1.5	534	T1	37.9
R2998	4.5	458	T39	40.6
R3053	4.5	399	T37	40.4
R3078	1.5	590	NK1-Transf	34.7
R3113	1.5	641	T12	37.3
R3213	1.5	742	T6	36.9
R3312	1.5	724	T32	36.6
R3372	4.5	436	T5	41.1
R3375	4.5	457	T30	41.3
R3401	4.5	528	T16	40.2
R3468	4.5	601	T24	36.8
R3470	1.5	596	T24	35.9
R3535	1.5	565	T21	39.3
R3539	4.5	518	T21	40.5
R3544	4.5	660	T43	39.5
V6007	4.5	583	T3	39.7
V6008	4.5	504	T4	40.2
V6032	4.5	556	T11	39.1
V6057	4.5	559	T46	39.2
V6061	4.5	618	T33	39.5
V6065	4.5	551	T34	39.5
V6145	4.5	680	T73	37.1
V6148	4.5	580	T50	38.7
V6153	4.5	543	T35	38.9
V6195	4.5	520	T38	40.3
V6198	4.5	579	T2	39.5
V6200	4.5	531	T31	38.9
V6209	4.5	811	T41	38.8
V6250	4.5	680	T14	39.2
V6263	4.5	484	T36	38.2
V6277	4.5	579	T49	39.5
V6286	4.5	523	T14	40.0
V6289	4.5	566	T27	39.7
V6299	4.5	543	T15	39.2
V6303	4.5	569	T17	40.0
V6306	4.5	385	T28	42.4
V6314	4.5	483	T19	40.8
V6323	4.5	460	T51	40.4
V6325	4.5	551	T23	39.6
V6329	4.5	503	T42	40.0
V6330	4.5	765	T40	38.9
V6340	4.5	716	T48	37.7
V6465	4.5	560	T26	39.5
V6643	4.5	645	T7	38.0

Table 7-3 Concordance table showing contributions from North Kent 1 and East Lake St. Clair at shared receptors

UTM coordinates		Noise receptor ID	Distance to nearest source [m]		Nearest source ID		Level of farm [dBA]		Level [dBA]
Easting [m]	Northing [m]		North Kent 1	East Lake St. Clair	North Kent 1	East Lake St. Clair	North Kent 1[1]	East Lake St. Clair[1]	Total[2]
391271	4704689	R3138	1310	1454	T23	T138	31.8	30.9	34.8
391308	4704719	R3144	1268	1447	T23	T138	32.0	30.8	34.8
391378	4704764	R3147	1190	1449	T23	T138	32.5	30.7	35.0
391414	4704807	R3153	1148	1435	T23	T138	31.4	28.9	33.5
391520	4704812	R3156	1042	1497	T23	T138	32.3	28.4	33.9
391541	4704830	R3158	1019	1498	T23	T138	32.5	28.3	34.1
391442	4704830	R3160	1117	1434	T23	T138	31.7	28.9	33.7
391559	4704845	R3162	999	1499	T23	T138	32.7	28.3	34.1
391493	4704858	R3164	1062	1445	T23	T138	33.4	30.4	35.5
391598	4704887	R3168	956	1495	T23	T138	34.3	29.9	35.9
391517	4704894	R3169	1036	1435	T23	T138	33.7	30.4	35.6
391535	4704910	R3174	1017	1435	T23	T138	33.8	30.3	35.6
391564	4704925	R3176	986	1445	T23	T138	32.8	28.5	34.3
391588	4704941	R3180	962	1450	T23	T138	33.0	28.4	34.4
391630	4704976	R3186	920	1457	T23	T138	35.1	30.5	36.6
391718	4705047	R3190	835	1480	T23	T138	35.5	29.8	36.7
391669	4705069	R3193	886	1427	T23	T138	35.0	30.1	36.4
391639	4705119	R3197	922	1373	T23	T138	34.7	30.5	36.3
391350	4705453	R3221	1292	946	T23	T138	30.8	32.1	34.5
391416	4705467	R3224	1236	996	T23	T138	31.1	31.5	34.4
390525	4708629	R3386	952	1435	T5	T149	35.5	31.2	36.9
389990	4709201	R3402	1322	818	T34	T149	32.6	35.7	37.4
390086	4709256	R3404	1233	920	T34	T149	31.9	33.2	35.4
390255	4709311	R3405	1130	1097	T34	T149	33.0	31.6	35.2
390339	4709369	R3410	1044	1190	T33	T149	35.0	32.6	37.0
389898	4709472	R3412	1129	805	T34	T149	31.2	34.8	36.2
390363	4709492	R3413	930	1246	T34	T149	35.4	32.2	37.1
390505	4709607	R3417	800	1417	T34	T149	36.6	31.2	37.7
394943	4709754	R3424	648	1479	T4	ELSC-Transf	37.4	19.2	37.5
394588	4709799	R3425	846	1304	T4	ELSC-Transf	35.4	20.7	35.5
389359	4709817	R3426	1312	601	T34	T148	30.1	39.1	39.7
389109	4710178	R3431	1439	840	T34	T148	28.8	37.8	38.3
389216	4710191	R3432	1332	876	T34	T148	29.5	37.1	37.8
393416	4710199	R3435	842	1192	T24	ELSC-Transf	35.0	24.5	35.4

UTM coordinates		Noise receptor ID	Distance to nearest source [m]		Nearest source ID		Level of farm [dBA]		Level [dBA]
Easting [m]	Northing [m]		North Kent 1	East Lake St. Clair	North Kent 1	East Lake St. Clair	North Kent 1[1]	East Lake St. Clair[1]	Total[2]
394076	4710347	R3443	1393	729	T24	ELSC-Transf	33.8	29.0	35.0
389656	4710669	R3451	912	1483	T34	T148	31.3	30.9	33.9
393613	4710865	R3460	911	659	T24	ELSC-Transf	33.0	28.6	34.1
394599	4711227	R3475	1324	394	T20	ELSC-Transf	33.9	35.2	37.6
392941	4711756	R3491	1103	1479	T24	ELSC-Transf	31.2	20.7	31.5
395214	4711764	R3493	858	1201	T20	ELSC-Transf	36.6	23.9	36.8
393345	4712023	R3502	1485	1319	T24	ELSC-Transf	32.2	22.8	32.7
393250	4712054	R3504	1477	1408	T24	ELSC-Transf	31.9	22.1	32.3
393661	4712281	R3512	1194	1356	T20	ELSC-Transf	31.9	20.4	32.2
393834	4712443	R3521	999	1446	T20	ELSC-Transf	34.4	21.8	34.7
393716	4712452	R3522	1115	1491	T20	ELSC-Transf	33.6	21.4	33.9
393933	4712513	R3523	896	1489	T20	ELSC-Transf	34.0	19.2	34.2
391687	4705061	R5020	867	1447	T23	T138	34.0	28.2	35.1
394976	4709821	V6002	706	1436	T4	ELSC-Transf	38.1	21.7	38.2
390034	4709071	V6012	1396	860	T33	T149	32.6	35.2	37.1
393318	4710075	V6019	846	1349	T24	ELSC-Transf	35.1	23.6	35.4
394423	4709938	V6020	1057	1133	T4	ELSC-Transf	35.4	24.4	35.7
394663	4709676	V6023	703	1443	T4	ELSC-Transf	37.8	21.7	37.9
394503	4709737	V6024	854	1345	T4	ELSC-Transf	36.6	22.5	36.8
395185	4710005	V6036	752	1412	T11	ELSC-Transf	37.8	22.0	37.9
395078	4709911	V6037	786	1417	T4	ELSC-Transf	37.9	21.9	38.0
394173	4710815	V6038	1457	252	T24	ELSC-Transf	33.4	38.7	39.8
395372	4710168	V6039	680	1436	T11	ELSC-Transf	37.9	21.8	38.0
394985	4711529	V6042	1014	879	T20	ELSC-Transf	35.3	27.3	36.0
395288	4711795	V6043	867	1279	T20	ELSC-Transf	36.7	23.2	36.8
394759	4711330	V6056	1202	584	T20	ELSC-Transf	34.4	31.4	36.2
393234	4710153	V6062	731	1355	T24	ELSC-Transf	35.8	23.9	36.1
389523	4710524	V6064	1014	1295	T34	T148	31.6	33.8	35.9
393978	4710803	V6077	1262	367	T24	ELSC-	33.4	35.5	37.6

UTM coordinates		Noise receptor ID	Distance to nearest source [m]		Nearest source ID		Level of farm [dBA]		Level [dBA]
Easting [m]	Northing [m]		North Kent 1	East Lake St. Clair	North Kent 1	East Lake St. Clair Transf	North Kent 1[1]	East Lake St. Clair[1]	Total[2]
393136	4711797	V6078	1196	1332	T24	ELSC-Transf	32.4	23.4	32.9
394613	4711361	V6080	1189	479	T20	ELSC-Transf	34.3	33.4	36.9
394840	4711561	V6081	970	781	T20	ELSC-Transf	35.4	28.5	36.2
394959	4711665	V6082	875	939	T20	ELSC-Transf	36.2	26.6	36.6
395141	4711826	V6083	771	1183	T20	ELSC-Transf	37.2	24.1	37.4
393478	4712255	V6085	1378	1422	T20	ELSC-Transf	32.4	22.0	32.8
393544	4712155	V6090	1339	1302	T20	ELSC-Transf	32.7	23.0	33.2
391209	4705473	V6253	1430	817	T23	T138	31.5	34.9	36.7
391490	4705333	V6293	1118	1129	T23	T138	33.2	32.1	35.9
391732	4705092	V6376	826	1464	T23	T138	35.6	29.8	36.8
391701	4705032	V6377	850	1476	T23	T138	35.4	29.8	36.6
389446	4710617	V6413	1104	1274	T34	T147	30.8	33.8	35.6
389145	4710352	V6550	1387	910	T34	T147	28.9	36.7	37.4
391182	4704629	V6611	1410	1438	T23	T151	31.2	31.1	34.6
391680	4705147	V6623	887	1390	T23	T138	35.0	30.3	36.5
393866	4710531	V6635	1153	647	T24	ELSC-Transf	33.8	30.2	35.4
389254	4710438	V6637	1277	1036	T34	T147	29.6	35.6	36.6

1. Circle of receptors method used for one storey receptors, as described in Section 7. Location of maximum sound level in the circle may vary depending on the sources considered.
2. Total sound level includes contributions from all sources and might not always be equal to the sum of the two previous columns (i.e. Total includes North Kent 1, East Lake St. Clair and Marsh Line contributions).

8 CONCLUSION

Based on the approach presented in this NIA, the Project is compliant with the MOECC noise limits at all PoR within 1,500 m of the Project's noise sources, for wind speeds of 6, 7, 8, 9, and 10 m/s.

9 REFERENCES

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[18] International Organization for Standardization (ISO), 1993. Acoustics - Attenuation of Sound During Propagation Outdoors - Calculation of the Absorption of Sound by the Atmosphere. ISO 9613-1. 33 p.

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APPENDIX A –NOISE ISO-CONTOUR MAPS

392000 396000 400000 404000

4716000 4712000 4708000 4704000 4700000 4696000

MAP 1

MAP 2

MAP 3

MAP 4

Dresden

Eberts

Chatham Kent

Dover Centre

Grande Pointe

BA'SE'LINE

PRINCE ALBERT RD

CORKTOWN LINE

OLDFIELD LINE

BUSH LINE

ELECTRIC LINE

GREENVALLEY LINE

BEAR LINE ROAD

ST ANDREWS LINE

PAIN COURT LINE

COUNTRYVIEW LINE

CENTRE SIDEROAD

CLAYMORE LINE

CALEDONIA RD

BROOK LINE

EBERTS LINE

PRINCE ALBERT ROAD

DARRELL LINE

PINE LINE

PIONEER LINE

GREGORY LINE

T148 T149 T150 T138 T151 T154 T124 T139 T106 T104

T-1 T-4 T-5

Lake St Clair

Chatham

Area Shown

Leamington

Lake Erie

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Substation
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

0 0.25 0.5 1 1.5 2 kilometres

Pattern ENERGY GROUP

North Kent Wind I

NOISE MAP EXTENTS

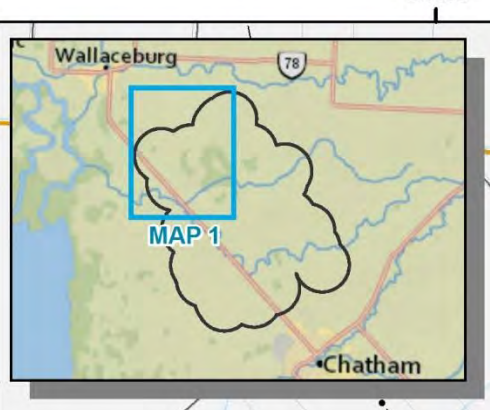
001-800809-151116-AD

May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83

Sources: LIO, GDF, Boralex



390000 392000 394000

4714000 4712000 4710000 4708000 4706000

PRINCE ALBERT RD
OLDFIELD LINE
CORKTOWN LINE
BUSH LINE
GREENVALLEY LINE
ELECTRIC LINE
40

T148 T149 T150 T138

34 24 33 52 5 44 43 21 20 4 3 27 26 14

R7618 R3510 V6540 R3505 R3499 V6440 V6539 R3496 V6412 R3490 R3483 R3482 R3480 R3472 V6601 R3469 R3466 V6630 V6413 R3451 V6414 V6637 V6064 V6550 R3438 R3432 R3431 R3426 V6012 V6027 R3396 V6009 V6011 R3386 V6013 R3412 R3410 R3405 R3402 R3404 R3372 R3358 V6026 V6541 R3354 R3349 V6076 R3343 R3342 V6025 R3327 V6311 R3322 V6260 R3332 V6139 R3314 R3306 V6257 R3303 R3298 R3297 R3293 V6259 V6290 R3282 R3284 V6294 R3273 R4002 R3268 R3248 V6386 V6280 R3247 V6320 R3352 R3366 R3367 R3361 V6028 R3351 V6003 V6021 V6004 V6443 R3328 R3321 R3315 V6282 R3308 V6250 V6286 R3294 R3291 V6298 R3283 R3302 R3292 V6295 R3289 V6465 V6466 V6283 R3272 R3263 R3252 R3255 V6287 V6467 R3368 R3364 R3359 V6289 V6052 V6284 R3355 R3504 R3502 V6078 R3491 R3489 R3488 V6073 V6063 V6538 V6072 R5017 R3477 R3474 R3468 R3470 R3463 R3462 R3461 R3664 R3459 V6067 V6071 R3453 R3456 V6638 R3448 R3447 R3441 V6075 R4003 V6066 R3436 V6065 V6061 V6070 R3422 R3428 V6060 R3417 R3413 R3398 V6016 V6062 R3435 V6385 V6019 V6018 V6020 R3425 V6024 V6023 R3420 R3424 V6442 R3414 R3418 V6008 V6029 R3408 V6007 V6017 V6006 V6005 R3394 R3390 V6015 V6014 R3388 R3384 V6022 R3382 V6296 V6041 V6048 V6040 V6033 V6039 V6032 V6036 V6037 V6034 V6002 V6635 R3443 R3460 V6077 V6038 V6079 R3475 V6056 V6080 V6081 V6042 V6082 R3493 V6083 V6043 V6044 R3508 R3509 V6050 V6087 R3529 V6086 R3527 R3522 R3523 R3521 V6085 R3512 V6090 R3539 R5016 V6088 R3544 R3547 R3550 V6634 R3556 V6084 V6091 R3560 R3561 R5015 V6354 V6602 R3567 R3572 V6392 V6393 R3576 R3571 R5010 V6537 V6089 V6000 R3565

N

Pattern ENERGY GROUP

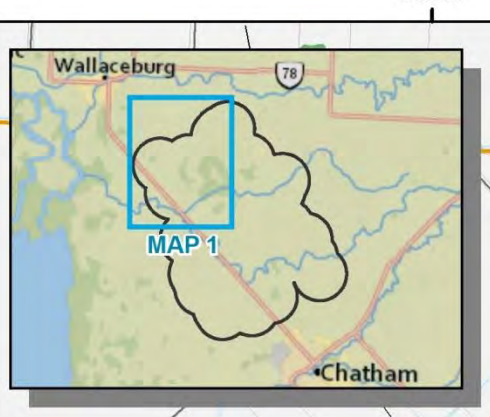
North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS
[WIND SPEED OF 6 m/s]
MAP 1A

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex



390000 392000 394000

4714000 4712000 4710000 4708000 4706000

PRINCE ALBERT RD
OLDFIELD LINE
CORKTOWN LINE
BUSH LINE
GREENVALLEY LINE
ELECTRIC LINE
40

T148 T149 T150 T138

34 33 52 5 24 44 14 4 3 43 21 20 27 26

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 8 m/s

- 45 dB(A) at 1.5 m agl*
- 45 dB(A) at 4.5 m agl*
- 45 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

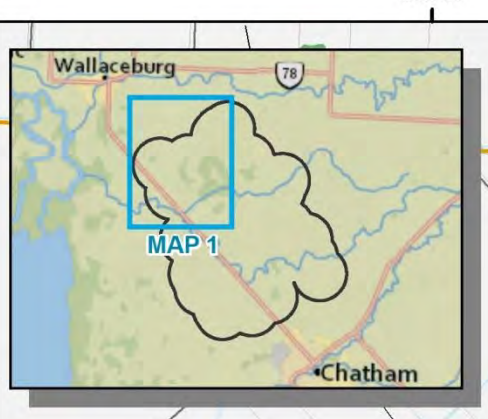
North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 8 m/s] MAP 1B OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex



390000 392000 394000

4714000 4712000 4710000 4708000 4706000

N

PRINCE ALBERT RD
OLDFIELD LINE
CORKTOWN LINE
BUSH LINE
GREENVALLEY LINE
ELECTRIC LINE
40

T148 T149 T150 T138
34 33 52 5 24 44 14 26 27 3 4 20 21 43

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 10 m/s

- 51 dB(A) at 1.5 m agl*
- 51 dB(A) at 4.5 m agl*
- 51 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

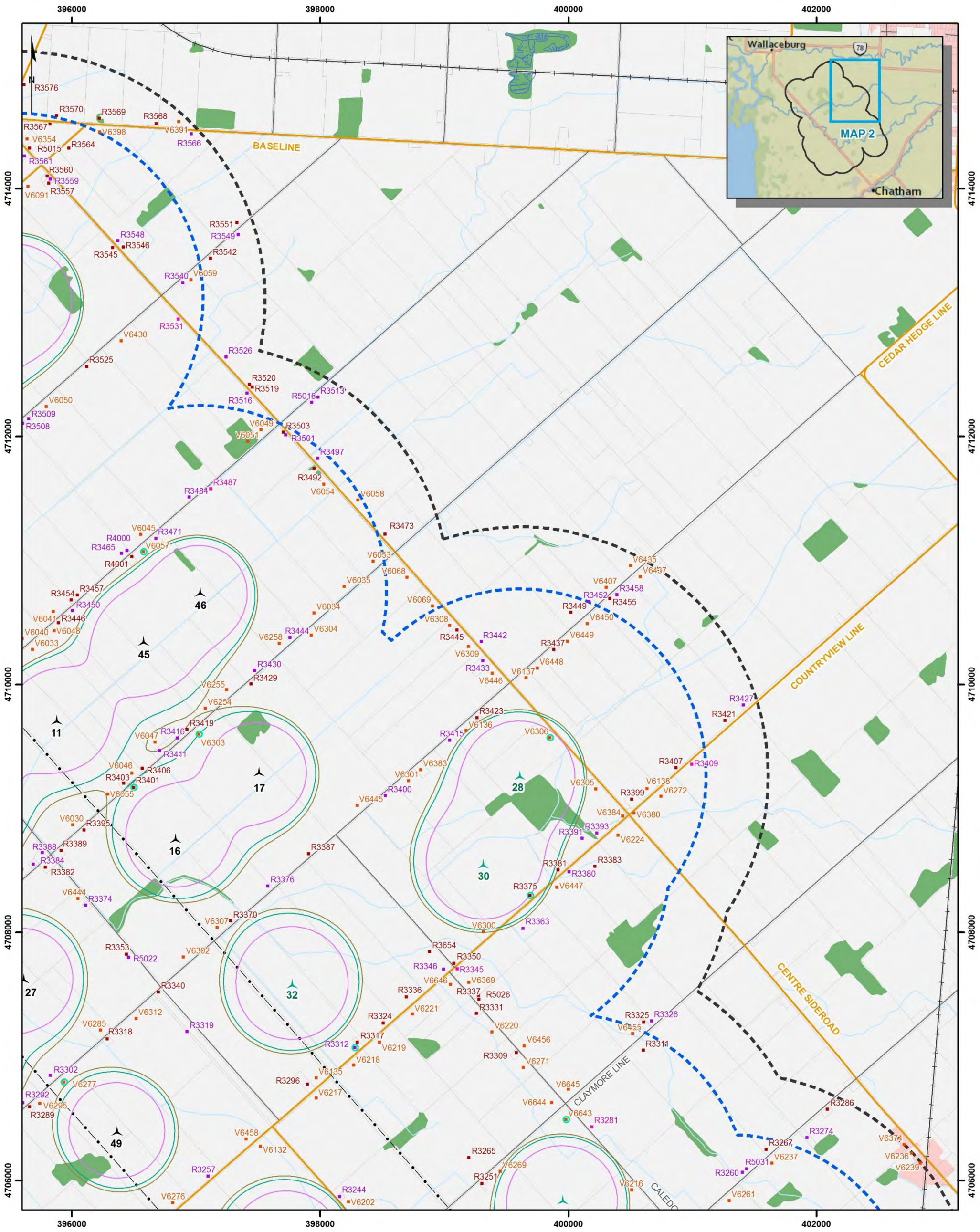
North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 10 m/s] MAP 1C OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex



Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 6 m/s

- 40 dB(A) at 1.5 m agl*
- 40 dB(A) at 4.5 m agl*
- 40 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

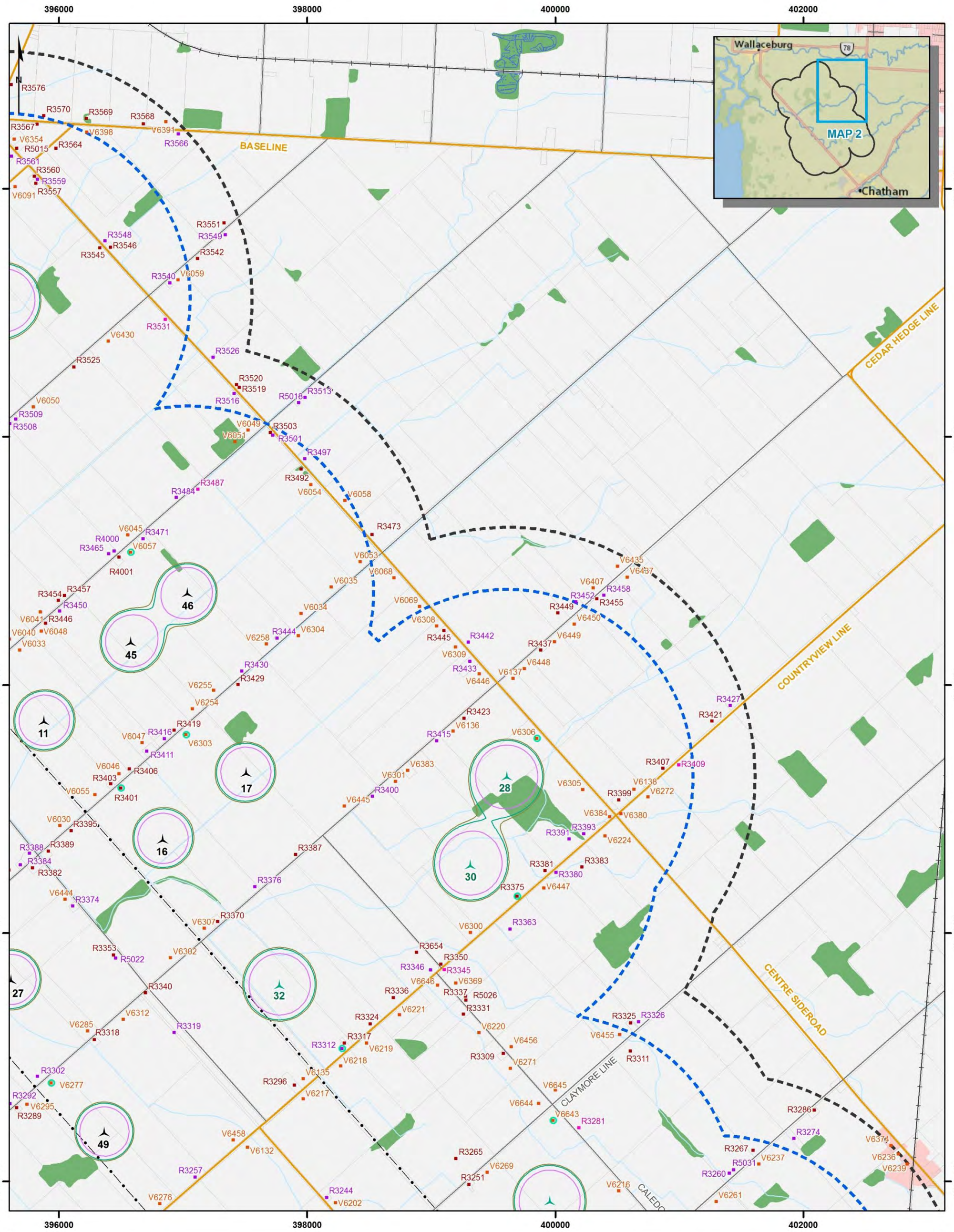
SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 6 m/s] MAP 2A OF 4

001-800809-151116-AD

May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex



Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 8 m/s

- 45 dB(A) at 1.5 m agl*
- 45 dB(A) at 4.5 m agl*
- 45 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 8 m/s] MAP 2B OF 4

001-800809-151116-AD

May 6, 2016

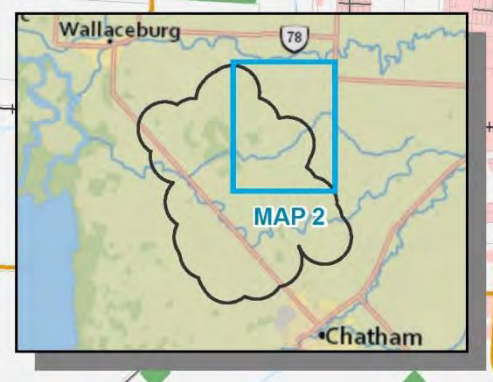
DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

396000 398000 400000 402000

4714000 4712000 4710000 4708000 4706000

N



BASELINE

CEDAR HEDGE LINE

COUNTRYVIEW LINE

CENTRE SIDEROAD

CLAYMORE LINE

CALEDO

R3576 R3570 R3569 R3568 R3567 V6354 R5015 R3564 V6398 V6391 R3566 R3561 R3560 R3559 R3557 V6091

R3551 R3549 R3548 R3546 R3545 R3542 R3540 V6059 R3531 V6430 R3526 R3525 R3520 R3519 R3516 R5018 R3513 V6050 R3509 R3508 V6049 V6051 R3503 R3501 R3497 R3492 R3487 R3484 V6054 V6058

V6045 R3471 R4000 V6057 R3465 R4001 R3473 V6053 V6068 V6035 V6034 R3454 R3457 R3450 V6041 R3446 V6040 V6048 V6033 V6258 R3444 V6304 R3430 R3429 V6255 V6254 R3419 V6047 R3416 V6303 R3411 V6046 R3406 R3403 R3401 V6055 V6030 R3395 R3388 R3389 R3384 R3382 V6444 R3374 R3387 R3376 V6307 R3370 R3353 R5022 V6302 R3340 V6312 V6285 R3318 R3319 R3302 V6277 R3292 V6295 R3289 V6458 V6132 R3257 V6276 R3244 V6202

V6435 V6437 V6407 R3458 R3452 R3455 R3449 V6450 V6069 V6308 R3445 R3442 V6309 R3437 V6449 R3433 V6137 V6448 V6446 R3427 R3421 R3423 V6136 R3415 V6306 V6383 V6301 R3400 V6445 R3407 R3409 V6305 V6138 R3399 V6272 V6384 V6380 R3391 R3393 V6224 R3381 R3383 R3380 R3375 V6447 V6300 R3363 R3654 R3350 R3346 R3345 V6646 V6369 R3336 R3337 R5026 R3331 R3324 V6221 V6220 R3325 R3326 V6455 V6456 R3317 R3312 V6219 V6218 R3309 V6271 R3311 V6135 R3296 V6217 V6645 V6644 V6643 R3281 R3286 R3274 R3267 V6237 V6374 V6236 V6239 R5031 R3260 R3265 V6269 R3251 V6216 V6261

46 45 11 17 28 30 16 32 27 49

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 10 m/s

- 51 dB(A) at 1.5 m agl*
- 51 dB(A) at 4.5 m agl*
- 51 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 10 m/s] MAP 2C OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

398000 400000 402000 404000

4706000 4704000 4702000 4700000 4698000

Eberts

Chatham

CALEDONIA RD

BROOK LINE

EBERTS LINE

PRINCE ALBERT ROAD

PIONEER LINE

PINE LINE

DARRELL LINE

GREGORY LINE

Wallaceburg

78

MAP 3

•Chatham

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 6 m/s

- 40 dB(A) at 1.5 m agl*
- 40 dB(A) at 4.5 m agl*
- 40 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 6 m/s] MAP 3A OF 4

001-800809-151116-AD

May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83

Sources: LIO, GDF, Boralex

398000 400000 402000 404000

4706000 4704000 4702000 4700000 4698000

CALEDONIA RD
EBERTS LINE
PRINCE ALBERT ROAD
BROOK LINE
PINE LINE
DARRELL LINE
PIONEER LINE
GREGORY LINE
Eberts
Chatham
N

Wallaceburg
78
MAP 3
Chatham

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 8 m/s

- 45 dB(A) at 1.5 m agl*
- 45 dB(A) at 4.5 m agl*
- 45 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 8 m/s] MAP 3B OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

398000 400000 402000 404000

4706000 4704000 4702000 4700000 4698000

Eberts

Chatham

CALEDONIA RD

BROOK LINE

EBERTS LINE

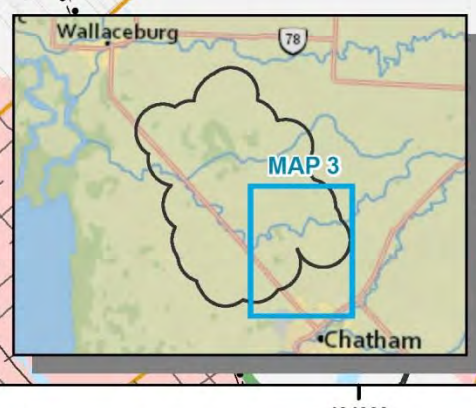
PRINCE ALBERT ROAD

PIONEER LINE

DARRELL LINE

GREGORY LINE

PINE LINE



Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 10 m/s

- 51 dB(A) at 1.5 m agl*
- 51 dB(A) at 4.5 m agl*
- 51 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 10 m/s] MAP 3C OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

392000 394000 396000

4706000 4704000 4702000 4700000 4698000

T138 T151 T124

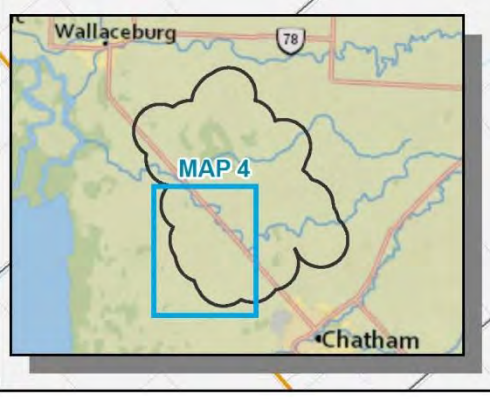
Dover Centre

BEAR LINE ROAD
MALLARD LINE
CEDAR HEDGE LINE
COUNTRYVIEW LINE
ST-PHILIPPE LINE
RIVARD LINE
HERON LINE
CLAYMORE LINE
BROOK LINE
BELLE ROSE LINE
MAPLE LINE

15 23 19 51 2 38 39 40 41 42 48 1 72 73 50

40

N



Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources
- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 6 m/s

- 40 dB(A) at 1.5 m agl*
- 40 dB(A) at 4.5 m agl*
- 40 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 6 m/s] MAP 4A OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

392000 394000 396000

4706000 4704000 4702000 4700000 4698000

T138 T151 T124

Dover Centre

BEAR LINE ROAD
MALLARD LINE
CEDAR HEDGE LINE
COUNTRYVIEW LINE
ST PHILIPPE LINE
RIVARD LINE
HERON LINE
CLAYMORE LINE
BROOK LINE
BELLE ROSE LINE
MAPLE LINE

15 23 19 51 2 38 40 39 41 1 42 48 72 73 50

N

Wallaceburg 78 Chatham

MAP 4

Content may not reflect National Geographic's current map policy. Sources: National

Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources

- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 8 m/s

- 45 dB(A) at 1.5 m agl*
- 45 dB(A) at 4.5 m agl*
- 45 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 8 m/s] MAP 4B OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

392000 394000 396000

4706000 4704000 4702000 4700000 4698000

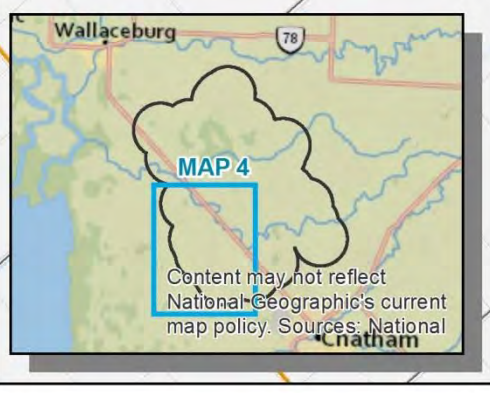
T138 T151 T124

15 23 19 51 2 38 41 1 39 40 42 48 72 73 50

Dover Centre

BEAR LINE ROAD
CEDAR HEDGE LINE
MALLARD LINE
COUNTRYVIEW LINE
CLAYMORE LINE
BROOK LINE
ST-PHILIPPE LINE
RIVARD LINE
HERON LINE
BELLE ROSE LINE
MAPLE LINE

N



Legend

Project Components

- SWT-3.2-113, Max. Power 2772 kW
- SWT-3.2-113, Max. Power 2942 kW
- SWT-3.2-113, Max. Power 3200 kW
- Transformer
- Investigation Area (2 km Buffer)
- 1.5 km Buffer from Project Noise Sources

- East Lake St. Clair Wind Turbine (GDF Suez)
- East Lake St. Clair Transformer

Predicted Sound Level at Wind Speed of 10 m/s

- 51 dB(A) at 1.5 m agl*
- 51 dB(A) at 4.5 m agl*
- 51 dB(A) at 7.5 m agl*

Other Components

- POR (1-Storey)
- POR (2-Storey)
- POR (3-Storey)
- Vacant Lot Receptor
- POR (Participant)
- Railroad
- Local Road
- Secondary Road
- Primary Road
- Transmission Line
- Watercourse
- Built Up Area
- Golf Course
- Wooded Area
- Wetland
- Waterbody
- Lot Line

* agl: above ground level

Existing Projects

- Marsh Line Wind Turbine (Boralex Inc. / Gengrowth)

0 250 500 1,000 1,500 2,000 Meters

Pattern ENERGY GROUP

North Kent Wind I

SIMULATED SOUND ISOCONTOUR LEVELS [WIND SPEED OF 10 m/s] MAP 4C OF 4

001-800809-151116-AD
May 6, 2016

DNV·GL

Projection: UTM Zone 17, NAD83
Sources: LIO, GDF, Boralex

APPENDIX B – SAMPLE CALCULATION FOR NOISE MODELING

Resulting A-weighted sound pressure level at Receptor 3403 and VLR 6038

The calculation of cumulative receptor noise levels from wind turbines uses the methodology of ISO 9613-2, "*Acoustics — Attenuation of sound during propagation outdoors: Part 2: General method of calculation*". These calculations are conducted with CadnaA *(which is an implementation of ISO 9613-1 and ISO 9613-2)*.

As an example, in this appendix, the results are presented at Receptors 3403 and VLR 6038. The following inputs and conditions were used:

- Turbine locations;
- Receptor locations.

Turbine characteristics and modelling parameters:

- Hub-heights: as noted in Appendix F;
- Ambient air temperature: 10ºC;
- Ambient barometric pressure: 101.32 kPa;
- Relative humidity: 70%;
- Source ground factor: 0.7;
- Middle ground factor: 0.7;
- Substation gravel area ground factor: 0;
- Receptor ground factor: 0.7.

See Section 5 for source broadband and octave band sound power levels.

The following table presents an example result and intermediate values of the calculations as the A-weighted sound pressure levels at two chosen example receptors, due to each turbine or substation and each octave band. The A-weighted sound pressure levels at the example Receptor 3403 and VLR 6038 for all bands and all noise sources within 5000 m are 39.9 and 39.8 dBA respectively.

Sample Calculations

Sound pressure levels at Receptor 3403

Source ID	Distance* [m]	Octave band sound pressure levels [dBA]									Broad-band SPL by source [dBA]
		31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
T16	613	N/A	27.7	25.1	27.7	29.2	29.3	25.1	9.1	-52.9	35.5
T11	751	N/A	25.9	23.2	25.8	27.1	27.0	22.0	2.8	-70.8	33.4
T17	1097	N/A	22.6	19.7	22.2	23.2	22.5	15.4	-11.9	+	29.3
T45	1164	N/A	22.0	19.1	21.6	22.5	21.7	14.2	-14.6	+	28.7
T4	1324	N/A	20.9	17.9	20.3	21.1	20.0	11.6	-20.9	+	27.3
T3	1622	N/A	19.1	16.0	18.2	18.8	17.2	6.9	-32.5	+	25.1
T46	1667	N/A	18.9	15.8	17.9	18.4	16.8	6.2	-34.2	+	24.8
T27	1770	N/A	18.3	15.2	17.3	17.7	15.9	4.7	-38.0	+	24.1
T32	2112	N/A	17.1	14.4	18.0	17.7	15.7	2.1	-50.1	+	23.8
T30	2971	N/A	14.1	11.0	14.2	13.1	9.6	-9.2	-81.2	+	19.7
T26	2702	N/A	14.5	11.2	12.7	12.3	8.8	-7.9	-72.3	+	19.3
T28	3194	N/A	13.5	10.3	13.3	12.1	8.1	-11.9	+	+	18.9
T49	2802	N/A	14.2	10.8	12.3	11.7	8.1	-9.2	-75.9	+	18.9
T14	3420	N/A	12.7	8.9	10.0	8.9	4.2	-16.9	+	+	16.7
T6	3962	N/A	12.1	8.3	10.8	8.9	3.6	-21.1	+	+	16.5
T43	3999	N/A	12.0	8.2	10.7	8.7	3.4	-21.5	+	+	16.4
T44	3658	N/A	11.9	8.3	10.1	9.0	4.3	-18.1	+	+	16.4
T20	3690	N/A	11.9	8.2	10.0	8.9	4.1	-18.5	+	+	16.3
T21	3856	N/A	11.9	7.8	8.6	7.1	1.6	-22.0	+	+	15.5
T24	3981	N/A	11.7	7.5	8.2	6.6	0.9	-23.5	+	+	15.1
T2	4541	N/A	11.1	7.0	9.1	6.7	0.4	-27.7	+	+	15.0
T15	4265	N/A	11.2	6.8	7.3	5.5	-0.7	-26.8	+	+	14.4
T7	4876	N/A	10.6	6.3	8.2	5.5	-1.4	-31.6	+	+	14.3
T52	4731	N/A	10.4	5.8	6.0	3.8	-3.2	-32.1	+	+	13.4
ELSC transformer	2864	-18.8	0.1	1.9	5.7	10.9	3.2	-17.8	+	+	13.2
Total A-Weighted Sound Pressure Level											39.9

* Includes the heights of noise sources and receptors.
+ indicates values below -88.0 dBA

Sound pressure levels at VLR 6038

Source ID	Distance* [m]	Octave band sound pressure levels [dBA]									Broad-band SPL by source [dBA]
		31.5 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
ELSC transformer	263	-0.6	18.6	24.3	28.4	35.9	32.7	27.3	16.0	-15.2	38.7
T24	1460	N/A	20.0	17.0	19.3	20.0	18.7	9.4	-26.2	+	26.2
T20	1840	N/A	17.7	14.9	17.8	18.4	16.8	5.3	-39.9	+	24.3
T4	1929	N/A	17.6	14.4	16.4	16.7	14.5	2.5	-44.0	+	23.1
T11	2032	N/A	17.1	13.9	15.8	16.0	13.7	1.0	-47.8	+	22.5
T3	2132	N/A	16.7	13.5	15.3	15.4	12.9	-0.4	-51.5	+	22.0
T21	2179	N/A	16.5	13.3	15.1	15.1	12.6	-1.0	-53.3	+	21.7
T43	2679	N/A	15.0	12.1	15.4	14.6	11.5	-5.4	-70.7	+	21.0
T45	2452	N/A	15.4	12.1	13.8	13.6	10.5	-4.7	-63.2	+	20.4
T46	2866	N/A	14.0	10.6	12.0	11.4	7.7	-10.0	-78.1	+	18.6
T33	3114	N/A	13.0	9.8	11.9	11.3	7.5	-11.6	-86.2	+	18.1
T52	3270	N/A	12.9	9.3	10.5	9.5	5.1	-15.1	+	+	17.1
T16	3363	N/A	12.8	9.1	10.1	9.1	4.5	-16.2	+	+	16.9
T44	3518	N/A	12.2	8.6	10.5	9.6	5.1	-16.4	+	+	16.8
T27	3497	N/A	12.5	8.7	9.7	8.6	3.7	-17.8	+	+	16.5
T5	3665	N/A	11.9	8.3	10.1	9.0	4.2	-18.2	+	+	16.3
T17	3664	N/A	12.2	8.3	9.2	7.9	2.8	-19.8	+	+	16.0
T34	3667	N/A	12.2	8.3	9.2	7.9	2.7	-19.8	+	+	16.0
T26	4018	N/A	11.6	7.4	8.1	6.5	0.7	-23.9	+	+	15.0
T14	4306	N/A	11.1	6.7	7.2	5.4	-0.9	-27.2	+	+	14.3
T32	4839	N/A	10.7	6.4	8.3	5.6	-1.2	-31.1	+	+	14.3
T49	4928	N/A	10.1	5.4	5.5	3.1	-4.2	-34.3	+	+	12.9
Total A-Weighted Sound Pressure Level											39.8

* Includes the heights of noise sources and receptors.
+ indicates values below -88.0 dBA

APPENDIX C – COORDINATES OF POINTS OF RECEPTION

Coordinates of all modeled Points of Reception and Vacant Lot Receptors for the North Kent 1 Project (UTM17-NAD83 projection) are given in the table below:

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R2247	395259	4697985	180
R2491	397167	4698366	180
R2556	397015	4698462	180
R2560	395474	4698490	180
R2568	395271	4698484	180
R2667	395073	4698692	180
R2676	397206	4698707	180
R2689	394005	4698817	180
R2691	395008	4698841	180
R2694	397183	4698872	180
R2699	395446	4698937	180
R2702	395479	4698972	180
R2705	397640	4699000	180
R2709	396924	4699019	180
R2734	396823	4699163	180
R2735	398891	4699164	180
R2739	398953	4699206	180
R2743	398934	4699230	180
R2752	398112	4699328	180
R2757	398827	4699350	180
R2765	398677	4699401	180
R2768	396716	4699421	180
R2780	396509	4699537	180
R2785	398585	4699614	180
R2789	396350	4699666	180
R2790	396554	4699667	180
R2794	396376	4699695	180
R2796	396320	4699709	180
R2797	394238	4699713	179
R2798	396420	4699731	179
R2799	394217	4699749	179
R2801	398610	4699766	180
R2807	393180	4699852	180
R2808	398366	4699859	180
R2811	396463	4699874	180
R2812	398198	4699874	180
R2813	398330	4699924	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R2815	396295	4699925	180
R2816	394152	4699937	179
R2818	394111	4699986	179
R2820	394000	4700003	179
R2821	398113	4700012	180
R2822	393986	4700030	179
R2823	398812	4700040	180
R2831	396912	4700156	180
R2834	395936	4700189	179
R2835	393458	4700192	179
R2841	393774	4700271	178
R2843	393738	4700313	178
R2844	393681	4700301	178
R2845	395942	4700306	179
R2846	398047	4700304	180
R2849	393719	4700328	178
R2850	398024	4700342	180
R2851	397958	4700331	180
R2852	397949	4700342	180
R2853	394901	4700355	179
R2856	398037	4700366	180
R2857	399205	4700385	180
R2858	398019	4700387	180
R2859	398055	4700383	180
R2860	398074	4700399	180
R2861	398037	4700403	180
R2862	398093	4700415	180
R2864	398055	4700420	180
R2866	398111	4700431	180
R2867	398073	4700436	180
R2869	398129	4700447	180
R2870	398092	4700453	180
R2871	398148	4700464	180
R2872	398110	4700468	180
R2873	398166	4700480	180
R2874	398128	4700484	180
R2875	398184	4700496	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R2876	398147	4700501	180
R2878	398164	4700517	180
R2881	393623	4700568	179
R2883	395569	4700574	179
R2885	397840	4700595	180
R2886	393622	4700623	179
R2896	397562	4700808	180
R2901	399893	4700917	180
R2902	399808	4700923	180
R2904	397778	4700989	180
R2907	397297	4700993	180
R2908	397259	4701018	180
R2910	402389	4701049	180
R2915	402294	4701141	180
R2917	395145	4701175	179
R2919	397179	4701227	180
R2922	401569	4701239	181
R2923	398044	4701246	180
R2924	396028	4701250	180
R2925	394964	4701272	179
R2927	395114	4701269	179
R2931	396057	4701279	180
R2932	402475	4701306	180
R2935	398255	4701426	180
R2936	402671	4701436	181
R2937	401825	4701452	181
R2938	402031	4701461	181
R2940	394853	4701543	180
R2942	392611	4701563	180
R2944	398631	4701583	180
R2945	396761	4701585	180
R2946	396883	4701590	180
R2947	398678	4701601	180
R2948	392580	4701602	180
R2949	398465	4701616	180
R2950	402865	4701625	182
R2951	394644	4701638	179
R2952	394726	4701689	180
R2953	402950	4701690	182
R2954	402775	4701703	181
R2956	398628	4701745	180
R2958	402408	4701764	181
R2960	402767	4701829	182

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R2961	402951	4701843	182
R2962	403096	4701842	183
R2963	392341	4701856	179
R2967	401036	4701904	181
R2968	401088	4701946	181
R2969	398754	4701986	180
R2970	401438	4701997	182
R2971	392525	4702013	180
R2974	394377	4702051	180
R2975	392166	4702013	179
R2976	392677	4702057	180
R2978	396345	4702071	179
R2979	394264	4702067	180
R2980	392618	4702085	180
R2982	403269	4702164	183
R2984	399734	4702234	180
R2985	403848	4702235	184
R2986	399174	4702241	180
R2987	401206	4702292	181
R2989	403591	4702367	184
R2990	393974	4702385	180
R2991	394058	4702396	180
R2992	403638	4702405	184
R2993	397586	4702424	180
R2994	399413	4702442	180
R2995	391846	4702449	179
R2997	393938	4702552	180
R3000	401010	4702625	180
R3002	395770	4702661	180
R3003	397586	4702677	180
R3004	401797	4702683	182
R3005	403495	4702686	183
R3007	395801	4702838	179
R3008	400875	4702830	180
R3009	395618	4702841	179
R3010	403261	4702842	182
R3011	395654	4702863	178
R3012	393578	4702865	180
R3013	395636	4702883	178
R3014	400783	4702887	180
R3015	395616	4702905	179
R3016	395716	4702908	178
R3017	395602	4702920	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3019	402057	4702919	181
R3020	393649	4702916	180
R3021	397897	4702952	180
R3022	395565	4702961	178
R3023	400610	4702967	180
R3024	395646	4702982	177
R3026	395812	4703000	178
R3027	393420	4703000	180
R3028	393511	4703010	180
R3029	400060	4703014	180
R3030	397960	4703020	180
R3031	393495	4703026	180
R3032	393822	4703051	180
R3033	395598	4703063	178
R3035	402484	4703197	181
R3037	393671	4703245	180
R3039	393129	4703331	180
R3043	396437	4703453	180
R3046	395205	4703509	178
R3047	395062	4703507	179
R3049	396339	4703525	180
R3050	402597	4703541	180
R3052	400204	4703559	180
R3055	395092	4703628	178
R3056	398760	4703630	180
R3057	396259	4703644	180
R3058	403058	4703667	180
R3060	399911	4703725	180
R3062	392608	4703747	179
R3065	396800	4703767	180
R3066	394615	4703777	178
R3067	392852	4703787	180
R3068	402498	4703790	180
R3070	394535	4703808	177
R3071	402379	4703844	180
R3073	394742	4703865	180
R3074	392284	4703869	180
R3076	396673	4703907	179
R3083	399701	4703996	180
R3084	394766	4703990	180
R3086	401355	4704005	180
R3089	399148	4704038	180
R3090	401396	4704055	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3093	399285	4704082	180
R3095	401979	4704097	180
R3096	394890	4704110	180
R3097	399170	4704118	180
R3098	399716	4704121	180
R3099	394530	4704133	179
R3100	394913	4704132	180
R3101	394618	4704146	180
R3102	394940	4704151	180
R3103	392512	4704150	180
R3104	394961	4704171	180
R3107	394995	4704206	180
R3108	399232	4704203	180
R3110	401475	4704236	180
R3111	402227	4704243	180
R3116	395113	4704328	179
R3117	399432	4704325	180
R3120	397366	4704372	180
R3123	401720	4704472	180
R3124	395311	4704488	180
R3125	392200	4704488	179
R3126	397482	4704497	180
R3128	394312	4704536	180
R3129	399801	4704552	180
R3130	397898	4704551	180
R3131	392037	4704559	179
R3135	391974	4704644	179
R3136	391364	4704669	179
R3138	391271	4704689	179
R3139	391394	4704694	179
R3141	391416	4704711	179
R3142	395723	4704720	180
R3144	391308	4704719	179
R3145	394111	4704732	179
R3146	391457	4704743	179
R3147	391378	4704764	179
R3148	391477	4704768	179
R3149	394058	4704758	179
R3150	391500	4704788	179
R3151	399984	4704789	180
R3153	391414	4704807	179
R3156	391520	4704812	179
R3157	397975	4704813	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3158	391541	4704830	179
R3159	393876	4704834	178
R3160	391442	4704830	179
R3161	400016	4704842	180
R3162	391559	4704845	179
R3164	391493	4704858	179
R3165	391578	4704861	179
R3168	391598	4704887	179
R3169	391517	4704894	179
R3170	393969	4704897	176
R3171	398200	4704898	180
R3172	397989	4704900	180
R3173	400221	4704901	180
R3174	391535	4704910	179
R3175	391636	4704909	179
R3176	391564	4704925	179
R3178	391649	4704929	179
R3179	398114	4704932	180
R3180	391588	4704941	179
R3181	391666	4704943	179
R3183	393802	4704950	176
R3184	391782	4704958	179
R3185	391717	4704954	179
R3186	391630	4704976	179
R3187	395871	4704999	180
R3190	391718	4705047	180
R3191	391810	4705053	180
R3193	391669	4705069	180
R3197	391639	4705119	180
R3198	400205	4705128	180
R3200	393919	4705166	180
R3201	393338	4705185	180
R3202	398731	4705245	180
R3203	400659	4705296	180
R3204	396263	4705299	179
R3205	394122	4705333	180
R3206	398620	4705340	180
R3207	402655	4705345	180
R3210	394162	4705360	180
R3214	393170	4705398	179
R3216	394215	4705411	180
R3218	394359	4705436	180
R3219	392250	4705437	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3221	391350	4705453	180
R3222	398607	4705447	180
R3223	400962	4705451	180
R3224	391416	4705467	180
R3225	392189	4705470	179
R3226	400865	4705473	180
R3228	396460	4705497	179
R3229	400924	4705505	180
R3231	398809	4705522	179
R3234	401695	4705547	180
R3235	398730	4705584	179
R3237	398946	4705633	180
R3239	393282	4705674	180
R3241	394651	4705778	180
R3244	398159	4705870	180
R3247	392670	4705888	178
R3248	392796	4705912	177
R3251	399306	4705974	180
R3252	394850	4705994	179
R3255	395015	4706018	180
R3257	397099	4706033	180
R3260	401406	4706066	181
R3263	395209	4706141	179
R3265	399202	4706183	180
R3267	401597	4706249	180
R3268	392618	4706271	180
R3272	395359	4706317	179
R3273	392673	4706324	180
R3281	400193	4706432	180
R3283	393455	4706493	180
R3289	395660	4706592	179
R3291	393474	4706606	180
R3292	395607	4706626	179
R3293	392375	4706670	180
R3294	393656	4706755	180
R3296	397900	4706775	180
R3297	392156	4706791	178
R3298	392262	4706794	180
R3302	395827	4706848	179
R3303	392086	4706862	176
R3306	391719	4706942	176
R3308	394028	4706988	179
R3309	399583	4707030	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3311	400607	4707051	181
R3314	391986	4707092	179
R3315	394044	4707100	179
R3317	398303	4707115	180
R3318	396286	4707141	178
R3319	396929	4707199	179
R3321	394280	4707228	179
R3324	398512	4707269	180
R3328	394371	4707307	178
R3331	399263	4707347	179
R3332	391757	4707364	179
R3336	398697	4707481	179
R3337	399279	4707492	180
R3340	396698	4707520	179
R3342	390263	4707537	176
R3343	390490	4707623	176
R3345	399107	4707705	180
R3346	398998	4707703	180
R3349	390424	4707745	176
R3350	399080	4707751	180
R3351	392640	4707774	179
R3352	391366	4707803	178
R3353	396440	4707824	179
R3354	390714	4707823	178
R3355	394963	4707825	178
R3358	390709	4707922	178
R3359	394973	4707937	178
R3361	392844	4707946	179
R3363	399637	4708032	180
R3364	395133	4708047	178
R3366	392954	4708045	179
R3367	393088	4708050	179
R3368	395239	4708064	178
R3370	397280	4708094	178
R3374	396112	4708219	178
R3376	397581	4708374	180
R3380	400009	4708489	180
R3381	399920	4708504	180
R3382	395787	4708525	178
R3383	400218	4708533	180
R3384	395690	4708549	178
R3386	390525	4708629	176
R3387	397909	4708634	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3388	395764	4708643	177
R3389	395916	4708660	177
R3390	393827	4708704	178
R3391	400114	4708759	180
R3393	400232	4708801	178
R3394	393858	4708822	178
R3395	396101	4708826	177
R3398	392113	4709061	176
R3399	400514	4709073	180
R3400	398529	4709103	179
R3402	389990	4709201	177
R3403	396419	4709202	177
R3404	390086	4709256	177
R3405	390255	4709311	176
R3406	396569	4709325	177
R3407	400870	4709330	180
R3408	394394	4709342	177
R3409	400997	4709356	180
R3410	390339	4709369	176
R3411	396709	4709466	178
R3412	389898	4709472	176
R3413	390363	4709492	176
R3414	394651	4709517	177
R3415	399047	4709549	179
R3416	396850	4709566	178
R3417	390505	4709607	176
R3418	394747	4709607	177
R3419	396931	4709634	178
R3420	394879	4709692	177
R3422	390626	4709715	176
R3423	399267	4709731	179
R3424	394943	4709754	177
R3425	394588	4709799	177
R3426	389359	4709817	176
R3428	390778	4709859	176
R3429	397444	4710003	178
R3430	397476	4710112	178
R3431	389109	4710178	175
R3432	389216	4710191	175
R3433	399313	4710190	179
R3435	393416	4710199	177
R3436	391350	4710274	176
R3437	399886	4710282	179

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3441	391309	4710346	176
R3442	399300	4710345	179
R3443	394076	4710347	177
R3444	397759	4710376	179
R3445	399105	4710438	179
R3446	395895	4710498	179
R3447	391687	4710556	176
R3448	391567	4710567	176
R3449	400023	4710580	180
R3450	396007	4710594	179
R3451	389656	4710669	175
R3453	391794	4710667	176
R3454	395997	4710682	179
R3456	391873	4710693	176
R3457	396045	4710721	179
R3459	391903	4710736	176
R3460	393613	4710865	177
R3461	391950	4710874	176
R3462	392008	4710941	176
R3463	392180	4710976	176
R3465	396402	4711058	179
R3466	390126	4711062	175
R3469	390226	4711157	176
R3471	396679	4711176	179
R3472	390170	4711225	176
R3474	392288	4711226	176
R3475	394599	4711227	178
R3477	392566	4711341	177
R3480	390476	4711395	176
R3482	390516	4711433	176
R3483	390470	4711544	176
R3484	396946	4711510	179
R3487	397121	4711577	178
R3488	392754	4711592	177
R3489	392828	4711647	177
R3490	390777	4711736	176
R3491	392941	4711756	177
R3492	397953	4711740	180
R3493	395214	4711764	178
R3496	390876	4711832	176
R3497	397982	4711823	179
R3501	397725	4712013	180
R3502	393345	4712023	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R3503	397706	4712033	180
R3504	393250	4712054	178
R3508	395604	4712105	179
R3509	395652	4712143	179
R3512	393661	4712281	179
R3521	393834	4712443	179
R3522	393716	4712452	179
R3523	393933	4712513	179
R3525	396123	4712563	180
R3527	394173	4712751	180
R3529	394316	4712856	180
R3531	396857	4712946	180
R3540	396896	4713240	179
R3545	396331	4713523	180
R3546	396417	4713528	180
R3547	395156	4713559	180
R3548	396371	4713578	180
R3550	395259	4713677	180
R3556	395384	4713910	180
R3557	395815	4714042	180
R3559	395828	4714075	180
R3560	395803	4714099	180
R3561	395618	4714261	180
R3564	395977	4714325	180
R3567	395826	4714520	180
R3654	398885	4707847	178
R3656	399479	4700844	180
R3664	391970	4710829	176
R3669	395402	4704476	180
R4000	396446	4711080	179
R4001	396486	4711030	179
R4002	392706	4706293	180
R4003	391463	4710262	176
R5015	395659	4714325	180
R5016	394382	4713180	180
R5017	392119	4711384	176
R5019	391185	4704504	179
R5020	391687	4705061	180
R5021	391839	4704930	179
R5022	396459	4707799	179
R5023	393945	4705171	180
R5024	395012	4703718	178
R5025	395588	4702938	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
R5026	399281	4707459	180
R5027	397443	4702559	179
R5028	397481	4702594	180
R5029	399733	4704104	180
R5030	400220	4703534	180
R5031	401440	4706094	181
R5033	395568	4698880	180
R5034	396445	4699809	180
R5035	398075	4701267	180
R5037	397978	4700356	180
R5038	397277	4698675	180
R5039	397187	4698608	180
V6000	395216	4714513	180
V6002	394976	4709821	177
V6003	392734	4707700	180
V6004	394524	4707558	179
V6005	394050	4708864	178
V6006	394250	4709041	177
V6012	390034	4709071	177
V6013	390588	4708522	176
V6014	393452	4708497	178
V6015	393649	4708670	178
V6016	392829	4709653	176
V6017	394145	4709108	177
V6018	393117	4709902	177
V6019	393318	4710075	177
V6020	394423	4709938	177
V6021	392449	4707613	179
V6022	395600	4708508	178
V6023	394663	4709676	177
V6024	394503	4709737	177
V6026	390598	4707860	178
V6028	393022	4707958	179
V6029	394467	4709393	177
V6030	396009	4708868	177
V6031	395193	4709852	177
V6033	395684	4710282	178
V6034	397955	4710576	179
V6035	398196	4710789	179
V6036	395185	4710005	178
V6037	395078	4709911	177
V6038	394173	4710815	177
V6039	395372	4710168	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6040	395601	4710369	178
V6041	395852	4710588	179
V6042	394985	4711529	178
V6043	395288	4711795	179
V6044	395472	4711957	179
V6045	396555	4711209	180
V6046	396485	4709284	177
V6047	396671	4709534	177
V6048	395859	4710434	179
V6049	397527	4712054	180
V6050	395796	4712242	179
V6051	397421	4711961	179
V6052	394891	4707882	178
V6053	398430	4710994	179
V6054	398033	4711614	180
V6055	396291	4709115	177
V6056	394759	4711330	178
V6058	398308	4711486	180
V6059	396961	4713265	179
V6060	390711	4709672	177
V6062	393234	4710153	176
V6063	392814	4711516	177
V6064	389523	4710524	175
V6066	391125	4710199	176
V6067	392101	4710895	176
V6070	390678	4709808	176
V6071	391958	4710770	176
V6072	392690	4711407	177
V6073	392683	4711560	177
V6075	391494	4710365	176
V6076	390550	4707669	177
V6077	393978	4710803	177
V6078	393136	4711797	177
V6080	394613	4711361	178
V6081	394840	4711561	178
V6082	394959	4711665	178
V6083	395141	4711826	179
V6084	395441	4713831	180
V6085	393478	4712255	178
V6086	393957	4712676	179
V6087	394181	4712873	180
V6088	394659	4713295	179
V6090	393544	4712155	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6091	395649	4714017	180
V6094	394452	4699453	179
V6095	394711	4699149	179
V6096	395205	4698573	180
V6100	395893	4699210	180
V6101	398053	4699418	180
V6102	397908	4700246	180
V6103	396321	4702259	179
V6104	397635	4702769	180
V6105	398140	4703210	179
V6106	397287	4704174	180
V6107	398349	4703393	180
V6114	397784	4699180	180
V6115	397622	4700572	180
V6116	394434	4699650	179
V6117	396929	4701382	180
V6118	395731	4700557	179
V6119	398840	4703824	179
V6120	399009	4703971	180
V6121	398557	4705243	180
V6122	397182	4704242	180
V6126	396571	4699399	180
V6127	396062	4700181	180
V6129	396495	4703642	180
V6130	396968	4704055	180
V6131	396338	4705247	180
V6132	397522	4706275	179
V6133	398249	4705014	180
V6135	397972	4706827	179
V6136	399179	4709629	179
V6137	399663	4710053	179
V6138	400636	4709160	180
V6139	392220	4707252	180
V6144	398659	4699579	180
V6147	396925	4700295	180
V6150	403043	4701765	182
V6151	402910	4701648	182
V6152	402625	4701557	181
V6154	402185	4702899	181
V6157	397873	4699099	180
V6158	397511	4698530	180
V6160	397236	4698536	180
V6163	402808	4701558	181

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6168	397047	4698369	180
V6169	395437	4700651	179
V6170	396627	4699554	180
V6172	403810	4702340	184
V6179	393091	4700997	179
V6181	394045	4698909	180
V6182	391980	4702242	179
V6187	399440	4700640	180
V6188	392165	4700987	178
V6190	399915	4701058	180
V6191	400026	4701156	180
V6192	399122	4702066	180
V6193	399370	4702283	180
V6194	398476	4703345	179
V6196	397461	4704326	180
V6197	398634	4703646	180
V6199	399350	4704270	180
V6201	397906	4704715	180
V6202	398232	4705827	179
V6203	396681	4701665	180
V6204	393547	4700316	178
V6205	399383	4704139	180
V6206	398207	4700085	180
V6207	400698	4702837	180
V6208	397898	4700439	180
V6212	393384	4700011	180
V6214	395889	4702754	180
V6216	400515	4705923	180
V6217	397969	4706666	180
V6218	398273	4706931	180
V6219	398482	4707114	180
V6220	399388	4707198	179
V6221	398746	4707343	180
V6222	400331	4705139	180
V6224	400404	4708784	180
V6226	397932	4701020	180
V6227	397873	4701128	180
V6228	400972	4702520	180
V6229	399284	4702367	180
V6230	399288	4700507	180
V6231	398304	4701349	180
V6232	402417	4703749	180
V6233	402482	4704990	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6234	400706	4703589	180
V6235	402383	4705079	180
V6237	401643	4706138	180
V6241	400136	4703651	180
V6242	402130	4704856	180
V6253	391209	4705473	180
V6254	397078	4709807	178
V6255	397249	4709957	178
V6258	397675	4710331	178
V6261	401299	4705838	180
V6264	398909	4701881	180
V6265	399610	4704076	180
V6266	398716	4701712	180
V6267	401104	4702368	181
V6268	399796	4703861	180
V6269	399453	4706073	180
V6270	398657	4705531	180
V6271	399641	4706911	180
V6272	400749	4709097	180
V6273	394710	4705709	180
V6274	395667	4704822	180
V6276	396814	4705821	180
V6278	393221	4705743	180
V6280	393046	4705939	179
V6281	394450	4705641	180
V6282	394197	4707110	179
V6283	395092	4706205	180
V6284	395039	4707853	178
V6285	396232	4707213	178
V6287	394787	4705937	179
V6288	396107	4705205	180
V6293	391490	4705333	180
V6295	395743	4706621	179
V6296	395548	4708302	178
V6297	396573	4705611	179
V6298	393627	4706607	180
V6300	399319	4708004	179
V6301	398714	4709223	179
V6302	396901	4707801	179
V6304	397932	4710397	179
V6305	400224	4709156	180
V6307	397174	4708039	178
V6308	399047	4710476	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6309	399198	4710306	179
V6312	396519	4707306	179
V6313	394029	4704840	178
V6317	392204	4704344	179
V6318	391728	4704879	179
V6319	393318	4703095	180
V6320	392930	4705889	179
V6321	393116	4704462	179
V6322	393940	4704759	179
V6324	392837	4703634	180
V6326	395327	4700796	179
V6327	395453	4700889	179
V6328	396228	4702183	179
V6331	394491	4703632	180
V6332	394335	4701957	180
V6333	394974	4700451	179
V6335	393406	4703177	180
V6336	392302	4704415	179
V6337	395045	4701154	179
V6338	394682	4703802	180
V6339	393891	4702446	180
V6346	392852	4701257	179
V6347	394074	4698774	179
V6348	392236	4700890	178
V6354	395639	4714399	180
V6355	396325	4699647	180
V6356	398992	4699179	180
V6357	395609	4699109	180
V6358	396382	4699784	179
V6366	398001	4700287	180
V6369	399201	4707597	180
V6371	402698	4703478	180
V6373	402756	4703540	180
V6376	391732	4705092	180
V6377	391701	4705032	179
V6380	400531	4708963	179
V6381	394102	4704755	179
V6382	394829	4704060	180
V6383	398814	4709311	179
V6384	400442	4708939	179
V6385	393050	4710003	176
V6386	392873	4705983	178
V6387	393674	4700377	178

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6412	390645	4711670	176
V6413	389446	4710617	175
V6430	396399	4712772	180
V6442	394983	4709667	177
V6443	394556	4707427	179
V6444	396051	4708272	177
V6445	398303	4709024	180
V6446	399389	4710090	179
V6447	399911	4708364	180
V6448	399752	4710132	179
V6449	399996	4710348	180
V6450	400156	4710489	180
V6455	400523	4707182	179
V6456	399649	4707084	180
V6457	400103	4704937	180
V6458	397405	4706334	179
V6460	403221	4702081	183
V6461	396237	4703416	180
V6462	394169	4702323	180
V6463	394634	4703920	180
V6464	394920	4703846	180
V6466	395452	4706363	179
V6467	394708	4705867	179
V6468	395921	4705043	180

Receptor ID	Easting [m]	Northing [m]	Base Elevation [m]
V6486	397078	4698556	180
V6487	393603	4700205	178
V6488	398163	4699953	180
V6538	392560	4711454	177
V6541	390897	4707969	178
V6550	389145	4710352	175
V6601	390015	4711118	175
V6602	395513	4714514	180
V6609	396370	4703530	180
V6611	391182	4704629	179
V6623	391680	4705147	180
V6628	392411	4701937	179
V6634	395004	4713610	179
V6635	393866	4710531	177
V6636	398891	4699296	180
V6637	389254	4710438	175
V6638	391838	4710631	176
V6639	401939	4704482	180
V6640	400788	4705564	180
V6641	400912	4705647	180
V6642	401002	4705538	180
V6644	399869	4706628	180
V6645	400003	4706735	180
V6646	399053	4707580	179

For single storey receptors, the sound levels were considered at 1.5 m above grade and 30 m horizontally from the dwelling, in 16 evenly spaced directions. In this way, a circle of 16 dummy receptors was created around each single storey receptor. The reported sound level at each receptor is then taken to be the maximum sound level from the circle of dummy receptors. The table below shows the coordinates of the circle point with the maximum sound level for each of the 235 one-storey receptors (UTM17-NAD83 projection).

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R2247	395259	4697985	Pt1-R2247	395259	4698015	29.0
R2491	397167	4698366	Pt1-R2491	397167	4698396	29.3
R2667	395073	4698692	Pt1-R2667	395073	4698722	34.8
R2689	394005	4698817	Pt3-R2689	394027	4698839	31.1
R2709	396924	4699019	Pt2-R2709	396936	4699047	34.1
R2743	398934	4699230	Pt15-R2743	398913	4699251	29.0
R2768	396716	4699421	Pt4-R2768	396744	4699432	35.9
R2797	394238	4699713	Pt5-R2797	394268	4699713	36.4
R2799	394217	4699749	Pt5-R2799	394247	4699749	36.2
R2801	398610	4699766	Pt16-R2801	398598	4699793	32.9
R2807	393180	4699852	Pt3-R2807	393201	4699873	31.4
R2811	396463	4699874	Pt5-R2811	396493	4699874	34.6
R2812	398198	4699874	Pt14-R2812	398171	4699886	34.7
R2813	398330	4699924	Pt16-R2813	398319	4699952	34.4
R2816	394152	4699937	Pt5-R2816	394182	4699937	35.9
R2818	394111	4699986	Pt4-R2818	394139	4699998	35.7
R2821	398113	4700012	Pt13-R2821	398083	4700012	35.4
R2823	398812	4700040	Pt16-R2823	398801	4700068	35.4
R2831	396912	4700156	Pt7-R2831	396933	4700134	37.7
R2843	393738	4700313	Pt2-R2843	393750	4700340	35.7
R2844	393681	4700301	Pt2-R2844	393693	4700329	35.4
R2850	398024	4700342	Pt5-R2850	398054	4700341	35.4
R2852	397949	4700342	Pt10-R2852	397938	4700314	35.4
R2856	398037	4700366	Pt5-R2856	398067	4700366	35.5
R2858	398019	4700387	Pt5-R2858	398049	4700387	35.4
R2859	398055	4700383	Pt4-R2859	398083	4700394	35.5
R2860	398074	4700399	Pt4-R2860	398102	4700411	35.7
R2861	398037	4700403	Pt5-R2861	398067	4700403	35.5
R2862	398093	4700415	Pt4-R2862	398121	4700427	35.8
R2864	398055	4700420	Pt5-R2864	398085	4700420	35.6
R2866	398111	4700431	Pt4-R2866	398138	4700442	36.0
R2867	398073	4700436	Pt5-R2867	398103	4700436	35.7
R2869	398129	4700447	Pt4-R2869	398157	4700459	36.2
R2870	398092	4700453	Pt4-R2870	398119	4700464	35.8

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R2871	398148	4700464	Pt4-R2871	398175	4700475	36.4
R2872	398110	4700468	Pt4-R2872	398138	4700480	36.0
R2873	398166	4700480	Pt4-R2873	398193	4700491	36.6
R2874	398128	4700484	Pt4-R2874	398155	4700496	36.2
R2875	398184	4700496	Pt4-R2875	398212	4700507	36.9
R2876	398147	4700501	Pt4-R2876	398174	4700513	36.5
R2878	398164	4700517	Pt5-R2878	398194	4700517	36.7
R2881	393623	4700568	Pt2-R2881	393635	4700595	37.2
R2886	393622	4700623	Pt2-R2886	393633	4700651	37.8
R2896	397562	4700808	Pt9-R2896	397562	4700778	33.5
R2901	399893	4700917	Pt15-R2901	399872	4700939	29.6
R2904	397778	4700989	Pt7-R2904	397799	4700968	33.3
R2907	397297	4700993	Pt9-R2907	397297	4700964	32.8
R2910	402389	4701049	Pt1-R2910	402389	4701079	28.6
R2915	402294	4701141	Pt1-R2915	402294	4701171	29.4
R2922	401569	4701239	Pt2-R2922	401581	4701266	29.0
R2923	398044	4701246	Pt7-R2923	398065	4701225	33.4
R2924	396028	4701250	Pt15-R2924	396007	4701271	32.8
R2927	395114	4701269	Pt12-R2927	395086	4701257	35.2
R2931	396057	4701279	Pt16-R2931	396046	4701307	32.8
R2932	402475	4701306	Pt1-R2932	402475	4701336	30.8
R2940	394853	4701543	Pt13-R2940	394823	4701544	36.1
R2944	398631	4701583	Pt9-R2944	398631	4701553	32.7
R2946	396883	4701590	Pt1-R2946	396883	4701620	34.9
R2948	392580	4701602	Pt4-R2948	392608	4701614	35.2
R2949	398465	4701616	Pt9-R2949	398465	4701586	32.6
R2950	402865	4701625	Pt15-R2950	402844	4701646	32.7
R2961	402951	4701843	Pt15-R2961	402930	4701865	34.2
R2967	401036	4701904	Pt3-R2967	401057	4701925	29.7
R2968	401088	4701946	Pt4-R2968	401115	4701958	30.0
R2969	398754	4701986	Pt16-R2969	398742	4702014	31.9
R2971	392525	4702013	Pt4-R2971	392553	4702024	35.7
R2976	392677	4702057	Pt4-R2976	392705	4702069	37.4
R2984	399734	4702234	Pt15-R2984	399713	4702255	31.3
R2992	403638	4702405	Pt13-R2992	403608	4702405	28.8
R2994	399413	4702442	Pt16-R2994	399402	4702469	33.6
R2997	393938	4702552	Pt11-R2997	393916	4702531	37.2
R3003	397586	4702677	Pt13-R3003	397556	4702677	36.1
R3004	401797	4702683	Pt6-R3004	401825	4702671	36.0
R3008	400875	4702830	Pt1-R3008	400875	4702860	30.8
R3009	395618	4702841	Pt12-R3009	395590	4702829	37.1
R3010	403261	4702842	Pt12-R3010	403233	4702831	31.3

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R3011	395654	4702863	Pt12-R3011	395626	4702852	36.7
R3013	395636	4702883	Pt12-R3013	395608	4702872	36.8
R3015	395616	4702905	Pt12-R3015	395589	4702894	36.9
R3017	395602	4702920	Pt12-R3017	395575	4702909	36.9
R3021	397897	4702952	Pt15-R3021	397876	4702973	35.6
R3022	395565	4702961	Pt12-R3022	395537	4702949	37.0
R3024	395646	4702982	Pt12-R3024	395618	4702971	36.3
R3026	395812	4703000	Pt11-R3026	395791	4702979	35.3
R3035	402484	4703197	Pt9-R3035	402484	4703167	33.4
R3043	396437	4703453	Pt4-R3043	396465	4703465	35.4
R3046	395205	4703509	Pt10-R3046	395193	4703481	35.3
R3055	395092	4703628	Pt11-R3055	395071	4703607	35.1
R3058	403058	4703667	Pt11-R3058	403037	4703646	28.4
R3065	396800	4703767	Pt5-R3065	396830	4703767	37.9
R3066	394615	4703777	Pt14-R3066	394587	4703788	37.2
R3070	394535	4703808	Pt14-R3070	394507	4703820	38.2
R3074	392284	4703869	Pt3-R3074	392305	4703890	33.8
R3084	394766	4703990	Pt13-R3084	394736	4703990	36.1
R3089	399148	4704038	Pt8-R3089	399159	4704010	35.2
R3090	401396	4704055	Pt16-R3090	401385	4704082	34.8
R3096	394890	4704110	Pt13-R3096	394860	4704110	35.3
R3097	399170	4704118	Pt2-R3097	399182	4704145	35.4
R3098	399716	4704121	Pt16-R3098	399705	4704148	35.1
R3100	394913	4704132	Pt13-R3100	394883	4704132	35.1
R3101	394618	4704146	Pt12-R3101	394590	4704135	37.3
R3102	394940	4704151	Pt13-R3102	394910	4704152	35.0
R3103	392512	4704150	Pt2-R3103	392523	4704178	35.8
R3104	394961	4704171	Pt12-R3104	394933	4704160	34.9
R3107	394995	4704206	Pt12-R3107	394967	4704195	34.7
R3110	401475	4704236	Pt15-R3110	401454	4704257	37.4
R3123	401720	4704472	Pt15-R3123	401699	4704493	37.0
R3124	395311	4704488	Pt7-R3124	395332	4704467	34.1
R3128	394312	4704536	Pt11-R3128	394291	4704515	38.3
R3136	391364	4704669	Pt3-R3136	391385	4704690	33.2
R3142	395723	4704720	Pt5-R3142	395753	4704720	35.8
R3145	394111	4704732	Pt10-R3145	394100	4704704	38.1
R3148	391477	4704768	Pt4-R3148	391505	4704779	33.7
R3150	391500	4704788	Pt4-R3150	391528	4704800	33.8
R3151	399984	4704789	Pt14-R3151	399957	4704801	36.7
R3153	391414	4704807	Pt5-R3153	391444	4704807	33.5
R3156	391520	4704812	Pt4-R3156	391547	4704824	33.9
R3157	397975	4704813	Pt16-R3157	397964	4704841	37.2

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R3158	391541	4704830	Pt5-R3158	391571	4704830	34.1
R3160	391442	4704830	Pt4-R3160	391469	4704841	33.7
R3161	400016	4704842	Pt14-R3161	399989	4704854	36.7
R3162	391559	4704845	Pt4-R3162	391586	4704857	34.1
R3165	391578	4704861	Pt4-R3165	391606	4704872	34.3
R3171	398200	4704898	Pt15-R3171	398179	4704919	36.9
R3172	397989	4704900	Pt16-R3172	397978	4704927	38.0
R3173	400221	4704901	Pt15-R3173	400200	4704922	36.1
R3175	391636	4704909	Pt5-R3175	391666	4704909	34.7
R3176	391564	4704925	Pt4-R3176	391592	4704937	34.3
R3179	398114	4704932	Pt15-R3179	398093	4704954	37.6
R3180	391588	4704941	Pt5-R3180	391618	4704941	34.4
R3183	393802	4704950	Pt9-R3183	393802	4704920	37.4
R3184	391782	4704958	Pt5-R3184	391812	4704958	35.8
R3187	395871	4704999	Pt6-R3187	395898	4704987	36.5
R3198	400205	4705128	Pt16-R3198	400193	4705156	37.0
R3200	393919	4705166	Pt16-R3200	393908	4705194	37.4
R3205	394122	4705333	Pt16-R3205	394111	4705361	38.0
R3210	394162	4705360	Pt15-R3210	394141	4705381	38.0
R3216	394215	4705411	Pt15-R3216	394194	4705432	38.0
R3221	391350	4705453	Pt15-R3221	391329	4705475	34.5
R3222	398607	4705447	Pt12-R3222	398579	4705436	36.3
R3223	400962	4705451	Pt9-R3223	400962	4705421	36.6
R3224	391416	4705467	Pt15-R3224	391395	4705488	34.4
R3228	396460	4705497	Pt8-R3228	396472	4705469	36.7
R3229	400924	4705505	Pt9-R3229	400924	4705475	36.2
R3231	398809	4705522	Pt7-R3231	398830	4705500	36.2
R3239	393282	4705674	Pt5-R3239	393311	4705674	38.0
R3241	394651	4705778	Pt15-R3241	394630	4705800	36.8
R3244	398159	4705870	Pt11-R3244	398138	4705849	38.2
R3247	392670	4705888	Pt8-R3247	392682	4705860	35.4
R3252	394850	4705994	Pt15-R3252	394829	4706015	37.0
R3257	397099	4706033	Pt8-R3257	397111	4706005	36.8
R3260	401406	4706066	Pt11-R3260	401385	4706045	31.8
R3291	393474	4706606	Pt4-R3291	393502	4706617	37.1
R3292	395607	4706626	Pt15-R3292	395586	4706647	38.1
R3298	392262	4706794	Pt5-R3298	392292	4706794	33.6
R3302	395827	4706848	Pt14-R3302	395800	4706859	37.9
R3303	392086	4706862	Pt3-R3303	392107	4706883	33.3
R3308	394028	4706988	Pt8-R3308	394040	4706960	38.6
R3314	391986	4707092	Pt2-R3314	391998	4707119	33.5
R3319	396929	4707199	Pt6-R3319	396957	4707187	36.1

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R3346	398998	4707703	Pt1-R3346	398998	4707733	35.3
R3351	392640	4707774	Pt6-R3351	392668	4707762	36.6
R3355	394963	4707825	Pt6-R3355	394990	4707814	37.7
R3359	394973	4707937	Pt5-R3359	395003	4707937	37.5
R3361	392844	4707946	Pt7-R3361	392865	4707925	36.9
R3363	399637	4708032	Pt15-R3363	399616	4708053	37.7
R3364	395133	4708047	Pt6-R3364	395161	4708036	38.1
R3366	392954	4708045	Pt8-R3366	392965	4708017	36.6
R3367	393088	4708050	Pt8-R3367	393099	4708023	36.9
R3368	395239	4708064	Pt7-R3368	395260	4708043	38.5
R3374	396112	4708219	Pt11-R3374	396091	4708198	37.0
R3376	397581	4708374	Pt11-R3376	397559	4708353	37.4
R3380	400009	4708489	Pt14-R3380	399982	4708501	37.3
R3384	395690	4708549	Pt14-R3384	395663	4708561	37.5
R3388	395764	4708643	Pt14-R3388	395736	4708655	37.5
R3391	400114	4708759	Pt14-R3391	400087	4708771	37.3
R3393	400232	4708801	Pt14-R3393	400204	4708813	36.2
R3394	393858	4708822	Pt5-R3394	393888	4708822	34.5
R3398	392113	4709061	Pt12-R3398	392085	4709049	38.5
R3400	398529	4709103	Pt6-R3400	398556	4709091	36.0
R3404	390086	4709256	Pt13-R3404	390056	4709257	35.4
R3405	390255	4709311	Pt4-R3405	390283	4709323	35.2
R3408	394394	4709342	Pt6-R3408	394422	4709331	37.1
R3411	396709	4709466	Pt8-R3411	396721	4709438	38.3
R3412	389898	4709472	Pt12-R3412	389870	4709461	36.2
R3415	399047	4709549	Pt7-R3415	399068	4709527	37.8
R3416	396850	4709566	Pt7-R3416	396871	4709545	38.3
R3420	394879	4709692	Pt8-R3420	394890	4709664	37.8
R3424	394943	4709754	Pt8-R3424	394954	4709726	37.5
R3425	394588	4709799	Pt7-R3425	394609	4709778	35.5
R3428	390778	4709859	Pt1-R3428	390778	4709889	37.8
R3430	397476	4710112	Pt13-R3430	397446	4710112	37.0
R3433	399313	4710190	Pt9-R3433	399313	4710160	33.5
R3442	399300	4710345	Pt9-R3442	399300	4710315	32.4
R3444	397759	4710376	Pt13-R3444	397729	4710377	35.4
R3450	396007	4710594	Pt6-R3450	396035	4710583	37.6
R3451	389656	4710669	Pt8-R3451	389668	4710641	33.9
R3453	391794	4710667	Pt7-R3453	391815	4710646	33.9
R3456	391873	4710693	Pt6-R3456	391900	4710682	34.2
R3460	393613	4710865	Pt12-R3460	393585	4710854	34.1
R3462	392008	4710941	Pt6-R3462	392036	4710930	34.3
R3463	392180	4710976	Pt6-R3463	392208	4710964	35.8

Receptor ID	Centre of Building Receptor Location		Maximum Sound Level of Model Location			
	Easting [m]	Northing [m]	Model Receptor ID	Easting [m]	Northing [m]	Sound Level [dBA]
R3465	396402	4711058	Pt7-R3465	396423	4711037	37.1
R3471	396679	4711176	Pt8-R3471	396690	4711149	37.8
R3474	392288	4711226	Pt7-R3474	392310	4711205	34.5
R3480	390476	4711395	Pt9-R3480	390476	4711365	31.8
R3482	390516	4711433	Pt9-R3482	390516	4711403	31.5
R3484	396946	4711510	Pt9-R3484	396946	4711480	34.8
R3490	390777	4711736	Pt9-R3490	390777	4711706	29.8
R3491	392941	4711756	Pt9-R3491	392941	4711726	31.5
R3497	397982	4711823	Pt11-R3497	397961	4711802	29.9
R3501	397725	4712013	Pt11-R3501	397703	4711992	30.0
R3508	395604	4712105	Pt15-R3508	395583	4712126	36.3
R3509	395652	4712143	Pt15-R3509	395631	4712164	36.3
R3512	393661	4712281	Pt5-R3512	393691	4712281	32.2
R3523	393933	4712513	Pt5-R3523	393963	4712513	34.2
R3527	394173	4712751	Pt6-R3527	394201	4712739	36.6
R3540	396896	4713240	Pt12-R3540	396868	4713229	30.5
R3548	396371	4713578	Pt11-R3548	396350	4713557	33.3
R3559	395828	4714075	Pt10-R3559	395816	4714048	32.6
R3561	395618	4714261	Pt9-R3561	395618	4714231	31.4
R3664	391970	4710829	Pt6-R3664	391998	4710818	34.4
R3669	395402	4704476	Pt6-R3669	395430	4704465	34.3
R4000	396446	4711080	Pt7-R4000	396467	4711059	37.2
R5020	391687	4705061	Pt5-R5020	391717	4705061	35.1
R5021	391839	4704930	Pt5-R5021	391869	4704930	36.4
R5022	396459	4707799	Pt13-R5022	396429	4707800	36.3
R5025	395588	4702938	Pt12-R5025	395560	4702927	37.0
R5027	397443	4702559	Pt12-R5027	397415	4702547	37.4
R5031	401440	4706094	Pt11-R5031	401419	4706073	31.6
R5033	395568	4698880	Pt16-R5033	395557	4698908	35.6
R5034	396445	4699809	Pt5-R5034	396475	4699809	34.6
R5037	397978	4700356	Pt10-R5037	397966	4700328	35.4
R5038	397277	4698675	Pt1-R5038	397277	4698705	31.5
R5039	397187	4698608	Pt1-R5039	397187	4698638	31.0

APPENDIX D – COORDINATES OF PARTICIPANTS

Coordinates of all modeled participants for the Project (UTM17-NAD83 projection) are given in the table below:

Participant ID	Easting [m]	Northing [m]	Base Elevation [m]
R2964	396646	4701876	178
R2998	393613	4702566	180
R3053	399072	4703577	180
R3078	401114	4703939	180
R3113	401505	4704260	180
R3213	398467	4705381	180
R3312	398283	4707069	180
R3372	391071	4708142	177
R3375	399694	4708296	180
R3401	396500	4709170	177
R3468	392335	4711134	176
R3470	392361	4711149	176
R3535	394549	4713065	179
R3539	394757	4713232	179
R3544	395019	4713490	180
V6007	394488	4709251	177
V6008	394716	4709451	177
V6032	395456	4710076	178
V6057	396578	4711069	179
V6061	390964	4709896	176
V6065	390875	4709977	176
V6145	395225	4698797	180

Participant ID	Easting [m]	Northing [m]	Base Elevation [m]
V6148	396847	4700063	180
V6153	401951	4702692	182
V6195	397059	4703974	180
V6198	396106	4705045	180
V6200	399734	4704610	180
V6209	394292	4702186	180
V6250	393719	4706849	180
V6263	399022	4700272	180
V6277	395938	4706793	179
V6286	393955	4706897	179
V6289	395146	4707947	178
V6299	394240	4705456	180
V6303	397024	4709600	178
V6306	399855	4709568	179
V6314	394117	4704559	180
V6323	394378	4703692	180
V6325	392347	4705487	180
V6329	393141	4701119	179
V6330	394088	4702233	180
V6340	394875	4701347	179
V6465	395342	4706426	179
V6643	399983	4706490	180

APPENDIX E – TURBINE NOISE SPECIFICATIONS

This appendix contains the following supporting documentation for the Siemens SWT-3.2-113 2A Turbine models:

- Guarantee letter from Siemens
- Acoustic emission specifications for each turbine model
- Wind Turbine noise measurement test reports, SWT-3.2-113 2A, as per IEC 61400-11 Ed. 2.1

SIEMENS

July 15, 2015

To Ontario Ministry of Environment
Re. North Kent Wind 1 LP Project

Dear Sir/Madam,

In respect to the North Kent Wind 1 LP Project, Siemens Canada Limited ("Siemens") will provide the following SWT D3 Direct Drive wind turbine generators: (i) SWT-3.2-113(2A) with a Max. Power of 3200 kW, (ii) SWT-3.2-113(2A) with a Max. Power of 2942 kW, and (iii) SWT-3.2-113(2A) with a Max. Power of 2772 kW, as applicable for the Project Site. In accordance with the Turbine Supply Agreement to be executed between Siemens and the Project Developer, Siemens will guarantee the maximum broadband sound power level value for these units at their respective maximum rated power level shown in the table below.

Official Nameplate	Maximum Rated Power Level	Maximum Broadband Sound Power Level	Hub Height
SWT-3.2-113 (2A), Max. Power 3200 kW	3.200 MW	106 dBA	99.5m
SWT-3.2-113 (2A), Max. Power 2942 kW	2.942 MW	105 dBA	99.5m
SWT-3.2-113 (2A), Max. Power 2772 kW	2.772 MW	104 dBA	99.5m

Siemens confirms that the attached acoustic emissions data sheets correspond to each of the nameplated wind turbine generators listed above. These sound power levels are presented with reference to the IEC 61400-11:2002 second edition dated 2002 Code with amendment 1 dated 2006-05 based on a hub height of 99.5m.

Siemens can also confirm that the wind turbine generators to be supplied for the North Kent Wind 1 LP Project should not be tonal since the SWT-3.2-113 wind turbine generators have not been found to produce tonal audibility levels above 3 dB as stated in our acoustic emission documents and calculated using the criteria specified in accordance with the IEC 61400-11:2002 Code with amendment 1 dated 2005-05. In addition, no test uncertainty needs to be included in the calculated tonal audibility per the IEC 61400-11:2002 Code with amendment 1 dated 2005-05.

Regards,

Donald R. Marcucci
Director Project Acquisitions

Siemens Energy, Inc.
4400 Alafaya Trail
Orlando, FL 32826

North Kent 1 - Ontario - Canada
SWT-3.2-113 (2A), Rev.0, Max. Power 3200 kW
Contract Acoustic Emission, Hub Height 99.5 m

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_{WA}) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	3	4	5	6	7	8	9	10	11	Up to cut-out
Max. Power 3200kW	90.9	95.5	100.1	104.9	106.0	106.0	106.0	106.0	106.0	106.0

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

Typical Octave Bands
Typical, not warranted octave band spectra are tabulated below referenced to 10 m height.

	Wind Speed (m/s)				
Octave band, center frequency [Hz]	6	7	8	9	10
63	90.7	91.9	90.8	90.7	91.2
125	94.3	94.5	94.4	94.7	94.9
250	97.4	97.8	96.7	96.7	96.5
500	97.5	98.4	98.4	98.1	97.9
1000	98.5	100.0	100.1	100.2	100.0
2000	97.7	99.1	99.5	99.4	99.9
4000	94.3	95.7	96.7	96.8	96.3
8000	85.1	86.8	86.1	86.1	86.0

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

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

Tonal Audibility
Typical tonal audibility for the Siemens wind turbine generators has not exceeded 3 dB(A) as determined in accordance with IEC 61400-11:2002 with amendment 1 dated 2006-05.

North Kent 1 - Ontario - Canada
SWT-3.2-113 (2A), Rev.0, Max. Power 2942 kW
Contract Acoustic Emission, Hub Height 99.5 m

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_{WA}) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	3	4	5	6	7	8	9	10	11	Up to cut-out
Max. Power 2942kW	90.9	95.5	100.1	104.7	105.0	105.0	105.0	105.0	105.0	105.0

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

Typical Octave Bands
Typical, not warranted octave band spectra are tabulated below referenced to 10 m height.

	Wind Speed (m/s)				
Octave band, center frequency [Hz]	6	7	8	9	10
63	90.0	90.8	91.4	91.4	91.2
125	92.8	92.9	93.4	93.9	93.7
250	95.9	96.0	95.8	96.2	96.1
500	97.5	97.6	97.1	96.7	97.3
1000	98.6	98.8	98.5	98.2	98.9
2000	98.1	98.4	99.0	99.1	98.5
4000	95.3	96.3	96.0	95.9	95.8
8000	83.4	84.1	84.1	83.8	82.0

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

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

Tonal Audibility
Typical tonal audibility for the Siemens wind turbine generators has not exceeded 3 dB(A) as determined in accordance with IEC 61400-11:2002 with amendment 1 dated 2006-05.

North Kent 1 - Ontario - Canada
SWT-3.2-113 (2A), Rev.0, Max. Power 2772 kW
Contract Acoustic Emission, Hub Height 99.5 m

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_{WA}) presented are valid for the corresponding wind speeds referenced to a height of 10 m above ground level.

Wind speed [m/s]	3	4	5	6	7	8	9	10	11	Up to cut-out
Max. Power 2772kW	90.9	95.5	100.1	103.8	104.0	104.0	104.0	104.0	104.0	104.0

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

Typical Octave Bands
Typical, not warranted octave band spectra are tabulated below referenced to 10 m height.

	Wind Speed (m/s)				
Octave band, center frequency [Hz]	6	7	8	9	10
63	89.8	91.0	91.3	91.2	91.5
125	91.3	93.0	93.6	93.2	93.7
250	94.9	94.8	94.3	95.0	95.2
500	96.5	96.3	95.5	95.6	96.2
1000	97.7	97.6	97.5	97.6	97.4
2000	97.2	97.3	97.1	97.2	96.9
4000	94.4	95.3	96.1	95.6	95.0
8000	82.7	83.5	83.2	83.0	84.6

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

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

Tonal Audibility
Typical tonal audibility for the Siemens wind turbine generators has not exceeded 3 dB(A) as determined in accordance with IEC 61400-11:2002 with amendment 1 dated 2006-05.

TEST REPORT SUMMARY

DANAK TEST Reg.nr. 134

This is a summary of the test report P6.056.15. The full report has 33 pages in total

Wind Turbine noise measurement, IEC 61400 ed. 2.1
Siemens SWT-3.2-113 2A Rev. 0

Report no.: P6.056.15
Aarhus 17. July 2015
Project: 35.6342.32

Client:	Commissioned by:
Siemens Wind Power A/S Borupvej 16 DK-7330 Brande Denmark	Henrik Kjær Andersen Telephone: +45 30677942
Prepared by: Bo Søndergaard Checked by: Jørgen Heiden	Signatory: Bo Søndergaard Bo Søndergaard

Ver. 2007.11.30 PHe

Summary:

For the Siemens wind turbine type SWT-3.2-113 2A Rev 0, serial number 3000364, the following acoustic data has been determined according to IEC 61400-11 Edition 2.1.:

Standardized wind speed [m/s]	5	6	7	8*	9*	10*	11*
Power [kW]	1038	1799	2650	3115	3196	3200	3200
Apparent Sound Power Level L_{WA} [dB re 1 pW]	98,9	104,8	105,6	105,0	104,8	105,2	104,8
Uncertainty U_c [dB]	1,3	1,0	1,0	1,1	1,4	1,5	1,7
Tonal Audibility ΔL_a [dB]	-13,8	-12,5	-16,3	-7,8	-0,5	-1,4	-3,7

* corresponds to more than 95% of rated power.

Third octave band spectra are found in full report.

The measurements were carried out on the 16th of January 2015, at Flø wind farm, Brande, Denmark.

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File Summary P6.056.15 SWT-3.2-113 2A.docx

CVR-no. 48233511

TEST REPORT SUMMARY

This is a summary of the test report P6.120.15. The full report has 27 pages in total

Summary:

Wind Turbine noise measurement, IEC 61400 ed. 2.1
Siemens SWT-3.2-113 2A Rev. 0 mode -1 dB

Report no.: P6.120.15
Aarhus 31. March 2015
Project: 35.6342.27

Client:	Commissioned by:
Siemens Wind Power A/S Borupvej 16 DK-7330 Brande Denmark	Tomas R. Hansen Telephone: +45 9942 2605
Prepared by: Mathias Bødker Borup **Checked by:** Bo Søndergaard	**Signatory:** Bo Søndergaard Bo Søndergaard

Ver. 2007.11.30 PHe

Summary:

For the Siemens wind turbine type SWT-3.2-113 2A mode -1 dB, serial number 3000364, the following acoustic data has been determined according to IEC 61400-11 Edition 2.1:

Standardized wind speed [m/s]	6	7*	8*	9*	10*
Power [kW]	1788	2564	2893	2940	2942
Apparent Sound Power Level L_{WA} [dB re 1 pW]	103,6	104,1	103,6	103,6	104,1
Uncertainty U_c [dB]	1,1	1,1	1,4	1,4	1,5
Tonal Audibility ΔL_a [dB]	-	-8,5	-6,2	-7,9	-7,8

* correspond to more than 95% of rated power.

Third octave band spectra are found in the full report.

The measurements were carried out on the 21st of March 2015, at Flø wind farm, Brande, Denmark.

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File Summary P6.120.15 SWT-3.2-113 2A mode -1 dB .docx

TEST REPORT SUMMARY

This is a summary of the test report P6.119.15. The full report has 27 pages in total

Summary:

Wind Turbine noise measurement, IEC 61400 ed. 2.1
Siemens SWT-3.2-113 2A Rev. 0 mode -2 dB

Report no.: P6.119.15
Aarhus 31. March 2015
Project: 35.6342.27

Client:	Commissioned by:
Siemens Wind Power A/S Borupvej 16 DK-7330 Brande Denmark	Tomas R. Hansen Telephone: +45 9942 2605
Prepared by: Mathias Bødker Borup **Checked by:** Bo Søndergaard	**Signatory:** Bo Søndergaard Bo Søndergaard

Ver. 2007.11.30 PHe

Summary:

For the Siemens wind turbine type SWT-3.2-113 2A mode -2dB, serial number 3000364, the following acoustic data has been determined according to IEC 61400-11 Edition 2.1:

Standardized wind speed	[m/s]	6	7*	8*	9*	10*
Power	[kW]	1781	2508	2746	2771	2772
Apparent Sound Power Level L_{WA}	[dB re 1 pW]	102,3	102,5	102,2	102,2	102,6
Uncertainty U_c	[dB]	0,9	1,0	1,1	1,3	1,2
Tonal Audibility ΔL_a	[dB]	-9,8	-11,8	-	-10,9	-7,7

* correspond to more than 95% of rated power.

Third octave band spectra are found in the full report.

The measurements were carried out on the 21st of March 2015, at Flø wind farm, Brande, Denmark.

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File Summary P6.119.15 SWT-3.2-113 2A mode -2 dB.docx

APPENDIX F – COORDINATES OF TURBINES AND TRANSFORMERS

Coordinates of turbines considered in the North Kent 1 Project are listed below in UTM17-NAD83 projection.

Turbine ID	Easting [m]	Northing [m]	Max Power [MW]	Broadband PWL [dBA]	Base Elevation [m]
T1	396873	4702359	2.942	105	180
T2	396542	4704663	3.200	106	180
T3	394852	4708795	2.772	104	180
T4	395101	4709126	2.772	104	177
T5	391442	4708371	2.942	105	178
T6	397729	4705464	3.200	106	177
T7	399956	4705846	3.200	106	180
T11	395880	4709716	2.772	104	180
T12	401302	4704868	2.772	104	177
T14	394310	4706512	2.772	104	180
T15	393831	4705813	2.772	104	179
T16	396836	4708763	2.772	104	180
T17	397508	4709300	2.772	104	179
T19	393752	4704242	2.772	104	178
T20	394829	4712531	2.942	105	179
T21	395052	4712806	2.772	104	179
T23	392550	4704974	3.200	106	180
T24	392722	4710675	2.772	104	179
T26	395026	4706889	2.772	104	176
T27	395614	4707629	2.772	104	179
T28	399611	4709270	3.200	106	178
T30	399317	4708555	3.200	106	180
T31	399318	4704940	2.772	104	179
T32	397777	4707587	3.200	106	180
T33	391381	4709440	2.942	105	179
T34	390530	4710407	2.772	104	177
T35	402374	4702350	3.200	106	176
T36	398719	4700650	2.772	104	183
T37	399138	4703184	2.772	104	180
T38	397398	4703580	2.942	105	180
T39	393206	4702357	2.772	104	180

Turbine ID	Easting [m]	Northing [m]	Max Power [MW]	Broadband PWL [dBA]	Base Elevation [m]
T40	393486	4701762	2.772	104	180
T41	394992	4702594	3.200	106	180
T42	393628	4701244	2.772	104	180
T43	395556	4713106	3.200	106	180
T44	393222	4707428	2.942	105	180
T45	396579	4710352	2.772	104	178
T46	397036	4710748	2.772	104	178
T48	394303	4700916	2.772	104	178
T49	396365	4706402	2.772	104	179
T50	397338	4699753	3.200	106	179
T51	394004	4703960	2.772	104	180
T52	391721	4708652	2.772	104	180
T73	395167	4699474	2.942	105	177
T72	394976	4699764	2.942	105	179
NK1 Transformer	400584	4704198	-	106.5	180

Coordinates of the East Lake St. Clair Wind Farm turbines are listed below in UTM17-NAD83 projection.

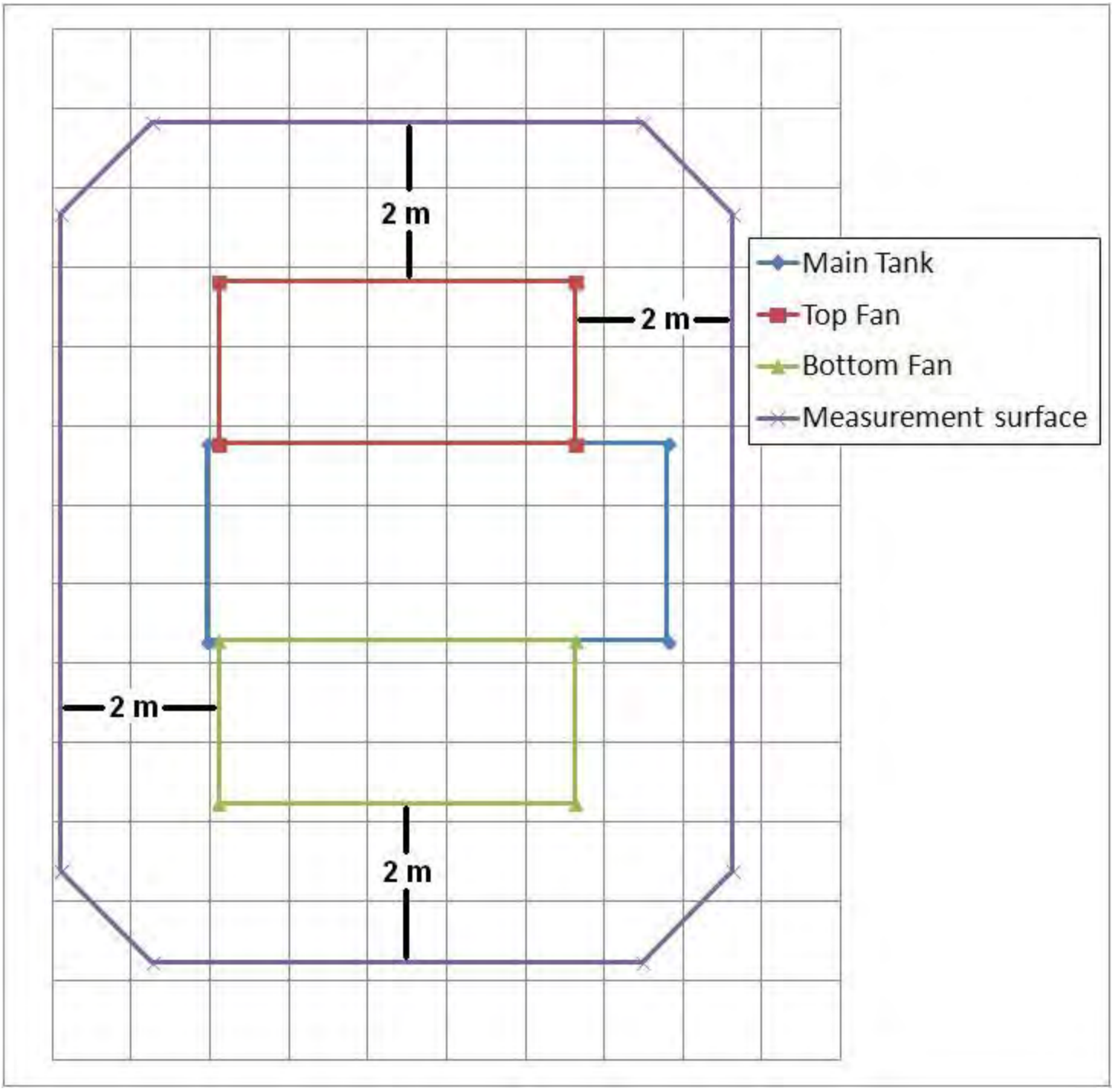
Turbine ID	Easting [m]	Northing [m]	Elevation [m]
T101	381921	4706602	175
T102	384912	4700680	175
T103	386830	4709220	175
T104	389653	4699776	178
T105	384372	4707564	175
T106	388873	4700621	176
T107	387455	4706675	176
T108	384314	4708786	175
T109	387619	4699731	177
T110	385347	4699559	176
T111	384553	4700419	175
T112	386728	4702593	176
T113	382560	4708108	175
T114	384041	4707916	175
T115	382130	4707036	175
T116	382081	4707408	175
T117	382166	4707720	175
T118	385592	4706899	175
T119	383748	4711936	175
T120	386134	4712622	175
T121	384629	4706397	175
T122	388064	4705624	178
T123	388160	4705894	178
T124	390309	4702086	178
T125	387752	4701442	176
T126	386017	4700139	176
T127	386593	4700641	176
T128	383033	4708013	175
T129	385924	4712859	175
T130	383748	4711591	175
T131	385023	4708620	175
T132	385220	4708437	175
T133	385550	4701340	175
T134	384836	4711900	175
T136	385091	4711213	175
T137	385930	4705565	176
T138	390544	4705948	180
T139	389491	4701060	177
T140	386304	4707518	175
T141	384939	4704658	176
T142	384664	4710807	175

Turbine ID	Easting [m]	Northing [m]	Elevation [m]
T143	386334	4712343	175
T144	386212	4709998	175
T145	387204	4708639	175
T146	388068	4710381	175
T147	388253	4710171	175
T148	388983	4709347	176
T149	389176	4709116	176
T150	389477	4706241	177
T151	390084	4705558	180
T152	386489	4706070	176
T153	383592	4707836	175
T154	389945	4701756	178
T155	385455	4705198	175
T156	386636	4709446	175
ELSC Transformer	394245	4711067	178

Coordinates of the Marsh Line Wind Farm turbines are listed below in UTM17-NAD83 projection.

Turbine ID	Easting [m]	Northing [m]	Elevation [m]
T-1	388628	4702397	178
T-2	388213	4703722	178
T-3	388352	4703555	178
T-4	388948	4702974	178
T-5	389082	4702798	178

APPENDIX G – NORTH KENT 1 EXAMPLE TRANSFORMER DIAGRAM



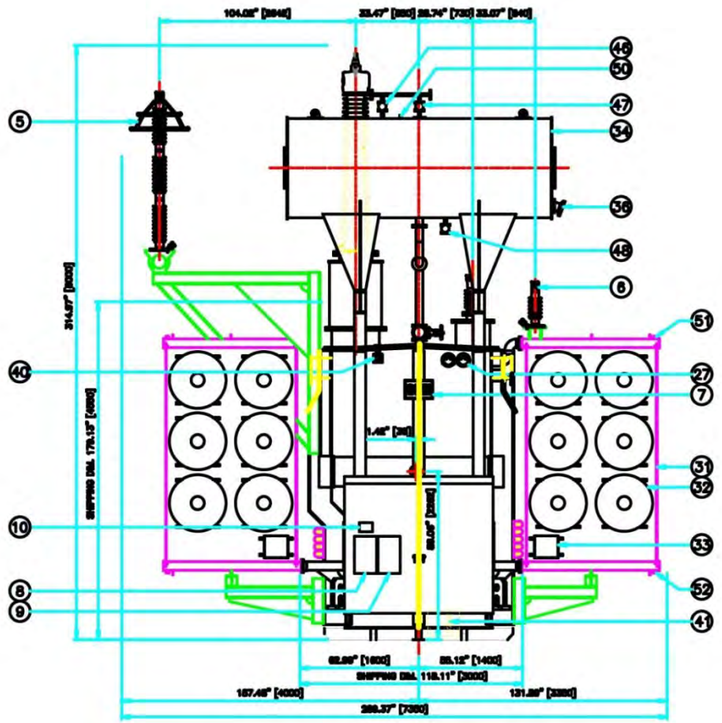
North Kent 1 transformer – diagram of sound measurement surface area, as per IEEE C57.12.9

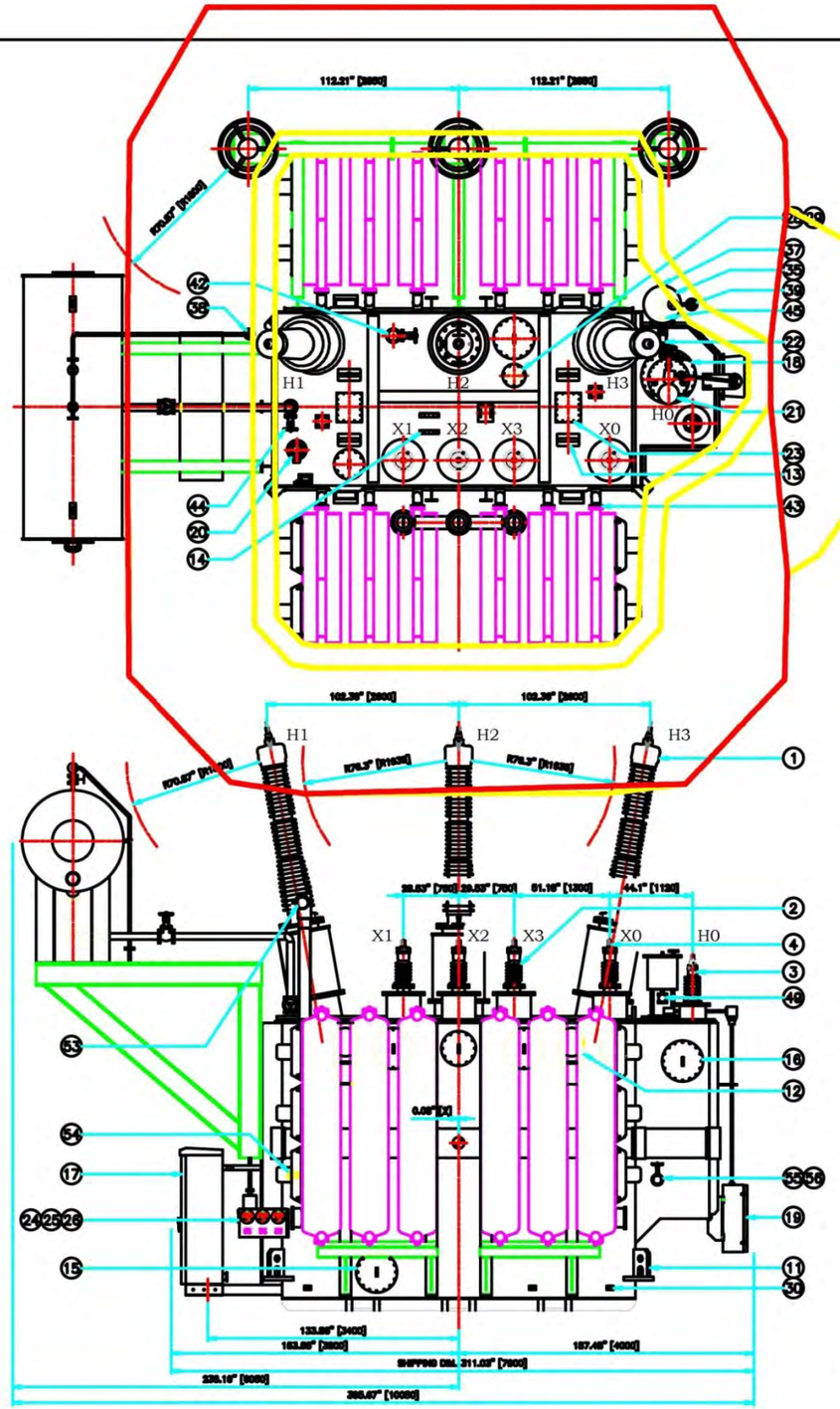
 # WEIGHT #

CORE AND COIL	:	153,880 lbs (69,800 kg)
TANK AND FITTING	:	86,640 lbs (39,300 kg)
INSULATING OIL	:	72,972 lbs (33,100 kg)
SHIPPING (WITHOUT OIL)	:	189,154 lbs (85,800 kg)
TOTAL	:	313,493 lbs (142,200 kg)

 # NOTE #

1. DIMENSION TOLERANCE : ± 5%
2. ALL DIMENSIONS ARE IN INCHES [MILLIMETERS].
3. ⊕ MARK : COMPLETE CENTER OF GRAVITY (WITH OIL)





PART LIST

ITEM	DESCRIPTION
1	H.V BUSHING
2	X.V BUSHING
3	H.V NEUTRAL BUSHING
4	X.V NEUTRAL BUSHING
5	H.V ARRESTER
6	X.V ARRESTER
7	HICO MARK
8	NAMEPLATE
9	VALVE LOCATION NAMEPLATE
10	OIL LEVEL TEMPERATURE CURVE PLATE
11	TRANSFORMER JACKS STEPS WITH PULLING EYE
12	LIFTING HOOK FOR MAIN TANK
13	LIFTING STUD FOR CORE & COIL ASS'Y
14	SUPPORT FOR MULTI-AXIS IMPACT RECORDER
15	MANHOLE
16	HANDHOLE
17	LOCAL CONTROL PANEL
18	ON LOAD TAP CHANGER
19	MOTOR DRIVE UNIT FOR OLTC
20	PRESSURE RELIEF DEVICE FOR MAIN TANK
21	PRESSURE RELIEF DEVICE FOR OLTC TANK
22	PROTECTIVE RELAY FOR OLTC
23	END FRAME SUPPORTER
24	WINDING TEMPERATURE INDICATOR FOR H.V
25	WINDING TEMPERATURE INDICATOR FOR X.V
26	OIL TEMPERATURE INDICATOR
27	THERMO POCKET FOR TOP OIL & WINDING TEMPERATURE
28	GROUNDING BUSHING FOR CORE
29	GROUNDING BUSHING FOR END FRAME
30	GROUNDING TERMINAL
31	COOLING RADIATORS
32	FAN WITH MOTOR
33	JUNCTION BOX FOR COOLING FANS
34	CONSERVATOR FOR MAIN TANK
35	CONSERVATOR FOR OLTC TANK
36	OIL LEVEL GAUGE FOR MAIN CONSERVATOR
37	OIL LEVEL GAUGE FOR OLTC CONSERVATOR
38	BREATHER FOR MAIN CONSERVATOR
39	BREATHER FOR OLTC CONSERVATOR
40	UPPER FILTER VALVE
41	LOWER FILTER & DRAIN VALVE WITH SAMPLING DEVICE
42	VACUUM VALVE FOR MAIN TANK
43	INLET AND OUTLET VALVE FOR RADIATOR
44	CONNECTING VALVE FOR MAIN CONSERVATOR
45	CONNECTING VALVE FOR OLTC CONSERVATOR
46	VACUUM VALVE FOR CONSERVATOR
47	EQUALIZING VALVE FOR CONSERVATOR
48	DRAIN VALVE FOR MAIN CONSERVATOR
49	DRAIN VALVE FOR OLTC CONSERVATOR
50	AIR VENT FOR CONSERVATOR
51	AIR RELEASE PLUG FOR RADIATOR
52	DRAIN PLUG FOR RADIATOR
53	GAS ACCUMULATION INDICATOR
54	SAMPLING VALVE FOR GAS ACCUMULATION INDICATOR
55	CONNECTING VALVE FOR RAPID PRESSURE RISE RELAY
56	RAPID PRESSURE RISE RELAY

3φ 60Hz 70/100/125MVA ONAN/ONAF/ONAF 230/34.5kV YND 11/OLTC "Oakcreek & Brown/Holyhead Ridge"

TYPE	DWG. NAME
POWER TRANSFORMER	OUTLINE

DRAWN CHECKED CHECKED CHECKED APPROVED | SCALE 1/35 | DATE 2009.03.03

HICO HYOSUNG CORPORATION

CHANGE

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