Project:
Flatnahagi Windfarm

EI19127PO
P/F Magn

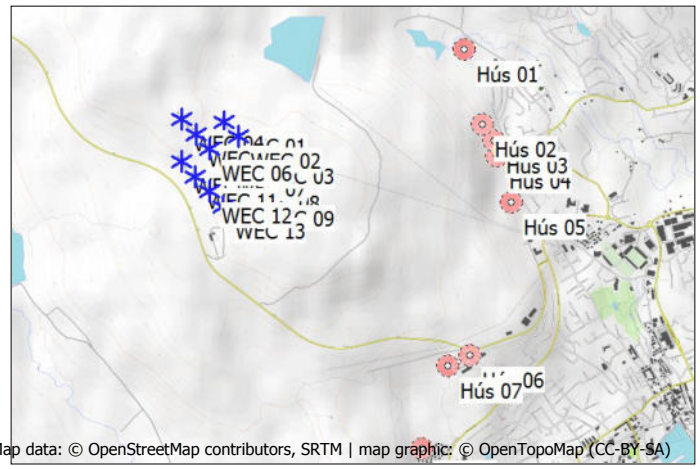
Licensed user:
ENERCON GmbH Aurich
Dreekamp 5
DE-26605 Aurich
04941/927-0
Eric Merfels / Wind Farm Engineering
Calculated:
13.06.2019 15:18/3.2.737

DECIBEL - Main Result

Calculation: Initial noise impact - C01b

Noise calculation model:
Danish Low frequency 2011 and 2015
The calculation is based on the "Bekendtgørelse nr 1736 af 21/12/2015" from the Danish Environmental Agency.

All coordinates are in
UTM (north)-WGS84 Zone: 29



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)]	
WEC 01	613.524	6.879.103	315,8	450692	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 02	613.619	6.879.008	320,6	450691	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 03	613.715	6.878.912	335,1	450690	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 04	613.243	6.879.109	310,0	450689	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 05	613.338	6.879.013	310,0	450688	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 06	613.434	6.878.918	312,7	450687	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 07	613.529	6.878.822	318,5	450686	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 08	613.625	6.878.727	324,5	450685	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 09	613.720	6.878.631	330,0	450684	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 10	613.248	6.878.828	299,7	450683	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 11	613.344	6.878.732	306,7	450682	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 12	613.439	6.878.637	311,6	450681	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 13	613.534	6.878.541	317,6	450680	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b

b) Data from Danish Environmental Agency

Calculation Results

Sound level

Noise sensitive area No.	Name	Easting	Northing	Z [m]	Imission height [m]	Wind speed [m/s]	Demands Noise [dB(A)]	Sound level From WTGs [dB(A)]	Demands fulfilled ? Noise
Hús 01	Sundsvegur 29, Tórshavn	615.100	6.879.632	133,6	1,5	6,0	20,0	6,2	Yes
Hús 01						8,0	20,0	10,0	Yes
Hús 02	Villingadalsvegur 65, Thorshavn	615.239	6.879.139	147,1	1,5	6,0	20,0	6,3	Yes
Hús 02						8,0	20,0	10,1	Yes
Hús 03	Villingardalsvegur 61, Tórshavn	615.317	6.879.030	132,7	1,5	6,0	20,0	6,0	Yes
Hús 03						8,0	20,0	9,8	Yes
Hús 04	Villingardalsvegur 45, Thorshavn	615.342	6.878.930	124,6	1,5	6,0	20,0	5,9	Yes
Hús 04						8,0	20,0	9,7	Yes
Hús 05	Villingardalsvegur 15B, Tórshavn	615.447	6.878.629	103,4	1,5	6,0	20,0	5,4	Yes
Hús 05						8,0	20,0	9,2	Yes
Hús 06	Oyggjarvegur 45, Hotel Føroyar	615.209	6.877.605	156,3	1,5	6,0	20,0	4,8	Yes
Hús 06						8,0	20,0	8,6	Yes
Hús 07	Oyggjarvegur 49, Kerjalon	615.063	6.877.533	155,5	1,5	6,0	20,0	5,1	Yes
Hús 07						8,0	20,0	8,9	Yes
Hús 08	Fjalsgøta 50	614.911	6.876.982	121,4	1,5	6,0	20,0	3,9	Yes
Hús 08						8,0	20,0	7,6	Yes

DECIBEL - Main Result

Calculation: Initial noise impact - C01b

Distances (m)

WTG	Hús 01	Hús 02	Hús 03	Hús 04	Hús 05	Hús 06	Hús 07	Hús 08
WEC 01	1662	1715	1794	1826	1981	2255	2198	2534
WEC 02	1607	1625	1698	1725	1867	2120	2064	2403
WEC 03	1561	1541	1606	1627	1755	1985	1928	2270
WEC 04	1929	1996	2075	2107	2256	2475	2408	2703
WEC 05	1868	1905	1979	2006	2144	2342	2273	2569
WEC 06	1813	1818	1886	1908	2034	2208	2138	2435
WEC 07	1768	1739	1800	1816	1928	2074	2004	2301
WEC 08	1731	1666	1719	1729	1825	1941	1869	2168
WEC 09	1705	1602	1646	1649	1727	1808	1735	2034
WEC 10	2019	2015	2079	2096	2208	2311	2230	2485
WEC 11	1973	1938	1995	2008	2105	2179	2096	2349
WEC 12	1936	1869	1919	1925	2008	2049	1964	2215
WEC 13	1909	1807	1849	1849	1915	1919	1831	2080

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Eric Merfels / Wind Farm Engineering
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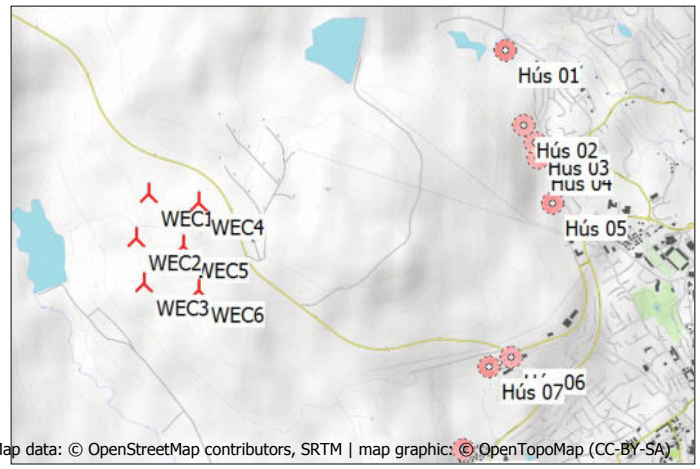
DECIBEL - Main Result

Calculation: Additional noise impact - C01b

Noise calculation model:
Danish Low frequency 2011 and 2015
The calculation is based on the "Bekendtgørelse nr 1736 af 21/12/2015" from the Danish Environmental Agency.

All coordinates are in
UTM (north)-WGS84 Zone: 29



Scale 1:50.000
New WTG
Noise sensitive area

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)]	
WEC1	612.764	6.878.603	267,5	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC2	612.695	6.878.309	258,0	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC3	612.755	6.878.015	250,0	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC4	613.099	6.878.562	285,2	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC5	613.007	6.878.269	293,1	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC6	613.119	6.877.982	285,5	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a

a) Generic data based on turbine power (very uncertain)

Calculation Results

Sound level

Noise sensitive area No.	Name	Easting	Northing	Z [m]	Imission height [m]	Wind speed [m/s]	Demands Noise [dB(A)]	Sound level From WTGs [dB(A)]	Demands fulfilled ? Noise
Hús 01	Sundsvegur 29, Tórshavn	615.100	6.879.632	133,6	1,5	6,0	20,0	5,2	Yes
Hús 01						8,0	20,0	7,7	Yes
Hús 02	Villingadalsvegur 65, Thorshavn	615.239	6.879.139	147,1	1,5	6,0	20,0	5,5	Yes
Hús 02						8,0	20,0	8,0	Yes
Hús 03	Villingardalsvegur 61, Tórshavn	615.317	6.879.030	132,7	1,5	6,0	20,0	5,4	Yes
Hús 03						8,0	20,0	7,8	Yes
Hús 04	Villingardalsvegur 45, Thorshavn	615.342	6.878.930	124,6	1,5	6,0	20,0	5,4	Yes
Hús 04						8,0	20,0	7,9	Yes
Hús 05	Villingardalsvegur 15B, Tórshavn	615.447	6.878.629	103,4	1,5	6,0	20,0	5,2	Yes
Hús 05						8,0	20,0	7,7	Yes
Hús 06	Oyggjarvegur 45, Hotel Føroyar	615.209	6.877.605	156,3	1,5	6,0	20,0	5,8	Yes
Hús 06						8,0	20,0	8,3	Yes
Hús 07	Oyggjarvegur 49, Kerjalon	615.063	6.877.533	155,5	1,5	6,0	20,0	6,3	Yes
Hús 07						8,0	20,0	8,8	Yes
Hús 08	Fjalsgøta 50	614.911	6.876.982	121,4	1,5	6,0	20,0	5,9	Yes
Hús 08						8,0	20,0	8,4	Yes

Distances (m)

	WTG					
NSA	WEC1	WEC2	WEC3	WEC4	WEC5	WEC6
Hús 01	2553	2745	2849	2269	2497	2578
Hús 02	2532	2676	2727	2216	2395	2415
Hús 03	2589	2719	2756	2267	2432	2435
Hús 04	2599	2719	2744	2273	2426	2417
Hús 05	2683	2770	2761	2349	2466	2416
Hús 06	2641	2611	2488	2317	2300	2124

To be continued on next page...

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DECIBEL - Main Result

Calculation: Additional noise impact - C01b

...continued from previous page

	WTG					
NSA	WEC1	WEC2	WEC3	WEC4	WEC5	WEC6
Hús 07	2536	2492	2358	2217	2184	1995
Hús 08	2690	2583	2391	2404	2298	2052

Project:
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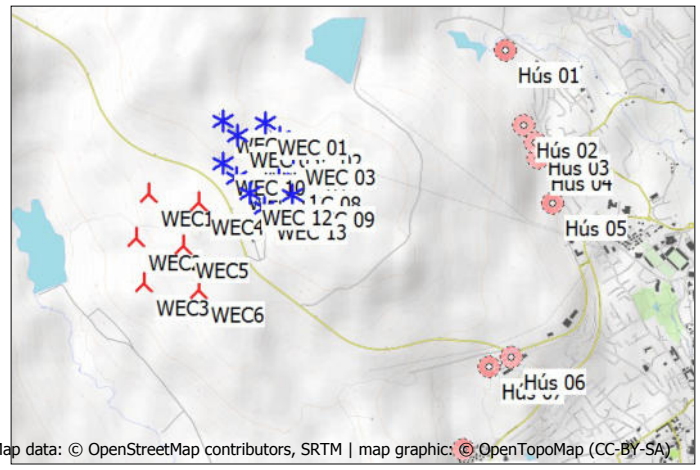
Eric Merfels / Wind Farm Engineering
Calculated:
13.06.2019 15:29/3.2.737

DECIBEL - Main Result

Calculation: Total noise impact - C01b

Noise calculation model:
Danish Low frequency 2011 and 2015
The calculation is based on the "Bekendtgørelse nr 1736 af 21/12/2015" from the Danish Environmental Agency.

All coordinates are in
UTM (north)-WGS84 Zone: 29



Scale 1:50.000
New WTG
Existing WTG
Noise sensitive area

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)]	
WEC 01	613.524	6.879.103	315,8	450692	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 02	613.619	6.879.008	320,6	450691	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 03	613.715	6.878.912	335,1	450690	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
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WEC 09	613.720	6.878.631	330,0	450684	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 10	613.248	6.878.828	299,7	450683	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
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WEC 12	613.439	6.878.637	311,6	450681	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC 13	613.534	6.878.541	317,6	450680	Yes	ENERCON GmbH	E-44-900	900	44,0	45,0	USER	E-44 900kW - OM I + 1 dB acc. to data sheet	6,0	88,9	b	8,0	91,9	b
WEC1	612.764	6.878.603	267,5	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
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WEC3	612.755	6.878.015	250,0	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
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WEC5	613.007	6.878.269	293,1	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a
WEC6	613.119	6.877.982	285,5	ENERCON GmbH E-82 E4 30...	Yes	ENERCON GmbH	E-82 E4-3.020	3.020	82,0	78,3	USER	E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)	6,0	92,9	a	8,0	95,2	a

b) Data from Danish Environmental Agency
a) Generic data based on turbine power (very uncertain)

Calculation Results

Sound level

Noise sensitive area							Demands	Sound level	Demands fulfilled ?
No.	Name	Easting	Northing	Z	Imission height	Wind speed	Noise	From WTGs	Noise
				[m]	[m]	[m/s]	[dB(A)]	[dB(A)]	
Hús 01	Sundsvegur 29, Tórshavn	615.100	6.879.632	133,6	1,5	6,0	20,0	8,8	Yes
Hús 01						8,0	20,0	12,0	Yes
Hús 02	Villingadalsvegur 65, Thorshavn	615.239	6.879.139	147,1	1,5	6,0	20,0	9,0	Yes
Hús 02						8,0	20,0	12,2	Yes
Hús 03	Villingardalsvegur 61, Tórshavn	615.317	6.879.030	132,7	1,5	6,0	20,0	8,7	Yes
Hús 03						8,0	20,0	11,9	Yes
Hús 04	Villingardalsvegur 45, Thorshavn	615.342	6.878.930	124,6	1,5	6,0	20,0	8,7	Yes
Hús 04						8,0	20,0	11,9	Yes
Hús 05	Villingardalsvegur 15B, Tórshavn	615.447	6.878.629	103,4	1,5	6,0	20,0	8,3	Yes
Hús 05						8,0	20,0	11,5	Yes
Hús 06	Oyggjarvegur 45, Hotel Føroyar	615.209	6.877.605	156,3	1,5	6,0	20,0	8,4	Yes
Hús 06						8,0	20,0	11,4	Yes
Hús 07	Oyggjarvegur 49, Kerjalon	615.063	6.877.533	155,5	1,5	6,0	20,0	8,8	Yes
Hús 07						8,0	20,0	11,8	Yes
Hús 08	Fjalsgøta 50	614.911	6.876.982	121,4	1,5	6,0	20,0	8,0	Yes
Hús 08						8,0	20,0	11,0	Yes

DECIBEL - Main Result

Calculation: Total noise impact - C01b

Distances (m)

WTG	Hús 01	Hús 02	Hús 03	Hús 04	Hús 05	Hús 06	Hús 07	Hús 08
WEC 01	1662	1715	1794	1826	1981	2255	2198	2534
WEC 02	1607	1625	1698	1725	1867	2120	2064	2403
WEC 03	1561	1541	1606	1627	1755	1985	1928	2270
WEC 04	1929	1996	2075	2107	2256	2475	2408	2703
WEC 05	1868	1905	1979	2006	2144	2342	2273	2569
WEC 06	1813	1818	1886	1908	2034	2208	2138	2435
WEC 07	1768	1739	1800	1816	1928	2074	2004	2301
WEC 08	1731	1666	1719	1729	1825	1941	1869	2168
WEC 09	1705	1602	1646	1649	1727	1808	1735	2034
WEC 10	2019	2015	2079	2096	2208	2311	2230	2485
WEC 11	1973	1938	1995	2008	2105	2179	2096	2349
WEC 12	1936	1869	1919	1925	2008	2049	1964	2215
WEC 13	1909	1807	1849	1849	1915	1919	1831	2080
WEC1	2553	2532	2589	2599	2683	2641	2536	2690
WEC2	2745	2676	2719	2719	2770	2611	2492	2583
WEC3	2849	2727	2756	2744	2761	2488	2358	2391
WEC4	2269	2216	2267	2273	2349	2317	2217	2404
WEC5	2497	2395	2432	2426	2466	2300	2184	2298
WEC6	2578	2415	2435	2417	2416	2124	1995	2052

DECIBEL - Assumptions for noise calculation

Calculation: Total noise impact - C01b

Noise calculation model:
Danish Low frequency 2011 and 2015
Wind speed (in 10 m height):
6,0 m/s - 8,0 m/s, step 2,0 m/s
Ground attenuation:
Fixed values, Agr: 0,0, Dc: 0,0
Meteorological coefficient, C0:
0,0 dB
Type of demand in calculation:
1: WTG noise is compared to demand (DK, DE, SE, NL etc.)
Noise values in calculation:
All noise values are mean values (Lwa) (Normal)
Pure tones:
Pure tone penalty is subtracted from demand
WTG catalogue
Height above ground level, when no value in NSA object:
1,5 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)
Low frequency calculation
?Ls

10,0 Hz [db]	12,5 Hz [db]	16,0 Hz [db]	20,0 Hz [db]	25,0 Hz [db]	31,5 Hz [db]	40,0 Hz [db]	50,0 Hz [db]	63,0 Hz [db]	80,0 Hz [db]	100,0 Hz [db]	125,0 Hz [db]	160,0 Hz [db]
4,9	5,9	4,6	6,6	8,4	10,8	11,4	13,0	16,6	19,7	21,2	20,2	21,2

WTG: ENERCON GmbH E-82 E4 3020 82.0 !O!
Noise: E-82 E4 3000kW - OM 0 + 2 dB (NORD2000)

Source	Source/Date	Creator	Edited
ENERCON GmbH	30.05.2017	USER	04.06.2019 12:54

The sum levels were taken from 'D0382691-0' while adding 2 dB safety margin. The one third octave band data originate from the document 'D0569351-0' and have been adjusted in order to fit the sum levels if necessary.
E. Merfels / C. Meckenhäuser

				Low frequency data												
Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	10,0 Hz [dB]	12,5 Hz [dB]	16,0 Hz [dB]	20,0 Hz [dB]	25,0 Hz [dB]	31,5 Hz [dB]	40,0 Hz [dB]	50,0 Hz [dB]	63,0 Hz [dB]	80,0 Hz [dB]	100,0 Hz [dB]	125,0 Hz [dB]	160,0 Hz [dB]
Generic data based on turbine power (very uncertain)	78,3	6,0	92,9	50,8	54,5	58,6	62,3	66,2	69,7	74,0	77,6	80,5	82,5	84,4	88,5	87,5
Generic data based on turbine power (very uncertain)	78,3	8,0	95,2	50,2	54,4	59,0	63,2	67,7	71,5	76,1	80,7	83,6	85,8	87,6	90,2	89,5

WTG: ENERCON GmbH E-44 900 44.0 !O!
Noise: E-44 900kW - OM I + 1 dB acc. to data sheet

Source	Source/Date	Creator	Edited
ENERCON GmbH	06.09.2017	USER	06.09.2017 15:20

The sum levels were taken from 'SIAS-04-SPL E44 OM I Rev2_1-eng-eng.pdf'. The adjusted octave band sound power levels are based on data of the measurement report 'WICO 123SR511/01 (06.06.2011)', scaled to fit the official sum level + 1 dB safety margin. Please note that only the sum level is official, not the individual octave band levels!
C. Meckenhäuser/ A. Albrecht

				Low frequency data												
Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	10,0 Hz [dB]	12,5 Hz [dB]	16,0 Hz [dB]	20,0 Hz [dB]	25,0 Hz [dB]	31,5 Hz [dB]	40,0 Hz [dB]	50,0 Hz [dB]	63,0 Hz [dB]	80,0 Hz [dB]	100,0 Hz [dB]	125,0 Hz [dB]	160,0 Hz [dB]
Data from Danish Environmental Agency	45,0	6,0	88,9	37,8	40,9	47,7	52,9	58,1	62,0	67,5	72,6	73,0	76,9	81,3	82,0	85,8
Data from Danish Environmental Agency	45,0	8,0	91,9	42,6	46,4	52,5	58,2	63,5	67,5	71,3	76,8	77,9	80,8	83,6	85,6	88,5

NSA: Sundsvegur 29, Tórshavn-Hús 01
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

DECIBEL - Assumptions for noise calculation

Calculation: Total noise impact - C01b

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Villingadalsvegur 65, Thorshavn-Hús 02
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Villingardalsvegur 61, Tórshavn-Hús 03
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Villingardalsvegur 45, Thorshavn-Hús 04
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Villingardalsvegur 15B, Tórshavn-Hús 05
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Oyggjarvegur 45, Hotel Føroyar-Hús 06
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Oyggjarvegur 49, Kerjalon-Hús 07
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

DECIBEL - Assumptions for noise calculation

Calculation: Total noise impact - C01b

Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

NSA: Fjalsgøta 50-Hús 08
Predefined calculation standard: Indoor
Imission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model

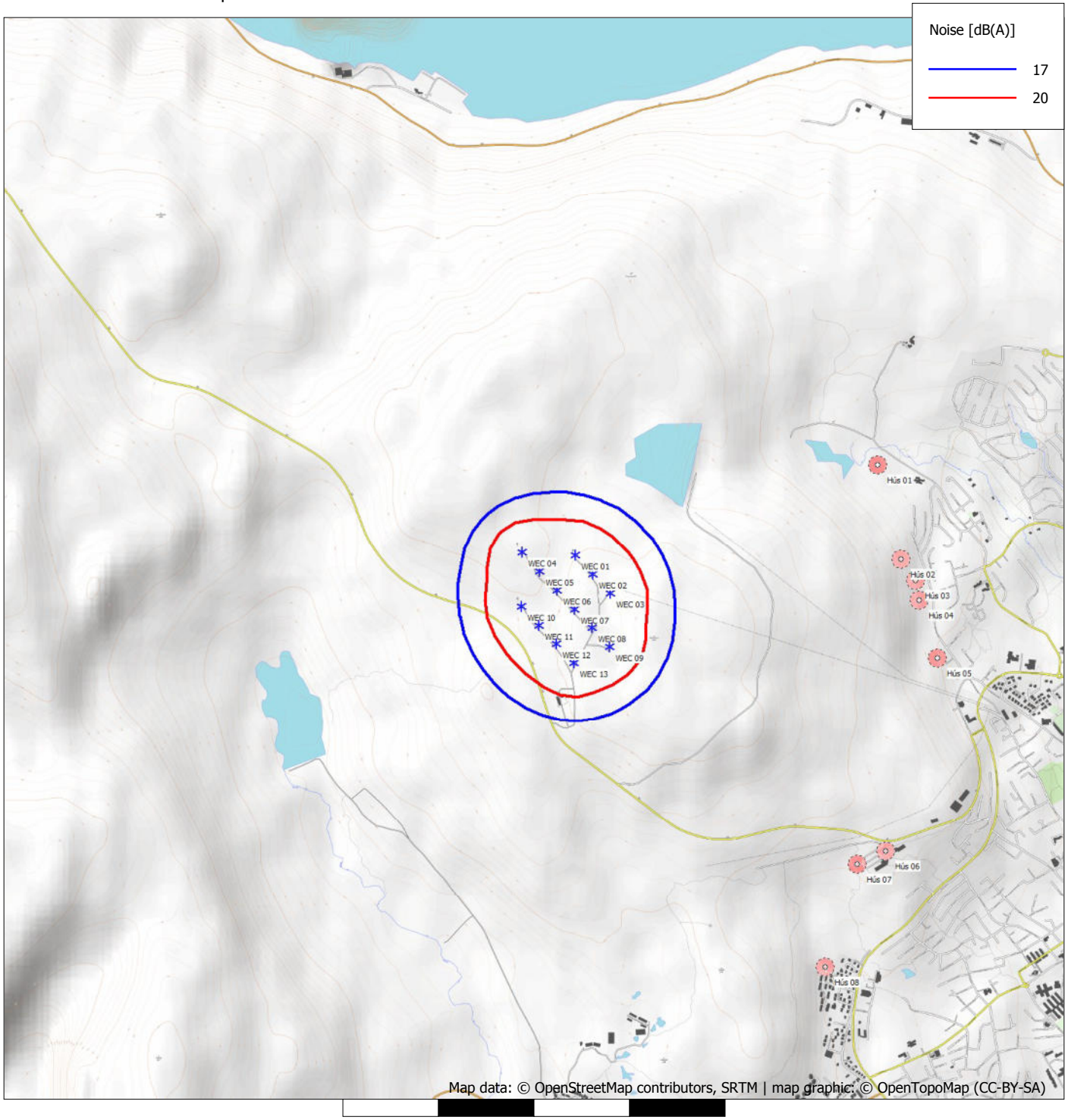
Noise demand:

6,0 [m/s]	8,0 [m/s]
20,0 dB(A)	20,0 dB(A)

No distance demand

DECIBEL - Map 6,0 m/s

Calculation: Initial noise impact - C01b



Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

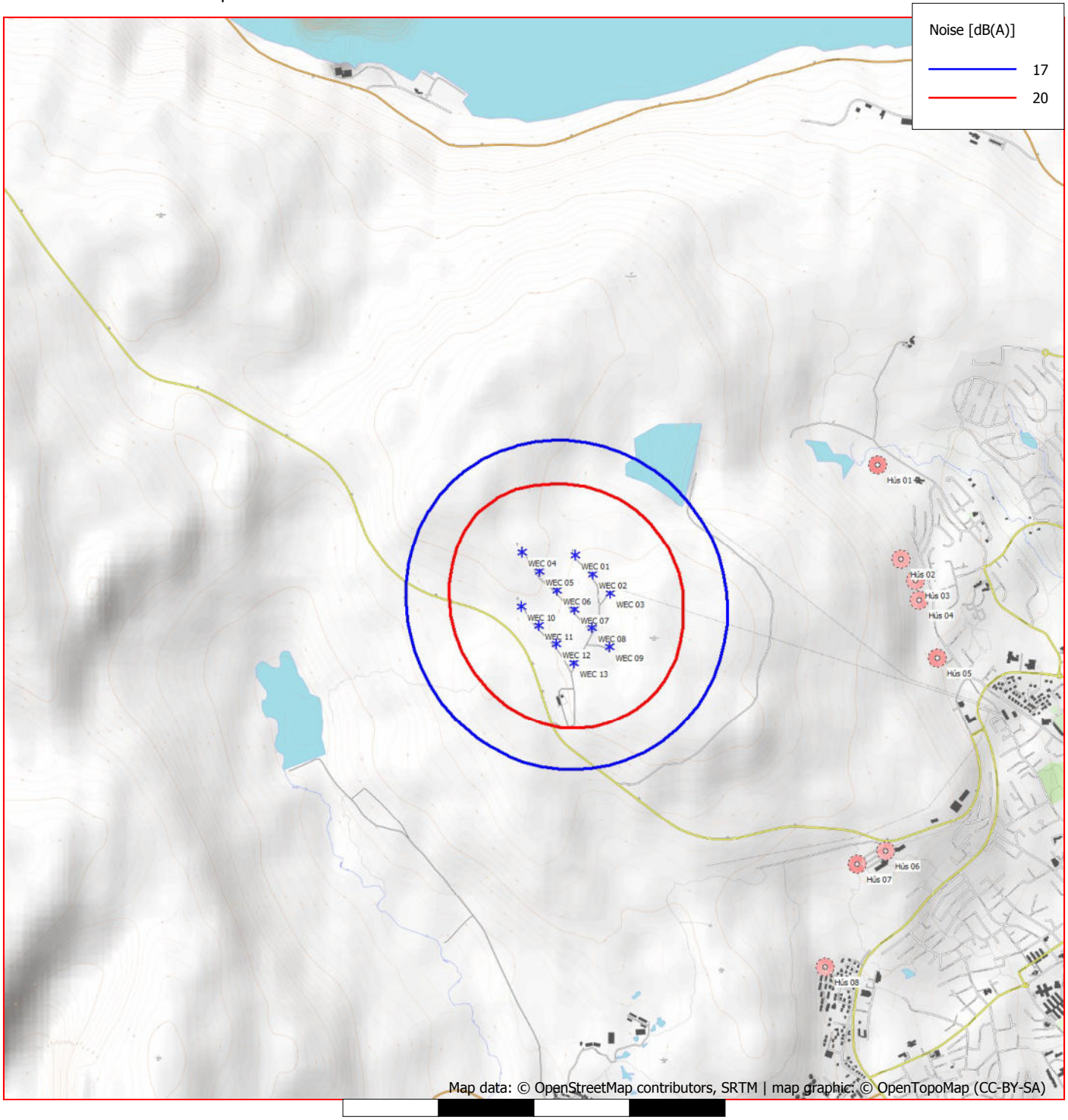
Existing WTG

Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 6,0 m/s
Height above sea level from active line object

DECIBEL - Map 8,0 m/s

Calculation: Initial noise impact - C01b



0 500 1000 1500 2000 m

Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

Existing WTG

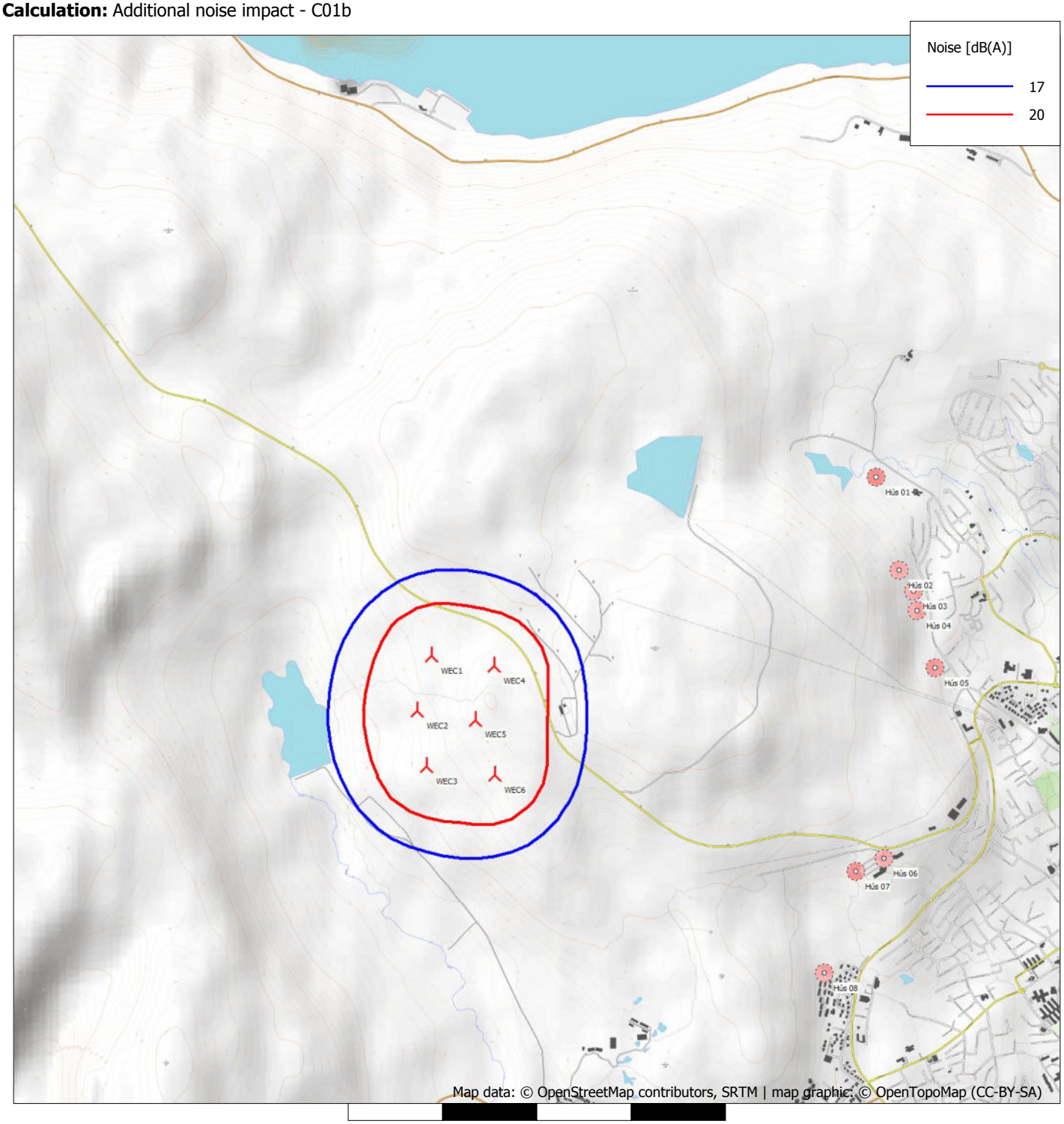
Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 8,0 m/s
Height above sea level from active line object

Licensed user:
ENERCON GmbH Aurich
Dreekamp 5
DE-26605 Aurich
04941/927-0
Eric Merfels / Wind Farm Engineering
Calculated:
13.06.2019 15:24/3.2.737

DECIBEL - Map 6,0 m/s

Calculation: Additional noise impact - C01b



0 500 1000 1500 2000 m

Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

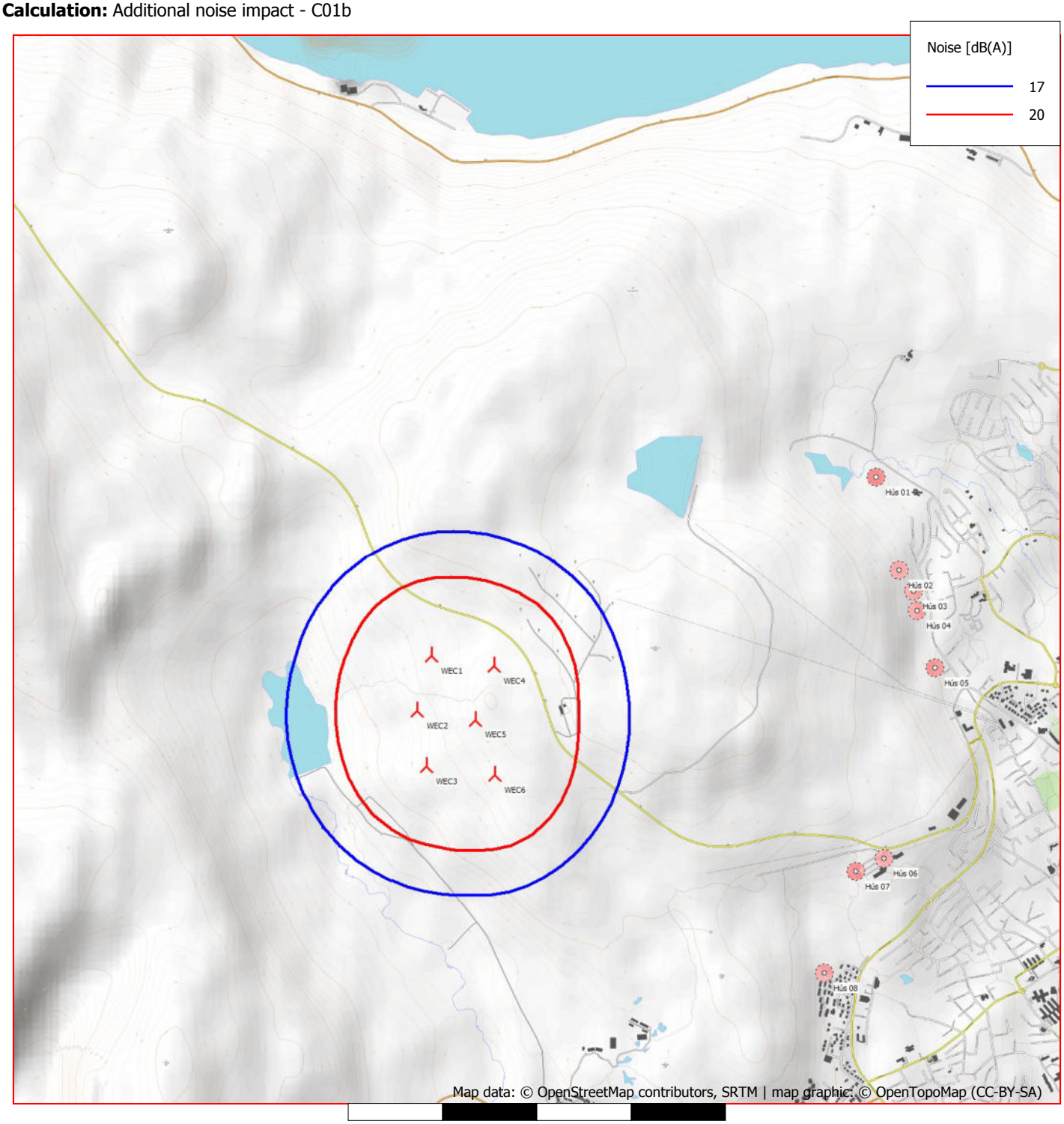
New WTG

Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 6,0 m/s
Height above sea level from active line object

DECIBEL - Map 8,0 m/s

Calculation: Additional noise impact - C01b



0 500 1000 1500 2000 m

Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

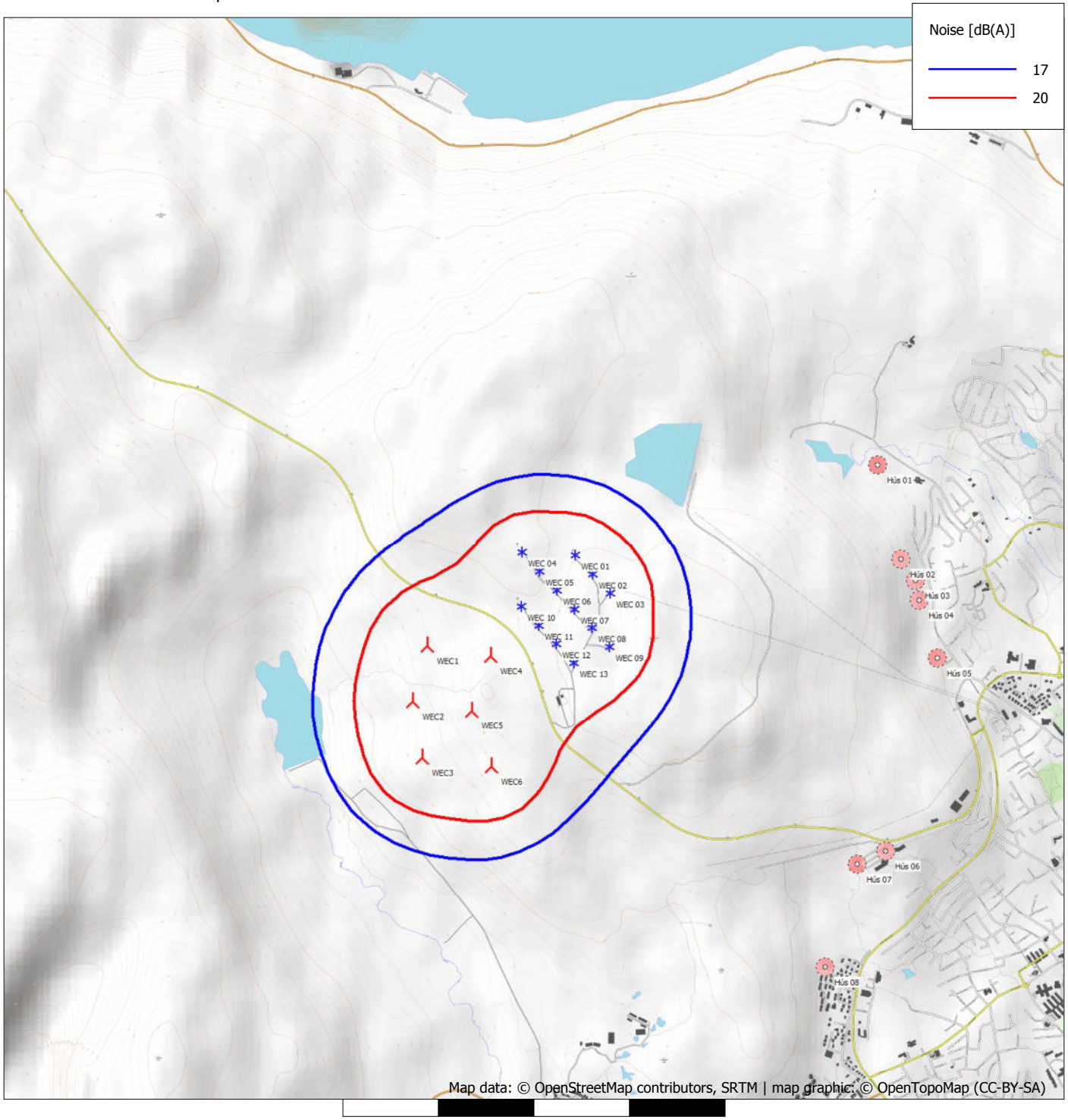
New WTG

Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 8,0 m/s
Height above sea level from active line object

DECIBEL - Map 6,0 m/s

Calculation: Total noise impact - C01b



0 500 1000 1500 2000 m

Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

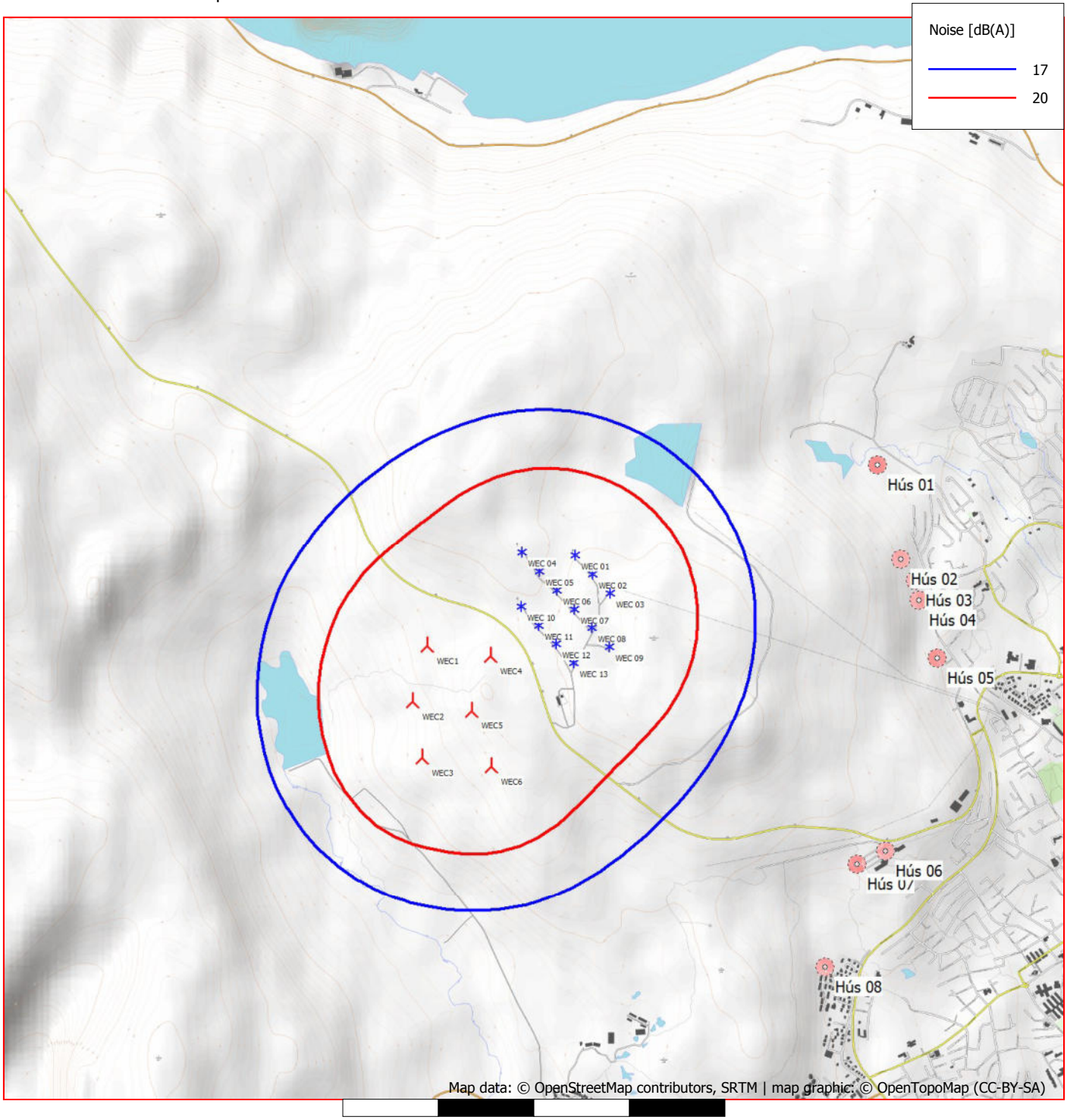
New WTG Existing WTG Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 6,0 m/s
Height above sea level from active line object

Licensed user:
ENERCON GmbH Aurich
Dreekamp 5
DE-26605 Aurich
04941/927-0
Eric Merfels / Wind Farm Engineering
Calculated:
13.06.2019 15:29/3.2.737

DECIBEL - Map 8,0 m/s

Calculation: Total noise impact - C01b



0 500 1000 1500 2000 m

Map: TMS Map 001 , Print scale 1:30.000, Map center UTM (north)-WGS84 Zone: 29 East: 613.200 North: 6.879.000

New WTG Existing WTG Noise sensitive area

Noise calculation model: Danish Low frequency 2011 and 2015. Wind speed: 8,0 m/s
Height above sea level from active line object