Project:
Projekt Kêpno

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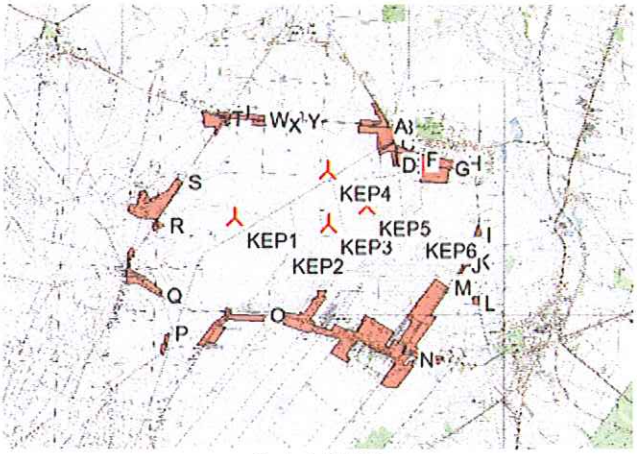
Calculated
2011-12-06 13:48/2.7.486

DECIBEL - Main Result

Calculation: Pilot, wariant 2

Noise calculation model:
ISO 9613-2 General
Wind speed:
8,0 m/s
Ground attenuation:
General, Ground factor: 1,0
Meteorological coefficient, C0:
0,0 dB
Type of demand in calculation:
1: WTG noise is compared to demand (DK, DE, SE, NL etc.)
Noise values in calculation:
All noise values are mean values (Lwa) (Normal)
Pure tones:
Pure and Impulse tone penalty are added to WTG source noise
Height above ground level, when no value in NSA object:
1,5 m Allow override of model height with height from NSA object
Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:
0,0 dB(A)



Scale 1:75 000

New WTG Noise sensitive area

WTGs

	Poland UKLAD 65 4 East	North	Z	Row data/Description	WTG type Valid	Manufact.	Type-generator	Power, rated	Rotor diameter	Hub height	Noise data Creator	Name	Wind speed	Status	Hub height	LwA,ref	Pure tones	Octave data
	Poland UKLAD 65 4		[m]					[kW]	[m]	[m]			[m/s]		[m]	[dB(A)]		
KEP1	3 791 814	5 579 558	190,6	KEP1	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 0 - Mode 0 - - 08-2011	8,0	ExtraPolated	140,0	106,5	0 dB	Generic *)
KEP2	3 792 301	5 579 313	190,1	KEP2	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 0 - Mode 0 - - 08-2011	8,0	ExtraPolated	140,0	106,5	0 dB	Generic *)
KEP3	3 792 797	5 579 525	183,4	KEP3	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 0 - Mode 0 - - 08-2011	8,0	ExtraPolated	140,0	106,5	0 dB	Generic *)
KEP4	3 792 775	5 580 084	187,9	KEP4	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 2 - Mode 2 - - 08-2011	8,0	ExtraPolated	140,0	104,5	0 dB	Generic *)
KEP5	3 793 197	5 579 732	187,9	KEP5	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 0 - Mode 0 - - 08-2011	8,0	ExtraPolated	140,0	106,5	0 dB	Generic *)
KEP6	3 793 689	5 579 519	180,0	KEP6	Yes	VESTAS	V112-3 075	3 075	112,0	140,0	EMD	Level 0 - Mode 0 - - 08-2011	8,0	ExtraPolated	140,0	106,5	0 dB	Generic *)

*)Notice: One or more noise data for this WTG is generic or input by user

Calculation Results

Sound Level

Noise sensitive area No.	Name	Poland UKLAD 65 4 East	North	Z [m]	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
A	6MN/RM	3 793 091	5 580 564	180,5	1,5	40,0	37,2	Yes
B	7MN/RM	3 793 284	5 580 316	181,7	1,5	40,0	39,2	Yes
C	8MN/RM	3 793 307	5 580 259	184,1	1,5	40,0	39,7	Yes
D	1RM	3 793 450	5 580 160	186,3	1,5	45,0	40,1	Yes
E	2RM	3 793 503	5 580 157	186,3	1,5	45,0	39,7	Yes
F	9MN/RM	3 793 487	5 580 295	183,5	1,5	40,0	38,2	Yes
G	1TR	3 793 736	5 579 997	182,7	1,5	45,0	40,0	Yes
H	10MN/RM	3 793 871	5 580 174	182,1	1,5	40,0	36,9	Yes
I	11MN/RM	3 794 334	5 579 466	180,0	1,5	40,0	35,7	Yes
J	1M	3 794 207	5 579 136	177,5	1,5	40,0	35,8	Yes
K	12MN/RM	3 794 238	5 579 219	177,5	1,5	40,0	36,0	Yes
L	2M	3 794 347	5 578 829	177,5	1,5	40,0	32,4	Yes
M	3M	3 793 930	5 578 996	182,5	1,5	40,0	37,1	Yes
N	4/5/6/7/8M	3 792 711	5 578 841	187,1	1,5	40,0	38,6	Yes
O	9/10M	3 792 157	5 578 557	190,6	1,5	40,0	35,5	Yes
P	11M	3 791 178	5 578 337	193,4	1,5	40,0	29,8	Yes
Q	12/13M	3 791 070	5 578 785	185,8	1,5	40,0	31,7	Yes
R	14M	3 791 077	5 579 451	185,3	1,5	40,0	34,5	Yes
S	15M	3 791 258	5 579 908	185,0	1,5	40,0	35,6	Yes
T	1MN/RM	3 791 575	5 580 408	187,8	1,5	40,0	33,9	Yes
U	2MN/RM	3 791 701	5 580 594	187,5	1,5	40,0	33,1	Yes
V	3MN/RM	3 792 094	5 580 529	186,1	1,5	40,0	35,2	Yes
W	3MN/RM	3 792 090	5 580 584	187,0	1,5	40,0	34,7	Yes
X	4MN/RM	3 792 280	5 580 531	186,1	1,5	40,0	36,1	Yes
Y	5MN/RM	3 792 489	5 580 577	188,8	1,5	40,0	36,8	Yes

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DECIBEL - Main Result

Calculation: Pilot, wariant 2

Distances (m)

	WTG					
NSA	KEP1	KEP2	KEP3	KEP4	KEP5	KEP6
A	1626	1480	1081	575	832	1085
B	1574	1405	929	512	590	894
C	1648	1380	894	555	538	818
D	1743	1427	911	679	497	673
E	1792	1469	948	731	523	656
F	1828	1540	1034	743	633	712
G	1972	1590	1051	963	601	481
H	2148	1791	1255	1100	806	680
I	2522	2039	1538	1669	1168	648
J	2414	1891	1454	1718	1173	645
K	2431	1915	1463	1699	1160	626
L	2636	2102	1699	2011	1462	953
M	2072	1526	1232	1587	1039	576
N	1093	625	682	1242	972	1026
O	941	769	1160	1647	1569	1808
P	1378	1488	2008	2367	2455	2775
Q	1073	1340	1879	2144	2329	2720
R	744	1232	1721	1812	2138	2612
S	656	1201	1586	1527	1947	2462
T	882	1314	1508	1203	1739	2273
U	1042	1415	1531	1186	1726	2259
V	963	1234	1226	814	1361	1888
W	1029	1289	1274	848	1397	1921
X	1058	1218	1131	667	1216	1734
Y	1098	1267	1096	570	1102	1599

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DECIBEL - Detailed results

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 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 6MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 626	1 632	**23,66**	106,5	0,00	75,26	-	-	0,00	0,00	-	0,00
KEP2	1 480	1 487	**24,79**	106,5	0,00	74,45	-	-	0,00	0,00	-	0,00
KEP3	1 081	1 089	**28,46**	106,5	0,00	71,74	-	-	0,00	0,00	-	0,00
KEP4	575	592	**33,33**	104,5	0,00	66,45	-	-	0,00	0,00	-	0,00
KEP5	839	850	**31,30**	106,5	0,00	69,59	-	-	0,00	0,00	-	0,00
KEP6	1 204	1 211	**27,22**	106,5	0,00	72,67	-	-	0,00	0,00	-	0,00

Sum 37,21

- Data undefined due to calculation with octave data

Noise sensitive area: B 7MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 654	1 660	**23,45**	106,5	0,00	75,40	-	-	0,00	0,00	-	0,00
KEP2	1 405	1 412	**25,41**	106,5	0,00	74,00	-	-	0,00	0,00	-	0,00
KEP3	929	939	**30,17**	106,5	0,00	70,46	-	-	0,00	0,00	-	0,00
KEP4	559	577	**33,61**	104,5	0,00	66,22	-	-	0,00	0,00	-	0,00
KEP5	590	607	**35,06**	106,5	0,00	66,66	-	-	0,00	0,00	-	0,00
KEP6	894	904	**30,60**	106,5	0,00	70,12	-	-	0,00	0,00	-	0,00

Sum 39,17

- Data undefined due to calculation with octave data

Noise sensitive area: C 8MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 649	1 655	**23,49**	106,5	0,00	75,38	-	-	0,00	0,00	-	0,00
KEP2	1 380	1 388	**25,61**	106,5	0,00	73,85	-	-	0,00	0,00	-	0,00
KEP3	894	904	**30,61**	106,5	0,00	70,12	-	-	0,00	0,00	-	0,00
KEP4	559	576	**33,62**	104,5	0,00	66,22	-	-	0,00	0,00	-	0,00
KEP5	538	555	**36,03**	106,5	0,00	65,89	-	-	0,00	0,00	-	0,00
KEP6	833	843	**31,40**	106,5	0,00	69,52	-	-	0,00	0,00	-	0,00

Sum 39,74

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DECIBEL - Detailed results

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

Noise sensitive area: D 1RM

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 743	1 749	**22,82**	106,5	0,00	75,85	-	-	0,00	0,00	-	0,00
KEP2	1 427	1 434	**25,22**	106,5	0,00	74,13	-	-	0,00	0,00	-	0,00
KEP3	911	921	**30,40**	106,5	0,00	70,28	-	-	0,00	0,00	-	0,00
KEP4	679	693	**31,60**	104,5	0,00	67,81	-	-	0,00	0,00	-	0,00
KEP5	497	516	**36,83**	106,5	0,00	65,25	-	-	0,00	0,00	-	0,00
KEP6	684	697	**33,54**	106,5	0,00	67,86	-	-	0,00	0,00	-	0,00

Sum 40,06

- *Data undefined due to calculation with octave data*

Noise sensitive area: E 2RM

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 792	1 798	**22,48**	106,5	0,00	76,10	-	-	0,00	0,00	-	0,00
KEP2	1 469	1 476	**24,88**	106,5	0,00	74,38	-	-	0,00	0,00	-	0,00
KEP3	948	957	**29,95**	106,5	0,00	70,62	-	-	0,00	0,00	-	0,00
KEP4	732	745	**30,79**	104,5	0,00	68,44	-	-	0,00	0,00	-	0,00
KEP5	523	541	**36,30**	106,5	0,00	65,67	-	-	0,00	0,00	-	0,00
KEP6	664	677	**33,85**	106,5	0,00	67,61	-	-	0,00	0,00	-	0,00

Sum 39,72

- *Data undefined due to calculation with octave data*

Noise sensitive area: F 9MN/RM

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 828	1 834	**22,24**	106,5	0,00	76,27	-	-	0,00	0,00	-	0,00
KEP2	1 540	1 547	**24,31**	106,5	0,00	74,79	-	-	0,00	0,00	-	0,00
KEP3	1 034	1 043	**28,96**	106,5	0,00	71,37	-	-	0,00	0,00	-	0,00
KEP4	743	756	**30,62**	104,5	0,00	68,57	-	-	0,00	0,00	-	0,00
KEP5	633	649	**34,32**	106,5	0,00	67,24	-	-	0,00	0,00	-	0,00
KEP6	802	813	**31,80**	106,5	0,00	69,21	-	-	0,00	0,00	-	0,00

Sum 38,20

- *Data undefined due to calculation with octave data*

Noise sensitive area: G 1TR

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 972	1 977	**21,30**	106,5	0,00	76,92	-	-	0,00	0,00	-	0,00
KEP2	1 590	1 597	**23,93**	106,5	0,00	75,06	-	-	0,00	0,00	-	0,00
KEP3	1 051	1 060	**28,77**	106,5	0,00	71,51	-	-	0,00	0,00	-	0,00
KEP4	965	976	**27,73**	104,5	0,00	70,79	-	-	0,00	0,00	-	0,00
KEP5	601	617	**34,87**	106,5	0,00	66,81	-	-	0,00	0,00	-	0,00
KEP6	481	499	**37,18**	106,5	0,00	64,96	-	-	0,00	0,00	-	0,00

Sum 40,01

- *Data undefined due to calculation with octave data*

Noise sensitive area: H 10MN/RM

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 148	2 153	**20,25**	106,5	0,00	77,66	-	-	0,00	0,00	-	0,00
KEP2	1 791	1 797	**22,49**	106,5	0,00	76,09	-	-	0,00	0,00	-	0,00
KEP3	1 255	1 263	**26,73**	106,5	0,00	73,03	-	-	0,00	0,00	-	0,00
KEP4	1 100	1 109	**26,25**	104,5	0,00	71,90	-	-	0,00	0,00	-	0,00
KEP5	806	818	**31,73**	106,5	0,00	69,26	-	-	0,00	0,00	-	0,00

To be continued on next page...

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DECIBEL - Detailed results

Calculation: Pilot, wariant 2 **Noise calculation model:** ISO 9613-2 General 8,0 m/s

...continued from previous page

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP6	680	694	**33,58**	106,5	0,00	67,82	-	-	0,00	0,00	-	0,00
Sum	36,94											

- Data undefined due to calculation with octave data

Noise sensitive area: I 11MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 522	2 527	**18,22**	106,5	0,00	79,05	-	-	0,00	0,00	-	0,00
KEP2	2 039	2 045	**20,89**	106,5	0,00	77,21	-	-	0,00	0,00	-	0,00
KEP3	1 538	1 545	**24,32**	106,5	0,00	74,78	-	-	0,00	0,00	-	0,00
KEP4	1 677	1 684	**21,28**	104,5	0,00	75,53	-	-	0,00	0,00	-	0,00
KEP5	1 168	1 177	**27,55**	106,5	0,00	72,42	-	-	0,00	0,00	-	0,00
KEP6	648	663	**34,09**	106,5	0,00	67,43	-	-	0,00	0,00	-	0,00
Sum	35,71											

- Data undefined due to calculation with octave data

Noise sensitive area: J 1M

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 431	2 435	**18,69**	106,5	0,00	78,73	-	-	0,00	0,00	-	0,00
KEP2	1 914	1 920	**21,67**	106,5	0,00	76,67	-	-	0,00	0,00	-	0,00
KEP3	1 463	1 470	**24,93**	106,5	0,00	74,35	-	-	0,00	0,00	-	0,00
KEP4	1 718	1 724	**20,99**	104,5	0,00	75,73	-	-	0,00	0,00	-	0,00
KEP5	1 173	1 182	**27,50**	106,5	0,00	72,46	-	-	0,00	0,00	-	0,00
KEP6	645	660	**34,14**	106,5	0,00	67,39	-	-	0,00	0,00	-	0,00
Sum	35,81											

- Data undefined due to calculation with octave data

Noise sensitive area: K 12MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 448	2 453	**18,60**	106,5	0,00	78,79	-	-	0,00	0,00	-	0,00
KEP2	1 939	1 945	**21,51**	106,5	0,00	76,78	-	-	0,00	0,00	-	0,00
KEP3	1 473	1 480	**24,84**	106,5	0,00	74,40	-	-	0,00	0,00	-	0,00
KEP4	1 699	1 706	**21,12**	104,5	0,00	75,64	-	-	0,00	0,00	-	0,00
KEP5	1 160	1 170	**27,63**	106,5	0,00	72,36	-	-	0,00	0,00	-	0,00
KEP6	626	641	**34,45**	106,5	0,00	67,14	-	-	0,00	0,00	-	0,00
Sum	36,04											

- Data undefined due to calculation with octave data

Noise sensitive area: L 2M

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 636	2 640	**17,66**	106,5	0,00	79,43	-	-	0,00	0,00	-	0,00
KEP2	2 102	2 107	**20,51**	106,5	0,00	77,48	-	-	0,00	0,00	-	0,00
KEP3	1 699	1 705	**23,13**	106,5	0,00	75,63	-	-	0,00	0,00	-	0,00
KEP4	2 011	2 017	**19,06**	104,5	0,00	77,09	-	-	0,00	0,00	-	0,00
KEP5	1 462	1 470	**24,93**	106,5	0,00	74,34	-	-	0,00	0,00	-	0,00
KEP6	953	964	**29,87**	106,5	0,00	70,68	-	-	0,00	0,00	-	0,00
Sum	32,40											

- Data undefined due to calculation with octave data

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DECIBEL - Detailed results

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

Noise sensitive area: M 3M

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	2 190	2 196	**20,00**	106,5	0,00	77,83	-	-	0,00	0,00	-	0,00
KEP2	1 660	1 667	**23,41**	106,5	0,00	75,44	-	-	0,00	0,00	-	0,00
KEP3	1 251	1 259	**26,77**	106,5	0,00	73,00	-	-	0,00	0,00	-	0,00
KEP4	1 587	1 594	**21,95**	104,5	0,00	75,05	-	-	0,00	0,00	-	0,00
KEP5	1 039	1 050	**28,89**	106,5	0,00	71,42	-	-	0,00	0,00	-	0,00
KEP6	576	593	**35,31**	106,5	0,00	66,46	-	-	0,00	0,00	-	0,00

Sum 37,09

- *Data undefined due to calculation with octave data*

Noise sensitive area: N 4/5/6/7/8M

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 149	1 158	**27,74**	106,5	0,00	72,28	-	-	0,00	0,00	-	0,00
KEP2	625	642	**34,45**	106,5	0,00	67,15	-	-	0,00	0,00	-	0,00
KEP3	689	703	**33,44**	106,5	0,00	67,94	-	-	0,00	0,00	-	0,00
KEP4	1 245	1 253	**24,82**	104,5	0,00	72,96	-	-	0,00	0,00	-	0,00
KEP5	1 016	1 025	**29,16**	106,5	0,00	71,22	-	-	0,00	0,00	-	0,00
KEP6	1 190	1 197	**27,36**	106,5	0,00	72,56	-	-	0,00	0,00	-	0,00

Sum 38,61

- *Data undefined due to calculation with octave data*

Noise sensitive area: O 9/10M

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 058	1 068	**28,69**	106,5	0,00	71,57	-	-	0,00	0,00	-	0,00
KEP2	769	781	**32,25**	106,5	0,00	68,86	-	-	0,00	0,00	-	0,00
KEP3	1 160	1 167	**27,65**	106,5	0,00	72,34	-	-	0,00	0,00	-	0,00
KEP4	1 647	1 652	**21,51**	104,5	0,00	75,36	-	-	0,00	0,00	-	0,00
KEP5	1 569	1 575	**24,09**	106,5	0,00	74,95	-	-	0,00	0,00	-	0,00
KEP6	1 808	1 813	**22,38**	106,5	0,00	76,17	-	-	0,00	0,00	-	0,00

Sum 35,53

- *Data undefined due to calculation with octave data*

Noise sensitive area: P 11M

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 378	1 384	**25,64**	106,5	0,00	73,82	-	-	0,00	0,00	-	0,00
KEP2	1 488	1 495	**24,73**	106,5	0,00	74,49	-	-	0,00	0,00	-	0,00
KEP3	2 008	2 013	**21,08**	106,5	0,00	77,08	-	-	0,00	0,00	-	0,00
KEP4	2 367	2 371	**17,03**	104,5	0,00	78,50	-	-	0,00	0,00	-	0,00
KEP5	2 455	2 459	**18,57**	106,5	0,00	78,81	-	-	0,00	0,00	-	0,00
KEP6	2 775	2 778	**17,01**	106,5	0,00	79,87	-	-	0,00	0,00	-	0,00

Sum 29,84

- *Data undefined due to calculation with octave data*

Noise sensitive area: Q 12/13M

Wind speed: 8,0 m/s

WTG No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 073	1 082	**28,54**	106,5	0,00	71,69	-	-	0,00	0,00	-	0,00
KEP2	1 340	1 347	**25,97**	106,5	0,00	73,59	-	-	0,00	0,00	-	0,00
KEP3	1 879	1 884	**21,91**	106,5	0,00	76,50	-	-	0,00	0,00	-	0,00
KEP4	2 144	2 148	**18,27**	104,5	0,00	77,64	-	-	0,00	0,00	-	0,00
KEP5	2 329	2 333	**19,23**	106,5	0,00	78,36	-	-	0,00	0,00	-	0,00

To be continued on next page...

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DECIBEL - Detailed results

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

...continued from previous page

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP6	2 720	2 723	**17,27**	106,5	0,00	79,70	-	-	0,00	0,00	-	0,00
Sum	31,67											

- Data undefined due to calculation with octave data

Noise sensitive area: R 14M

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	744	757	**32,61**	106,5	0,00	68,59	-	-	0,00	0,00	-	0,00
KEP2	1 232	1 240	**26,95**	106,5	0,00	72,87	-	-	0,00	0,00	-	0,00
KEP3	1 721	1 727	**22,98**	106,5	0,00	75,74	-	-	0,00	0,00	-	0,00
KEP4	1 812	1 817	**20,35**	104,5	0,00	76,19	-	-	0,00	0,00	-	0,00
KEP5	2 138	2 143	**20,30**	106,5	0,00	77,62	-	-	0,00	0,00	-	0,00
KEP6	2 612	2 615	**17,78**	106,5	0,00	79,35	-	-	0,00	0,00	-	0,00
Sum	34,46											

- Data undefined due to calculation with octave data

Noise sensitive area: S 15M

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	656	672	**33,94**	106,5	0,00	67,55	-	-	0,00	0,00	-	0,00
KEP2	1 201	1 210	**27,24**	106,5	0,00	72,65	-	-	0,00	0,00	-	0,00
KEP3	1 586	1 592	**23,96**	106,5	0,00	75,04	-	-	0,00	0,00	-	0,00
KEP4	1 527	1 534	**22,41**	104,5	0,00	74,72	-	-	0,00	0,00	-	0,00
KEP5	1 947	1 952	**21,46**	106,5	0,00	76,81	-	-	0,00	0,00	-	0,00
KEP6	2 462	2 465	**18,53**	106,5	0,00	78,84	-	-	0,00	0,00	-	0,00
Sum	35,61											

- Data undefined due to calculation with octave data

Noise sensitive area: T 1MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	882	894	**30,73**	106,5	0,00	70,02	-	-	0,00	0,00	-	0,00
KEP2	1 314	1 322	**26,19**	106,5	0,00	73,42	-	-	0,00	0,00	-	0,00
KEP3	1 508	1 514	**24,57**	106,5	0,00	74,60	-	-	0,00	0,00	-	0,00
KEP4	1 243	1 251	**24,84**	104,5	0,00	72,94	-	-	0,00	0,00	-	0,00
KEP5	1 757	1 763	**22,72**	106,5	0,00	75,92	-	-	0,00	0,00	-	0,00
KEP6	2 293	2 297	**19,43**	106,5	0,00	78,22	-	-	0,00	0,00	-	0,00
Sum	33,92											

- Data undefined due to calculation with octave data

Noise sensitive area: U 2MN/RM

WTG — **Wind speed: 8,0 m/s**

No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 042	1 051	**28,87**	106,5	0,00	71,43	-	-	0,00	0,00	-	0,00
KEP2	1 415	1 422	**25,32**	106,5	0,00	74,06	-	-	0,00	0,00	-	0,00
KEP3	1 531	1 537	**24,39**	106,5	0,00	74,73	-	-	0,00	0,00	-	0,00
KEP4	1 189	1 197	**25,36**	104,5	0,00	72,56	-	-	0,00	0,00	-	0,00
KEP5	1 726	1 732	**22,94**	106,5	0,00	75,77	-	-	0,00	0,00	-	0,00
KEP6	2 260	2 263	**19,62**	106,5	0,00	78,09	-	-	0,00	0,00	-	0,00
Sum	33,05											

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Calculated:
2011-12-06 13:48/2.7.486

DECIBEL - Detailed results

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

Noise sensitive area: V 3MN/RM

WTG			Wind speed: 8,0 m/s									
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 010	1 020	**29,22**	106,5	0,00	71,17	-	-	0,00	0,00	-	0,00
KEP2	1 234	1 242	**26,93**	106,5	0,00	72,88	-	-	0,00	0,00	-	0,00
KEP3	1 226	1 234	**27,01**	106,5	0,00	72,82	-	-	0,00	0,00	-	0,00
KEP4	814	826	**29,63**	104,5	0,00	69,34	-	-	0,00	0,00	-	0,00
KEP5	1 361	1 368	**25,78**	106,5	0,00	73,72	-	-	0,00	0,00	-	0,00
KEP6	1 888	1 893	**21,85**	106,5	0,00	76,54	-	-	0,00	0,00	-	0,00

Sum 35,16

- *Data undefined due to calculation with octave data*

Noise sensitive area: W 3MN/RM

WTG			Wind speed: 8,0 m/s									
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 062	1 072	**28,65**	106,5	0,00	71,60	-	-	0,00	0,00	-	0,00
KEP2	1 289	1 297	**26,42**	106,5	0,00	73,26	-	-	0,00	0,00	-	0,00
KEP3	1 274	1 281	**26,56**	106,5	0,00	73,15	-	-	0,00	0,00	-	0,00
KEP4	848	860	**29,17**	104,5	0,00	69,69	-	-	0,00	0,00	-	0,00
KEP5	1 397	1 404	**25,47**	106,5	0,00	73,95	-	-	0,00	0,00	-	0,00
KEP6	1 921	1 926	**21,63**	106,5	0,00	76,69	-	-	0,00	0,00	-	0,00

Sum 34,70

- *Data undefined due to calculation with octave data*

Noise sensitive area: X 4MN/RM

WTG			Wind speed: 8,0 m/s									
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 078	1 088	**28,48**	106,5	0,00	71,73	-	-	0,00	0,00	-	0,00
KEP2	1 218	1 227	**27,07**	106,5	0,00	72,77	-	-	0,00	0,00	-	0,00
KEP3	1 131	1 139	**27,94**	106,5	0,00	72,13	-	-	0,00	0,00	-	0,00
KEP4	667	682	**31,78**	104,5	0,00	67,67	-	-	0,00	0,00	-	0,00
KEP5	1 216	1 224	**27,10**	106,5	0,00	72,76	-	-	0,00	0,00	-	0,00
KEP6	1 734	1 739	**22,89**	106,5	0,00	75,81	-	-	0,00	0,00	-	0,00

Sum 36,07

- *Data undefined due to calculation with octave data*

Noise sensitive area: Y 5MN/RM

WTG			Wind speed: 8,0 m/s									
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
KEP1	1 222	1 230	**27,04**	106,5	0,00	72,80	-	-	0,00	0,00	-	0,00
KEP2	1 278	1 286	**26,52**	106,5	0,00	73,18	-	-	0,00	0,00	-	0,00
KEP3	1 096	1 104	**28,30**	106,5	0,00	71,86	-	-	0,00	0,00	-	0,00
KEP4	570	586	**33,43**	104,5	0,00	66,36	-	-	0,00	0,00	-	0,00
KEP5	1 102	1 111	**28,23**	106,5	0,00	71,91	-	-	0,00	0,00	-	0,00
KEP6	1 599	1 605	**23,87**	106,5	0,00	75,11	-	-	0,00	0,00	-	0,00

Sum 36,76

- *Data undefined due to calculation with octave data*

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DECIBEL - Assumptions for noise calculation

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

Noise calculation model:
ISO 9613-2 General
Wind speed:
8,0 m/s
Ground attenuation:
General, Ground factor: 1,0
Meteorological coefficient, C0:
0,0 dB
Type of demand in calculation:
1: WTG noise is compared to demand (DK, DE, SE, NL etc.)
Noise values in calculation:
All noise values are mean values (Lwa) (Normal)
Pure tones:
Pure and Impulse tone penalty are added to WTG source noise
Height above ground level, when no value in NSA object:
1,5 m Allow override of model height with height from NSA object
Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:
0,0 dB(A)
Octave data required
Air absorption

63 [db/km]	125 [db/km]	250 [db/km]	500 [db/km]	1 000 [db/km]	2 000 [db/km]	4 000 [db/km]	8 000 [db/km]
0,1	0,4	1,0	1,9	3,7	9,7	32,8	117,0

WTG: VESTAS V112 3075 112.0 !O!
Noise: Level 0 - Mode 0 - - 08-2011

Source	Source/Date	Creator	Edited
Manufacturer	2011-08-16	EMD	2011-10-25 16:07

Document no.: 0011-9181 V05

						Octave data							
Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones		63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
ExtraPolated	140,0	8,0	106,5	No	Generic data	88,1	95,1	98,5	101,1	100,9	98,0	93,2	83,7

WTG: VESTAS V112 3075 112.0 !O!
Noise: Level 2 - Mode 2 - - 08-2011

Source	Source/Date	Creator	Edited
Manufacturer	2011-08-16	EMD	2011-10-25 16:08

Document no.: 0011-9181 V05

						Octave data							
Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones		63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
ExtraPolated	140,0	8,0	104,5	No	Generic data	86,1	93,1	96,5	99,1	98,9	96,0	91,2	81,7

NSA: 6MN/RM-A
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 7MN/RM-B
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

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DECIBEL - Assumptions for noise calculation

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

NSA: 8MN/RM-C
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 1RM-D
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 45,0 dB(A)
Distance demand: 0,0 m

NSA: 2RM-E
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 45,0 dB(A)
Distance demand: 0,0 m

NSA: 9MN/RM-F
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 1TR-G
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 45,0 dB(A)
Distance demand: 0,0 m

NSA: 10MN/RM-H
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 11MN/RM-I
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 1M-J
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 12MN/RM-K
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

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DECIBEL - Assumptions for noise calculation

Calculation: Pilot, wariant 2**Noise calculation model:** ISO 9613-2 General 8,0 m/s

NSA: 2M-L
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 3M-M
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 4/5/6/7/8M-N
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 9/10M-O
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 11M-P
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 12/13M-Q
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 14M-R
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 15M-S
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 1MN/RM-T
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

Project:
Projekt Kêpno

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Calculated:
2011-12-06 13:48/2.7.486

DECIBEL - Assumptions for noise calculation

Calculation: Pilot, wariant 2 **Noise calculation model:** ISO 9613-2 General 8,0 m/s

NSA: 2MN/RM-U
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 3MN/RM-V
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 3MN/RM-W
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

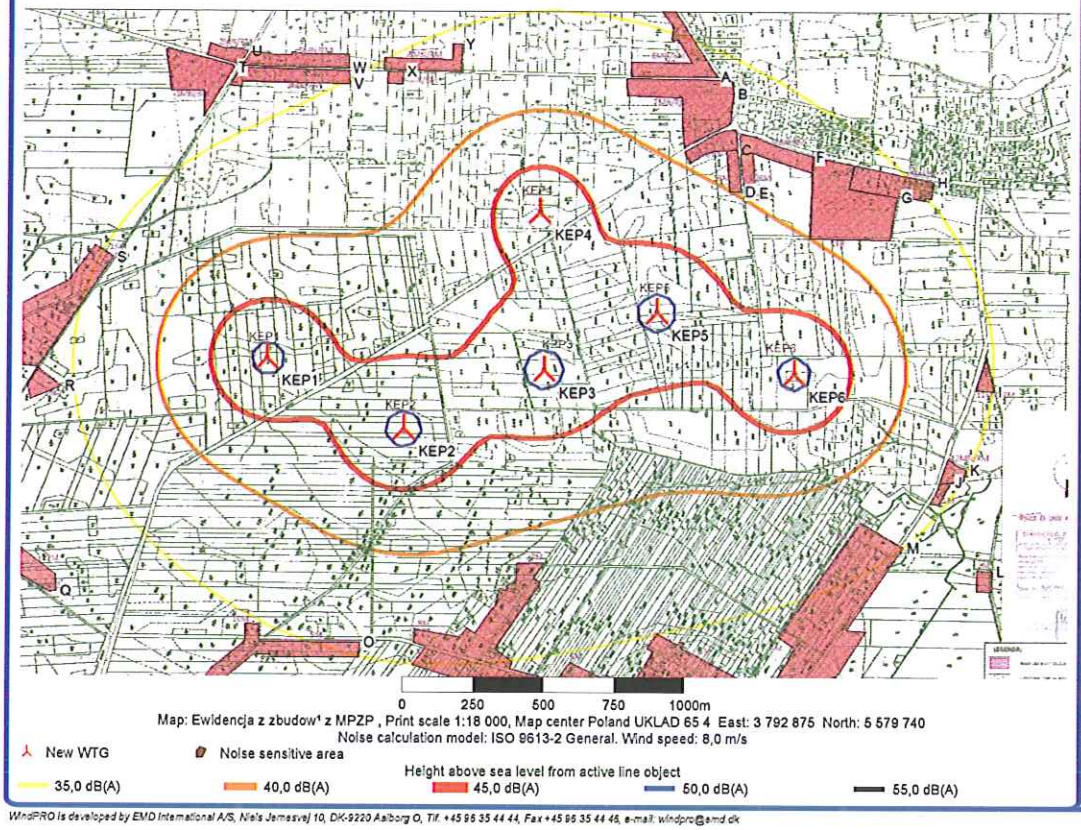
Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 4MN/RM-X
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m

NSA: 5MN/RM-Y
Predefined calculation standard:
Imission height(a.g.l.): Use standard value from calculation model

Noise demand: 40,0 dB(A)
Distance demand: 0,0 m



Map: Ewidencja z zbudow¹ z MPZP , Print scale 1:18 000, Map center Poland UKLAD 65 4 East: 3 792 875 North: 5 579 740
Noise calculation model: ISO 9613-2 General. Wind speed: 8,0 m/s

New WTG | Noise sensitive area | Height above sea level from active line object

35,0 dB(A) | 40,0 dB(A) | 45,0 dB(A) | 50,0 dB(A) | 55,0 dB(A)

Project
Projekt Kępno

DECIBEL -
Map 8,0 m/s

Calculation:
Pilot, wariant 2
Noise calculation model:
ISO 9613-2 General 8,0 m/s

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