

Project:

20100624 wysoka_raport.

Description:

WARIANT I

(rozplanowanie 20szt.)
turbina N90 LS 2,5MW;
D=90m; h=100m;

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Calculated:

2010-06-25 11:40/2.7.468

DECIBEL - Main Result**Calculation: WARIANT I N90 LS****Noise calculation model:**

ISO 9613-2 General

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

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:

4,0 m Don't 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)



New WTG

Scale 1:50 000

Noise sensitive area

WTGs

Poland UKLAD 65 3				WTG type				Noise data									
East		North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
Poland UKLAD 65 3				[m]													
1	3 338 520	5 905 554	57,5	EW01	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
2	3 338 236	5 906 704	63,5	EW02	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
3	3 338 406	5 908 085	61,0	EW03	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
4	3 338 089	5 908 349	62,0	EW04	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
5	3 337 729	5 908 554	65,0	EW05	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
6	3 337 835	5 908 042	64,2	EW06	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
7	3 337 241	5 907 804	63,8	EW07	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
8	3 336 849	5 907 867	58,7	EW08	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
9	3 336 481	5 908 467	59,5	EW09	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
10	3 336 169	5 908 749	58,0	EW10	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
11	3 336 284	5 909 096	58,9	EW11	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
12	3 336 622	5 908 875	62,6	EW12	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
13	3 336 846	5 909 188	66,0	EW13	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
14	3 337 087	5 909 657	70,0	EW14	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
15	3 336 703	5 909 567	67,0	EW15	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
16	3 335 081	5 907 283	52,8	EW16	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
17	3 335 122	5 907 726	57,7	EW17	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
18	3 335 382	5 907 548	58,2	EW18	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
19	3 338 709	5 905 867	58,0	EW19	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No
20	3 337 759	5 906 052	57,3	EW20	No	NORDEX	N90 LS gama-2 500	2 500	90,0	100,0	USER	level0	10,0	100,0	103,5	0 dB	No

Calculation Results**Sound Level****Noise sensitive area Poland UKLAD 65 3**

Poland UKLAD 65 3				Demands			Sound Level			Demands fulfilled ?		
No.	Name	East	North	Z [m]	Imission height [m]	Noise [dB(A)]	Distance [m]	From WTGs [dB(A)]	Noise	Distance	All	
A tr01	3 339 203	5 906 608	61,3	4,0	45,0	300	36,7	Yes	Yes	Yes		
B tr02	3 339 370	5 907 008	63,8	4,0	45,0	300	34,6	Yes	Yes	Yes		
C tr03	3 339 403	5 906 857	63,8	4,0	45,0	300	34,6	Yes	Yes	Yes		
D tr05	3 339 235	5 907 804	62,5	4,0	45,0	300	36,2	Yes	Yes	Yes		
E tr07	3 338 969	5 908 120	62,5	4,0	40,0	300	40,0	No	Yes	No		
F tr08	3 338 904	5 908 002	60,0	4,0	45,0	300	41,1	Yes	Yes	Yes		
G tr09	3 338 953	5 907 913	61,2	4,0	45,0	300	39,9	Yes	Yes	Yes		
H tr10	3 338 967	5 908 172	63,8	4,0	45,0	300	40,0	Yes	Yes	Yes		
I tr11	3 339 004	5 908 209	63,8	4,0	45,0	300	39,3	Yes	Yes	Yes		
J tr12	3 339 046	5 908 373	65,0	4,0	40,0	300	38,2	Yes	Yes	Yes		
K tr13	3 339 053	5 908 409	66,2	4,0	40,0	300	38,0	Yes	Yes	Yes		
L tr17	3 338 271	5 907 475	68,8	4,0	45,0	300	41,7	Yes	Yes	Yes		
M tr18	3 338 179	5 907 535	68,8	4,0	45,0	300	42,5	Yes	Yes	Yes		
N tr19	3 338 189	5 907 485	68,8	4,0	45,0	300	41,9	Yes	Yes	Yes		

To be continued on next page...

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DECIBEL - Main Result**Calculation: WARIANT I N90 LS**

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Noise sensitive area Poland UKLAD 65 3

Noise sensitive area					Bolund UKLAD 65 3		Demands		Sound Level	Demands fulfilled ?		
No.	Name	East	North	Z	Imission height	Noise	Distance	From WTGs	Noise	Distance	All	
				[m]	[m]	[dB(A)]	[m]	[dB(A)]				
	O tr20	3 338 102	5 907 458	68,8		4,0	45,0	300	41,9	Yes	Yes	Yes
	P tr21	3 338 069	5 907 352	66,2		4,0	45,0	300	41,4	Yes	Yes	Yes
	Q tr22	3 338 067	5 907 434	66,2		4,0	45,0	300	41,8	Yes	Yes	Yes
	R tr23	3 338 006	5 907 402	67,0		4,0	45,0	300	41,7	Yes	Yes	Yes
	S tr24	3 337 950	5 907 372	65,0		4,0	45,0	300	41,6	Yes	Yes	Yes
	T tr25	3 337 930	5 907 144	64,0		4,0	45,0	300	41,6	Yes	Yes	Yes
	U tr26	3 338 362	5 907 030	64,0		4,0	45,0	300	44,5	Yes	Yes	Yes
	V tr27	3 337 497	5 906 439	58,3		4,0	45,0	300	41,9	Yes	Yes	Yes
	W tr28	3 337 221	5 905 968	46,0		4,0	40,0	300	39,5	Yes	Yes	Yes
	X tr29	3 337 061	5 906 055	44,0		4,0	40,0	300	37,4	Yes	Yes	Yes
	Y tr30	3 336 983	5 906 032	44,0		4,0	40,0	300	36,6	Yes	Yes	Yes
	Z tr31	3 336 938	5 906 154	45,0		4,0	40,0	300	36,4	Yes	Yes	Yes
	AA tr32	3 336 349	5 907 048	47,0		4,0	40,0	300	37,9	Yes	Yes	Yes
	AB tr33	3 336 239	5 907 190	51,2		4,0	40,0	300	38,7	Yes	Yes	Yes
	AC tr34	3 335 563	5 906 739	47,5		4,0	40,0	300	38,4	Yes	Yes	Yes
	AD tr36	3 335 430	5 906 567	48,0		4,0	40,0	300	37,1	Yes	Yes	Yes
	AE tr37	3 335 371	5 906 519	48,7		4,0	40,0	300	36,7	Yes	Yes	Yes
	AF tr38	3 335 167	5 906 688	51,2		4,0	45,0	300	39,2	Yes	Yes	Yes
	AG tr39	3 334 328	5 907 317	50,0		4,0	45,0	300	37,5	Yes	Yes	Yes
	AH tr40	3 334 429	5 907 459	52,5		4,0	45,0	300	39,1	Yes	Yes	Yes
	AI tr41	3 334 455	5 907 520	54,0		4,0	45,0	300	39,5	Yes	Yes	Yes
	AJ tr42	3 334 647	5 907 968	55,0		4,0	45,0	300	40,8	Yes	Yes	Yes
	AK tr43	3 334 587	5 907 942	55,0		4,0	45,0	300	40,0	Yes	Yes	Yes
	AL tr44	3 334 649	5 908 000	55,0		4,0	45,0	300	40,5	Yes	Yes	Yes
	AM tr45	3 334 779	5 908 143	57,0		4,0	45,0	300	40,6	Yes	Yes	Yes
	AN tr46	3 335 730	5 908 440	58,0		4,0	45,0	300	42,5	Yes	Yes	Yes
	AO tr47	3 335 850	5 908 300	58,0		4,0	45,0	300	42,8	Yes	Yes	Yes
	AP tr48	3 336 049	5 907 975	58,5		4,0	45,0	300	42,1	Yes	Yes	Yes
	AQ tr49	3 336 038	5 907 880	55,0		4,0	45,0	300	41,7	Yes	Yes	Yes
	AR tr50	3 336 087	5 907 828	57,0		4,0	45,0	300	41,6	Yes	Yes	Yes
	AS tr51	3 336 040	5 907 679	55,0		4,0	45,0	300	41,2	Yes	Yes	Yes
	AT tr52	3 336 065	5 907 561	55,0		4,0	45,0	300	40,8	Yes	Yes	Yes
	AU tr53	3 336 480	5 907 416	55,0		4,0	45,0	300	41,0	Yes	Yes	Yes
	AV tr54	3 336 756	5 907 046	53,7		4,0	45,0	300	38,7	Yes	Yes	Yes
	AW tr55	3 336 594	5 906 867	50,0		4,0	40,0	300	37,2	Yes	Yes	Yes
	AX tr56	3 337 093	5 908 420	67,5		4,0	45,0	300	44,9	Yes	Yes	Yes
	AY tr57	3 337 349	5 907 359	62,5		4,0	45,0	300	43,2	Yes	Yes	Yes
	AZ tr58	3 337 456	5 907 184	62,5		4,0	45,0	300	40,8	Yes	Yes	Yes
	BA tr59	3 337 585	5 907 137	63,7		4,0	45,0	300	40,5	Yes	Yes	Yes
	BB tr60	3 338 198	5 907 614	66,0		4,0	45,0	300	43,4	Yes	Yes	Yes
	BC tr61	3 337 358	5 909 074	65,0		4,0	45,0	300	44,1	Yes	Yes	Yes
	BD tr62	3 338 348	5 906 067	58,5		4,0	45,0	300	45,0	Yes	Yes	Yes
	BE tr56a	3 337 118	5 908 419	67,5		4,0	45,0	300	44,8	Yes	Yes	Yes
	BF tr45a	3 334 807	5 908 164	57,0		4,0	45,0	300	40,6	Yes	Yes	Yes
	BG tr54a	3 336 751	5 906 988	53,7		4,0	45,0	300	38,2	Yes	Yes	Yes

Distances (m)

WTG																				
NSA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	1245	963	1662	2051	2425	1966	2284	2656	3282	3699	3821	3420	3479	3695	3858	4168	4221	3925	880	1546
B	1684	1174	1437	1846	2247	1846	2272	2663	3233	3640	3721	3317	3328	3488	3688	4298	4308	4024	1319	1873
C	1574	1177	1564	1971	2368	1954	2355	2742	3328	3738	3828	3425	3446	3616	3810	4343	4369	4080	1209	1831
D	2352	1480	875	1269	1682	1420	1994	2386	2832	3208	3221	2824	2761	2836	3085	4186	4113	3861	1998	2284
E	2563	1585	564	909	1314	1137	1757	2135	2512	2870	2857	2465	2376	2420	2688	3977	3867	3632	2220	2391
F	2439	1451	505	886	1298	1070	1675	2059	2467	2835	2839	2443	2375	2455	2700	3890	3792	3551	2100	2257
G	2391	1405	573	968	1382	1125	1715	2104	2533	2907	2919	2522	2462	2551	2791	3923	3836	3590	2052	2211
H	2650	1637	568	896	1296	1139	1765	2140	2503	2857	2838	2448	2352	2395	2659	3986	3871	3639	2313	2438
I	2695	1688	610	925	1320	1180	1808	2181	2536	2886	2861	2473	2369	2401	2672	4030	3911	3681	2356	2489
J	2852	1855	702	958	1330	1256	1893	2255	2567	2902	2855	2476	2346	2341	2630	4113	3977	3756	2511	2654

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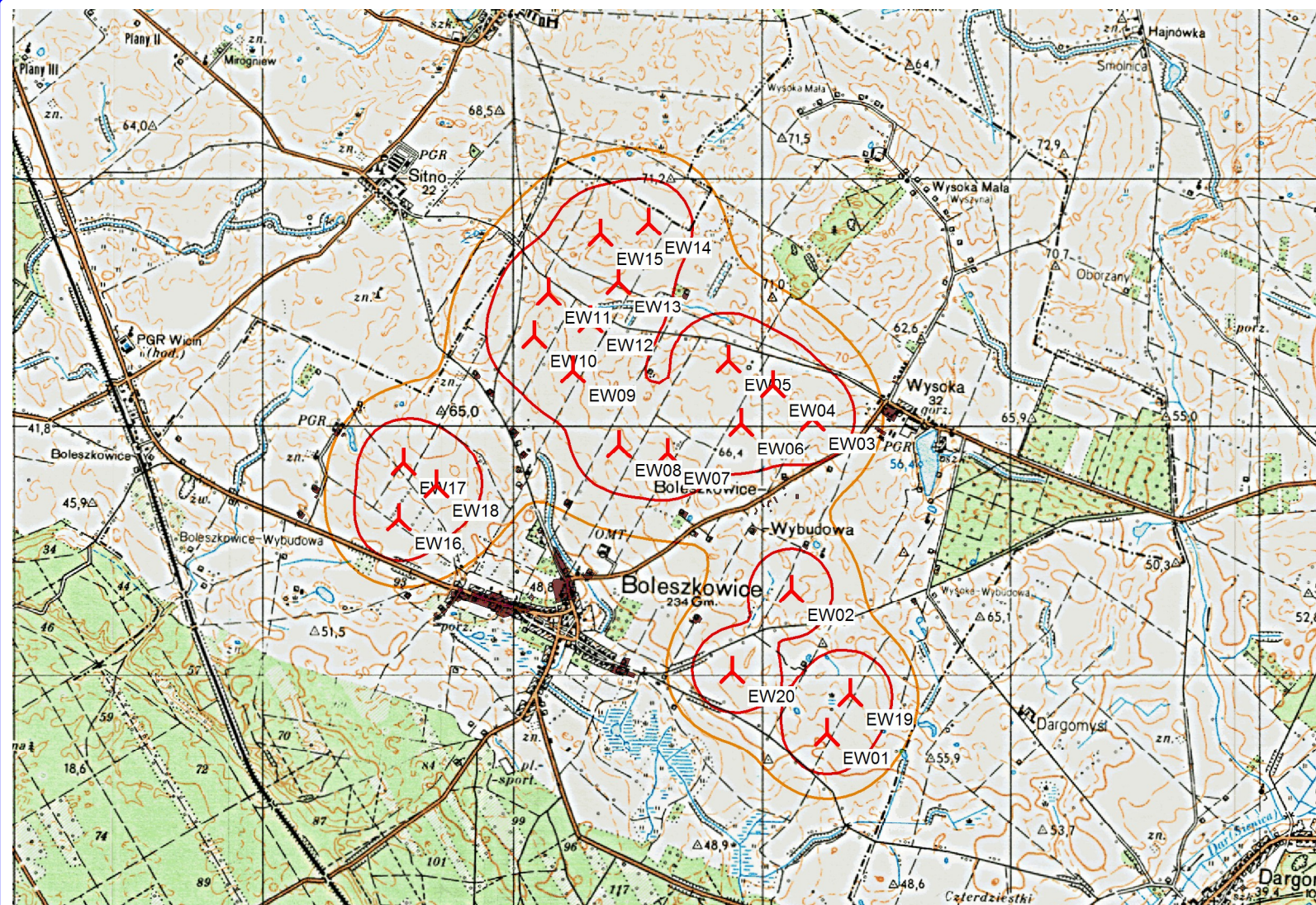
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DECIBEL - Main Result**Calculation: WARIANT I N90 LS**

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WTG																				
NSA	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
K	2899	1890	724	966	1332	1272	1911	2270	2573	2904	2853	2475	2340	2327	2620	4129	3990	3771	2559	2689
L	1904	741	621	893	1207	715	1081	1475	2046	2458	2564	2163	2228	2482	2614	3193	3159	2890	1632	1484
M	1992	814	596	819	1114	612	965	1360	1929	2341	2451	2050	2122	2387	2511	3094	3050	2783	1734	1521
N	1940	763	639	870	1164	660	996	1388	1969	2382	2495	2095	2169	2436	2558	3104	3068	2798	1681	1477
O	1896	713	697	891	1158	643	920	1309	1903	2319	2444	2046	2137	2422	2531	3014	2981	2710	1649	1402
P	1841	656	806	997	1249	728	939	1319	1936	2355	2493	2099	2206	2505	2602	2981	2963	2686	1605	1322
Q	1881	696	734	915	1170	651	890	1276	1880	2297	2429	2033	2134	2429	2530	2962	2937	2663	1645	1355
R	1889	706	792	951	1185	662	857	1239	1854	2273	2412	2018	2128	2435	2526	2917	2892	2618	1660	1344
S	1853	678	846	987	1203	680	826	1202	1829	2248	2396	2004	2125	2443	2524	2857	2843	2565	1639	1276
T	1696	536	995	1149	1357	836	908	1263	1916	2337	2501	2115	2254	2586	2655	2821	2835	2547	1496	1105
U	1485	350	1018	1302	1602	1092	1314	1683	2318	2738	2880	2486	2587	2871	2981	3250	3271	2982	1214	1149
V	1353	754	1830	1942	2064	1578	1321	1501	2201	2598	2853	2520	2757	3176	3159	2497	2643	2329	1338	468
W	1363	1254	2426	2532	2630	2159	1827	1922	2592	2958	3251	2955	3230	3681	3624	2491	2718	2404	1491	545
X	1543	1342	2435	2513	2585	2131	1755	1819	2474	2831	3132	2848	3135	3597	3525	2318	2549	2236	1659	698
Y	1609	1422	2498	2568	2624	2183	1760	1765	2383	2717	3035	2777	3085	3566	3465	2073	2324	2015	1734	776
Z	1692	1410	2426	2479	2527	2091	1677	1704	2339	2684	2995	2725	3025	3499	3409	2128	2360	2048	1794	827
AA	2287	1730	2300	2173	2043	1788	1169	960	1425	1710	2049	1847	2197	2711	2544	1281	1397	1084	2334	1383
AB	2772	2033	2344	2183	2020	1809	1175	911	1299	1560	1906	1728	2088	2608	2422	1142	1223	912	2770	1863
AC	2560	2083	2714	2629	2535	2235	1646	1474	1889	2085	2446	2320	2689	3213	3005	727	1081	829	2639	1674
AD	3203	2769	3316	3181	3025	2800	2174	1912	2172	2304	2670	2598	2980	3507	3259	797	1200	983	3306	2338
AE	3236	2825	3389	3257	3103	2875	2250	1990	2242	2368	2734	2667	3049	3576	3326	817	1232	1029	3346	2378
AF	3516	3052	3520	3357	3169	2987	2351	2053	2212	2292	2655	2627	3012	3536	3264	602	1039	887	3614	2647
AG	4548	3956	4149	3900	3619	3581	2953	2580	2441	2332	2644	2773	3137	3617	3271	754	893	1079	4615	3657
AH	4513	3881	4026	3767	3477	3455	2833	2454	2286	2166	2474	2610	2972	3449	3101	675	743	957	4567	3615
AI	4515	3868	3991	3727	3433	3420	2800	2419	2236	2109	2414	2555	2915	3390	3040	669	698	927	4564	3615
AJ	4564	3806	3761	3464	3138	3189	2600	2205	1901	1711	1988	2174	2515	2968	2605	798	534	847	4574	3655
AK	4601	3849	3795	3493	3162	3224	2639	2243	1921	1717	1986	2183	2519	2965	2598	823	575	887	4614	3692
AL	4578	3811	3752	3451	3122	3180	2594	2199	1883	1685	1958	2149	2488	2938	2573	837	546	861	4585	3669
AM	4549	3744	3621	3306	2964	3052	2482	2085	1716	1490	1748	1958	2287	2727	2358	911	540	847	4542	3640
AN	3990	3031	2690	2353	1996	2131	1625	1241	746	537	859	993	1344	1823	1489	1271	879	903	3915	3108
AO	3808	2859	2565	2240	1896	2002	1474	1085	653	551	907	963	1335	1837	1528	1223	870	834	3736	2924
AP	3453	2530	2360	2074	1777	1788	1204	808	655	754	1119	1067	1451	1974	1707	1120	885	722	3394	2563
AQ	3389	2482	2371	2100	1818	1798	1198	804	736	879	1241	1154	1538	2064	1814	1108	910	716	3333	2498
AR	3282	2380	2305	2047	1781	1734	1122	733	751	925	1283	1176	1558	2085	1845	1090	934	709	3227	2389
AS	3223	2361	2368	2127	1879	1799	1173	800	903	1078	1438	1330	1711	2238	2001	1014	906	652	3184	2324
AT	3140	2310	2381	2157	1926	1817	1183	827	998	1193	1551	1428	1805	2333	2106	1002	953	673	3114	2237
AU	2748	1895	2039	1860	1690	1493	854	583	1025	1332	1660	1444	1793	2308	2141	1330	1325	1035	2708	1852
AV	2291	1503	1942	1859	1793	1463	899	827	1448	1802	2104	1834	2144	2632	2522	1690	1770	1463	2264	1392
AW	2261	1589	2149	2082	2023	1685	1128	1032	1604	1930	2251	2008	2335	2833	2702	1555	1705	1390	2275	1352
AX	3188	2047	1337	979	631	816	623	603	614	981	1052	652	800	1228	1205	2311	2090	1920	3007	2449
AY	2070	1033	1253	1228	1254	832	458	713	1407	1823	2038	1681	1897	2313	2300	2245	2242	1958	1941	1287
AZ	1895	876	1304	1326	1397	938	656	914	1611	2026	2243	1886	2095	2500	2499	2368	2390	2097	1771	1115
BA	1810	756	1249	1313	1425	939	750	1036	1728	2145	2352	1987	2180	2569	2585	2502	2529	2237	1668	1073
BB	2055	880	510	743	1049	551	943	1340	1892	2301	2402	2000	2063	2322	2450	3096	3042	2780	1791	1589
BC	3669	2489	1398	986	596	1097	1250	1296	1065	1233	1074	762	524	626	818	2894	2610	2494	3441	3016
BD	541	615	1986	2264	2532	2009	2034	2319	3016	3432	3640	3270	3435	3775	3839	3472	3614	3301	413	577
BE	3181	2038	1316	955	602	800	621	614	639	1005	1070	668	799	1216	1204	2333	2113	1942	2999	2445
BF	4538	3726	3597	3283	2944	3027	2458	2061	1697	1476	1740	1944	2275	2719	2352	922	539	842	4527	3629
BG	2262	1501	1980	1905	1846	1508	951	884	1503	1854	2159	1891	2202	2690	2579	1686	1784	1474	2244	1359



0 500 1000 1500 2000 m

Map: , Print scale 1:50 000, Map center Poland UKLAD 65 3 East: 3 337 146 North: 5 907 626

Noise calculation model: ISO 9613-2 General. Wind speed: 10,0 m/s

Height above sea level: 67,0 m

New WTG

Noise sensitive area

45,0 dB(A)

40,0 dB(A)

Project:
20100624 wysokaRaport.

Description:
WARIANT I

(rozplanowanie 20szt.)
turbina N90 LS 2,5MW;
D=90m; h=100m;

DECIBEL -
Map 10,0 m/s
Calculation:
WARIANT I N90 LS

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2010-06-25 11:41 / 4

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Calculated:
2010-06-25 11:40/2.7.468