

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)

Noise calculation model:
ISO 9613-2 General
Wind speed (at 10 m height):
6,0 m/s
Ground attenuation:
Alternative
Meteorological coefficient, C0:
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
Model: 5,0 dB(A)
Height above ground level, when no value in NSA object:
1,5 m; Allow override of model height with height from NSA object
Uncertainty margin:
0,0 dB; Uncertainty margin in model has priority
Deviation from "official" noise demands. Negative is more restrictive,
positive is less restrictive.:
0,0 dB(A)

All coordinates are in
Luxemburgian TM-LUREF (LU)

WTGs

	X	Y	Z	Row data/Description	WTG type		Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	LwA,ref [dB(A)]
													Creator	Name		
1	86 953	65 285	260,7	WP Mondorf W...	Yes	ENERCON	E-175 EP5 E2-7	000	7 000	175,0	174,5	EMD	Mode 00 - OM-0-0 (7000 kW)	6,0	106,9	g
2	88 544	66 138	282,2	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	6,0	102,8	
3	86 902	66 430	318,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	6,0	102,8	
4	84 883	68 088	305,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	6,0	102,8	
5	84 781	69 096	317,8	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	6,0	102,8	
6	85 688	68 990	329,7	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	6,0	102,8	

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

Calculation Results

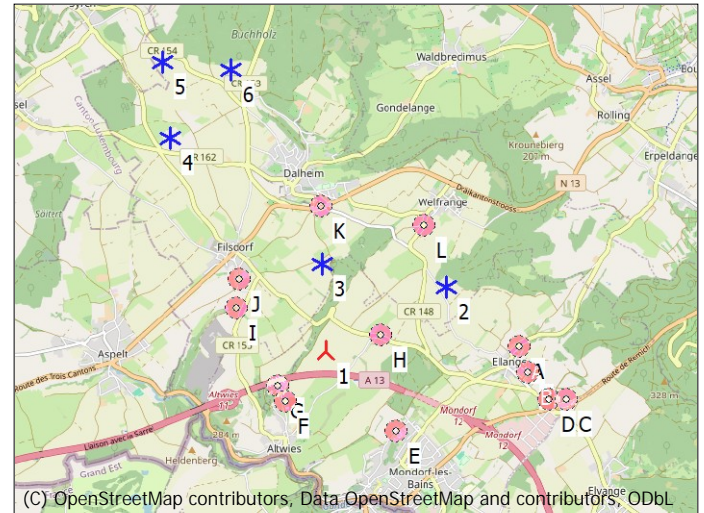
Sound level

Noise sensitive area				Demands		Sound level		Demands fulfilled ?	
No.	Name	X	Y	Z	Immission height	Noise	From WTGs	Distance to noise demand	Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
A	Ellange, Route d'Erpeldange 30	89 505	65 345	216,4	1,5	40,0	28,8	767	Yes
B	Ellange, Op dem Ewent 12	89 630	64 996	233,8	1,5	40,0	26,7	1 096	Yes
C	Ellange, Route de Remich 1	90 140	64 652	250,3	1,5	42,0	23,2	1 803	Yes
D	Ellange, Rue de la Gare 10	89 913	64 652	238,6	1,5	40,0	24,1	1 540	Yes
E	Mondorf-les-Bains, La Corniche 26	87 886	64 233	240,4	1,5	40,0	31,4	700	Yes
F	Altwies, Rue des Romains (limite)	86 413	64 604	238,8	1,5	40,0	37,1	174	Yes
G	Altwies, Rue des Romains 61	86 317	64 820	272,4	1,5	42,0	38,7	195	Yes
H	Altwies, Bremhaff 1	87 686	65 493	252,8	1,5	42,0	39,6	154	Yes
I	Filsdorf, Woneschwee 21	85 761	65 847	274,8	1,5	42,0	32,9	722	Yes
J	Filsdorf, Am Eck 19	85 800	66 228	280,9	1,5	40,0	32,9	602	Yes
K	Dalheim, Redoutewee 5	86 885	67 203	327,0	1,5	40,0	35,2	277	Yes
L	Welfrange, Munneréferwee 15	88 252	66 943	294,0	1,5	40,0	34,4	371	Yes

Distances (m)

WTG						
NSA	1	2	3	4	5	6
A	2553	1246	2820	5375	6033	5278
B	2693	1576	3082	5666	6350	5612
C	3249	2181	3694	6281	6962	6216
D	3027	2021	3497	6092	6789	6056
E	1406	2016	2407	4887	5770	5241

To be continued on next page...



Scale 1:100 000
New WTG
Noise sensitive area

Project:
Mondorf

Licensed user:
Societe Electrique de l'Our S.A.
2, rue Pierre d'Aspelt, P.B. 37
LU-2010 Luxembourg
+352 449 021
Anne Slunecko / anne.slunecko@soler.lu
Calculated:
25.06.2025 10:48/4.0.531

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)

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WTG						
NSA	1	2	3	4	5	6
F	869	2626	1890	3805	4780	4446
G	788	2588	1713	3569	4544	4218
H	762	1073	1222	3820	4629	4028
I	1318	2798	1281	2407	3394	3144
J	1490	2746	1120	2074	3044	2764
K	1919	1972	773	2189	2830	2151
L	2106	856	1444	3559	4085	3281

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag) Noise calculation model: ISO 9613-2 General 6,0 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 Ellange, Route d'Erpeldange 30

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 553	2 562	73,6	Yes	22,04	106,9	3,01	79,17	4,87	3,82	0,00	0,00	87,86
2	1 246	1 264	66,1	Yes	27,33	102,8	3,01	73,04	2,40	3,00	0,00	0,00	78,44
3	2 820	2 831	67,1	Yes	16,36	102,8	3,01	80,04	5,38	3,99	0,00	0,00	89,41
4	5 375	5 380	38,2	No	5,13	102,8	3,01	85,62	10,22	4,80	0,00	0,00	100,64
5	6 033	6 038	40,1	No	2,88	102,8	3,01	86,62	11,47	4,80	0,00	0,00	102,89
6	5 278	5 285	55,9	No	5,47	102,8	3,01	85,46	10,04	4,80	0,00	0,00	100,30
Sum					28,77								

Noise sensitive area: B Ellange, Op dem Ewent 12

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 693	2 700	87,6	Yes	21,45	106,9	3,01	79,63	5,13	3,69	0,00	0,00	88,45
2	1 576	1 588	80,3	Yes	24,67	102,8	3,01	75,02	3,02	3,06	0,00	0,00	81,10
3	3 082	3 091	81,7	Yes	15,20	102,8	3,01	80,80	5,87	3,90	0,00	0,00	90,57
4	5 666	5 670	52,0	No	4,13	102,8	3,01	86,07	10,77	4,80	0,00	0,00	101,64
5	6 350	6 355	52,8	No	1,84	102,8	3,01	87,06	12,07	4,80	0,00	0,00	103,94
6	5 612	5 617	65,9	Yes	4,71	102,8	3,01	85,99	10,67	4,40	0,00	0,00	101,06
Sum					26,75								

Noise sensitive area: C Ellange, Route de Remich 1

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 249	3 255	96,2	Yes	18,67	106,9	3,01	81,25	6,18	3,79	0,00	0,00	91,22
2	2 181	2 188	93,4	Yes	20,47	102,8	3,01	77,80	4,16	3,34	0,00	0,00	85,30
3	3 694	3 701	95,5	Yes	12,46	102,8	3,01	82,37	7,03	3,92	0,00	0,00	93,31
4	6 281	6 284	65,8	Yes	2,42	102,8	3,01	86,96	11,94	4,44	0,00	0,00	103,35
5	6 962	6 966	66,3	Yes	0,20	102,8	3,01	87,86	13,23	4,48	0,00	0,00	105,57
6	6 216	6 221	81,2	Yes	2,72	102,8	3,01	86,88	11,82	4,35	0,00	0,00	103,05
Sum					23,17								

Noise sensitive area: D Ellange, Rue de la Gare 10

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 027	3 033	90,1	Yes	19,71	106,9	3,01	80,64	5,76	3,78	0,00	0,00	90,19
2	2 021	2 030	86,3	Yes	21,42	102,8	3,01	77,15	3,86	3,34	0,00	0,00	84,35
3	3 497	3 504	88,8	Yes	13,29	102,8	3,01	81,89	6,66	3,93	0,00	0,00	92,48
4	6 092	6 096	59,4	Yes	3,02	102,8	3,01	86,70	11,58	4,47	0,00	0,00	102,75

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DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag) Noise calculation model: ISO 9613-2 General 6,0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
5	6 789	6 793	59,6	Yes	0,72	102,8	3,01	87,64	12,91	4,50	0,00	0,00	105,05
6	6 056	6 061	71,6	Yes	3,21	102,8	3,01	86,65	11,52	4,40	0,00	0,00	102,56
Sum					24,13								

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 406	1 419	95,8	Yes	30,68	106,9	3,01	74,04	2,70	2,48	0,00	0,00	79,22
2	2 016	2 024	70,8	Yes	21,20	102,8	3,01	77,13	3,85	3,60	0,00	0,00	84,57
3	2 407	2 418	88,6	Yes	18,96	102,8	3,01	78,67	4,59	3,55	0,00	0,00	86,81
4	4 887	4 892	64,7	Yes	7,34	102,8	3,01	84,79	9,29	4,35	0,00	0,00	98,43
5	5 770	5 775	62,4	Yes	4,14	102,8	3,01	86,23	10,97	4,43	0,00	0,00	101,63
6	5 241	5 246	65,0	Yes	6,03	102,8	3,01	85,40	9,97	4,38	0,00	0,00	99,74
Sum					31,43								

Noise sensitive area: F Altwies,Rue des Romains (limite)

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	869	891	89,9	Yes	36,90	106,9	3,01	70,00	1,69	1,30	0,00	0,00	72,99
2	2 626	2 633	80,6	Yes	17,61	102,8	3,01	79,41	5,00	3,75	0,00	0,00	88,16
3	1 890	1 904	64,1	Yes	21,91	102,8	3,01	76,59	3,62	3,64	0,00	0,00	83,86
4	3 805	3 811	60,4	No	11,11	102,8	3,01	82,62	7,24	4,80	0,00	0,00	94,66
5	4 780	4 785	60,5	No	7,28	102,8	3,01	84,60	9,09	4,80	0,00	0,00	98,49
6	4 446	4 452	57,7	No	8,54	102,8	3,01	83,97	8,46	4,80	0,00	0,00	97,23
Sum					37,11								

Noise sensitive area: G Altwies,Rue des Romains 61

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	788	804	94,0	Yes	38,51	106,9	3,01	69,11	1,53	0,74	0,00	0,00	71,38
2	2 588	2 593	90,7	Yes	17,97	102,8	3,01	79,28	4,93	3,60	0,00	0,00	87,80
3	1 713	1 724	72,3	Yes	23,40	102,8	3,01	75,73	3,28	3,36	0,00	0,00	82,37
4	3 569	3 574	74,8	Yes	12,83	102,8	3,01	82,06	6,79	4,08	0,00	0,00	92,94
5	4 544	4 548	75,2	Yes	8,74	102,8	3,01	84,16	8,64	4,24	0,00	0,00	97,03
6	4 218	4 222	72,3	Yes	10,02	102,8	3,01	83,51	8,02	4,22	0,00	0,00	95,75
Sum					38,70								

Noise sensitive area: H Altwies, Bremhaff 1

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	762	783	92,0	Yes	38,81	106,9	3,01	68,88	1,49	0,72	0,00	0,00	71,08
2	1 073	1 088	70,6	Yes	29,41	102,8	3,01	71,73	2,07	2,56	0,00	0,00	76,36
3	1 222	1 240	73,7	Yes	27,79	102,8	3,01	72,87	2,36	2,75	0,00	0,00	77,98
4	3 820	3 825	53,0	No	11,05	102,8	3,01	82,65	7,27	4,80	0,00	0,00	94,72
5	4 629	4 633	51,9	No	7,85	102,8	3,01	84,32	8,80	4,80	0,00	0,00	97,92
6	4 028	4 034	55,9	No	10,19	102,8	3,01	83,11	7,66	4,80	0,00	0,00	95,58
Sum					39,59								

Noise sensitive area: I Filsdorf, Woneschwee 21

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 318	1 327	72,4	Yes	30,99	106,9	3,01	73,46	2,52	2,92	0,00	0,00	78,90
2	2 798	2 803	66,6	Yes	16,51	102,8	3,01	79,95	5,33	3,99	0,00	0,00	89,26

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DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag) Noise calculation model: ISO 9613-2 General 6,0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
3	1 281	1 296	76,2	Yes	27,29	102,8	3,01	73,25	2,46	2,77	0,00	0,00	78,48
4	2 407	2 414	69,7	Yes	18,72	102,8	3,01	78,65	4,59	3,81	0,00	0,00	87,05
5	3 394	3 399	71,5	Yes	13,60	102,8	3,01	81,63	6,46	4,08	0,00	0,00	92,17
6	3 144	3 151	70,9	Yes	14,79	102,8	3,01	80,97	5,99	4,03	0,00	0,00	90,99
Sum					32,93								

Noise sensitive area: J Filldorf, Am Eck 19

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 490	1 497	72,1	Yes	29,40	106,9	3,01	74,51	2,85	3,14	0,00	0,00	80,50
2	2 746	2 750	64,7	Yes	16,77	102,8	3,01	79,79	5,22	3,99	0,00	0,00	89,00
3	1 120	1 136	78,3	Yes	29,09	102,8	3,01	72,10	2,16	2,42	0,00	0,00	76,68
4	2 074	2 081	69,3	Yes	20,79	102,8	3,01	77,37	3,95	3,66	0,00	0,00	84,98
5	3 044	3 049	71,1	Yes	15,29	102,8	3,01	80,68	5,79	4,00	0,00	0,00	90,48
6	2 764	2 771	69,0	Yes	16,70	102,8	3,01	79,85	5,27	3,95	0,00	0,00	89,07
Sum					32,85								

Noise sensitive area: K Dalheim, Redoutewee 5

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 919	1 922	74,3	Yes	26,09	106,9	3,01	76,68	3,65	3,47	0,00	0,00	83,80
2	1 972	1 974	73,4	Yes	21,59	102,8	3,01	76,91	3,75	3,52	0,00	0,00	84,18
3	773	786	76,4	Yes	33,95	102,8	3,01	68,90	1,49	1,42	0,00	0,00	71,81
4	2 189	2 193	78,6	Yes	20,21	102,8	3,01	77,82	4,17	3,57	0,00	0,00	85,56
5	2 830	2 834	81,5	Yes	16,52	102,8	3,01	80,05	5,38	3,82	0,00	0,00	89,25
6	2 151	2 156	82,4	Yes	20,51	102,8	3,01	77,67	4,10	3,49	0,00	0,00	85,26
Sum					35,18								

Noise sensitive area: L Welfrange, Munnerëferwee 15

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 106	2 111	87,5	Yes	25,01	106,9	3,01	77,49	4,01	3,38	0,00	0,00	84,88
2	856	867	86,4	Yes	33,02	102,8	3,01	69,76	1,65	1,34	0,00	0,00	72,75
3	1 444	1 454	66,2	Yes	25,52	102,8	3,01	74,25	2,76	3,23	0,00	0,00	80,25
4	3 559	3 562	57,0	No	12,17	102,8	3,01	82,03	6,77	4,80	0,00	0,00	93,60
5	4 085	4 088	63,6	No	9,97	102,8	3,01	83,23	7,77	4,80	0,00	0,00	95,80
6	3 281	3 286	76,4	No	13,39	102,8	3,01	81,33	6,24	4,80	0,00	0,00	92,38
Sum					34,35								

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

6,0 m/s

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

0,0 dB; Uncertainty margin in model has priority

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)

WTG: ENERCON E-175 EP5 E2 7000 175.0 !O!

Noise: Mode 00 - OM-0-0 (7000 kW)

Source Source/Date Creator Edited
ENERCON GmbH 20.08.2024 EMD 09.04.2025 14:31

The sound power levels do not include uncertainties.

According to manufacturer specification document (D03045913_1.0_de_Technisches Datenblatt_Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf/D03045924_1.0_de_Technisches Datenblatt_Oktavbandpegel Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf).

Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones
Interpolated	174,5	6,0	106,9	No

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [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	149,0	6,0	102,8	No	84,7	90,4	93,5	95,9	97,0	96,9	91,2	74,5

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [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	149,0	6,0	102,8	No	84,7	90,4	93,5	95,9	97,0	96,9	91,2	74,5

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)

Noise sensitive area: A Ellange, Route d'Erpeldange 30

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: B Ellange, Op dem Ewent 12

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: C Ellange, Route de Remich 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: D Ellange, Rue de la Gare 10

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: F Altwies, Rue des Romains (limite)

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: G Altwies, Rue des Romains 61

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: H Altwies, Bremhaff 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: I Filsdorf, Woneschwee 21

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Project:
Mondorf

Licensed user:
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+352 449 021
Anne Slunecko / anne.slunecko@soler.lu
Calculated:
25.06.2025 10:48/4.0.531

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)

Noise demand: 42,0 dB(A)
No distance demand

Noise sensitive area: J Filsdorf, Am Eck 19

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

Noise sensitive area: K Dalheim, Redoutewee 5

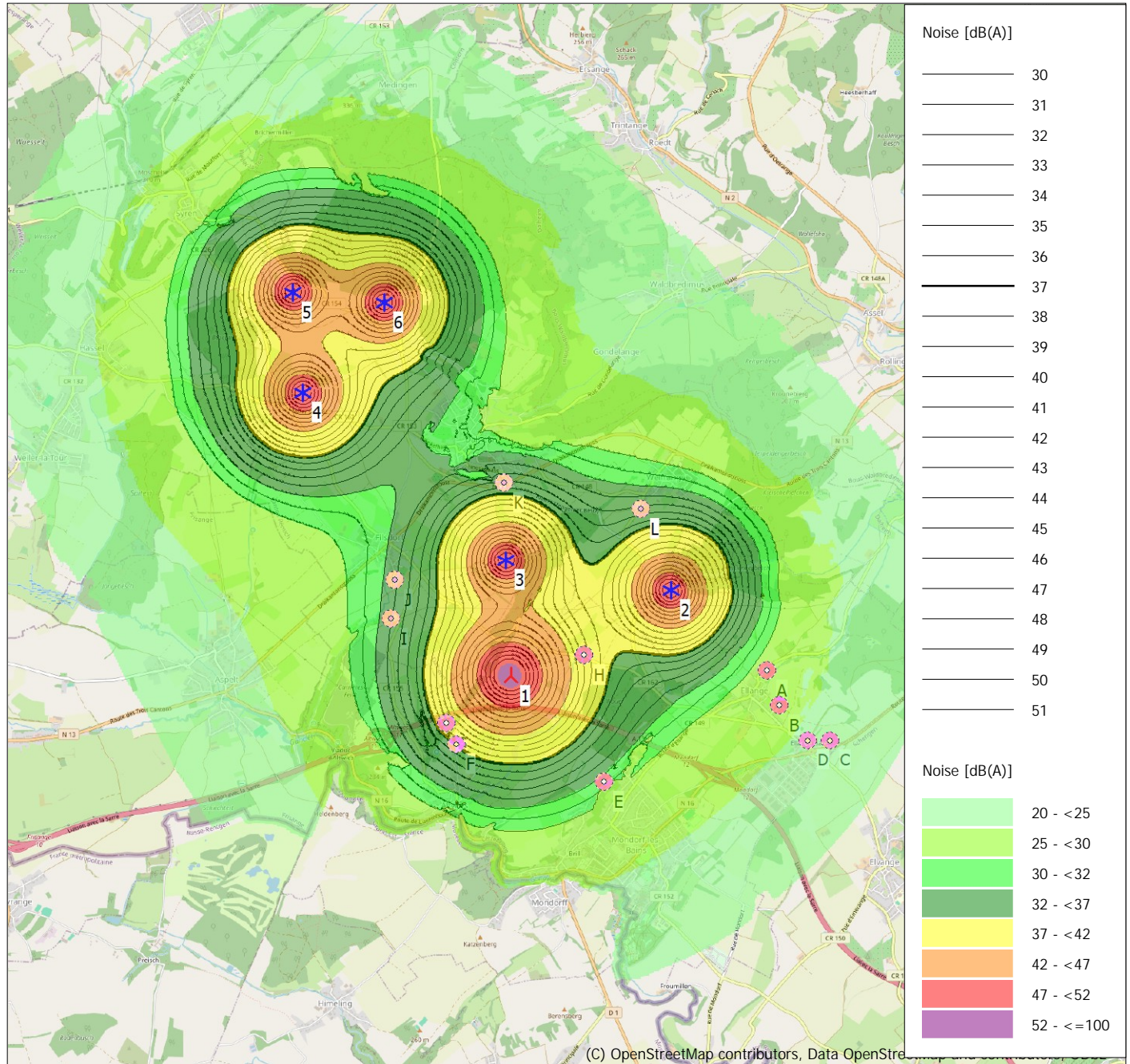
Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

Noise sensitive area: L Welfrange, Munnerëferwee 15

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

DECIBEL - Map 6,0 m/s

Calculation: Schall Berechnung WEA 2 (6 m/s - Tag)



DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

6,0 m/s

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

0,0 dB; Uncertainty margin in model has priority

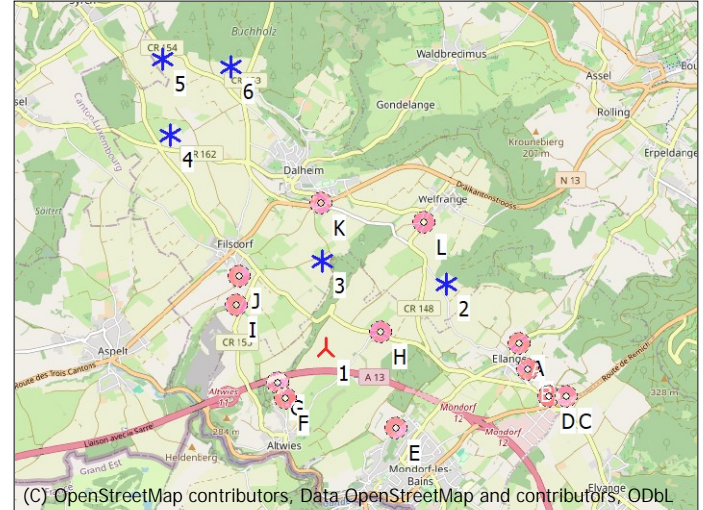
Deviation from "official" noise demands. Negative is more restrictive,

positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)



Scale 1:100 000
New WTG
Noise sensitive area

WTGs

	X	Y	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)]
					Valid	Manufact.	Type-generator			Creator	Name		
1	86 953	65 285	260,7	WP Mondorf WE...	Yes	ENERCON	E-175 EP5 E2-7 000	7 000	175,0	174,5	EMD Mode 01 - OM-NR-01-0 (6200 kW)	6,0	106,0 g
2	88 544	66 138	282,2	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4 200	4 200	115,7	149,0	EMD Mode 00 - OM 0 s (4200 kW)	6,0	102,8
3	86 902	66 430	318,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4 200	4 200	115,7	149,0	EMD Mode 01 - OM I s (4000 kW)	6,0	103,1
4	84 883	68 088	305,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4 200	4 200	115,7	149,0	EMD Mode 00 - OM 0 s (4200 kW)	6,0	102,8
5	84 781	69 096	317,8	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4 200	4 200	115,7	149,0	EMD Mode 00 - OM 0 s (4200 kW)	6,0	102,8
6	85 688	68 990	329,7	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4 200	4 200	115,7	149,0	EMD Mode 00 - OM 0 s (4200 kW)	6,0	102,8

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

Calculation Results

Sound level

Noise sensitive area

No.	Name	X	Y	Z [m]	Immission height [m]	Demands		Sound level From WTGs [dB(A)]	Distance to noise demand [m]	Demands fulfilled ?	
						Noise [dB(A)]				Noise	
A	Ellange, Route d'Erpeldange 30	89 505	65 345	216,4	1,5	37,0		28,6	637	Yes	
B	Ellange, Op dem Ewent 12	89 630	64 996	233,8	1,5	37,0		26,5	965	Yes	
C	Ellange, Route de Remich 1	90 140	64 652	250,3	1,5	39,0		22,9	1 656	Yes	
D	Ellange, Rue de la Gare 10	89 913	64 652	238,6	1,5	37,0		23,9	1 409	Yes	
E	Mondorf-les-Bains, La Corniche 26	87 886	64 233	240,4	1,5	37,0		30,7	559	Yes	
F	Altwies, Rue des Romains (limite)	86 413	64 604	238,8	1,5	37,0		36,3	46	Yes	
G	Altwies, Rue des Romains 61	86 317	64 820	272,4	1,5	39,0		37,9	60	Yes	
H	Altwies, Bremhaff 1	87 686	65 493	252,8	1,5	39,0		38,9	9	Yes	
I	Filsdorf, Woneschwee 21	85 761	65 847	274,8	1,5	39,0		32,5	606	Yes	
J	Filsdorf, Am Eck 19	85 800	66 228	280,9	1,5	37,0		32,6	423	Yes	
K	Dalheim, Redoutewee 5	86 885	67 203	327,0	1,5	37,0		35,4	105	Yes	
L	Welfrange, Munneréferwee 15	88 252	66 943	294,0	1,5	37,0		34,3	195	Yes	

Distances (m)

WTG

NSA	1	2	3	4	5	6
A	2553	1246	2820	5375	6033	5278
B	2693	1576	3082	5666	6350	5612
C	3249	2181	3694	6281	6962	6216
D	3027	2021	3497	6092	6789	6056
E	1406	2016	2407	4887	5770	5241
F	869	2626	1890	3805	4780	4446

To be continued on next page...

Project:
Mondorf

Licensed user:
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2, rue Pierre d'Aspelt, P.B. 37
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Anne Slunecko / anne.slunecko@soler.lu
Calculated:
25.06.2025 09:56/4.0.531

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)

...continued from previous page

WTG						
NSA	1	2	3	4	5	6
G	788	2588	1713	3569	4544	4218
H	762	1073	1222	3820	4629	4028
I	1318	2798	1281	2407	3394	3144
J	1490	2746	1120	2074	3044	2764
K	1919	1972	773	2189	2830	2151
L	2106	856	1444	3559	4085	3281

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht) Noise calculation model: ISO 9613-2 General 6,0 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 Ellange, Route d'Erpeldange 30

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 553	2 562	73,6	Yes	21,15	106,0	3,01	79,17	4,87	3,82	0,00	0,00	87,86
2	1 246	1 264	66,1	Yes	27,33	102,8	3,01	73,04	2,40	3,00	0,00	0,00	78,44
3	2 820	2 831	67,1	Yes	16,71	103,1	3,01	80,04	5,38	3,99	0,00	0,00	89,41
4	5 375	5 380	38,2	No	5,13	102,8	3,01	85,62	10,22	4,80	0,00	0,00	100,64
5	6 033	6 038	40,1	No	2,88	102,8	3,01	86,62	11,47	4,80	0,00	0,00	102,89
6	5 278	5 285	55,9	No	5,47	102,8	3,01	85,46	10,04	4,80	0,00	0,00	100,30
Sum					28,62								

Noise sensitive area: B Ellange, Op dem Ewent 12

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 693	2 700	87,6	Yes	20,56	106,0	3,01	79,63	5,13	3,69	0,00	0,00	88,45
2	1 576	1 588	80,3	Yes	24,67	102,8	3,01	75,02	3,02	3,06	0,00	0,00	81,10
3	3 082	3 091	81,7	Yes	15,54	103,1	3,01	80,80	5,87	3,90	0,00	0,00	90,57
4	5 666	5 670	52,0	No	4,13	102,8	3,01	86,07	10,77	4,80	0,00	0,00	101,64
5	6 350	6 355	52,8	No	1,84	102,8	3,01	87,06	12,07	4,80	0,00	0,00	103,94
6	5 612	5 617	65,9	Yes	4,71	102,8	3,01	85,99	10,67	4,40	0,00	0,00	101,06
Sum					26,53								

Noise sensitive area: C Ellange, Route de Remich 1

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 249	3 255	96,2	Yes	17,79	106,0	3,01	81,25	6,18	3,79	0,00	0,00	91,22
2	2 181	2 188	93,4	Yes	20,47	102,8	3,01	77,80	4,16	3,34	0,00	0,00	85,30
3	3 694	3 701	95,5	Yes	12,80	103,1	3,01	82,37	7,03	3,92	0,00	0,00	93,31
4	6 281	6 284	65,8	Yes	2,42	102,8	3,01	86,96	11,94	4,44	0,00	0,00	103,35
5	6 962	6 966	66,3	Yes	0,20	102,8	3,01	87,86	13,23	4,48	0,00	0,00	105,57
6	6 216	6 221	81,2	Yes	2,72	102,8	3,01	86,88	11,82	4,35	0,00	0,00	103,05
Sum					22,91								

Noise sensitive area: D Ellange, Rue de la Gare 10

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 027	3 033	90,1	Yes	18,82	106,0	3,01	80,64	5,76	3,78	0,00	0,00	90,19
2	2 021	2 030	86,3	Yes	21,42	102,8	3,01	77,15	3,86	3,34	0,00	0,00	84,35
3	3 497	3 504	88,8	Yes	13,63	103,1	3,01	81,89	6,66	3,93	0,00	0,00	92,48
4	6 092	6 096	59,4	Yes	3,02	102,8	3,01	86,70	11,58	4,47	0,00	0,00	102,75

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht) Noise calculation model: ISO 9613-2 General 6,0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
5	6 789	6 793	59,6	Yes	0,72	102,8	3,01	87,64	12,91	4,50	0,00	0,00	105,05
6	6 056	6 061	71,6	Yes	3,21	102,8	3,01	86,65	11,52	4,40	0,00	0,00	102,56
Sum					23,86								

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 406	1 419	95,8	Yes	29,79	106,0	3,01	74,04	2,70	2,48	0,00	0,00	79,22
2	2 016	2 024	70,8	Yes	21,20	102,8	3,01	77,13	3,85	3,60	0,00	0,00	84,57
3	2 407	2 418	88,6	Yes	19,31	103,1	3,01	78,67	4,59	3,55	0,00	0,00	86,81
4	4 887	4 892	64,7	Yes	7,34	102,8	3,01	84,79	9,29	4,35	0,00	0,00	98,43
5	5 770	5 775	62,4	Yes	4,14	102,8	3,01	86,23	10,97	4,43	0,00	0,00	101,63
6	5 241	5 246	65,0	Yes	6,03	102,8	3,01	85,40	9,97	4,38	0,00	0,00	99,74
Sum					30,73								

Noise sensitive area: F Altwies,Rue des Romains (limite)

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	869	891	89,9	Yes	36,02	106,0	3,01	70,00	1,69	1,30	0,00	0,00	72,99
2	2 626	2 633	80,6	Yes	17,61	102,8	3,01	79,41	5,00	3,75	0,00	0,00	88,16
3	1 890	1 904	64,1	Yes	22,26	103,1	3,01	76,59	3,62	3,64	0,00	0,00	83,86
4	3 805	3 811	60,4	No	11,11	102,8	3,01	82,62	7,24	4,80	0,00	0,00	94,66
5	4 780	4 785	60,5	No	7,28	102,8	3,01	84,60	9,09	4,80	0,00	0,00	98,49
6	4 446	4 452	57,7	No	8,54	102,8	3,01	83,97	8,46	4,80	0,00	0,00	97,23
Sum					36,28								

Noise sensitive area: G Altwies,Rue des Romains 61

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	788	804	94,0	Yes	37,63	106,0	3,01	69,11	1,53	0,74	0,00	0,00	71,38
2	2 588	2 593	90,7	Yes	17,97	102,8	3,01	79,28	4,93	3,60	0,00	0,00	87,80
3	1 713	1 724	72,3	Yes	23,75	103,1	3,01	75,73	3,28	3,36	0,00	0,00	82,37
4	3 569	3 574	74,8	Yes	12,83	102,8	3,01	82,06	6,79	4,08	0,00	0,00	92,94
5	4 544	4 548	75,2	Yes	8,74	102,8	3,01	84,16	8,64	4,24	0,00	0,00	97,03
6	4 218	4 222	72,3	Yes	10,02	102,8	3,01	83,51	8,02	4,22	0,00	0,00	95,75
Sum					37,87								

Noise sensitive area: H Altwies, Bremhaff 1

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	762	783	92,0	Yes	37,93	106,0	3,01	68,88	1,49	0,72	0,00	0,00	71,08
2	1 073	1 088	70,6	Yes	29,41	102,8	3,01	71,73	2,07	2,56	0,00	0,00	76,36
3	1 222	1 240	73,7	Yes	28,14	103,1	3,01	72,87	2,36	2,75	0,00	0,00	77,98
4	3 820	3 825	53,0	No	11,05	102,8	3,01	82,65	7,27	4,80	0,00	0,00	94,72
5	4 629	4 633	51,9	No	7,85	102,8	3,01	84,32	8,80	4,80	0,00	0,00	97,92
6	4 028	4 034	55,9	No	10,19	102,8	3,01	83,11	7,66	4,80	0,00	0,00	95,58
Sum					38,90								

Noise sensitive area: I Filsdorf, Woneschwee 21

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 318	1 327	72,4	Yes	30,10	106,0	3,01	73,46	2,52	2,92	0,00	0,00	78,90
2	2 798	2 803	66,6	Yes	16,51	102,8	3,01	79,95	5,33	3,99	0,00	0,00	89,26

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht) Noise calculation model: ISO 9613-2 General 6,0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
3	1 281	1 296	76,2	Yes	27,63	103,1	3,01	73,25	2,46	2,77	0,00	0,00	78,48
4	2 407	2 414	69,7	Yes	18,72	102,8	3,01	78,65	4,59	3,81	0,00	0,00	87,05
5	3 394	3 399	71,5	Yes	13,60	102,8	3,01	81,63	6,46	4,08	0,00	0,00	92,17
6	3 144	3 151	70,9	Yes	14,79	102,8	3,01	80,97	5,99	4,03	0,00	0,00	90,99
Sum					32,50								

Noise sensitive area: J Filldorf, Am Eck 19

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 490	1 497	72,1	Yes	28,51	106,0	3,01	74,51	2,85	3,14	0,00	0,00	80,50
2	2 746	2 750	64,7	Yes	16,77	102,8	3,01	79,79	5,22	3,99	0,00	0,00	89,00
3	1 120	1 136	78,3	Yes	29,43	103,1	3,01	72,10	2,16	2,42	0,00	0,00	76,68
4	2 074	2 081	69,3	Yes	20,79	102,8	3,01	77,37	3,95	3,66	0,00	0,00	84,98
5	3 044	3 049	71,1	Yes	15,29	102,8	3,01	80,68	5,79	4,00	0,00	0,00	90,48
6	2 764	2 771	69,0	Yes	16,70	102,8	3,01	79,85	5,27	3,95	0,00	0,00	89,07
Sum					32,64								

Noise sensitive area: K Dalheim, Redoutewee 5

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 919	1 922	74,3	Yes	25,21	106,0	3,01	76,68	3,65	3,47	0,00	0,00	83,80
2	1 972	1 974	73,4	Yes	21,59	102,8	3,01	76,91	3,75	3,52	0,00	0,00	84,18
3	773	786	76,4	Yes	34,30	103,1	3,01	68,90	1,49	1,42	0,00	0,00	71,81
4	2 189	2 193	78,6	Yes	20,21	102,8	3,01	77,82	4,17	3,57	0,00	0,00	85,56
5	2 830	2 834	81,5	Yes	16,52	102,8	3,01	80,05	5,38	3,82	0,00	0,00	89,25
6	2 151	2 156	82,4	Yes	20,51	102,8	3,01	77,67	4,10	3,49	0,00	0,00	85,26
Sum					35,35								

Noise sensitive area: L Welfrange, Munnerferwee 15

Wind speed: 6,0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 106	2 111	87,5	Yes	24,13	106,0	3,01	77,49	4,01	3,38	0,00	0,00	84,88
2	856	867	86,4	Yes	33,02	102,8	3,01	69,76	1,65	1,34	0,00	0,00	72,75
3	1 444	1 454	66,2	Yes	25,86	103,1	3,01	74,25	2,76	3,23	0,00	0,00	80,25
4	3 559	3 562	57,0	No	12,17	102,8	3,01	82,03	6,77	4,80	0,00	0,00	93,60
5	4 085	4 088	63,6	No	9,97	102,8	3,01	83,23	7,77	4,80	0,00	0,00	95,80
6	3 281	3 286	76,4	No	13,39	102,8	3,01	81,33	6,24	4,80	0,00	0,00	92,38
Sum					34,31								

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

6,0 m/s

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

0,0 dB; Uncertainty margin in model has priority

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)

WTG: ENERCON E-175 EP5 E2 7000 175.0 !O!

Noise: Mode 01 - OM-NR-01-0 (6200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 20.08.2024 EMD 09.04.2025 14:31

The sound power levels do not include uncertainties.

According to manufacturer specification document (D03119985_0.0_de_Technisches Datenblatt_Betriebsmodus OM-NR-01-0 - E-175 EP5 E2 - 7000 kW.pdf/D03119987_0.0_de_Technisches Datenblatt_Oktavbandpegel Betriebsmodus OM-NR-01-0 - E-175 EP5 E2 - 7000 kW.pdf).

Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones
Interpolated	174,5	6,0	106,0	No

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [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	149,0	6,0	102,8	No	84,7	90,4	93,5	95,9	97,0	96,9	91,2	74,5

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 01 - OM I s (4000 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [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	149,0	6,0	103,1	No	85,2	90,8	94,1	97,8	98,0	95,4	87,3	69,2

DECIBEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source	Source/Date	Creator	Edited
ENERCON GmbH	19.12.2022	EMD	19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed [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	149,0	6,0	102,8	No	84,7	90,4	93,5	95,9	97,0	96,9	91,2	74,5

Noise sensitive area: A Ellange, Route d'Erpeldange 30

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: B Ellange, Op dem Ewent 12

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: C Ellange, Route de Remich 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 39,0 dB(A)

No distance demand

Noise sensitive area: D Ellange, Rue de la Gare 10

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: F Altwies,Rue des Romains (limite)

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: G Altwies,Rue des Romains 61

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 39,0 dB(A)

No distance demand

Project:
Mondorf

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Anne Slunecko / anne.slunecko@soler.lu
Calculated:
25.06.2025 09:56/4.0.531

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)

Noise sensitive area: H Altwies, Bremhaff 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 39,0 dB(A)

No distance demand

Noise sensitive area: I Filsdorf, Woneschwee 21

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 39,0 dB(A)

No distance demand

Noise sensitive area: J Filsdorf, Am Eck 19

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: K Dalheim, Redoutewee 5

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

Noise sensitive area: L Welfrange, Munneréferwee 15

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

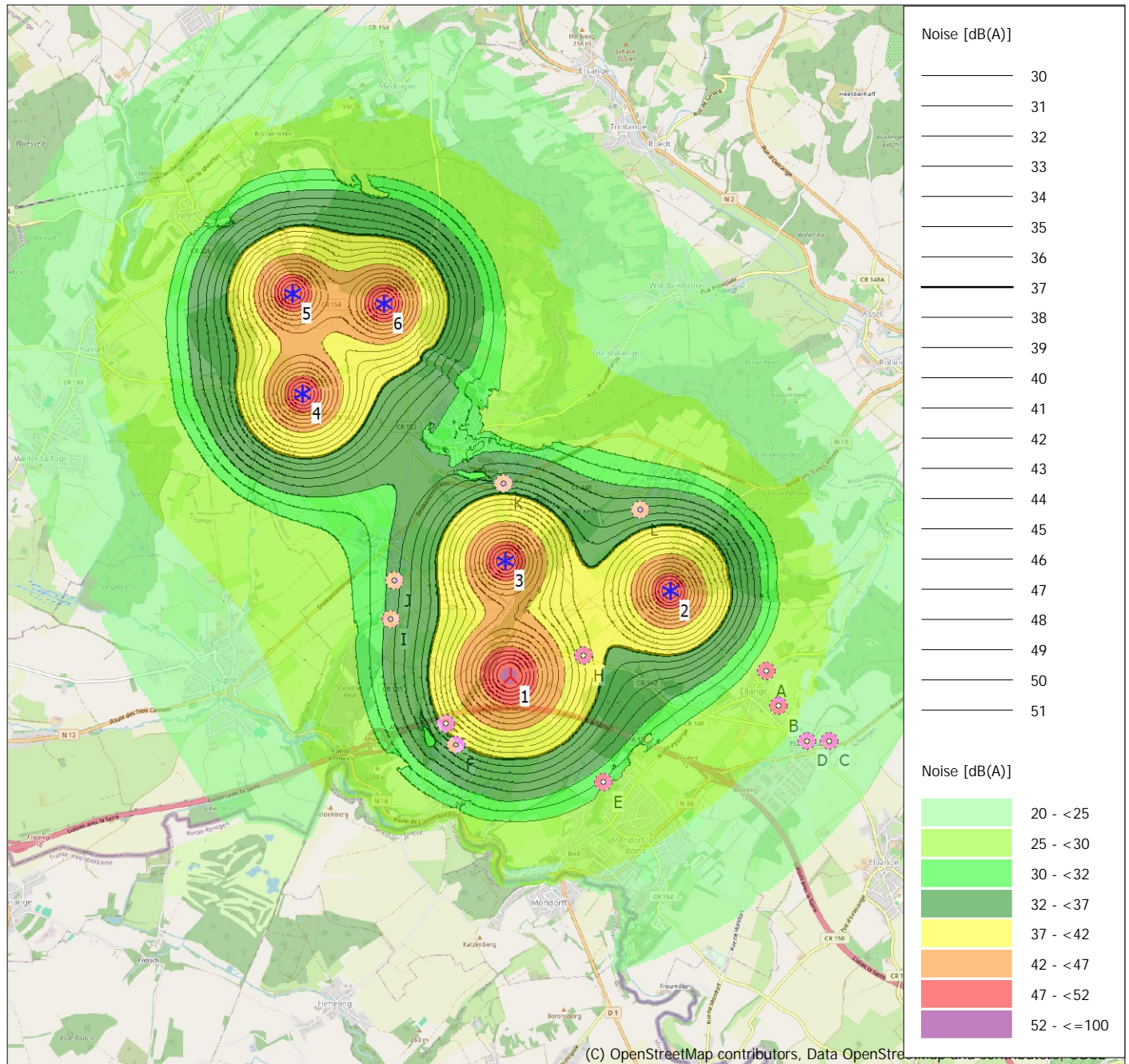
No temporal binning

Noise demand: 37,0 dB(A)

No distance demand

DECIBEL - Map 6,0 m/s

Calculation: Schall Berechnung WEA 2 (6 m/s - Nacht)



DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)

Noise calculation model:
ISO 9613-2 General
Wind speed (at 10 m height):
Highest noise value
Ground attenuation:
Alternative
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
Model: 5,0 dB(A)
Height above ground level, when no value in NSA object:
1,5 m; Allow override of model height with height from NSA object
Uncertainty margin:
0,0 dB; Uncertainty margin in model has priority
Deviation from "official" noise demands. Negative is more restrictive,
positive is less restrictive.:
0,0 dB(A)

All coordinates are in
Luxemburgian TM-LUREF (LU)

WTGs

	X	Y	Z	Row data/Description	WTG type		Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	LwA,ref [dB(A)]
													Creator	Name		
1	86 953	65 285	260,7	WP Mondorf W...	Yes	ENERCON	E-175 EP5 E2-7	000	7 000	175,0	174,5	EMD	Mode 00 - OM-0-0 (7000 kW)	6,0	106,9	g
2	88 544	66 138	282,2	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
3	86 902	66 430	318,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
4	84 883	68 088	305,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
5	84 781	69 096	317,8	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
6	85 688	68 990	329,7	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	

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

Calculation Results

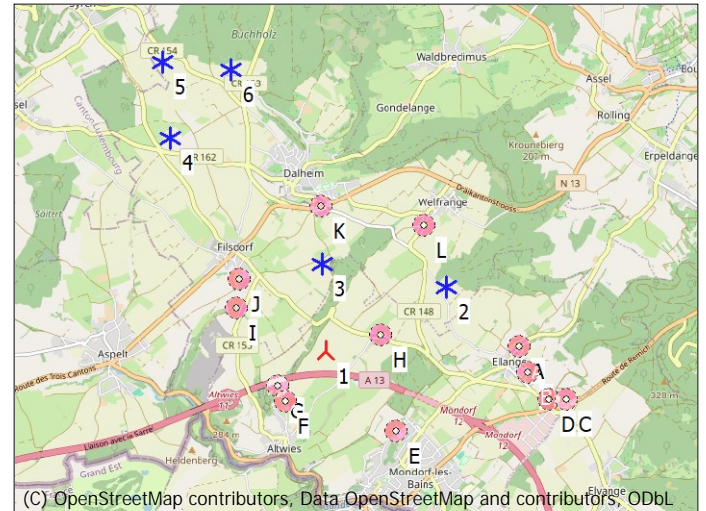
Sound level

Noise sensitive area				Demands		Sound level		Demands fulfilled ?	
No.	Name	X	Y	Z	Immission height	Noise	From WTGs	Distance to noise demand	Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
A	Ellange, Route d'Erpeldange 30	89 505	65 345	216,4	1,5	43,0	30,5	820	Yes
B	Ellange, Op dem Ewent 12	89 630	64 996	233,8	1,5	43,0	28,3	1 150	Yes
C	Ellange, Route de Remich 1	90 140	64 652	250,3	1,5	45,0	24,6	1 848	Yes
D	Ellange, Rue de la Gare 10	89 913	64 652	238,6	1,5	43,0	25,5	1 594	Yes
E	Mondorf-les-Bains, La Corniche 26	87 886	64 233	240,4	1,5	43,0	31,8	879	Yes
F	Altwies, Rue des Romains (limite)	86 413	64 604	238,8	1,5	43,0	37,2	342	Yes
G	Altwies, Rue des Romains 61	86 317	64 820	272,4	1,5	45,0	38,8	370	Yes
H	Altwies, Bremhaff 1	87 686	65 493	252,8	1,5	45,0	40,0	338	Yes
I	Filsdorf, Woneschwee 21	85 761	65 847	274,8	1,5	45,0	33,8	877	Yes
J	Filsdorf, Am Eck 19	85 800	66 228	280,9	1,5	43,0	34,1	680	Yes
K	Dalheim, Redoutewee 5	86 885	67 203	327,0	1,5	43,0	37,0	338	Yes
L	Welfrange, Munneréferwee 15	88 252	66 943	294,0	1,5	43,0	36,2	430	Yes

Distances (m)

WTG						
NSA	1	2	3	4	5	6
A	2553	1246	2820	5375	6033	5278
B	2693	1576	3082	5666	6350	5612
C	3249	2181	3694	6281	6962	6216
D	3027	2021	3497	6092	6789	6056
E	1406	2016	2407	4887	5770	5241

To be continued on next page...



(C) OpenStreetMap contributors, Data OpenStreetMap and contributors, ODbL
Scale 1:100 000
New WTG
Noise sensitive area

Project:
Mondorf

Licensed user:
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Anne Slunecko / anne.slunecko@soler.lu
Calculated:
25.06.2025 11:44/4.0.531

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)

...continued from previous page

WTG						
NSA	1	2	3	4	5	6
F	869	2626	1890	3805	4780	4446
G	788	2588	1713	3569	4544	4218
H	762	1073	1222	3820	4629	4028
I	1318	2798	1281	2407	3394	3144
J	1490	2746	1120	2074	3044	2764
K	1919	1972	773	2189	2830	2151
L	2106	856	1444	3559	4085	3281

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Tag) Noise calculation model: ISO 9613-2 General 6,0 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 Ellange, Route d'Erpeldange 30

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 553	2 562	73,6	Yes	22,04	106,9	3,01	79,17	4,87	3,82	0,00	0,00	87,86
2	1 246	1 264	66,1	Yes	29,38	104,8	3,01	73,04	2,40	3,00	0,00	0,00	78,44
3	2 820	2 831	67,1	Yes	18,41	104,8	3,01	80,04	5,38	3,99	0,00	0,00	89,41
4	5 375	5 380	38,2	No	7,18	104,8	3,01	85,62	10,22	4,80	0,00	0,00	100,64
5	6 033	6 038	40,1	No	4,93	104,8	3,01	86,62	11,47	4,80	0,00	0,00	102,89
6	5 278	5 285	55,9	No	7,52	104,8	3,01	85,46	10,04	4,80	0,00	0,00	100,30
Sum					30,46								

Noise sensitive area: B Ellange, Op dem Ewent 12

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 693	2 700	87,6	Yes	21,45	106,9	3,01	79,63	5,13	3,69	0,00	0,00	88,45
2	1 576	1 588	80,3	Yes	26,72	104,8	3,01	75,02	3,02	3,06	0,00	0,00	81,10
3	3 082	3 091	81,7	Yes	17,25	104,8	3,01	80,80	5,87	3,90	0,00	0,00	90,57
4	5 666	5 670	52,0	No	6,17	104,8	3,01	86,07	10,77	4,80	0,00	0,00	101,64
5	6 350	6 355	52,8	No	3,88	104,8	3,01	87,06	12,07	4,80	0,00	0,00	103,94
6	5 612	5 617	65,9	Yes	6,76	104,8	3,01	85,99	10,67	4,40	0,00	0,00	101,06
Sum					28,29								

Noise sensitive area: C Ellange, Route de Remich 1

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 249	3 255	96,2	Yes	18,67	106,9	3,01	81,25	6,18	3,79	0,00	0,00	91,22
2	2 181	2 188	93,4	Yes	22,52	104,8	3,01	77,80	4,16	3,34	0,00	0,00	85,30
3	3 694	3 701	95,5	Yes	14,50	104,8	3,01	82,37	7,03	3,92	0,00	0,00	93,31
4	6 281	6 284	65,8	Yes	4,47	104,8	3,01	86,96	11,94	4,44	0,00	0,00	103,35
5	6 962	6 966	66,3	Yes	2,25	104,8	3,01	87,86	13,23	4,48	0,00	0,00	105,57
6	6 216	6 221	81,2	Yes	4,77	104,8	3,01	86,88	11,82	4,35	0,00	0,00	103,05
Sum					24,60								

Noise sensitive area: D Ellange, Rue de la Gare 10

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 027	3 033	90,1	Yes	19,71	106,9	3,01	80,64	5,76	3,78	0,00	0,00	90,19
2	2 021	2 030	86,3	Yes	23,47	104,8	3,01	77,15	3,86	3,34	0,00	0,00	84,35
3	3 497	3 504	88,8	Yes	15,33	104,8	3,01	81,89	6,66	3,93	0,00	0,00	92,48
4	6 092	6 096	59,4	Yes	5,07	104,8	3,01	86,70	11,58	4,47	0,00	0,00	102,75

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Tag) Noise calculation model: ISO 9613-2 General 6,0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
5	6 789	6 793	59,6	Yes	2,77	104,8	3,01	87,64	12,91	4,50	0,00	0,00	105,05
6	6 056	6 061	71,6	Yes	5,26	104,8	3,01	86,65	11,52	4,40	0,00	0,00	102,56
Sum					25,55								

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 406	1 419	95,8	Yes	30,68	106,9	3,01	74,04	2,70	2,48	0,00	0,00	79,22
2	2 016	2 024	70,8	Yes	23,24	104,8	3,01	77,13	3,85	3,60	0,00	0,00	84,57
3	2 407	2 418	88,6	Yes	21,01	104,8	3,01	78,67	4,59	3,55	0,00	0,00	86,81
4	4 887	4 892	64,7	Yes	9,39	104,8	3,01	84,79	9,29	4,35	0,00	0,00	98,43
5	5 770	5 775	62,4	Yes	6,19	104,8	3,01	86,23	10,97	4,43	0,00	0,00	101,63
6	5 241	5 246	65,0	Yes	8,08	104,8	3,01	85,40	9,97	4,38	0,00	0,00	99,74
Sum					31,83								

Noise sensitive area: F Altwies,Rue des Romains (limite)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	869	891	89,9	Yes	36,90	106,9	3,01	70,00	1,69	1,30	0,00	0,00	72,99
2	2 626	2 633	80,6	Yes	19,66	104,8	3,01	79,41	5,00	3,75	0,00	0,00	88,16
3	1 890	1 904	64,1	Yes	23,96	104,8	3,01	76,59	3,62	3,64	0,00	0,00	83,86
4	3 805	3 811	60,4	No	13,16	104,8	3,01	82,62	7,24	4,80	0,00	0,00	94,66
5	4 780	4 785	60,5	No	9,33	104,8	3,01	84,60	9,09	4,80	0,00	0,00	98,49
6	4 446	4 452	57,7	No	10,59	104,8	3,01	83,97	8,46	4,80	0,00	0,00	97,23
Sum					37,23								

Noise sensitive area: G Altwies,Rue des Romains 61

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	788	804	94,0	Yes	38,51	106,9	3,01	69,11	1,53	0,74	0,00	0,00	71,38
2	2 588	2 593	90,7	Yes	20,01	104,8	3,01	79,28	4,93	3,60	0,00	0,00	87,80
3	1 713	1 724	72,3	Yes	25,45	104,8	3,01	75,73	3,28	3,36	0,00	0,00	82,37
4	3 569	3 574	74,8	Yes	14,88	104,8	3,01	82,06	6,79	4,08	0,00	0,00	92,94
5	4 544	4 548	75,2	Yes	10,79	104,8	3,01	84,16	8,64	4,24	0,00	0,00	97,03
6	4 218	4 222	72,3	Yes	12,07	104,8	3,01	83,51	8,02	4,22	0,00	0,00	95,75
Sum					38,81								

Noise sensitive area: H Altwies, Bremhaff 1

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	762	783	92,0	Yes	38,81	106,9	3,01	68,88	1,49	0,72	0,00	0,00	71,08
2	1 073	1 088	70,6	Yes	31,46	104,8	3,01	71,73	2,07	2,56	0,00	0,00	76,36
3	1 222	1 240	73,7	Yes	29,84	104,8	3,01	72,87	2,36	2,75	0,00	0,00	77,98
4	3 820	3 825	53,0	No	13,10	104,8	3,01	82,65	7,27	4,80	0,00	0,00	94,72
5	4 629	4 633	51,9	No	9,90	104,8	3,01	84,32	8,80	4,80	0,00	0,00	97,92
6	4 028	4 034	55,9	No	12,24	104,8	3,01	83,11	7,66	4,80	0,00	0,00	95,58
Sum					40,01								

Noise sensitive area: I Filsdorf, Woneschwee 21

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 318	1 327	72,4	Yes	30,99	106,9	3,01	73,46	2,52	2,92	0,00	0,00	78,90
2	2 798	2 803	66,6	Yes	18,55	104,8	3,01	79,95	5,33	3,99	0,00	0,00	89,26

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Tag) Noise calculation model: ISO 9613-2 General 6,0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
3	1 281	1 296	76,2	Yes	29,34	104,8	3,01	73,25	2,46	2,77	0,00	0,00	78,48
4	2 407	2 414	69,7	Yes	20,77	104,8	3,01	78,65	4,59	3,81	0,00	0,00	87,05
5	3 394	3 399	71,5	Yes	15,65	104,8	3,01	81,63	6,46	4,08	0,00	0,00	92,17
6	3 144	3 151	70,9	Yes	16,83	104,8	3,01	80,97	5,99	4,03	0,00	0,00	90,99
Sum					33,78								

Noise sensitive area: J Filisdorf, Am Eck 19

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 490	1 497	72,1	Yes	29,40	106,9	3,01	74,51	2,85	3,14	0,00	0,00	80,50
2	2 746	2 750	64,7	Yes	18,81	104,8	3,01	79,79	5,22	3,99	0,00	0,00	89,00
3	1 120	1 136	78,3	Yes	31,14	104,8	3,01	72,10	2,16	2,42	0,00	0,00	76,68
4	2 074	2 081	69,3	Yes	22,84	104,8	3,01	77,37	3,95	3,66	0,00	0,00	84,98
5	3 044	3 049	71,1	Yes	17,34	104,8	3,01	80,68	5,79	4,00	0,00	0,00	90,48
6	2 764	2 771	69,0	Yes	18,75	104,8	3,01	79,85	5,27	3,95	0,00	0,00	89,07
Sum					34,09								

Noise sensitive area: K Dalheim, Redoutewee 5

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 919	1 922	74,3	Yes	26,09	106,9	3,01	76,68	3,65	3,47	0,00	0,00	83,80
2	1 972	1 974	73,4	Yes	23,64	104,8	3,01	76,91	3,75	3,52	0,00	0,00	84,18
3	773	786	76,4	Yes	36,00	104,8	3,01	68,90	1,49	1,42	0,00	0,00	71,81
4	2 189	2 193	78,6	Yes	22,26	104,8	3,01	77,82	4,17	3,57	0,00	0,00	85,56
5	2 830	2 834	81,5	Yes	18,57	104,8	3,01	80,05	5,38	3,82	0,00	0,00	89,25
6	2 151	2 156	82,4	Yes	22,56	104,8	3,01	77,67	4,10	3,49	0,00	0,00	85,26
Sum					37,03								

Noise sensitive area: L Welfrange, Munnerferwee 15

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agrr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 106	2 111	87,5	Yes	25,01	106,9	3,01	77,49	4,01	3,38	0,00	0,00	84,88
2	856	867	86,4	Yes	35,07	104,8	3,01	69,76	1,65	1,34	0,00	0,00	72,75
3	1 444	1 454	66,2	Yes	27,57	104,8	3,01	74,25	2,76	3,23	0,00	0,00	80,25
4	3 559	3 562	57,0	No	14,22	104,8	3,01	82,03	6,77	4,80	0,00	0,00	93,60
5	4 085	4 088	63,6	No	12,02	104,8	3,01	83,23	7,77	4,80	0,00	0,00	95,80
6	3 281	3 286	76,4	No	15,44	104,8	3,01	81,33	6,24	4,80	0,00	0,00	92,38
Sum					36,21								

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

Highest noise value

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

0,0 dB; Uncertainty margin in model has priority

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)

WTG: ENERCON E-175 EP5 E2 7000 175.0 !O!

Noise: Mode 00 - OM-0-0 (7000 kW)

Source Source/Date Creator Edited
ENERCON GmbH 20.08.2024 EMD 09.04.2025 14:31

The sound power levels do not include uncertainties.

According to manufacturer specification document (D03045913_1.0_de_Technisches Datenblatt_Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf/D03045924_1.0_de_Technisches Datenblatt_Oktavbandpegel Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf).

Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [m/s]	LwA,ref [dB(A)]	Pure tones
Interpolated	174,5	6,0	106,9	No

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [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	149,0	8,5	104,8	No	86,5	92,2	95,2	97,7	99,0	99,2	94,0	77,5

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [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	149,0	8,5	104,8	No	86,5	92,2	95,2	97,7	99,0	99,2	94,0	77,5

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)

Noise sensitive area: A Ellange, Route d'Erpeldange 30

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 43,0 dB(A)

No distance demand

Noise sensitive area: B Ellange, Op dem Ewent 12

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 43,0 dB(A)

No distance demand

Noise sensitive area: C Ellange, Route de Remich 1

Predefined calculation standard:

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 Ellange, Rue de la Gare 10

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 43,0 dB(A)

No distance demand

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 43,0 dB(A)

No distance demand

Noise sensitive area: F Altwies, Rue des Romains (limite)

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 43,0 dB(A)

No distance demand

Noise sensitive area: G Altwies, Rue des Romains 61

Predefined calculation standard:

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: H Altwies, Bremhaff 1

Predefined calculation standard:

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 Filsdorf, Woneschwee 21

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Project:
Mondorf

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Calculated:
25.06.2025 11:44/4.0.531

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)

Noise demand: 45,0 dB(A)
No distance demand

Noise sensitive area: J Filsdorf, Am Eck 19

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 43,0 dB(A)
No distance demand

Noise sensitive area: K Dalheim, Redoutewee 5

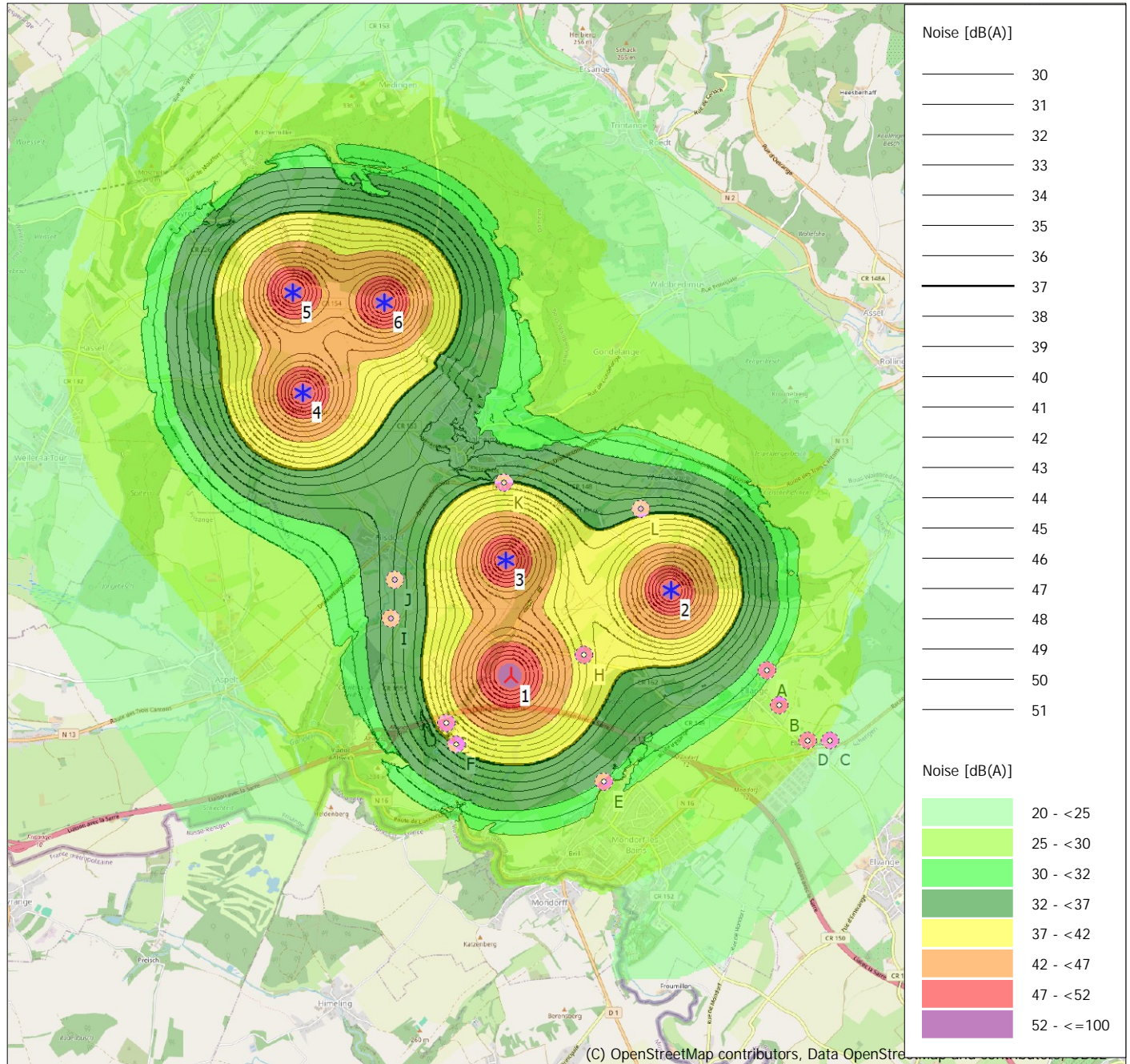
Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 43,0 dB(A)
No distance demand

Noise sensitive area: L Welfrange, Munnerëferwee 15

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 43,0 dB(A)
No distance demand

DECIBEL - Map Highest noise value

Calculation: Schall Berechnung WEA 2 (Pmax - Tag)



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:60 000, Map center Luxemburgian TM-LUREF (LU) East: 87 676 North: 66 895

New WTG

Existing WTG

Noise sensitive area

Noise calculation model: ISO 9613-2 General. Wind speed: Highest noise value
Height above sea level from active line object

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

Highest noise value

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

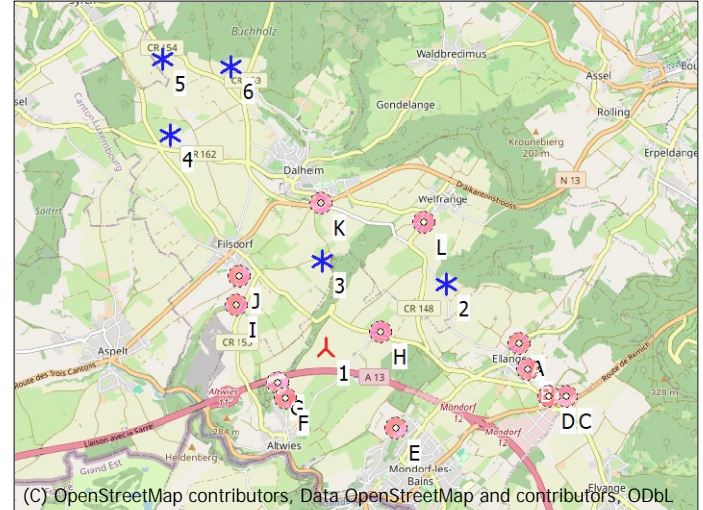
0,0 dB; Uncertainty margin in model has priority

Deviation from "official" noise demands. Negative is more restrictive,
positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)



Scale 1:100 000

▲ New WTG
★ Existing WTG

WTGs

	X	Y	Z	Row data/Description	WTG type		Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	LwA,ref [dB(A)]
													Creator	Name		
1	86 953	65 285	260,7	WP Mondorf W...	Yes	ENERCON	E-175 EP5 E2-7	000	7 000	175,0	174,5	EMD	Mode 00 - OM-0-0 (7000 kW)	6,0	106,9	g
2	88 544	66 138	282,2	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
3	86 902	66 430	318,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
4	84 883	68 088	305,3	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
5	84 781	69 096	317,8	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	
6	85 688	68 990	329,7	WP Duelem WE...	No	ENERCON	E-115 EP3 E3-4	200	4 200	115,7	149,0	EMD	Mode 00 - OM 0 s (4200 kW)	8,5	104,8	

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

Calculation Results

Sound level

Noise sensitive area

No.	Name	X	Y	Z	Immission height [m]	Demands		Sound level From WTGs [dB(A)]	Distance to noise demand [m]	Demands fulfilled ?	
						Noise [dB(A)]				Noise	
A	Ellange, Route d'Erpeldange 30	89 505	65 345	216,4	1,5	40,0		30,5	681	Yes	
B	Ellange, Op dem Ewent 12	89 630	64 996	233,8	1,5	40,0		28,3	1 010	Yes	
C	Ellange, Route de Remich 1	90 140	64 652	250,3	1,5	42,0		24,6	1 702	Yes	
D	Ellange, Rue de la Gare 10	89 913	64 652	238,6	1,5	40,0		25,5	1 454	Yes	
E	Mondorf-les-Bains, La Corniche 26	87 886	64 233	240,4	1,5	40,0		31,8	692	Yes	
F	Altwies, Rue des Romains (limite)	86 413	64 604	238,8	1,5	40,0		37,2	170	Yes	
G	Altwies, Rue des Romains 61	86 317	64 820	272,4	1,5	42,0		38,8	191	Yes	
H	Altwies, Bremhaff 1	87 686	65 493	252,8	1,5	42,0		40,0	137	Yes	
I	Filsdorf, Woneschwee 21	85 761	65 847	274,8	1,5	42,0		33,8	713	Yes	
J	Filsdorf, Am Eck 19	85 800	66 228	280,9	1,5	40,0		34,1	513	Yes	
K	Dalheim, Redoutewee 5	86 885	67 203	327,0	1,5	40,0		37,0	174	Yes	
L	Welfrange, Munneréferwee 15	88 252	66 943	294,0	1,5	40,0		36,2	251	Yes	

Distances (m)

WTG						
NSA	1	2	3	4	5	6
A	2553	1246	2820	5375	6033	5278
B	2693	1576	3082	5666	6350	5612
C	3249	2181	3694	6281	6962	6216
D	3027	2021	3497	6092	6789	6056
E	1406	2016	2407	4887	5770	5241

To be continued on next page...

Project:
Mondorf

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Calculated:
25.06.2025 11:58/4.0.531

DECIBEL - Main Result

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)

...continued from previous page

WTG						
NSA	1	2	3	4	5	6
F	869	2626	1890	3805	4780	4446
G	788	2588	1713	3569	4544	4218
H	762	1073	1222	3820	4629	4028
I	1318	2798	1281	2407	3394	3144
J	1490	2746	1120	2074	3044	2764
K	1919	1972	773	2189	2830	2151
L	2106	856	1444	3559	4085	3281

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht) Noise calculation model: ISO 9613-2 General 6,0 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 Ellange, Route d'Erpeldange 30

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 553	2 562	73,6	Yes	22,04	106,9	3,01	79,17	4,87	3,82	0,00	0,00	87,86
2	1 246	1 264	66,1	Yes	29,38	104,8	3,01	73,04	2,40	3,00	0,00	0,00	78,44
3	2 820	2 831	67,1	Yes	18,41	104,8	3,01	80,04	5,38	3,99	0,00	0,00	89,41
4	5 375	5 380	38,2	No	7,18	104,8	3,01	85,62	10,22	4,80	0,00	0,00	100,64
5	6 033	6 038	40,1	No	4,93	104,8	3,01	86,62	11,47	4,80	0,00	0,00	102,89
6	5 278	5 285	55,9	No	7,52	104,8	3,01	85,46	10,04	4,80	0,00	0,00	100,30
Sum					30,46								

Noise sensitive area: B Ellange, Op dem Ewent 12

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 693	2 700	87,6	Yes	21,45	106,9	3,01	79,63	5,13	3,69	0,00	0,00	88,45
2	1 576	1 588	80,3	Yes	26,72	104,8	3,01	75,02	3,02	3,06	0,00	0,00	81,10
3	3 082	3 091	81,7	Yes	17,25	104,8	3,01	80,80	5,87	3,90	0,00	0,00	90,57
4	5 666	5 670	52,0	No	6,17	104,8	3,01	86,07	10,77	4,80	0,00	0,00	101,64
5	6 350	6 355	52,8	No	3,88	104,8	3,01	87,06	12,07	4,80	0,00	0,00	103,94
6	5 612	5 617	65,9	Yes	6,76	104,8	3,01	85,99	10,67	4,40	0,00	0,00	101,06
Sum					28,29								

Noise sensitive area: C Ellange, Route de Remich 1

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 249	3 255	96,2	Yes	18,67	106,9	3,01	81,25	6,18	3,79	0,00	0,00	91,22
2	2 181	2 188	93,4	Yes	22,52	104,8	3,01	77,80	4,16	3,34	0,00	0,00	85,30
3	3 694	3 701	95,5	Yes	14,50	104,8	3,01	82,37	7,03	3,92	0,00	0,00	93,31
4	6 281	6 284	65,8	Yes	4,47	104,8	3,01	86,96	11,94	4,44	0,00	0,00	103,35
5	6 962	6 966	66,3	Yes	2,25	104,8	3,01	87,86	13,23	4,48	0,00	0,00	105,57
6	6 216	6 221	81,2	Yes	4,77	104,8	3,01	86,88	11,82	4,35	0,00	0,00	103,05
Sum					24,60								

Noise sensitive area: D Ellange, Rue de la Gare 10

Highest noise value
WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3 027	3 033	90,1	Yes	19,71	106,9	3,01	80,64	5,76	3,78	0,00	0,00	90,19
2	2 021	2 030	86,3	Yes	23,47	104,8	3,01	77,15	3,86	3,34	0,00	0,00	84,35
3	3 497	3 504	88,8	Yes	15,33	104,8	3,01	81,89	6,66	3,93	0,00	0,00	92,48
4	6 092	6 096	59,4	Yes	5,07	104,8	3,01	86,70	11,58	4,47	0,00	0,00	102,75

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht) Noise calculation model: ISO 9613-2 General 6,0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
5	6 789	6 793	59,6	Yes	2,77	104,8	3,01	87,64	12,91	4,50	0,00	0,00	105,05
6	6 056	6 061	71,6	Yes	5,26	104,8	3,01	86,65	11,52	4,40	0,00	0,00	102,56
Sum					25,55								

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 406	1 419	95,8	Yes	30,68	106,9	3,01	74,04	2,70	2,48	0,00	0,00	79,22
2	2 016	2 024	70,8	Yes	23,24	104,8	3,01	77,13	3,85	3,60	0,00	0,00	84,57
3	2 407	2 418	88,6	Yes	21,01	104,8	3,01	78,67	4,59	3,55	0,00	0,00	86,81
4	4 887	4 892	64,7	Yes	9,39	104,8	3,01	84,79	9,29	4,35	0,00	0,00	98,43
5	5 770	5 775	62,4	Yes	6,19	104,8	3,01	86,23	10,97	4,43	0,00	0,00	101,63
6	5 241	5 246	65,0	Yes	8,08	104,8	3,01	85,40	9,97	4,38	0,00	0,00	99,74
Sum					31,83								

Noise sensitive area: F Altwies,Rue des Romains (limite)

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	869	891	89,9	Yes	36,90	106,9	3,01	70,00	1,69	1,30	0,00	0,00	72,99
2	2 626	2 633	80,6	Yes	19,66	104,8	3,01	79,41	5,00	3,75	0,00	0,00	88,16
3	1 890	1 904	64,1	Yes	23,96	104,8	3,01	76,59	3,62	3,64	0,00	0,00	83,86
4	3 805	3 811	60,4	No	13,16	104,8	3,01	82,62	7,24	4,80	0,00	0,00	94,66
5	4 780	4 785	60,5	No	9,33	104,8	3,01	84,60	9,09	4,80	0,00	0,00	98,49
6	4 446	4 452	57,7	No	10,59	104,8	3,01	83,97	8,46	4,80	0,00	0,00	97,23
Sum					37,23								

Noise sensitive area: G Altwies,Rue des Romains 61

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	788	804	94,0	Yes	38,51	106,9	3,01	69,11	1,53	0,74	0,00	0,00	71,38
2	2 588	2 593	90,7	Yes	20,01	104,8	3,01	79,28	4,93	3,60	0,00	0,00	87,80
3	1 713	1 724	72,3	Yes	25,45	104,8	3,01	75,73	3,28	3,36	0,00	0,00	82,37
4	3 569	3 574	74,8	Yes	14,88	104,8	3,01	82,06	6,79	4,08	0,00	0,00	92,94
5	4 544	4 548	75,2	Yes	10,79	104,8	3,01	84,16	8,64	4,24	0,00	0,00	97,03
6	4 218	4 222	72,3	Yes	12,07	104,8	3,01	83,51	8,02	4,22	0,00	0,00	95,75
Sum					38,81								

Noise sensitive area: H Altwies, Bremhaff 1

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	762	783	92,0	Yes	38,81	106,9	3,01	68,88	1,49	0,72	0,00	0,00	71,08
2	1 073	1 088	70,6	Yes	31,46	104,8	3,01	71,73	2,07	2,56	0,00	0,00	76,36
3	1 222	1 240	73,7	Yes	29,84	104,8	3,01	72,87	2,36	2,75	0,00	0,00	77,98
4	3 820	3 825	53,0	No	13,10	104,8	3,01	82,65	7,27	4,80	0,00	0,00	94,72
5	4 629	4 633	51,9	No	9,90	104,8	3,01	84,32	8,80	4,80	0,00	0,00	97,92
6	4 028	4 034	55,9	No	12,24	104,8	3,01	83,11	7,66	4,80	0,00	0,00	95,58
Sum					40,01								

Noise sensitive area: I Filsdorf, Woneschwee 21

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 318	1 327	72,4	Yes	30,99	106,9	3,01	73,46	2,52	2,92	0,00	0,00	78,90
2	2 798	2 803	66,6	Yes	18,55	104,8	3,01	79,95	5,33	3,99	0,00	0,00	89,26

To be continued on next page...

DECIBEL - Detailed results

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht) Noise calculation model: ISO 9613-2 General 6,0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Ag [dB]	Abar [dB]	Amisc [dB]	A [dB]
3	1 281	1 296	76,2	Yes	29,34	104,8	3,01	73,25	2,46	2,77	0,00	0,00	78,48
4	2 407	2 414	69,7	Yes	20,77	104,8	3,01	78,65	4,59	3,81	0,00	0,00	87,05
5	3 394	3 399	71,5	Yes	15,65	104,8	3,01	81,63	6,46	4,08	0,00	0,00	92,17
6	3 144	3 151	70,9	Yes	16,83	104,8	3,01	80,97	5,99	4,03	0,00	0,00	90,99
Sum					33,78								

Noise sensitive area: J Filisdorf, Am Eck 19

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Ag [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 490	1 497	72,1	Yes	29,40	106,9	3,01	74,51	2,85	3,14	0,00	0,00	80,50
2	2 746	2 750	64,7	Yes	18,81	104,8	3,01	79,79	5,22	3,99	0,00	0,00	89,00
3	1 120	1 136	78,3	Yes	31,14	104,8	3,01	72,10	2,16	2,42	0,00	0,00	76,68
4	2 074	2 081	69,3	Yes	22,84	104,8	3,01	77,37	3,95	3,66	0,00	0,00	84,98
5	3 044	3 049	71,1	Yes	17,34	104,8	3,01	80,68	5,79	4,00	0,00	0,00	90,48
6	2 764	2 771	69,0	Yes	18,75	104,8	3,01	79,85	5,27	3,95	0,00	0,00	89,07
Sum					34,09								

Noise sensitive area: K Dalheim, Redoutewee 5

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Ag [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1 919	1 922	74,3	Yes	26,09	106,9	3,01	76,68	3,65	3,47	0,00	0,00	83,80
2	1 972	1 974	73,4	Yes	23,64	104,8	3,01	76,91	3,75	3,52	0,00	0,00	84,18
3	773	786	76,4	Yes	36,00	104,8	3,01	68,90	1,49	1,42	0,00	0,00	71,81
4	2 189	2 193	78,6	Yes	22,26	104,8	3,01	77,82	4,17	3,57	0,00	0,00	85,56
5	2 830	2 834	81,5	Yes	18,57	104,8	3,01	80,05	5,38	3,82	0,00	0,00	89,25
6	2 151	2 156	82,4	Yes	22,56	104,8	3,01	77,67	4,10	3,49	0,00	0,00	85,26
Sum					37,03								

Noise sensitive area: L Welfrange, Munnerferwee 15

Highest noise value

WTG

No.	Distance [m]	Sound distance [m]	Mean height [m]	Visible	Calculated [dB(A)]	LwA.ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Ag [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	2 106	2 111	87,5	Yes	25,01	106,9	3,01	77,49	4,01	3,38	0,00	0,00	84,88
2	856	867	86,4	Yes	35,07	104,8	3,01	69,76	1,65	1,34	0,00	0,00	72,75
3	1 444	1 454	66,2	Yes	27,57	104,8	3,01	74,25	2,76	3,23	0,00	0,00	80,25
4	3 559	3 562	57,0	No	14,22	104,8	3,01	82,03	6,77	4,80	0,00	0,00	93,60
5	4 085	4 088	63,6	No	12,02	104,8	3,01	83,23	7,77	4,80	0,00	0,00	95,80
6	3 281	3 286	76,4	No	15,44	104,8	3,01	81,33	6,24	4,80	0,00	0,00	92,38
Sum					36,21								

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)

Noise calculation model:

ISO 9613-2 General

Wind speed (at 10 m height):

Highest noise value

Ground attenuation:

Alternative

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

Model: 5,0 dB(A)

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

1,5 m; Allow override of model height with height from NSA object

Uncertainty margin:

0,0 dB; Uncertainty margin in model has priority

Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in

Luxemburgian TM-LUREF (LU)

WTG: ENERCON E-175 EP5 E2 7000 175.0 !O!

Noise: Mode 00 - OM-0-0 (7000 kW)

Source Source/Date Creator Edited
ENERCON GmbH 20.08.2024 EMD 09.04.2025 14:31

The sound power levels do not include uncertainties.

According to manufacturer specification document (D03045913_1.0_de_Technisches Datenblatt_Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf/D03045924_1.0_de_Technisches Datenblatt_Oktavbandpegel Betriebsmodus OM-0-0 - E-175 EP5 E2 - 7000 kW.pdf).

Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [m/s]	LwA,ref [dB(A)]	Pure tones
Interpolated	174,5	6,0	106,9	No

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [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	149,0	8,5	104,8	No	86,5	92,2	95,2	97,7	99,0	99,2	94,0	77,5

WTG: ENERCON E-115 EP3 E3 4200 115.7 !O!

Noise: Mode 00 - OM 0 s (4200 kW)

Source Source/Date Creator Edited
ENERCON GmbH 19.12.2022 EMD 19.12.2022 10:49

The sound power levels do not include uncertainties. According to manufacturer specification document (D0828520_8.0_de_Operating Modes E-115 EP3 E3-4200 kW with TES.pdf/D0828576_6.0_de_One-third octave band level E-115 EP3 E3-4200 kW with TES.pdf). Enercon reserves the right to change the above specifications without prior notice.

Status	Hub height [m]	Wind speed (10m) [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	149,0	8,5	104,8	No	86,5	92,2	95,2	97,7	99,0	99,2	94,0	77,5

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)

Noise sensitive area: A Ellange, Route d'Erpeldange 30

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: B Ellange, Op dem Ewent 12

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: C Ellange, Route de Remich 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: D Ellange, Rue de la Gare 10

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: E Mondorf-les-Bains, La Corniche 26

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: F Altwies, Rue des Romains (l'ite)

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 40,0 dB(A)

No distance demand

Noise sensitive area: G Altwies, Rue des Romains 61

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: H Altwies, Bremhaff 1

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Noise demand: 42,0 dB(A)

No distance demand

Noise sensitive area: I Filsdorf, Woneschwee 21

Predefined calculation standard:

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

Uncertainty margin: Use default value from calculation model

No temporal binning

Project:
Mondorf

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Calculated:
25.06.2025 11:58/4.0.531

DECI BEL - Assumptions for noise calculation

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)

Noise demand: 42,0 dB(A)
No distance demand

Noise sensitive area: J Filsdorf, Am Eck 19

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

Noise sensitive area: K Dalheim, Redoutewee 5

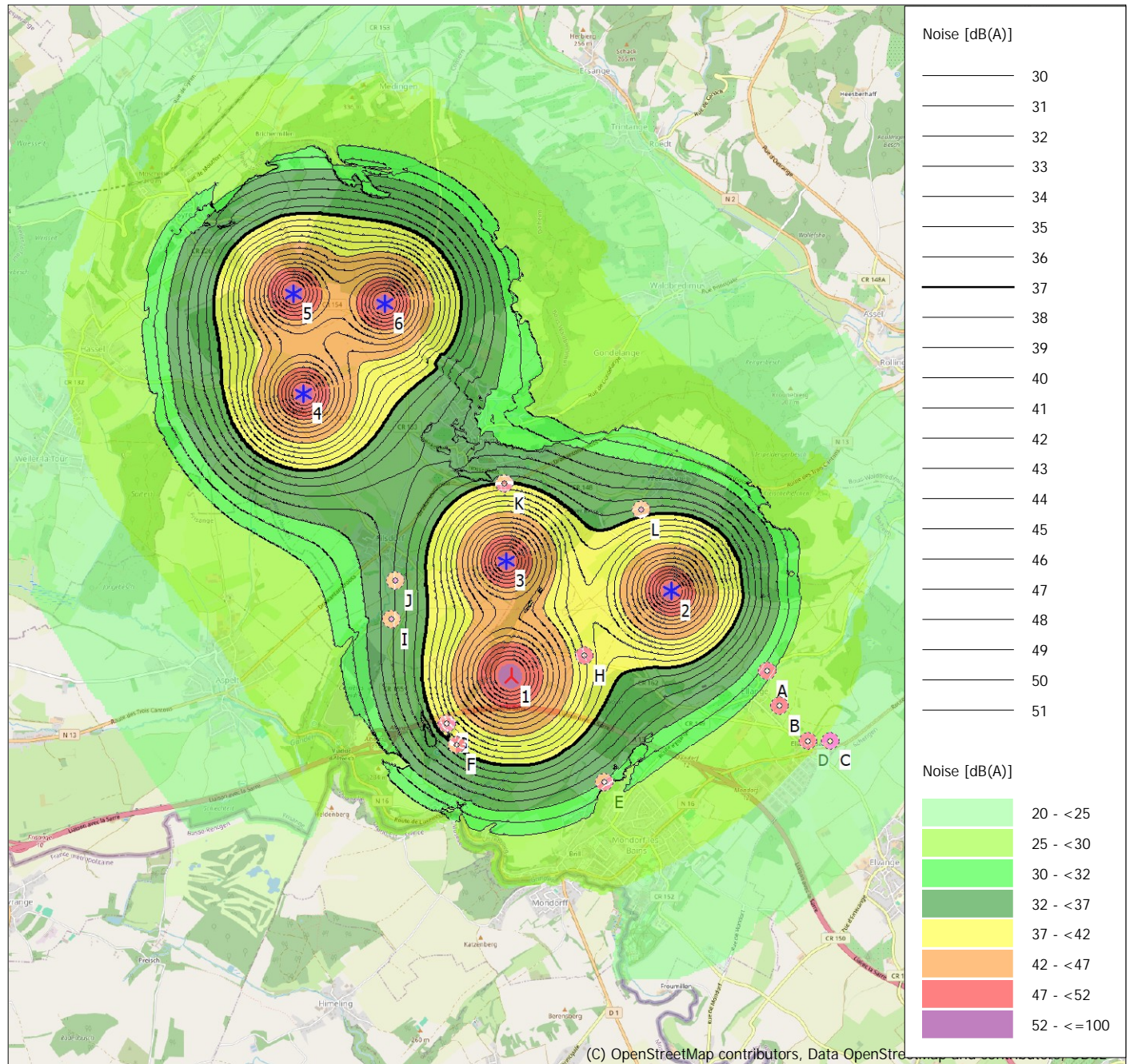
Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

Noise sensitive area: L Welfrange, Munnerëferwee 15

Predefined calculation standard:
Immission height(a.g.l.): Use standard value from calculation model
Uncertainty margin: Use default value from calculation model
No temporal binning
Noise demand: 40,0 dB(A)
No distance demand

DECIBEL - Map Highest noise value

Calculation: Schall Berechnung WEA 2 (Pmax - Nacht)



0 1 2 3 4 km

Map: EMD OpenStreetMap , Print scale 1:60 000, Map center Luxemburgian TM-LUREF (LU) East: 87 676 North: 66 895

⚡ New WTG

⚡ Existing WTG

🏠 Noise sensitive area

Noise calculation model: ISO 9613-2 General. Wind speed: Highest noise value
Height above sea level from active line object