

DECIBEL - Main Result

Calculation: Noise_Enercon_Optimization_01

ISO 9613-2 German (Interimsverfahren)

The calculation is based on the international norm "ISO 9613-2
Acoustics - Attenuation of sound during propagation outdoors"

Meteorological correction factor, C0: 0.0 dB

Die Immissionsrichtwerte entsprechend TA Lärm sind (Nacht / Tag):

Industriegebiet: 70 / 70 dB(A)

Kerngebiet, Dorf- und Mischgebiet: 45 / 60 dB(A)

Reines Wohngebiet: 35 / 50 dB(A)

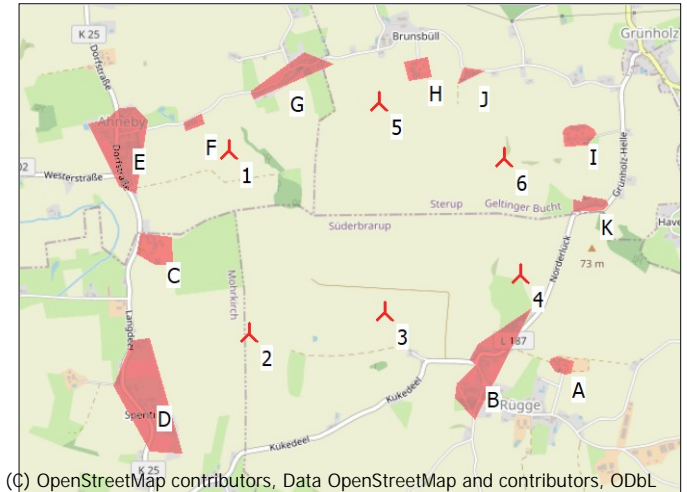
Gewerbegebiet: 50 / 65 dB(A)

Allgemeines Wohngebiet, Kleinsiedlungsgebiet: 40 / 55 dB(A)

Kurgebiet, Krankenhaus, Pflegeanstalt: 35 / 45 dB(A)

All coordinates are in

UTM (north)-ETRS89 Zone: 32



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Scale 1:40,000

New WTG

Noise sensitive area

WTGs

	Easting	Northing	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	LwA,ref [dB(A)]	Uncertainty [dB(A)]
					Valid	Manufact.	Type-generator				Creator	Name			
1	547,702	6,061,711	60.0	01_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 04 - OM 102.3 dB(A)	12.5	102.3	0.0
2	547,819	6,060,747	60.0	02_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 00 - OM 0 s - 5000 kW	12.5	106.4	0.0
3	548,537	6,060,868	60.0	03_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 00 - OM 0 s - 5000 kW	12.5	106.4	0.0
4	549,253	6,061,072	60.0	04_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 04 - OM 102.3 dB(A)	12.5	102.3	0.0
5	548,497	6,061,973	60.0	05_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 04 - OM 102.3 dB(A)	12.5	102.3	0.0
6	549,164	6,061,683	60.0	06_ENERCON E-147 EP5 E...	No	ENERCON	E-147 EP5 E2-5,000	5,000	147.0	126.0	USER	Mode 03 - OM 103.3 dB(A)	13.0	103.3	0.0

Calculation Results

Sound level

Noise sensitive area

No. Name

No.	Name	Easting	Northing	Z	Immission height	Demands Noise [dB(A)]	Sound level From WTGs [dB(A)]	Distance to noise demand [m]	Demands fulfilled ? Noise
A	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (1)	549,421	6,060,629	53.8	5.0	45.0	41.2	210	Yes
B	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (2)	549,311	6,060,896	60.0	5.0	45.0	47.2	-79	No
C	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (3)	547,408	6,061,109	60.0	5.0	45.0	42.7	147	Yes
D	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (4)	547,324	6,060,595	70.0	5.0	45.0	42.4	134	Yes
E	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (5)	547,246	6,061,722	60.0	5.0	45.0	40.7	209	Yes
F	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (6)	547,568	6,061,853	60.0	5.0	45.0	46.5	-47	No
G	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (7)	547,830	6,061,989	60.0	5.0	45.0	43.9	50	Yes
H	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (8)	548,649	6,062,095	60.0	5.0	45.0	46.8	-66	No
I	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (9)	549,481	6,061,756	51.1	5.0	45.0	44.0	44	Yes
J	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (10)	548,910	6,062,081	60.0	5.0	45.0	43.3	143	Yes
K	Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (12)	549,528	6,061,470	60.0	5.0	45.0	43.3	107	Yes

Distances (m)

NSA	WTG					
	1	2	3	4	5	6
A	2032	1599	913	474	1631	1080
B	1669	1131	515	186	1348	800
C	553	548	1154	1846	1315	1817
D	1080	518	1240	1985	1746	2111
E	453	954	1461	2083	1234	1906
F	195	1124	1381	1857	937	1605
G	306	1242	1312	1492	321	1040
H	1022	1583	1232	1147	195	584
I	1771	1944	1296	721	982	326
J	1264	1724	1269	1065	427	469
K	1843	1837	1133	438	1147	422

DECIBEL - Detailed results

Calculation: Noise_Enercon_Optimization_01 Noise calculation model: ISO 9613-2 German (Interimsverfahren) 10.0 m/s
Assumptions

Calculated L(DW) = LWA,ref + K + Dc - (Adiv + Aatm + Agr + Abar + Amisc) - Cmet
(when calculated with ground attenuation, then Dc = Domega)

LWA,ref:	Sound pressure level at WTG
K:	Pure tone
Dc:	Directivity correction
Adiv:	the attenuation due to geometrical divergence
Aatm:	the attenuation due to atmospheric absorption
Agr:	the attenuation due to ground effect
Abar:	the attenuation due to a barrier
Amisc:	the attenuation due to miscellaneous other effects
Cmet:	Meteorological correction

Calculation Results

Noise sensitive area: A Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (1)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2,032	2,036	22.45	22.45	102.3	0.00	77.18	5.72	-3.00	0.00	0.00	79.90
2	1,607	1,612	29.23	29.23	106.4	0.00	75.14	5.07	-3.00	0.00	0.00	77.22
3	917	925	35.62	35.62	106.4	0.00	70.33	3.49	-3.00	0.00	0.00	70.82
4	475	491	38.37	38.37	102.3	0.00	64.82	2.15	-3.00	0.00	0.00	63.98
5	1,631	1,636	25.11	25.11	102.3	0.00	75.28	4.96	-3.00	0.00	0.00	77.23
6	1,085	1,092	30.74	30.74	103.3	0.00	71.77	3.83	-3.00	0.00	0.00	72.60
Sum				41.15								

Noise sensitive area: B Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (2)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,804	1,808	23.91	23.91	102.3	0.00	76.14	5.29	-3.00	0.00	0.00	78.44
2	1,499	1,504	30.05	30.05	106.4	0.00	74.54	4.85	-3.00	0.00	0.00	76.39
3	775	784	37.44	37.44	106.4	0.00	68.89	3.11	-3.00	0.00	0.00	69.00
4	186	222	46.25	46.25	102.3	0.00	57.91	1.19	-3.00	0.00	0.00	56.10
5	1,349	1,355	27.33	27.33	102.3	0.00	73.64	4.38	-3.00	0.00	0.00	75.01
6	800	809	34.06	34.06	103.3	0.00	69.16	3.12	-3.00	0.00	0.00	69.28
Sum				47.16								

Noise sensitive area: C Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (3)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	670	681	34.96	34.96	102.3	0.00	67.67	2.72	-3.00	0.00	0.00	67.39
2	548	561	41.00	41.00	106.4	0.00	65.98	2.46	-3.00	0.00	0.00	65.44
3	1,154	1,160	33.07	33.07	106.4	0.00	72.29	4.07	-3.00	0.00	0.00	73.37
4	1,846	1,850	23.63	23.63	102.3	0.00	76.34	5.37	-3.00	0.00	0.00	78.71
5	1,390	1,396	26.99	26.99	102.3	0.00	73.90	4.46	-3.00	0.00	0.00	75.36
6	1,847	1,851	24.56	24.56	103.3	0.00	76.35	5.43	-3.00	0.00	0.00	78.77
Sum				42.73								

Noise sensitive area: D Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (4)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,179	1,185	28.88	28.88	102.3	0.00	72.47	4.00	-3.00	0.00	0.00	73.47
2	518	531	41.58	41.58	106.4	0.00	65.50	2.37	-3.00	0.00	0.00	64.87
3	1,243	1,249	32.23	32.23	106.4	0.00	72.93	4.28	-3.00	0.00	0.00	74.21
4	1,988	1,991	22.73	22.73	102.3	0.00	76.98	5.64	-3.00	0.00	0.00	79.62

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DECIBEL - Detailed results

Calculation: Noise_Enercon_Optimization_01 Noise calculation model: ISO 9613-2 German (Interimsverfahren) 10.0 m/s

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No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
5	1,810	1,814	23.87	23.87	102.3	0.00	76.17	5.31	-3.00	0.00	0.00	78.48
6	2,138	2,141	22.77	22.77	103.3	0.00	77.61	5.95	-3.00	0.00	0.00	80.56
Sum				42.41								

Noise sensitive area: E Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (5)

Highest noise value

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	456	472	38.77	38.77	102.3	0.00	64.48	2.09	-3.00	0.00	0.00	63.57
2	1,132	1,138	33.30	33.30	106.4	0.00	72.12	4.02	-3.00	0.00	0.00	73.14
3	1,548	1,553	29.67	29.67	106.4	0.00	74.82	4.95	-3.00	0.00	0.00	76.77
4	2,110	2,114	21.99	21.99	102.3	0.00	77.50	5.86	-3.00	0.00	0.00	80.36
5	1,277	1,282	27.97	27.97	102.3	0.00	73.16	4.22	-3.00	0.00	0.00	74.38
6	1,919	1,922	24.10	24.10	103.3	0.00	76.68	5.56	-3.00	0.00	0.00	79.24
Sum				40.66								

Noise sensitive area: F Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (6)

Highest noise value

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	195	229	45.93	45.93	102.3	0.00	58.20	1.22	-3.00	0.00	0.00	56.42
2	1,134	1,141	33.27	33.27	106.4	0.00	72.14	4.03	-3.00	0.00	0.00	73.17
3	1,381	1,387	31.01	31.01	106.4	0.00	73.84	4.59	-3.00	0.00	0.00	75.43
4	1,857	1,861	23.56	23.56	102.3	0.00	76.39	5.39	-3.00	0.00	0.00	78.79
5	937	945	31.42	31.42	102.3	0.00	70.51	3.42	-3.00	0.00	0.00	70.93
6	1,605	1,609	26.25	26.25	103.3	0.00	75.13	4.95	-3.00	0.00	0.00	77.09
Sum				46.49								

Noise sensitive area: G Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (7)

Highest noise value

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	306	329	42.41	42.41	102.3	0.00	61.34	1.60	-3.00	0.00	0.00	59.94
2	1,242	1,248	32.24	32.24	106.4	0.00	72.92	4.28	-3.00	0.00	0.00	74.20
3	1,325	1,330	31.50	31.50	106.4	0.00	73.48	4.47	-3.00	0.00	0.00	74.95
4	1,693	1,697	24.67	24.67	102.3	0.00	75.59	5.08	-3.00	0.00	0.00	77.67
5	667	678	35.00	35.00	102.3	0.00	67.63	2.71	-3.00	0.00	0.00	67.34
6	1,368	1,374	28.11	28.11	103.3	0.00	73.76	4.46	-3.00	0.00	0.00	75.22
Sum				43.91								

Noise sensitive area: H Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (8)

Highest noise value

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,022	1,029	30.47	30.47	102.3	0.00	71.25	3.63	-3.00	0.00	0.00	71.88
2	1,583	1,588	29.40	29.40	106.4	0.00	75.02	5.02	-3.00	0.00	0.00	77.04
3	1,232	1,238	32.33	32.33	106.4	0.00	72.85	4.26	-3.00	0.00	0.00	74.11
4	1,188	1,194	28.79	28.79	102.3	0.00	72.54	4.02	-3.00	0.00	0.00	73.56
5	195	229	45.92	45.92	102.3	0.00	58.20	1.22	-3.00	0.00	0.00	56.42
6	659	670	36.07	36.07	103.3	0.00	67.53	2.73	-3.00	0.00	0.00	67.26
Sum				46.78								

Noise sensitive area: I Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (9)

Highest noise value

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,780	1,784	24.07	24.07	102.3	0.00	76.03	5.25	-3.00	0.00	0.00	78.28
2	1,944	1,949	26.91	26.91	106.4	0.00	76.79	5.74	-3.00	0.00	0.00	79.53

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DECIBEL - Detailed results

Calculation: Noice_Enercon_Optimizaton_01 Noise calculation model: ISO 9613-2 German (Interimsverfahren) 10.0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
3	1,296	1,303	31.74	31.74	106.4	0.00	73.30	4.40	-3.00	0.00	0.00	74.70
4	721	732	34.19	34.19	102.3	0.00	68.29	2.86	-3.00	0.00	0.00	68.15
5	1,007	1,015	30.62	30.62	102.3	0.00	71.13	3.60	-3.00	0.00	0.00	71.73
6	326	350	42.75	42.75	103.3	0.00	61.88	1.71	-3.00	0.00	0.00	60.59
Sum				43.95								

Noise sensitive area: J Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (10)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,264	1,270	28.08	28.08	102.3	0.00	73.08	4.19	-3.00	0.00	0.00	74.26
2	1,724	1,728	28.38	28.38	106.4	0.00	75.75	5.31	-3.00	0.00	0.00	78.06
3	1,269	1,275	31.99	31.99	106.4	0.00	73.11	4.34	-3.00	0.00	0.00	74.45
4	1,065	1,072	30.01	30.01	102.3	0.00	71.60	3.73	-3.00	0.00	0.00	72.34
5	427	444	39.40	39.40	102.3	0.00	63.95	2.00	-3.00	0.00	0.00	62.95
6	472	487	39.40	39.40	103.3	0.00	64.76	2.18	-3.00	0.00	0.00	63.94
Sum				43.29								

Noise sensitive area: K Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (12)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	From WTGs [dB(A)]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,843	1,847	23.65	23.65	102.3	0.00	76.33	5.37	-3.00	0.00	0.00	78.70
2	1,856	1,860	27.48	27.48	106.4	0.00	76.39	5.57	-3.00	0.00	0.00	78.96
3	1,160	1,166	33.02	33.02	106.4	0.00	72.34	4.09	-3.00	0.00	0.00	73.42
4	483	498	38.22	38.22	102.3	0.00	64.95	2.18	-3.00	0.00	0.00	64.13
5	1,147	1,154	29.18	29.18	102.3	0.00	72.24	3.93	-3.00	0.00	0.00	73.17
6	422	439	40.46	40.46	103.3	0.00	63.85	2.02	-3.00	0.00	0.00	62.87
Sum				43.30								

DECIBEL - Assumptions for noise calculation

Calculation: Noice_Enercon_Optimizazation_01

Noise calculation model:

ISO 9613-2 German (Interimsverfahren)

Wind speed (at hubheight):

Highest noise value

Ground attenuation:

Fixed values, Agr: -3.0, Dc: 0.0

Meteorological coefficient, CO:

Selected option: Fixed value: 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:

Fixed penalty added to source noise of WTGs with pure tones

WTG catalogue

Height above ground level, when no value in NSA object:

5.0 m; Allow override of model height with height from NSA object

Uncertainty margin:

Uncertainty added to source noise level of the WTGs in the calculation

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	125	250	500	1,000	2,000	4,000	8,000
[dB/km]	[dB/km]	[dB/km]	[dB/km]	[dB/km]	[dB/km]	[dB/km]	[dB/km]
0.10	0.40	1.00	1.90	3.70	9.70	32.80	117.00

All coordinates are in

UTM (north)-ETRS89 Zone: 32

WTG: ENERCON E-147 EP5 E2 5000 147.0 !O!

Noise: Mode 04 - OM 102.3 dB(A)

Source	Source/Date	Creator	Edited
ENERCON GmbH	2/10/2020	USER	2/10/2020 10:06 AM

The sound power levels do not include uncertainties.

According to manufacturer specification document (D0842288-1/D0841792-0).

ENERCON GmbH reserves the right to change the above specifications without prior notice.

Status	Wind speed (hh) [m/s]	LwA,ref [dB(A)]	Pure tones	Octave data							
				63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
From Windcat	12.5	102.3	No	82.4	88.7	92.8	96.2	97.0	95.5	91.3	84.3

WTG: ENERCON E-147 EP5 E2 5000 147.0 !O!

Noise: Mode 00 - OM 0 s - 5000 kW

Source	Source/Date	Creator	Edited
ENERCON GmbH	2/10/2020	USER	2/10/2020 10:05 AM

The sound power levels do not include uncertainties.

According to manufacturer specification document (D0802432-3/D0820251-1).

ENERCON GmbH reserves the right to change the above specifications without prior notice.

Status	Wind speed (hh) [m/s]	LwA,ref [dB(A)]	Pure tones	Octave data							
				63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
From Windcat	12.5	106.4	No	86.0	92.4	96.6	100.1	101.2	99.7	95.8	89.0

DECIBEL - Assumptions for noise calculation

Calculation: Noice_Enercon_Optimization_01

WTG: ENERCON E-147 EP5 E2 5000 147.0 !O!

Noise: Mode 03 - OM 103.3 dB(A)

Source	Source/Date	Creator	Edited
ENERCON GmbH	2/10/2020	USER	2/10/2020 10:06 AM

The sound power levels do not include uncertainties.

According to manufacturer specification document (D0842288-1/D0841792-0).

ENERCON GmbH reserves the right to change the above specifications without prior notice.

Status	Wind speed (hh) [m/s]	LwA,ref [dB(A)]	Pure tones	Octave data							
				63	125	250	500	1000	2000	4000	8000
				[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
From Windcat	13.0	103.3	No	83.6	89.8	93.8	97.0	98.0	96.6	92.5	85.4

Noise sensitive area: A Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (1)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: B Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (2)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: C Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (3)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: D Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (4)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: E Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (5)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: F Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (6)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: G Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (7)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

DECIBEL - Assumptions for noise calculation

Calculation: Noice_Enercon_Optimizaztion_01

Noise sensitive area: H Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (8)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: I Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (9)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: J Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (10)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Noise sensitive area: K Noise sensitive area: German TA Lärm - Rural villages, Mixed areas (12)

Predefined calculation standard: Rural villages, Mixed areas

Immission height(a.g.l.): Use standard value from calculation model

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 45.0 dB(A)

No distance demand

Project:

Exam_16.01

Licensed user:

Hochschule Flensburg, University of Applied Sciences
Darf nur für Zwecke der Lehre verwendet werden

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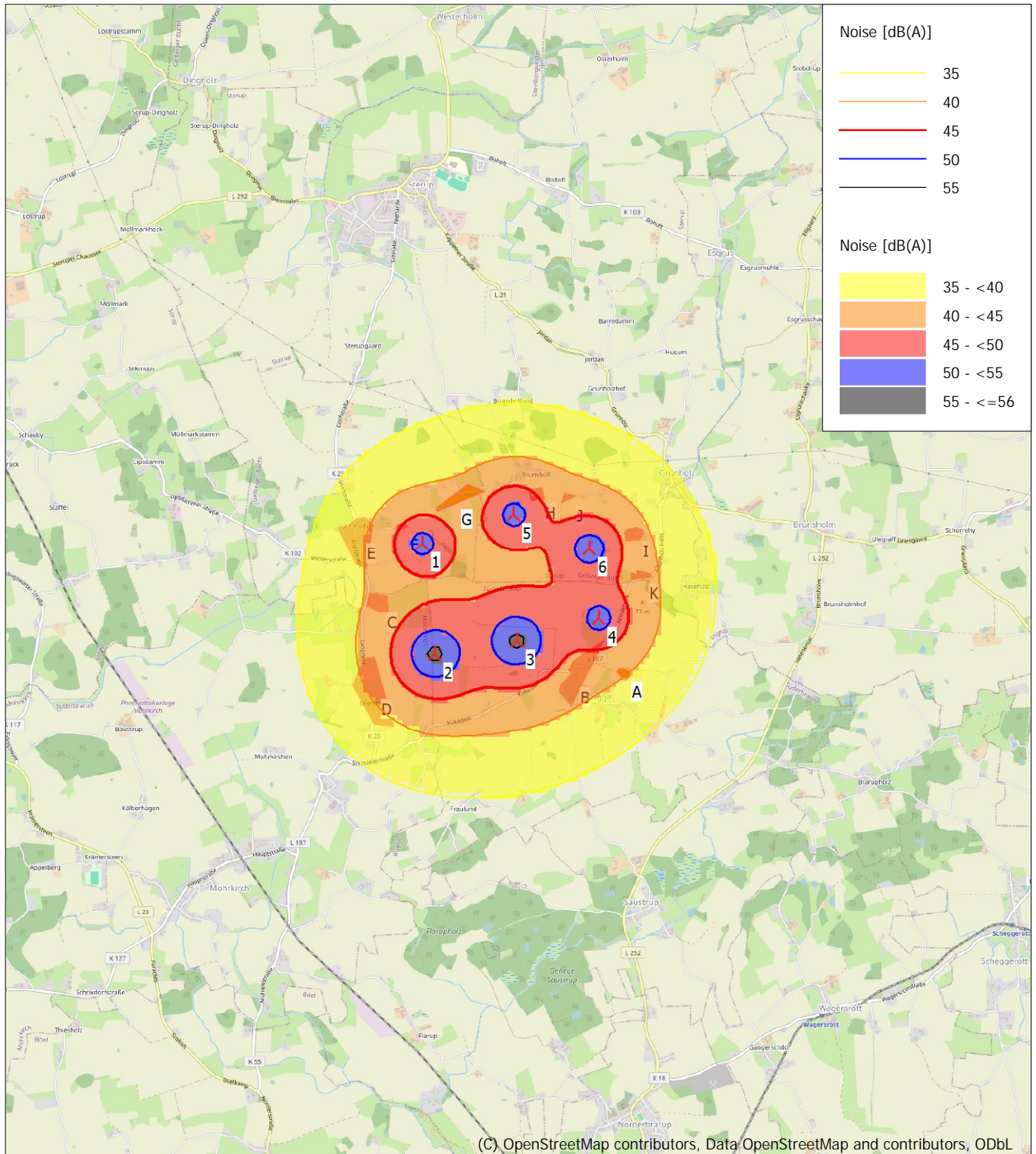
student / weti-lab-vt10@hs-flensburg.de

Calculated:

1/16/2025 4:33 PM/4.0.547

DECIBEL - Map Highest noise value

Calculation: Noice_Enercon_Optimizaton_01



Map: EMD OpenStreetMap , Print scale 1:50,000, Map center UTM (north)-ETRS89 Zone: 32 East: 548,477 North: 6,061,360

 New WTG

 Noise sensitive area

Noise calculation model: ISO 9613-2 German (Interimsverfahren). Wind speed: Highest noise value

Height above sea level from active line object