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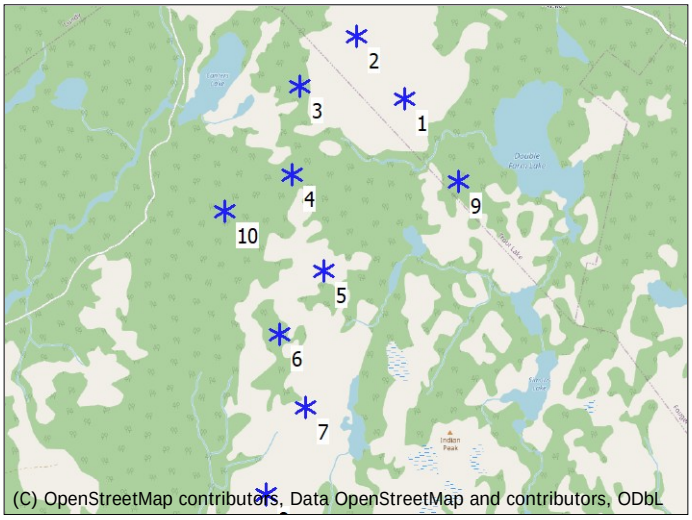
Calculated:
2026-05-08 12:06 PM/4.2.303

DECIBEL - Main Result

Calculation: Site 99 Analysis - Noise Map

Noise propagation model:
ISO 9613-2:2024 United Kingdom
Wind speed:
4.0 m/s - 12.0 m/s, step 1.0 m/s
Ground attenuation:
General, Ground factor: 0.5
Valley effect, Penalty: 3.0 dB
Topographic screening, Reduction: 2.0 dB
Type of demand in calculation:
WTG noise is compared to ambient noise plus 5dB margin with the option of a floor setting (e.g. 35dB)
Noise values in calculation:
All noise values are 90% exeedence values (L90) designed to show compliance with ETSU-R-97 limits
Pure tones:
Fixed penalty added to source noise of WTGs with pure tones
WTG catalogue
Uncertainty margin:
0.0 dB; Uncertainty margin in NSA has priority
Calculation height above ground level:
4.0 m
Octave band data required

All coordinates are in
UTM (north)-WGS84 Zone: 20



Scale 1:75,000
Existing WTG

WTGs

	Easting	Northing	Z	Row data/Description	WTG type Valid	Manufact.	Type-generator	Power, rated	Rotor diameter	Hub height	Noise data Creator	Name	First wind speed	LwaRef	Last wind speed	LwaRef	
			[m]					[kW]	[m]	[m]			[m/s]	[dB(A)]	[m/s]	[dB(A)]	
1	620,638	5,012,469	135.0	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
2	620,158	5,013,069	120.9	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
3	619,598	5,012,569	121.0	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
4	619,538	5,011,689	132.8	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
5	619,878	5,010,749	145.0	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
6	619,438	5,010,109	140.1	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
7	619,718	5,009,389	129.9	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
8	619,338	5,008,509	120.0	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
9	621,198	5,011,649	105.9	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g
10	618,878	5,011,309	129.0	Siemens Gamesa SG 7...	Yes	Siemens Gamesa	SG 7.0-170-7,000	7,000	170.0	135.0	EMD	AM 0	4.0	98.8	12.0	106.5	g

g) Data calculated from data for other wind speed (uncertain)

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DECIBEL - Assumptions for noise calculation

Calculation: Site 99 Analysis - Noise Map

Noise calculation model:
ISO 9613-2:2024 United Kingdom
Wind speed (at 10 m height):
4.0 m/s - 12.0 m/s, step 1.0 m/s
Ground attenuation:
General, Ground factor: 0.5
Valley effect, Penalty: 3.0 dB
Topographic screening, Reduction: 2.0 dB
Meteorological coefficient, C0:
Selected option: Fixed value: 0.0 dB
Type of demand in calculation:
3: WTG noise is compared to ambient noise plus margin (UK, AT etc.)
Noise values in calculation:
All noise values are 90% exceedance values (L90)
Pure tones:
Fixed penalty added to source noise of WTGs with pure tones
WTG catalogue
Height above ground level, when no value in NSA object:
4.0 m; Don't allow override of model height with height from NSA object
Uncertainty margin:
0.0 dB; Uncertainty margin in NSA has priority
Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:
0.0 dB(A)
Octave data required
Frequency dependent air absorption

63 [dB/km]	125 [dB/km]	250 [dB/km]	500 [dB/km]	1,000 [dB/km]	2,000 [dB/km]	4,000 [dB/km]	8,000 [dB/km]
0.1	0.4	1.0	1.9	3.7	9.7	32.8	117.0

The air absorption is for a temperature of 10.0 degrees C and 70.0 % humidity.

All coordinates are in
UTM (north)-WGS84 Zone: 20

WTG: Siemens Gamesa SG 7.0-170 7000 170.0 !O!
Noise: AM 0

Source	Source/Date	Creator	Edited
Manufacturer	2026-02-19	EMD	2026-02-25 1:48 PM
Rev. 2			

					Octave data							
Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones	63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
Interpolated	135.0	4.0	98.8	No	80.7	86.2	89.8	88.8	91.5	94.3	90.8	75.5
Interpolated	135.0	5.0	103.6	No	85.5	91.0	94.5	93.4	96.3	99.2	95.7	80.2
Interpolated	135.0	6.0	106.5	No	88.3	93.9	97.3	96.3	99.1	102.0	98.5	83.0
Interpolated	135.0	7.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1
Interpolated	135.0	8.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1
Interpolated	135.0	9.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1
Interpolated	135.0	10.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1
Interpolated	135.0	11.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1
Interpolated	135.0	12.0	106.5	No	88.4	93.9	97.4	96.3	99.2	102.1	98.6	83.1

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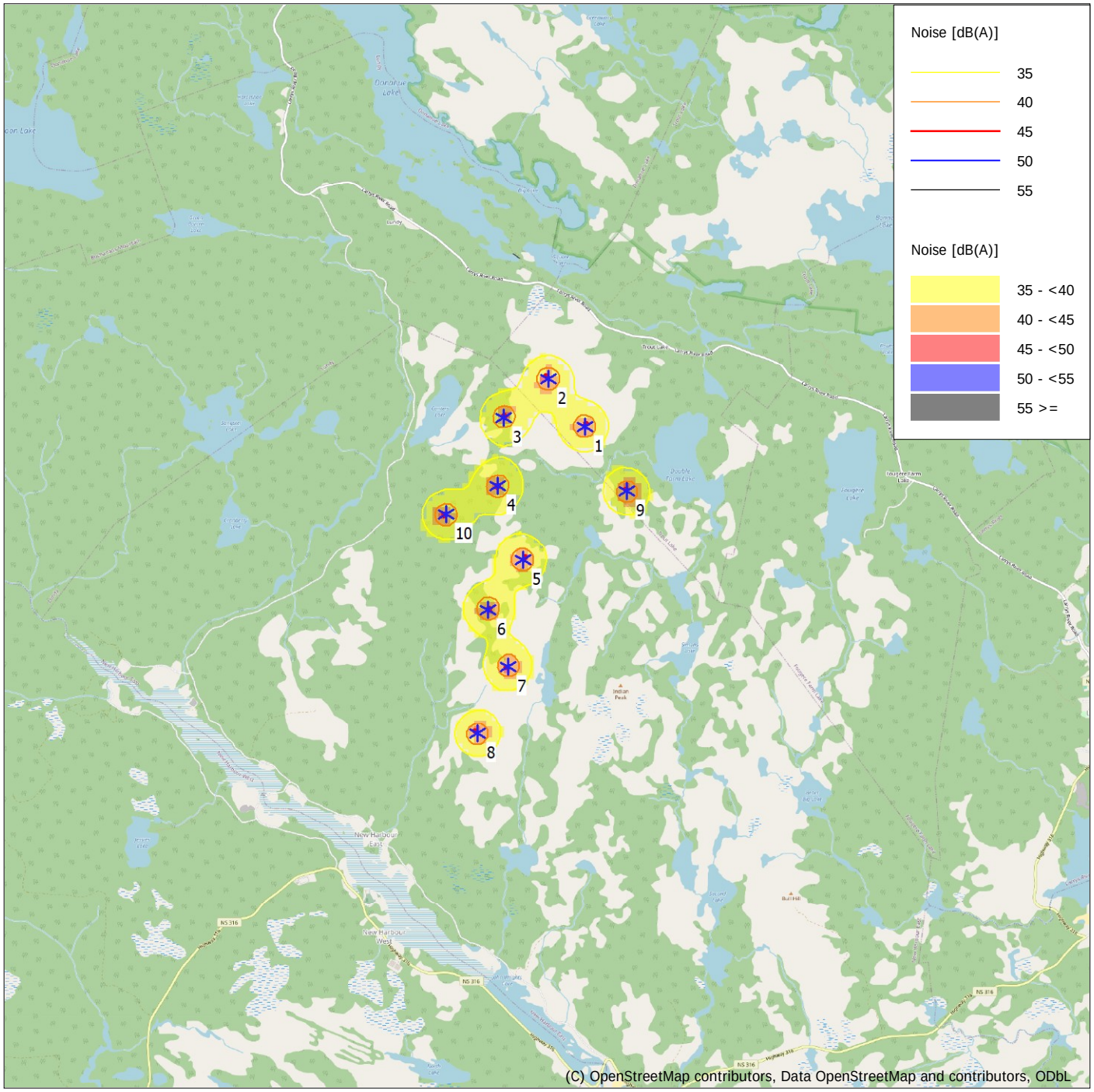
DECIBEL - Map 4.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 4.0 m/s
Height above sea level from active line object

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Calculated:
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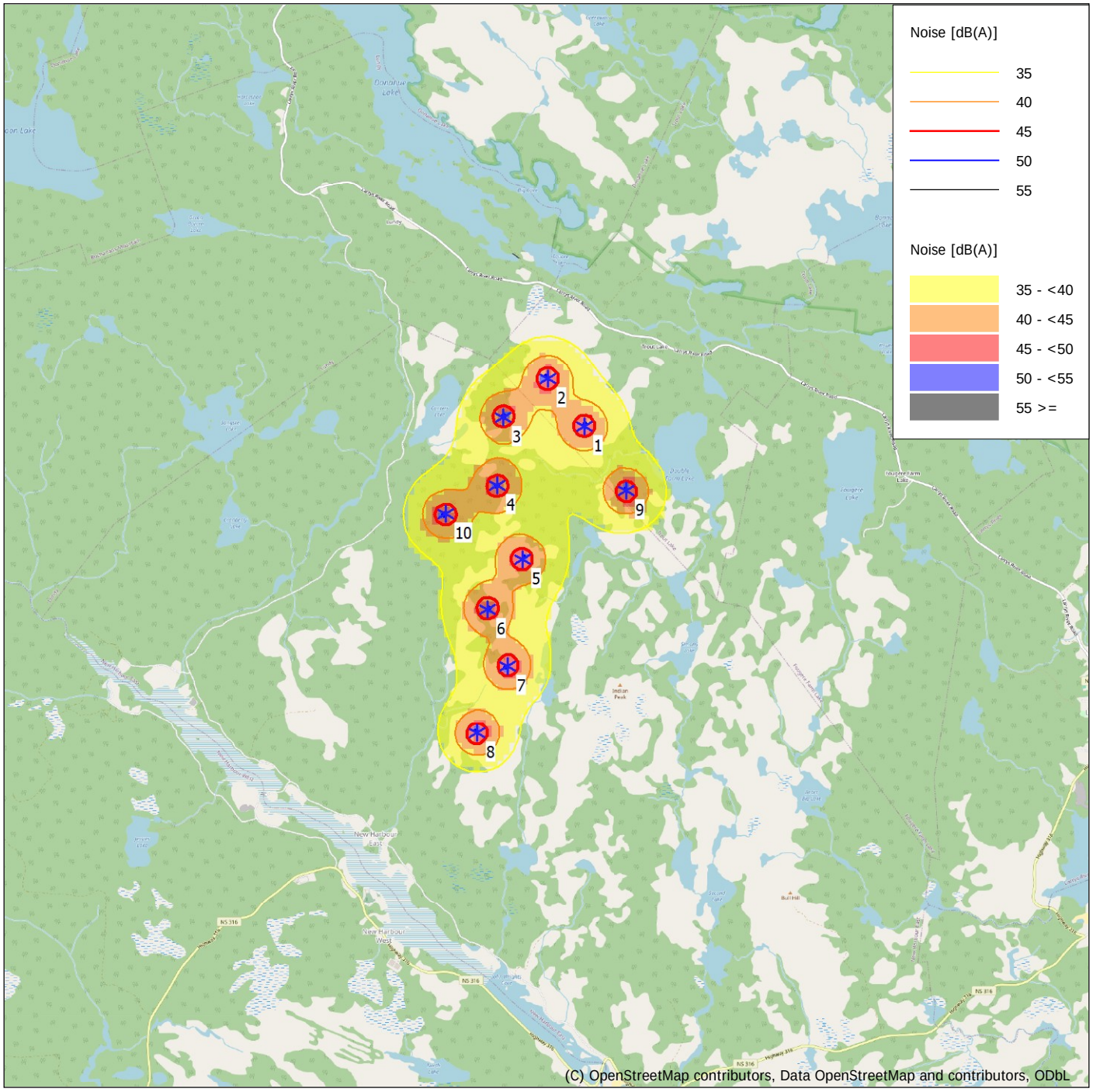
DECIBEL - Map 5.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 5.0 m/s
Height above sea level from active line object

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Calculated:
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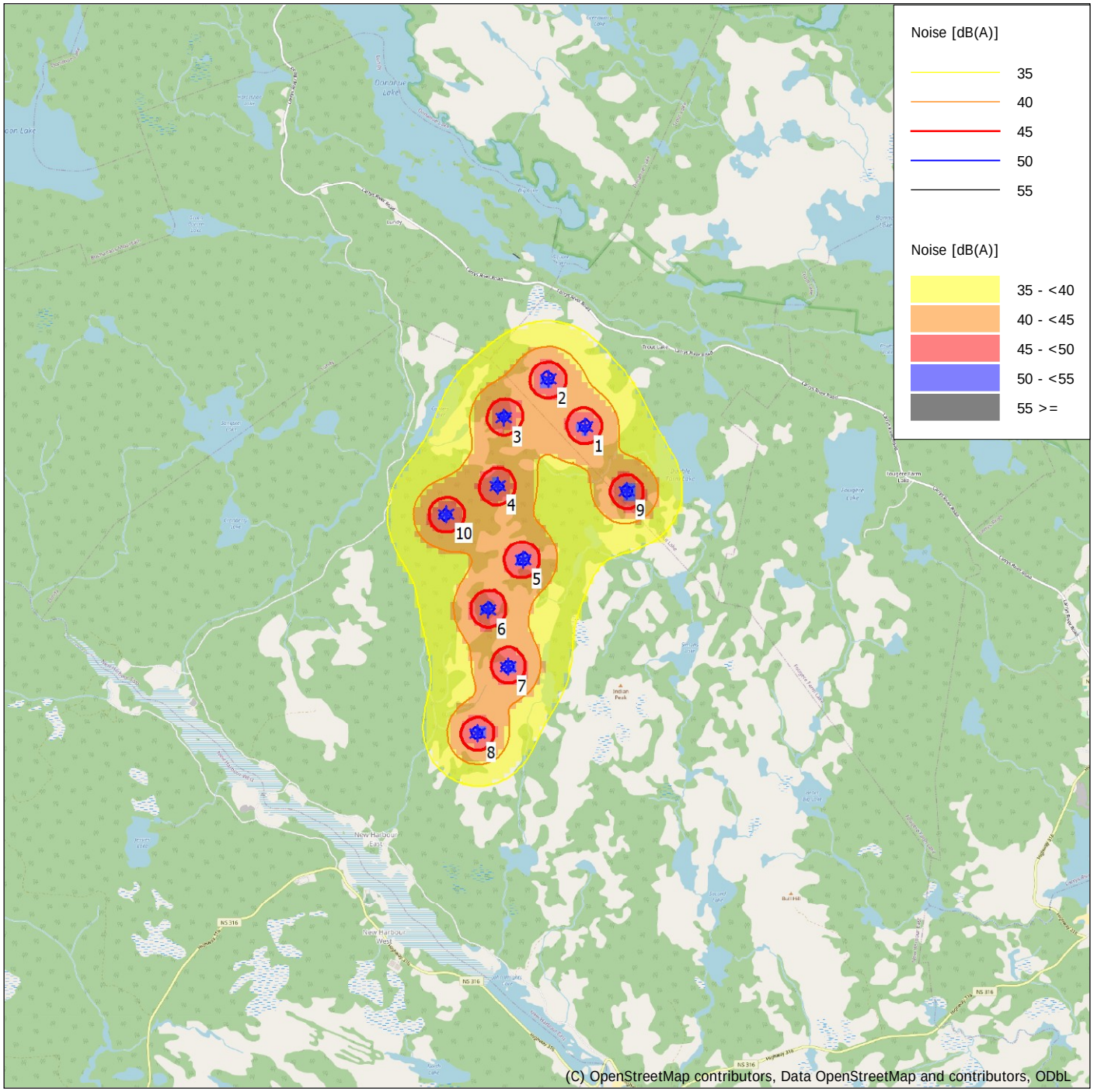
DECIBEL - Map 6.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 6.0 m/s
Height above sea level from active line object

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Calculated:
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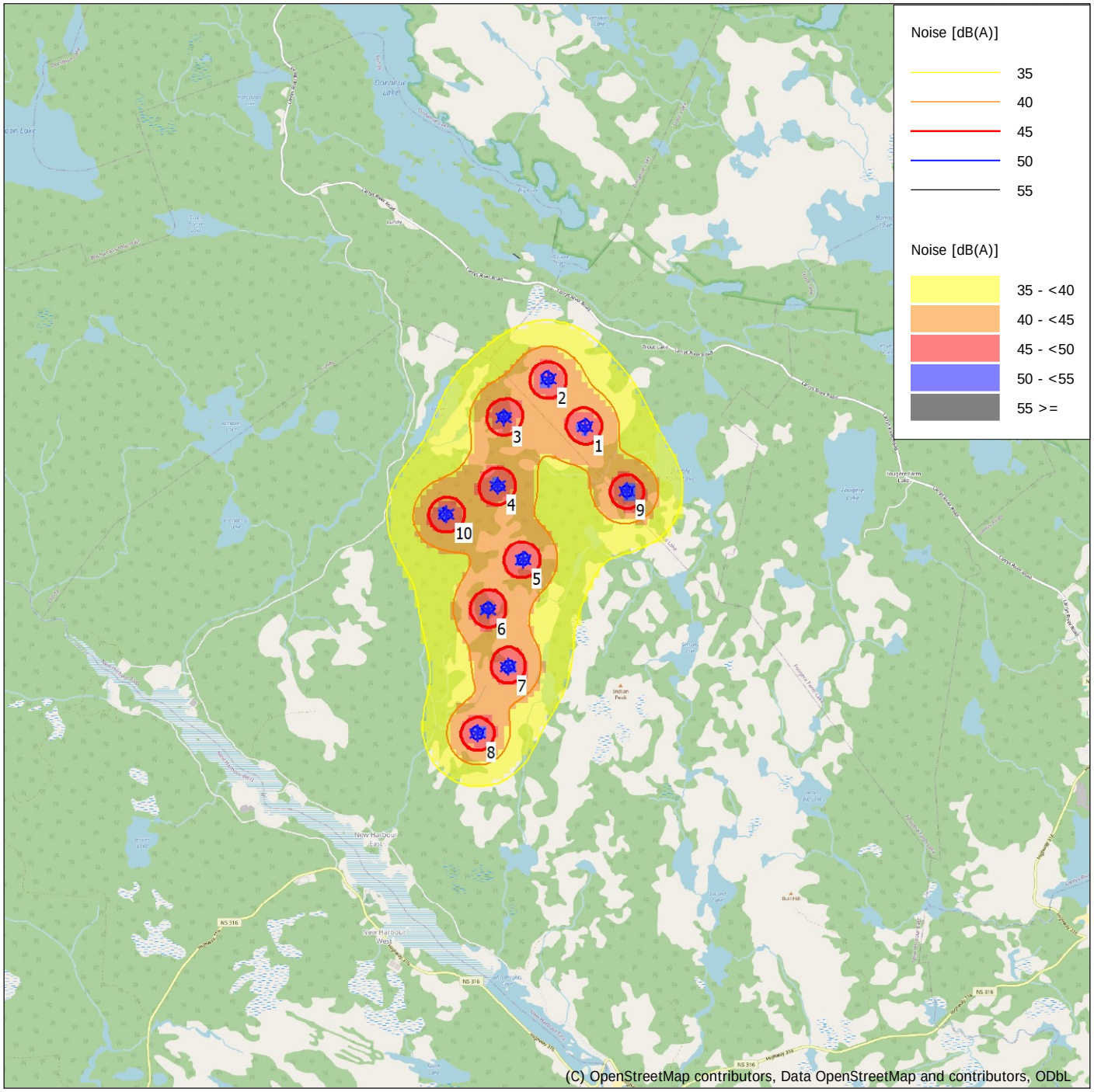
DECIBEL - Map 7.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 7.0 m/s
Height above sea level from active line object

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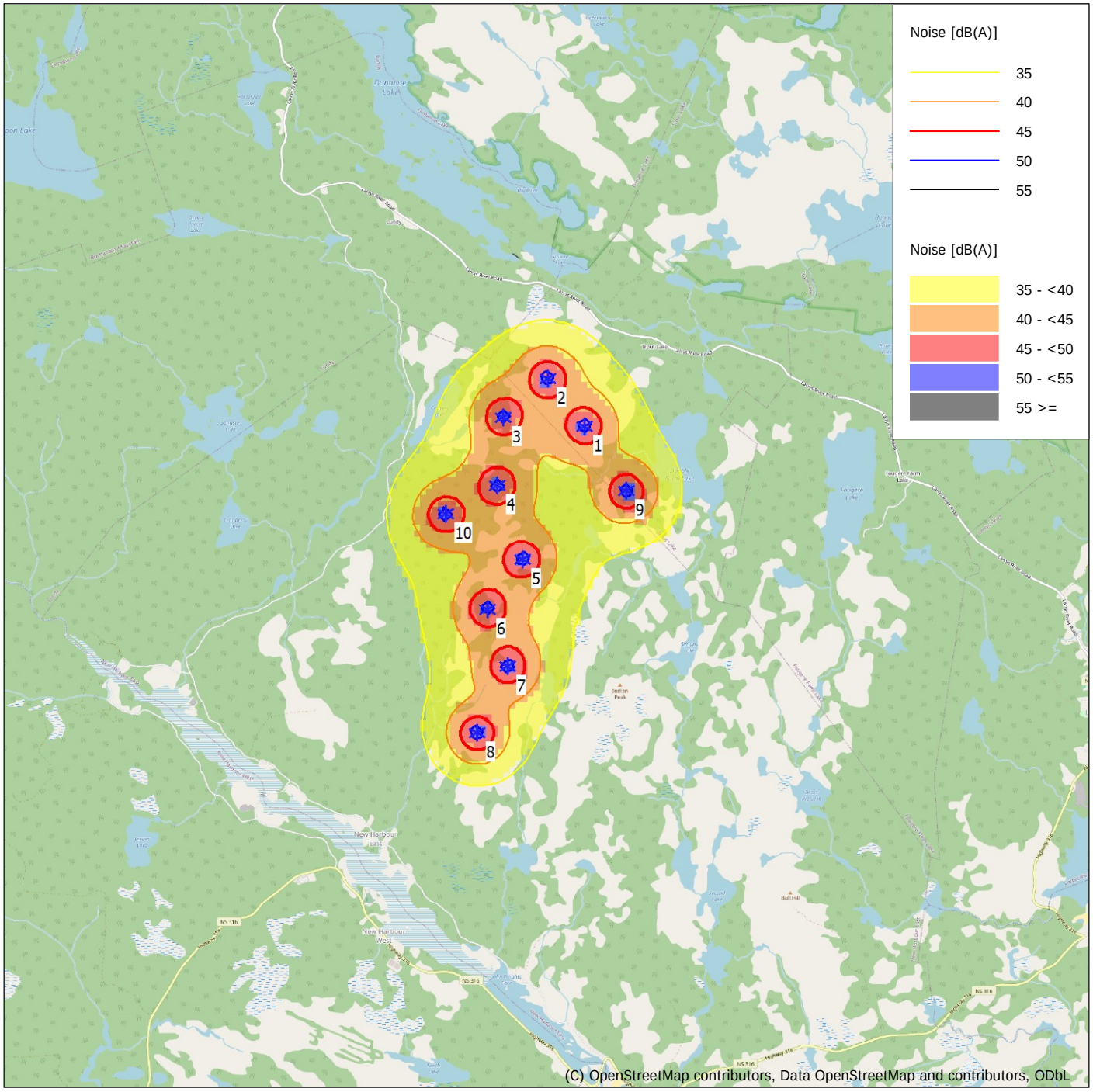
DECIBEL - Map 8.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 8.0 m/s
Height above sea level from active line object

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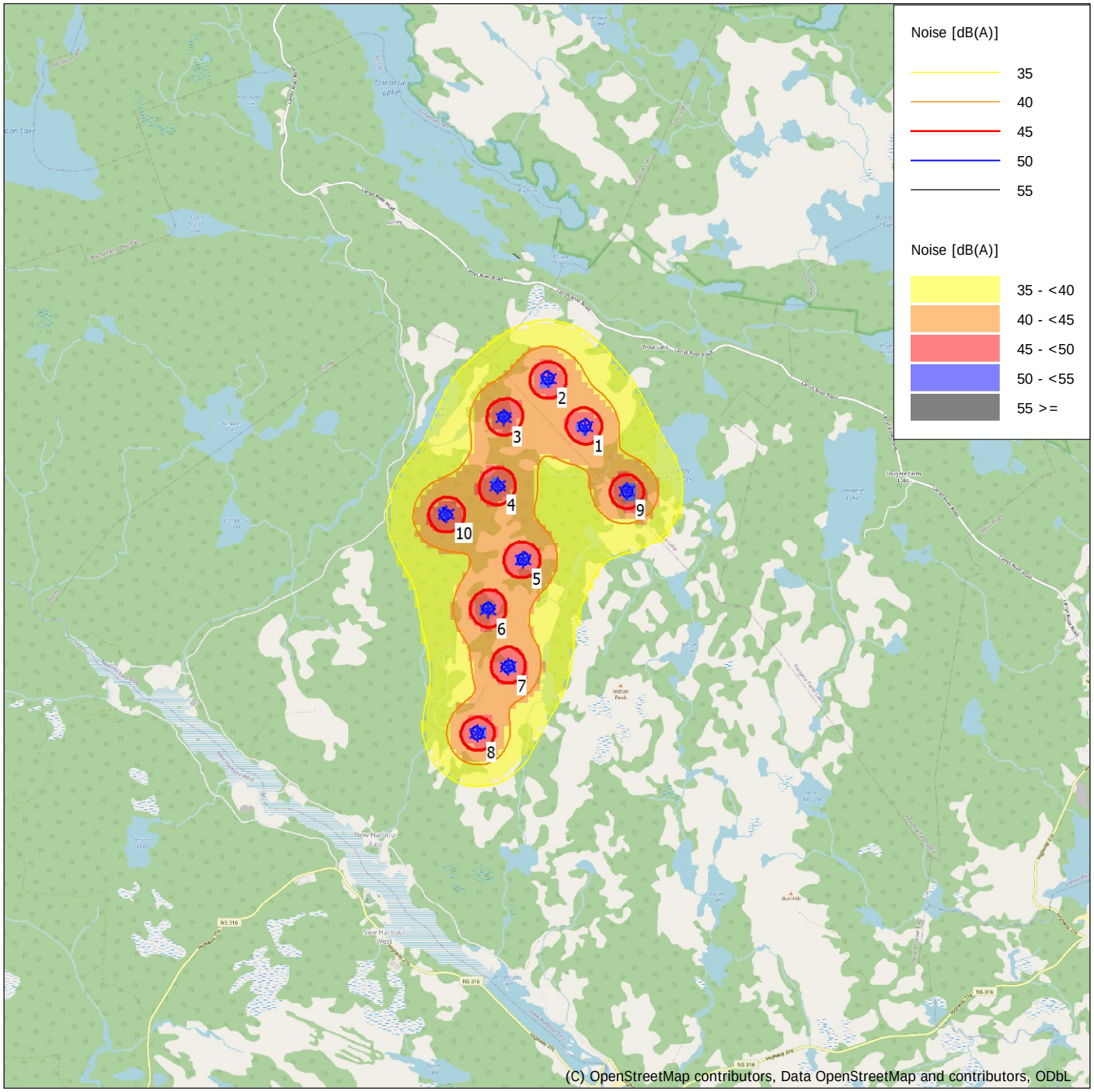
DECIBEL - Map 9.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 9.0 m/s
Height above sea level from active line object

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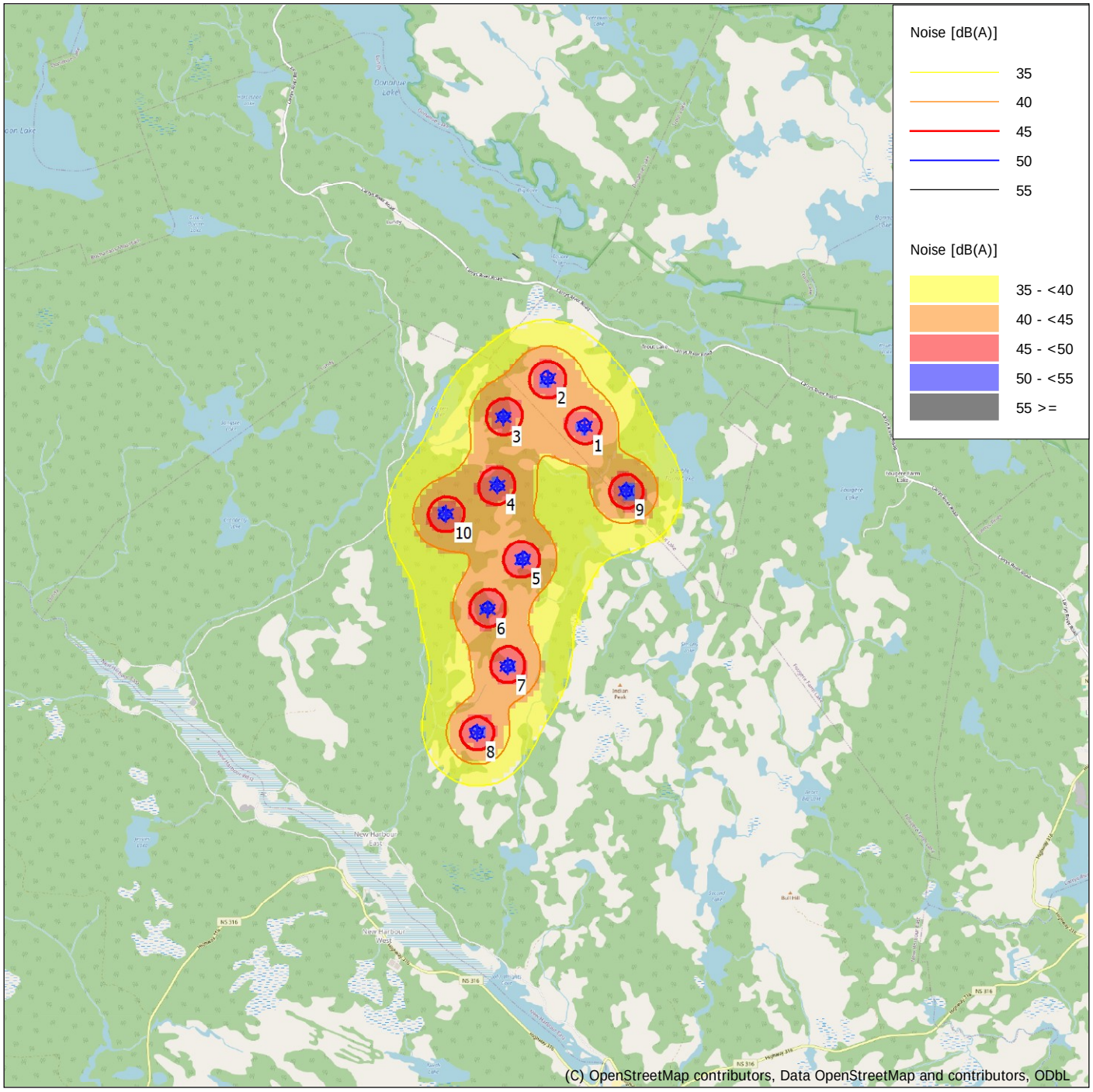
DECIBEL - Map 10.0 m/s

Calculation: Site 99 Analysis - Noise Map



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:75,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

✳ Existing WTG

Noise calculation model: ISO 9613-2:2024 United Kingdom. Wind speed: 10.0 m/s
Height above sea level from active line object

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DECIBEL - Map 11.0 m/s

Calculation: Site 99 Analysis - Noise Map

0 500 1000 1500 2000 m

Map: EMD OpenStreetMap , Print scale 1:40,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

Existing WTG

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DECIBEL - Map 12.0 m/s

Calculation: Site 99 Analysis - Noise Map

0 500 1000 1500 2000 m

Map: EMD OpenStreetMap , Print scale 1:40,000, Map center UTM (north)-WGS84 Zone: 20 East: 620,038 North: 5,010,789

Existing WTG