






**Legenda**

*Przedsiębiorstwo Szymanek*

Zabudowa 

Wielorodzinnna 

Zagrodowa 

0 0.5 1 km



Czarniejewo, 01.12.2015r.

RIS.604.15.2015.AK

**Sz. P.**  
**Kamil Podemski**  
**CRE WIDE**  
**ul. Norwida 8**  
**89-100 Nakło nad Notecią**

**Dotyczy: identyfikacji terenów chronionych akustycznie w Gminie Czarniejewo**

W odpowiedzi na pismo z 03 listopada 2015r. (data wpływu 05.11.2015r.), Urząd Miasta i Gminy Czarniejewo na podstawie gminnego systemu informacji przestrzennej oraz ortofotomapy przedstawia przeważający charakter zabudowy dla wnioskowanych obszarów :

**• zabudowa zagrodowa:**

obręby: Pakszynek, Gębarzewo, Pawłowo, Goraniec, Szczytniki Czarniejewskie, Kosowo, Nidom, Pakszyn, Kapiel.

**• zabudowa wielorodzinna:**

obręby: Kosmowo, Golimowo, Gębarzewko.

Powyższe w oparciu o art. 114. ust. 2, ustawy z dnia 27 kwietnia 2001 r., :Prawo ochrony środowiska”, uzasadnia konieczność przyjęcia dopuszczalnego poziomu hałasu adekwatnego dla przeważającego rodzaju terenu, to jest odpowiednio zabudowy zagrodowej oraz zabudowy wielorodzinnej.

Z poważaniem

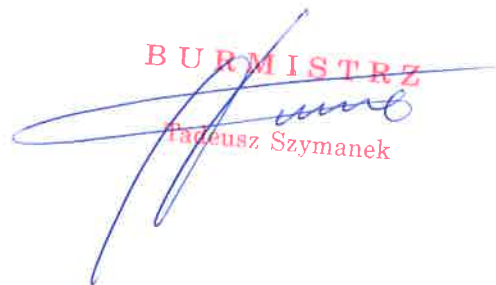
**Załącznik:**  
Załącznik graficzny przedstawiający charakter zabudowy


**Otrzymują:**

① Adresaat

2.A/a

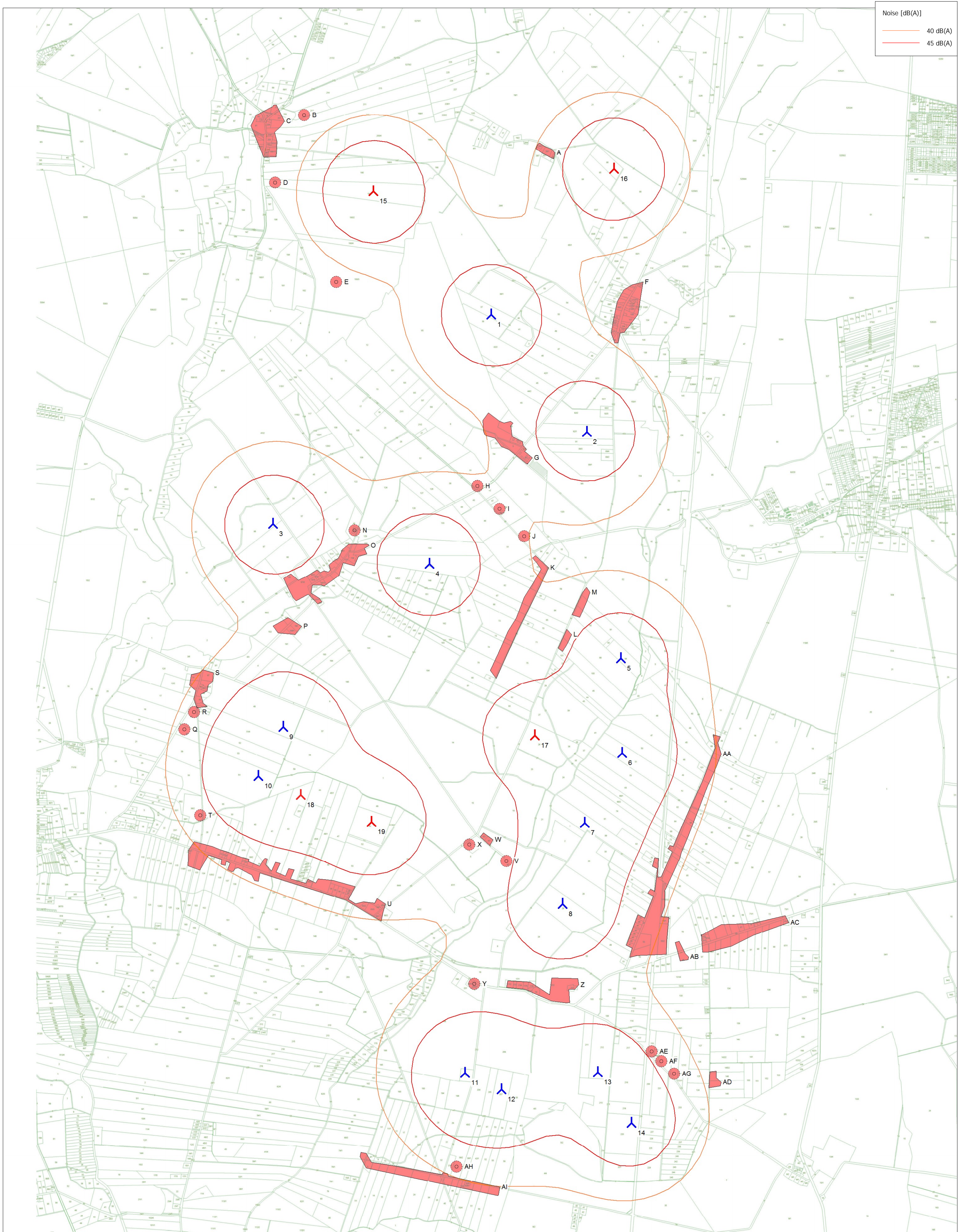
! bprawy prowadzi : Aleksandra Kuygier tel 61 429 1329)

BURMISTRZ  
  
Radosław Szymanek

potwierdzenie odbioru  
2.12.2015 r. 



DECIBEL - Map 10,0 m/s  
Calculation: Wariant I wieża 150m



Map: ewidencyjna, Print scale 1:20 000, Map center Poland CS 92 East: 400 725 North: 509 543

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object

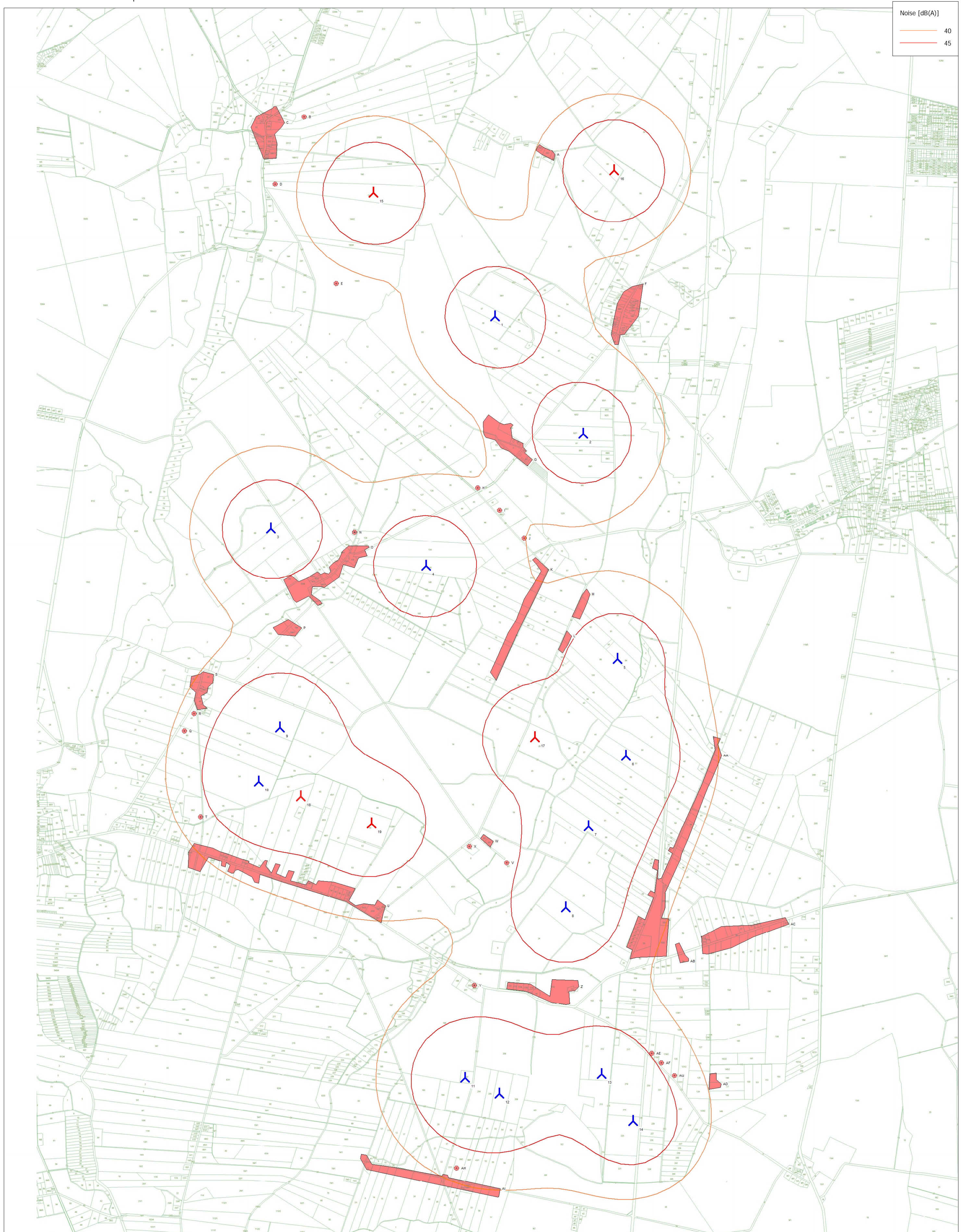
New WTG

Noise sensitive area



DECIBEL - Map 10,0 m/s

Calculation: Wariant I wieża 150m przesuniecie 30m



▲ New WTG      ■ Noise sensitive area

0 250 500 750 1000m  
Map: ewidencyjna , Print scale 1:20 000. Map center Poland CS 92 East: 400 732 North: 509 557

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



## DECIBEL - Main Result

Calculation: Wariant I wieza 150m przesuniecie 30m

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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 Allow override of model height with height from NSA object

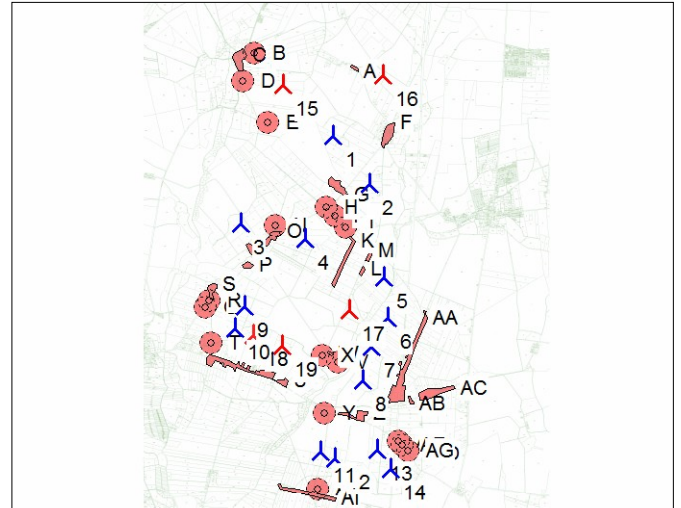
Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	Lwa_ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 132	512 242	111,0	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 852	511 287	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 304	510 514	108,2	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 570	510 209	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 131	509 449	104,8	Dz. 99 Goraniec	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	105,0	No
6	402 199	508 660	106,0	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
7	401 894	508 086	106,0	Dz. 89 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 711	507 424	107,6	Dz. 26 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 379	508 890	108,2	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
10	399 206	508 449	108,0	Dz. 54 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 889	506 034	108,0	Dz. 197 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 169	505 904	108,0	Dz. 207 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	402 002	506 065	108,6	Dz. 212 Szczytniki Czernieje...	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No
14	402 259	505 682	110,0	Dz. 220 Szczytniki Czernieje...	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No
15	400 141	513 250	112,0	SWT 4.4	Yes	SWT	W (107 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	107,0	No
16	402 104	513 433	116,0	SWT 4.1	Yes	SWT	W (107 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	107,0	No
17	401 458	508 811	105,9	SWT 4.3	Yes	SWT	W (106 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	106,0	No
18	399 550	508 327	108,0	SWT 4.6	Yes	SWT	W (104,5 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	104,5	No
19	400 126	508 108	107,6	Dz. 50 Pakszyn	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No



New WTG

Scale 1:150 000

Noise sensitive area

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Distance to noise demand [m]	Demands fulfilled ? Noise
A	Zab_zagrodowa_Gębarzewko	401 617	513 536	116,0	4,0	45,0	42,9	79	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	45,0	36,6	425	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	45,0	36,6	432	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	45,0	37,2	392	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	45,0	38,2	381	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	45,0	39,7	363	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	45,0	44,1	58	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	45,0	40,4	356	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	45,0	40,6	342	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	45,0	40,0	424	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 144	509 276	108,0	4,0	45,0	42,6	139	Yes
L	Zab_zagrodowa_45dB	401 727	509 568	107,2	4,0	45,0	44,8	15	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	45,0	44,0	65	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	45,0	42,8	220	Yes
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	45,0	44,9	2	Yes
P	Zab_zagrodowa_45dB	399 463	509 640	110,0	4,0	45,0	41,3	309	Yes

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant I wieza 150m przesuniecie 30m

...continued from previous page

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level		Demands fulfilled ?
							From WTGs	Distance to noise demand	
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	Noise
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	45,0	41,4	209	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	45,0	41,8	187	Yes
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	45,0	43,0	113	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	45,0	43,3	106	Yes
U	Zab_zagrodowa_45dB_Pakszyn	399 922	507 599	108,0	4,0	45,0	43,5	102	Yes
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	45,0	43,8	88	Yes
W	Zab_wielorodzinna_45dB	401 119	507 963	106,8	4,0	45,0	42,6	226	Yes
X	Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	45,0	41,8	384	Yes
Y	Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	45,0	41,7	255	Yes
Z	Zab_zagrodowa_45dB	401 709	506 832	109,3	4,0	45,0	43,4	146	Yes
AA	Zab_zagrodowa_45dB_Kosowo	402 434	507 816	110,0	4,0	45,0	43,4	107	Yes
AB	Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	45,0	38,9	495	Yes
AC	Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 813	507 183	112,0	4,0	45,0	37,4	673	Yes
AD	Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	45,0	39,9	290	Yes
AE	Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	45,0	44,7	20	Yes
AF	Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	45,0	44,5	36	Yes
AG	Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	45,0	43,8	75	Yes
AH	Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	45,0	41,7	175	Yes
AI	Zab_zagrodowa_45dB_Pakszynek	400 931	505 182	106,0	4,0	45,0	40,5	260	Yes

## Distances (m)

NSA	WTG																		
	17	15	16	19	18	1	7	12	6	13	11	4	3	9	2	8	5	10	14
A	4706	1370	498	5607	5582	1357	5436	7624	4890	7461	7517	3465	3767	5135	2240	6092	4099	5608	7861
B	5399	838	2565	5790	5545	2251	6233	8126	5835	8176	7948	3795	3368	4986	3443	6792	5108	5436	8620
C	5173	842	2716	5481	5210	2202	6013	7845	5647	7927	7657	3541	3015	4641	3364	6551	4943	5081	8375
D	4986	804	2768	5275	5001	2093	5828	7643	5471	7733	7454	3348	2809	4434	3234	6359	4776	4877	8182
E	4041	799	2447	4414	4196	1322	4881	6742	4519	6803	6565	2417	2068	3652	2357	5423	3827	4113	7249
F	3270	2185	954	4382	4490	962	3935	6184	3354	5952	6106	2374	3182	4151	771	4609	2565	4600	6335
G	2216	2038	2228	3183	3270	802	2982	5128	2498	4999	5019	1140	1902	2904	464	3616	1740	3365	5415
H	2088	2552	2818	2872	2903	1405	2904	4947	2498	4888	4815	764	1721	2536	968	3498	1804	2990	5319
I	1872	2789	2927	2759	2843	1584	2675	4758	2250	4672	4637	753	1874	2521	925	3282	1546	2960	5098
J	1628	3074	3087	2641	2788	1824	2408	4538	1960	4418	4430	834	2071	2524	978	3032	1246	2941	4838
K	562	3255	3221	1550	1850	1993	1408	3374	1223	3326	3254	846	2116	1776	1081	1938	824	2092	3765
L	723	3905	3775	2079	2416	2630	1427	3631	983	3448	3555	1264	2545	2357	1614	2074	418	2669	3860
M	1030	3671	3423	2350	2655	2347	1691	3928	1176	3716	3858	1261	2561	2549	1268	2355	448	2889	4118
N	2227	2772	3631	2381	2202	2099	3063	4731	2866	4858	4542	642	687	1708	2029	3512	2380	2182	5314
O	2017	2880	3661	1831	1565	2138	2832	4249	2668	4466	4036	487	419	1030	1977	3179	2210	1494	4926
P	2101	3549	4520	1651	1311	2991	2843	4089	2842	4361	3862	1133	756	755	2790	3126	2588	1211	4822
Q	2860	4654	5763	1702	1090	4226	3385	3919	3606	4406	3639	2387	1797	779	4058	3428	3581	733	4849
R	2786	4493	5601	1701	1102	4065	3344	3976	3537	4437	3703	2242	1635	708	3910	3419	3481	764	4885
S	2664	4140	5253	1637	1050	3715	3255	3946	3421	4388	3677	1947	1279	613	3600	3347	3298	731	4838
T	2804	5283	6261	1396	835	4737	3165	3323	3505	3886	3031	2752	2422	974	4418	3070	3637	554	4314
U	1837	5503	6227	546	582	4800	1777	1694	2311	2180	1437	2688	2643	1088	4150	1470	2762	638	2614
V	1050	5573	5717	1148	1764	4459	731	1884	1307	1889	1786	2511	3339	2154	3557	604	1892	2129	2345
W	897	5311	5521	895	1502	4227	785	2013	1287	2063	1893	2241	3040	1868	3369	791	1799	1866	2521
X	1037	5389	5639	821	1435	4328	983	2033	1474	2147	1889	2316	3059	1826	3492	930	1947	1799	2608
Y	2084	6519	6747	1566	2093	5461	1598	906	2245	1264	757	3446	4083	2636	4589	981	2908	2421	1702
Z	1982	6534	6615	1708	2269	5430	1261	853	1874	629	800	3463	4179	2789	4460	593	2641	2610	1086
AA	1394	5229	4687	2301	2918	3861	604	1530	660	967	1658	2725	3988	3240	2687	576	1003	3283	1323
AB	2040	6607	6324	2667	3283	5327	1196	1821	1587	1112	1990	3697	4733	3678	4227	942	2369	3648	1348
AC	2116	6621	6227	2843	3459	5305	1287	2013	1593	1281	2186	3765	4838	3837	4172	1129	2337	3825	1478
AD	3090	7689	7407	3430	4027	6418	2246	1709	2679	880	1990	4743	5708	4500	5319	1791	3462	4382	669
AE	2749	7379	7210	2958	3548	6147	1924	1287	2437	444	1537	4383	5292	4034	5086	1382	3229	3899	573
AF	2849	7477	7291	3067	3657	6239	2021	1346	2522	497	1607	4487	5401	4144	5173	1489	3313	4008	528
AG	2984	7608	7400	3214	3803	6363	2151	1435	2638	594	1708	4625	5546	4291	5288	1632	3428	4153	502
AH	3574	7987	8242	2897	3288	6957	2991	701	3638	1411	741	4921	5436	3874	6082	2308	4356	3543	1490
AI	3642	7842	8282	2698	2956	6920	3045	757	3679	1249	806	4827	5156	3541	6144	2358	4426	3150	1217



## DECIBEL - Main Result

Calculation: Wariant I wieza 150m

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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 Allow override of model height with height from NSA object

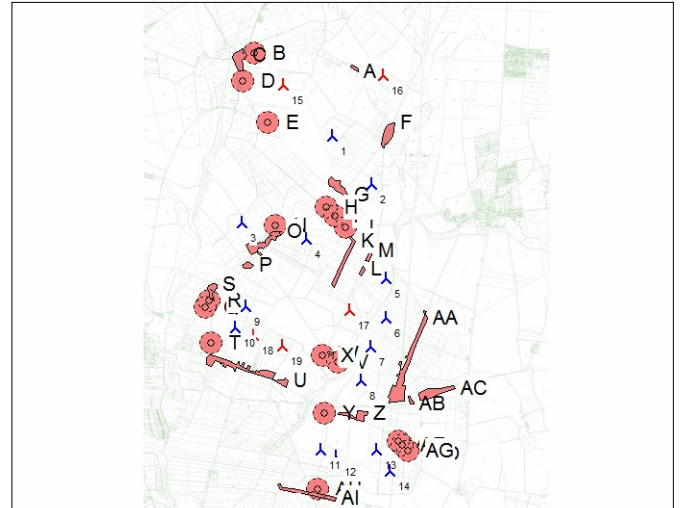
Deviation from "official" noise demands. Negative is more restrictive, positive is less restrictive.:

0,0 dB(A)

All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	Lwa,ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 102	512 242	110,9	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 882	511 289	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 323	510 538	108,3	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 599	510 210	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 160	509 439	104,6	Dz. 99 Goraniec	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	105,0	No
6	402 171	508 670	105,9	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
7	401 867	508 100	105,8	Dz. 89 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 684	507 437	107,2	Dz. 26 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 407	508 880	108,6	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
10	399 203	508 480	108,0	Dz. 54 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 890	506 063	108,0	Dz. 197 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 188	505 927	108,0	Dz. 207 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	401 971	506 066	108,4	Dz. 212 Szczytniki Czernieje...	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No
14	402 248	505 654	110,0	Dz. 220 Szczytniki Czernieje...	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No
15	400 141	513 250	112,0	SWT 4.4	Yes	SWT	W (107 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	107,0	No
16	402 104	513 433	116,0	SWT 4.1	Yes	SWT	W (107 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	107,0	No
17	401 458	508 811	105,9	SWT 4.3	Yes	SWT	W (106 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	106,0	No
18	399 550	508 327	108,0	SWT 4.6	Yes	SWT	W (104,5 dB)-3 500	3 500	130,0	90,0	USER	Runtime input	10,0	User value	104,5	No
19	400 126	508 108	107,6	Dz. 50 Pakszyn	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No



New WTG

Scale 1:150 000  
Noise sensitive area

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Distance to noise demand [m]	Demands fulfilled ? Noise
A	Zab_zagrodowa_Gębarzewko	401 617	513 536	116,0	4,0	45,0	42,9	82	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	45,0	36,6	426	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	45,0	36,6	430	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	45,0	37,2	390	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	45,0	38,3	384	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	45,0	39,8	357	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	45,0	43,7	85	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	45,0	40,4	340	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	45,0	40,8	319	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	45,0	40,1	395	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 144	509 276	108,0	4,0	45,0	42,6	141	Yes
L	Zab_zagrodowa_45dB	401 727	509 568	107,2	4,0	45,0	44,4	43	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	45,0	43,6	93	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	45,0	42,7	241	Yes
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	45,0	44,7	19	Yes
P	Zab_zagrodowa_45dB	399 487	509 638	110,0	4,0	45,0	41,2	309	Yes

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant I wieza 150m

...continued from previous page

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level From WTGs	Distance to noise demand	Demands fulfilled ? Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	45,0	41,4	205	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	45,0	41,7	189	Yes
S	Zab_zagrodowa_45dB_Kapitel	398 786	509 048	110,0	4,0	45,0	42,9	120	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	45,0	43,0	119	Yes
U	Zab_zagrodowa_45dB_Pakszyn	399 922	507 599	108,0	4,0	45,0	43,5	102	Yes
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	45,0	44,3	56	Yes
W	Zab_wielorodzinna_45dB	401 119	507 963	106,8	4,0	45,0	42,9	195	Yes
X	Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	45,0	42,0	380	Yes
Y	Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	45,0	42,0	229	Yes
Z	Zab_zagrodowa_45dB	401 684	506 833	109,3	4,0	45,0	43,3	158	Yes
AA	Zab_zagrodowa_45dB_Kosowo	402 434	507 816	110,0	4,0	45,0	42,9	135	Yes
AB	Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	45,0	38,6	523	Yes
AC	Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 813	507 183	112,0	4,0	45,0	37,2	701	Yes
AD	Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	45,0	39,6	319	Yes
AE	Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	45,0	44,2	49	Yes
AF	Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	45,0	44,0	71	Yes
AG	Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	45,0	43,3	110	Yes
AH	Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	45,0	41,3	207	Yes
AI	Zab_zagrodowa_45dB_Pakszynek	400 955	505 177	106,0	4,0	45,0	40,2	289	Yes

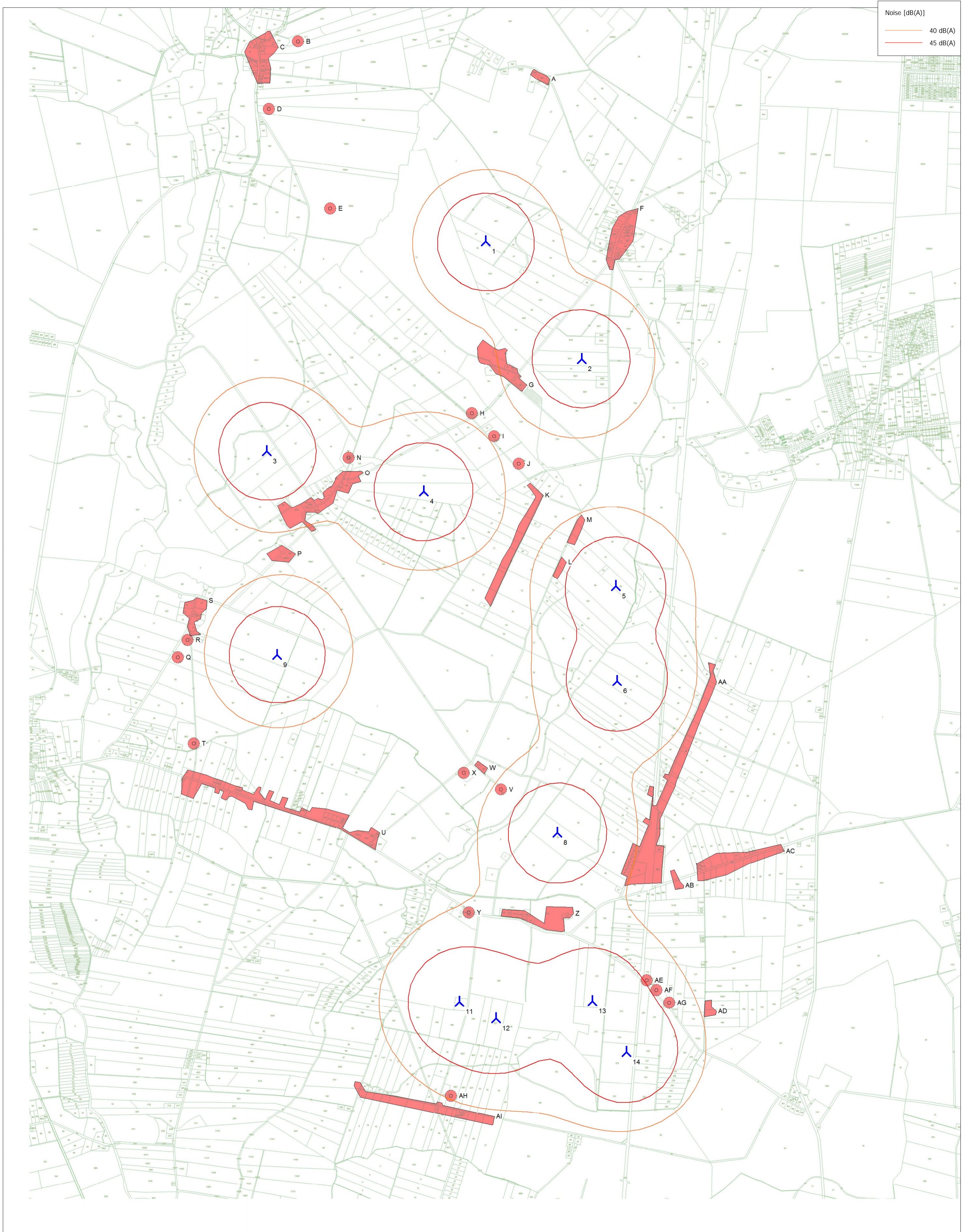
## Distances (m)

NSA	WTG	17	15	16	19	18	1	7	12	6	13	11	4	3	9	2	8	5	10	14
A	4706	1370	498	5607	5582	1368	5421	7601	4877	7458	7488	3456	3737	5132	2241	6079	4112	5581	7888	
B	5399	838	2565	5790	5545	2230	6210	8108	5813	8166	7920	3801	3343	4995	3462	6772	5131	5404	8643	
C	5173	842	2716	5481	5210	2177	5990	7827	5624	7916	7629	3551	2991	4652	3385	6529	4967	5049	8398	
D	4986	804	2768	5275	5001	2067	5804	7626	5448	7721	7426	3358	2785	4444	3256	6337	4801	4845	8205	
E	4041	799	2447	4414	4196	1292	4857	6724	4495	6792	6537	2425	2040	3658	2382	5402	3852	4082	7272	
F	3270	2185	954	4382	4490	992	3923	6159	3344	5951	6078	2354	3155	4140	760	4598	2574	4577	6363	
G	2216	2038	2228	3183	3270	801	2964	5105	2480	4994	4991	1123	1875	2895	492	3601	1760	3340	5441	
H	2088	2552	2818	2872	2903	1402	2883	4925	2475	4881	4786	747	1698	2526	996	3480	1829	2966	5344	
I	1872	2789	2927	2759	2843	1585	2654	4736	2228	4665	4609	729	1854	2508	949	3265	1572	2939	5123	
J	1628	3074	3087	2641	2788	1828	2389	4515	1939	4412	4402	806	2053	2508	995	3016	1271	2922	4864	
K	562	3255	3221	1550	1850	1998	1382	3351	1193	3317	3225	818	2108	1751	1095	1918	854	2081	3789	
L	723	3905	3775	2079	2416	2637	1410	3606	960	3444	3527	1238	2538	2332	1619	2061	448	2659	3887	
M	1030	3671	3423	2350	2655	2357	1676	3902	1158	3713	3830	1234	2550	2526	1270	2343	474	2877	4145	
N	2227	2772	3631	2381	2202	2082	3036	4714	2838	4844	4514	669	669	1707	2058	3488	2410	2153	5335	
O	2017	2880	3661	1831	1565	2124	2802	4235	2639	4449	4009	515	434	1036	2005	3152	2240	1464	4945	
P	2101	3549	4520	1651	1311	2974	2813	4076	2812	4342	3835	1160	776	763	2817	3098	2618	1180	4839	
Q	2860	4654	5763	1702	1090	4208	3355	3914	3578	4381	3618	2412	1826	807	4084	3398	3608	713	4860	
R	2786	4493	5601	1701	1102	4046	3313	3971	3508	4413	3680	2267	1664	738	3936	3389	3509	740	4896	
S	2664	4140	5253	1637	1050	3697	3224	3940	3391	4365	3654	1973	1309	644	3626	3317	3327	704	4850	
T	2804	5283	6261	1396	835	4722	3137	3322	3479	3860	3012	2773	2450	986	4441	3041	3660	569	4321	
U	1837	5503	6227	546	582	4791	1757	1687	2292	2153	1412	2697	2670	1081	4166	1444	2775	667	2623	
V	1050	5573	5717	1148	1764	4460	712	1861	1293	1875	1758	2504	3348	2125	3565	575	1898	2141	2366	
W	897	5311	5521	895	1502	4226	760	1991	1269	2048	1864	2236	3050	1838	3379	762	1807	1876	2541	
X	1037	5389	5639	821	1435	4327	959	2013	1455	2131	1860	2312	3070	1796	3503	901	1958	1811	2627	
Y	2084	6519	6747	1566	2093	5460	1594	889	2238	1238	729	3444	4097	2610	4597	970	2911	2445	1712	
Z	1982	6534	6615	1708	2269	5433	1273	825	1878	615	774	3459	4191	2763	4463	605	2635	2632	1106	
AA	1394	5229	4687	2301	2918	3875	634	1501	690	974	1641	2700	3981	3209	2677	606	975	3297	1351	
AB	2040	6607	6324	2667	3283	5336	1224	1793	1605	1129	1976	3682	4737	3648	4224	971	2354	3662	1378	
AC	2116	6621	6227	2843	3459	5316	1316	1984	1615	1300	2172	3748	4841	3807	4166	1158	2318	3838	1508	
AD	3090	7689	7407	3430	4027	6427	2270	1689	2696	911	1991	4729	5715	4471	5315	1819	3446	4401	691	
AE	2749	7379	7210	2958	3548	6153	1945	1263	2450	472	1533	4372	5301	4006	5085	1407	3217	3919	603	
AF	2849	7477	7291	3067	3657	6246	2042	1323	2536	528	1604	4475	5410	4116	5171	1514	3301	4028	559	
AG	2984	7608	7400	3214	3803	6370	2173	1414	2652	625	1707	4613	5555	4263	5286	1658	3415	4173	531	
AH	3574	7987	8242	2897	3288	6955	2994	730	3636	1385	770	4921	5454	3854	6089	2310	4356	3573	1472	
AI	3642	7842	8282	2698	2956	6915	3052	783	3681	1230	834	4831	5178	3526	6155	2365	4424	3181	1195	



DECIBEL - Map 10,0 m/s

Calculation: Wariant II wieża 100m dzien



New WTG

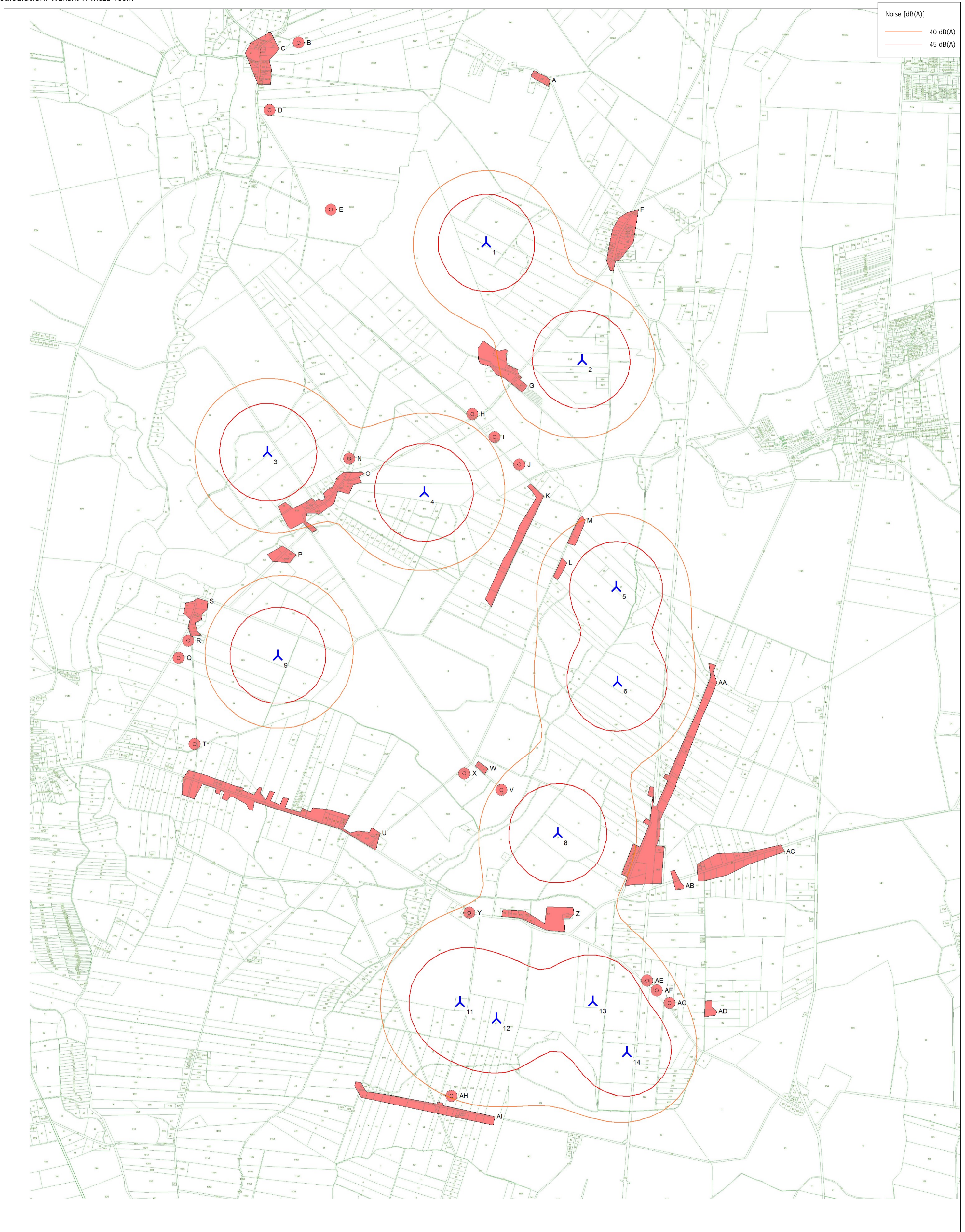
Noise sensitive area

Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 785 North: 508 948

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



DECIBEL - Map 10,0 m/s  
Calculation: Wariant II wieża 100m



Noise [dB(A)]  
— 40 dB(A)  
— 45 dB(A)

New WTG Noise sensitive area

0 250 500 750 1000m  
Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 785 North: 508 948  
Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



## DECIBEL - Main Result

Calculation: Wariant II wieza 100m dzien

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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:

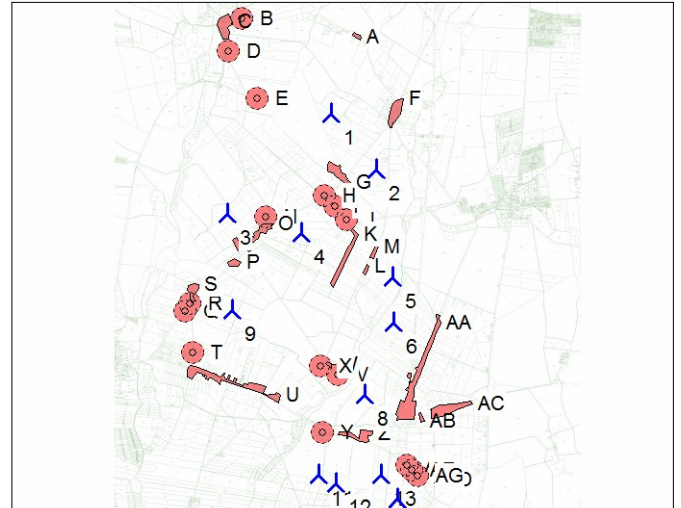
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m 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)



All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	Lwa,ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 102	512 242	110,9	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
2	401 882	511 289	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
3	399 323	510 538	108,3	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
4	400 599	510 210	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
5	402 160	509 439	104,6	Dz. 99 Goraniec	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
6	402 171	508 670	105,9	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
8	401 684	507 437	107,2	Dz. 26 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
9	399 407	508 880	108,6	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
11	400 890	506 063	108,0	Dz. 197 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
12	401 188	505 927	108,0	Dz. 207 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
13	401 971	506 066	108,4	Dz. 212 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
14	402 248	505 654	110,0	Dz. 220 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No

## Calculation Results

### Sound Level

Noise sensitive area

No. Name

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level		Demands fulfilled ?
							From WTGs [dB(A)]	Distance to noise demand [m]	
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	55,0	30,6	1 291	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	55,0	25,3	2 150	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	55,0	26,0	2 092	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	55,0	26,8	1 979	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	55,0	32,1	1 199	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	55,0	38,3	666	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	55,0	42,7	400	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	55,0	39,3	656	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	55,0	39,6	639	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	55,0	39,0	726	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 345	509 871	108,0	4,0	55,0	39,1	728	Yes
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	55,0	43,9	354	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	55,0	43,2	390	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	55,0	41,4	577	Yes
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	55,0	44,1	339	Yes
P	Zab_zagrodowa_45dB	399 487	509 638	110,0	4,0	55,0	39,3	679	Yes
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	55,0	36,5	722	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	55,0	37,6	647	Yes
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	55,0	39,1	551	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	55,0	34,3	895	Yes
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	55,0	34,7	1 321	Yes

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant II wieza 100m dzien

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Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level From WTGs	Distance to noise demand	Demands fulfilled ? Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
	V Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	55,0	41,1	487	Yes
	W Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	55,0	38,6	674	Yes
	X Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	55,0	37,3	811	Yes
	Y Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	55,0	40,8	623	Yes
	Z Zab_zagrodowa_45dB	401 743	506 637	109,3	4,0	55,0	42,6	531	Yes
	AA Zab_zagrodowa_45dB_Kosowo	402 231	507 171	110,0	4,0	55,0	40,9	522	Yes
	AB Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	55,0	37,3	889	Yes
	AC Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 825	507 046	112,0	4,0	55,0	35,9	1 124	Yes
	AD Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	55,0	39,8	604	Yes
	AE Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	55,0	44,6	374	Yes
	AF Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	55,0	44,1	433	Yes
	AG Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	55,0	43,4	442	Yes
	AH Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	55,0	40,4	625	Yes
	AI Zab_zagrodowa_45dB_Pakszynek	401 004	505 166	106,0	4,0	55,0	39,5	675	Yes

## Distances (m)

NSA	WTG											
	1	12	6	13	11	4	3	9	2	8	5	14
A	1368	7601	4877	7458	7488	3456	3737	5132	2241	6079	4112	7888
B	2230	8108	5813	8166	7920	3801	3343	4995	3462	6772	5131	8643
C	2177	7827	5624	7916	7629	3551	2991	4652	3385	6529	4967	8398
D	2067	7626	5448	7721	7426	3358	2785	4444	3256	6337	4801	8205
E	1292	6724	4495	6792	6537	2425	2040	3658	2382	5402	3852	7272
F	992	6159	3344	5951	6078	2354	3155	4140	760	4598	2574	6363
G	801	5105	2480	4994	4991	1123	1875	2895	492	3601	1760	5441
H	1402	4925	2475	4881	4786	747	1698	2526	996	3480	1829	5344
I	1585	4736	2228	4665	4609	729	1854	2508	949	3265	1572	5123
J	1828	4515	1939	4412	4402	806	2053	2508	995	3016	1271	4864
K	1998	3351	1193	3317	3225	818	2108	1751	1095	1918	854	3789
L	2637	3606	960	3444	3527	1238	2538	2332	1619	2061	448	3887
M	2357	3902	1158	3713	3830	1234	2550	2526	1270	2343	474	4145
N	2082	4714	2838	4844	4514	669	669	1707	2058	3488	2410	5335
O	2124	4235	2639	4449	4009	515	434	1036	2005	3152	2240	4945
P	2974	4076	2812	4342	3835	1160	776	763	2817	3098	2618	4839
Q	4208	3914	3578	4381	3618	2412	1826	807	4084	3398	3608	4860
R	4046	3971	3508	4413	3680	2267	1664	738	3936	3389	3509	4896
S	3697	3940	3391	4365	3654	1973	1309	644	3626	3317	3327	4850
T	4722	3322	3479	3860	3012	2773	2450	986	4441	3041	3660	4321
U	4791	1687	2292	2153	1412	2697	2670	1081	4166	1444	2775	2623
V	4460	1861	1293	1875	1758	2504	3348	2125	3565	575	1898	2366
W	4226	1991	1269	2048	1864	2236	3050	1838	3379	762	1807	2541
X	4327	2013	1455	2131	1860	2312	3070	1796	3503	901	1958	2627
Y	5460	889	2238	1238	729	3444	4097	2610	4597	970	2911	1712
Z	5433	825	1878	615	774	3459	4191	2763	4463	605	2635	1106
AA	3875	1501	690	974	1641	2700	3981	3209	2677	606	975	1351
AB	5336	1793	1605	1129	1976	3682	4737	3648	4224	971	2354	1378
AC	5316	1984	1615	1300	2172	3748	4841	3807	4166	1158	2318	1508
AD	6427	1689	2696	911	1991	4729	5715	4471	5315	1819	3446	691
AE	6153	1263	2450	472	1533	4372	5301	4006	5085	1407	3217	603
AF	6246	1323	2536	528	1604	4475	5410	4116	5171	1514	3301	559
AG	6370	1414	2652	625	1707	4613	5555	4263	5286	1658	3415	531
AH	6955	730	3636	1385	770	4921	5454	3854	6089	2310	4356	1472
AI	6915	783	3681	1230	834	4831	5178	3526	6155	2365	4424	1195



## DECIBEL - Main Result

Calculation: Wariant II wieza 100m

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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:

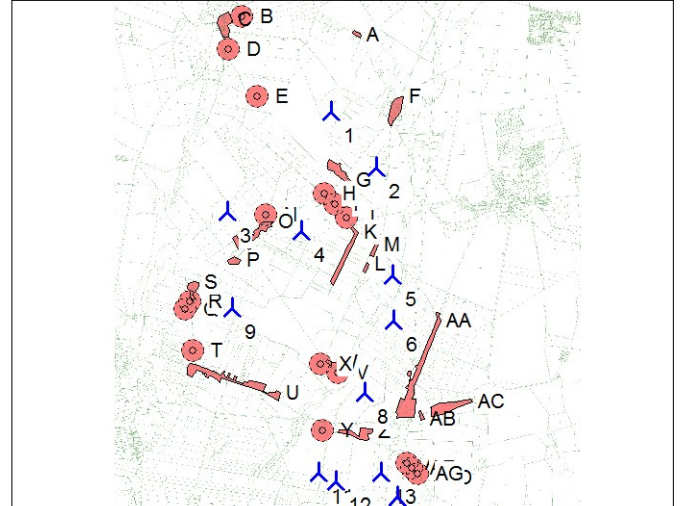
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m 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)



All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	Status	Lwa_ref [dB(A)]	Pure tones
					Valid	Manufact.	Type-generator				Creator	Name				
1	401 102	512 242	110,9	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
2	401 882	511 289	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
3	399 323	510 538	108,3	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
4	400 599	510 210	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
5	402 160	509 439	104,6	Dz. 99 Goraniec	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	105,0	No
6	402 171	508 670	105,9	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
8	401 684	507 437	107,2	Dz. 26 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
9	399 407	508 880	108,6	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
11	400 890	506 063	108,0	Dz. 197 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
12	401 188	505 927	108,0	Dz. 207 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	106,0	No
13	401 971	506 066	108,4	Dz. 212 Szczytniki Czerniejewo	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	104,5	No
14	402 248	505 654	110,0	Dz. 220 Szczytniki Czerniejewo	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	100,0	USER	Runtime input	10,0	User value	104,5	No

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level		Demands fulfilled ?
							From WTGs [dB(A)]	Distance to noise demand [m]	
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	45,0	30,5	978	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	45,0	25,3	1 841	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	45,0	26,0	1 788	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	45,0	26,8	1 676	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	45,0	32,1	904	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	45,0	38,3	361	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	45,0	42,7	94	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	45,0	39,3	346	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	45,0	39,6	328	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	45,0	38,9	409	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 345	509 871	108,0	4,0	45,0	38,8	424	Yes
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	45,0	43,1	75	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	45,0	42,4	104	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	45,0	41,4	261	Yes
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	45,0	44,1	31	Yes
P	Zab_zagrodowa_45dB	399 487	509 638	110,0	4,0	45,0	39,3	366	Yes
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	45,0	36,5	420	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	45,0	37,6	349	Yes
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	45,0	39,1	255	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	45,0	34,3	599	Yes
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	45,0	34,6	990	Yes

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant II wieza 100m

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Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level From WTGs	Distance to noise demand	Demands fulfilled ? Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	45,0	41,0	177	Yes
W	Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	45,0	38,5	364	Yes
X	Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	45,0	37,1	500	Yes
Y	Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	45,0	40,6	283	Yes
Z	Zab_zagrodowa_45dB	401 713	506 633	109,3	4,0	45,0	41,9	230	Yes
AA	Zab_zagrodowa_45dB_Kosowo	402 240	507 194	110,0	4,0	45,0	40,7	207	Yes
AB	Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	45,0	36,8	573	Yes
AC	Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 813	507 183	112,0	4,0	45,0	35,3	758	Yes
AD	Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	45,0	38,5	323	Yes
AE	Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	45,0	43,2	77	Yes
AF	Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	45,0	42,7	106	Yes
AG	Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	45,0	42,1	136	Yes
AH	Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	45,0	40,2	258	Yes
AI	Zab_zagrodowa_45dB_Pakszynek	400 980	505 172	106,0	4,0	45,0	39,2	334	Yes

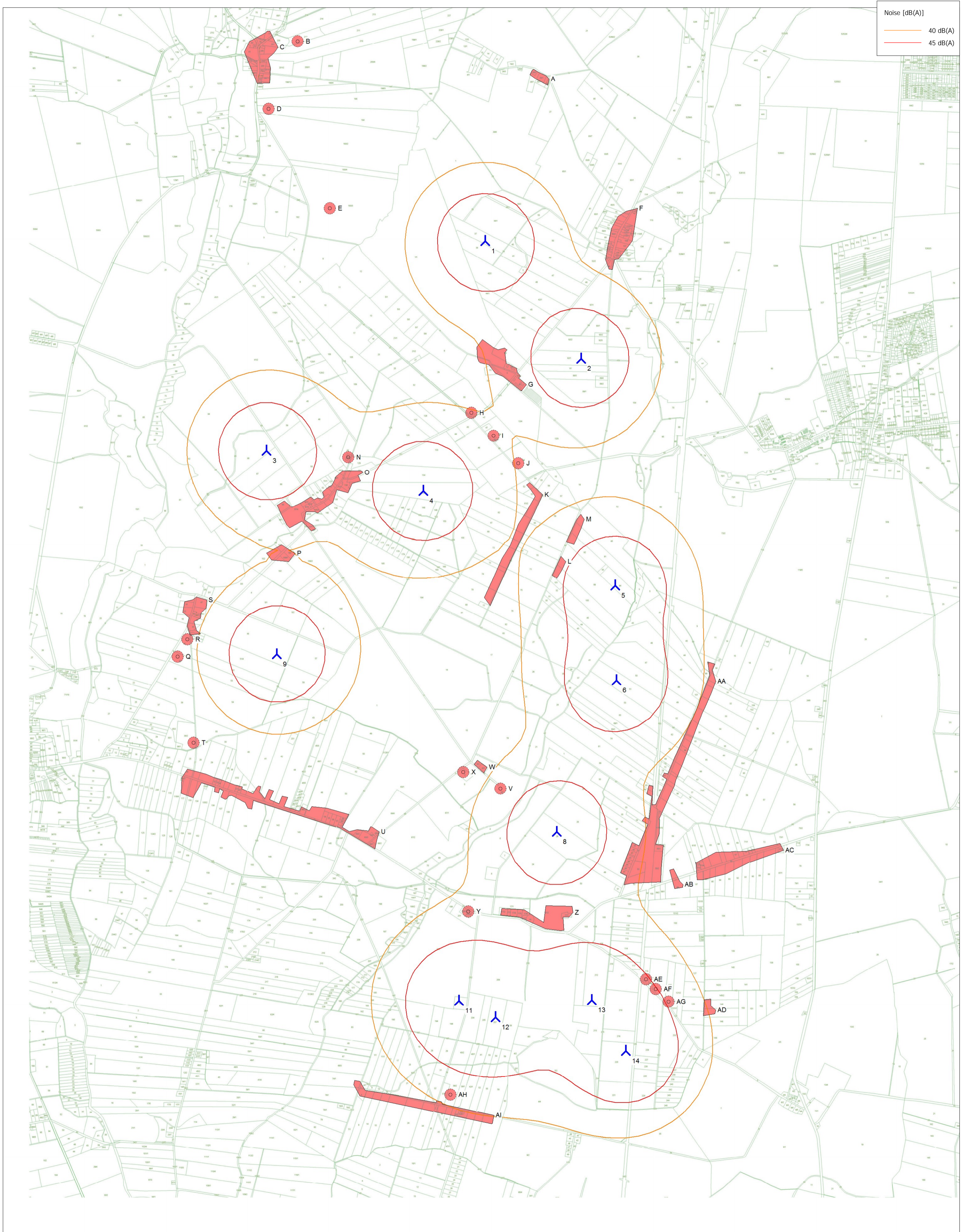
## Distances (m)

NSA	WTG											
	1	12	6	13	11	4	3	9	2	8	5	14
A	1368	7601	4877	7458	7488	3456	3737	5132	2241	6079	4112	7888
B	2230	8108	5813	8166	7920	3801	3343	4995	3462	6772	5131	8643
C	2177	7827	5624	7916	7629	3551	2991	4652	3385	6529	4967	8398
D	2067	7626	5448	7721	7426	3358	2785	4444	3256	6337	4801	8205
E	1292	6724	4495	6792	6537	2425	2040	3658	2382	5402	3852	7272
F	992	6159	3344	5951	6078	2354	3155	4140	760	4598	2574	6363
G	801	5105	2480	4994	4991	1123	1875	2895	492	3601	1760	5441
H	1402	4925	2475	4881	4786	747	1698	2526	996	3480	1829	5344
I	1585	4736	2228	4665	4609	729	1854	2508	949	3265	1572	5123
J	1828	4515	1939	4412	4402	806	2053	2508	995	3016	1271	4864
K	1998	3351	1193	3317	3225	818	2108	1751	1095	1918	854	3789
L	2637	3606	960	3444	3527	1238	2538	2332	1619	2061	448	3887
M	2357	3902	1158	3713	3830	1234	2550	2526	1270	2343	474	4145
N	2082	4714	2838	4844	4514	669	669	1707	2058	3488	2410	5335
O	2124	4235	2639	4449	4009	515	434	1036	2005	3152	2240	4945
P	2974	4076	2812	4342	3835	1160	776	763	2817	3098	2618	4839
Q	4208	3914	3578	4381	3618	2412	1826	807	4084	3398	3608	4860
R	4046	3971	3508	4413	3680	2267	1664	738	3936	3389	3509	4896
S	3697	3940	3391	4365	3654	1973	1309	644	3626	3317	3327	4850
T	4722	3322	3479	3860	3012	2773	2450	986	4441	3041	3660	4321
U	4791	1687	2292	2153	1412	2697	2670	1081	4166	1444	2775	2623
V	4460	1861	1293	1875	1758	2504	3348	2125	3565	575	1898	2366
W	4226	1991	1269	2048	1864	2236	3050	1838	3379	762	1807	2541
X	4327	2013	1455	2131	1860	2312	3070	1796	3503	901	1958	2627
Y	5460	889	2238	1238	729	3444	4097	2610	4597	970	2911	1712
Z	5433	825	1878	615	774	3459	4191	2763	4463	605	2635	1106
AA	3875	1501	690	974	1641	2700	3981	3209	2677	606	975	1351
AB	5336	1793	1605	1129	1976	3682	4737	3648	4224	971	2354	1378
AC	5316	1984	1615	1300	2172	3748	4841	3807	4166	1158	2318	1508
AD	6427	1689	2696	911	1991	4729	5715	4471	5315	1819	3446	691
AE	6153	1263	2450	472	1533	4372	5301	4006	5085	1407	3217	603
AF	6246	1323	2536	528	1604	4475	5410	4116	5171	1514	3301	559
AG	6370	1414	2652	625	1707	4613	5555	4263	5286	1658	3415	531
AH	6955	730	3636	1385	770	4921	5454	3854	6089	2310	4356	1472
AI	6915	783	3681	1230	834	4831	5178	3526	6155	2365	4424	1195



DECIBEL - Map 10,0 m/s

Calculation: Wariant II wieża 150m dzien



New WTG

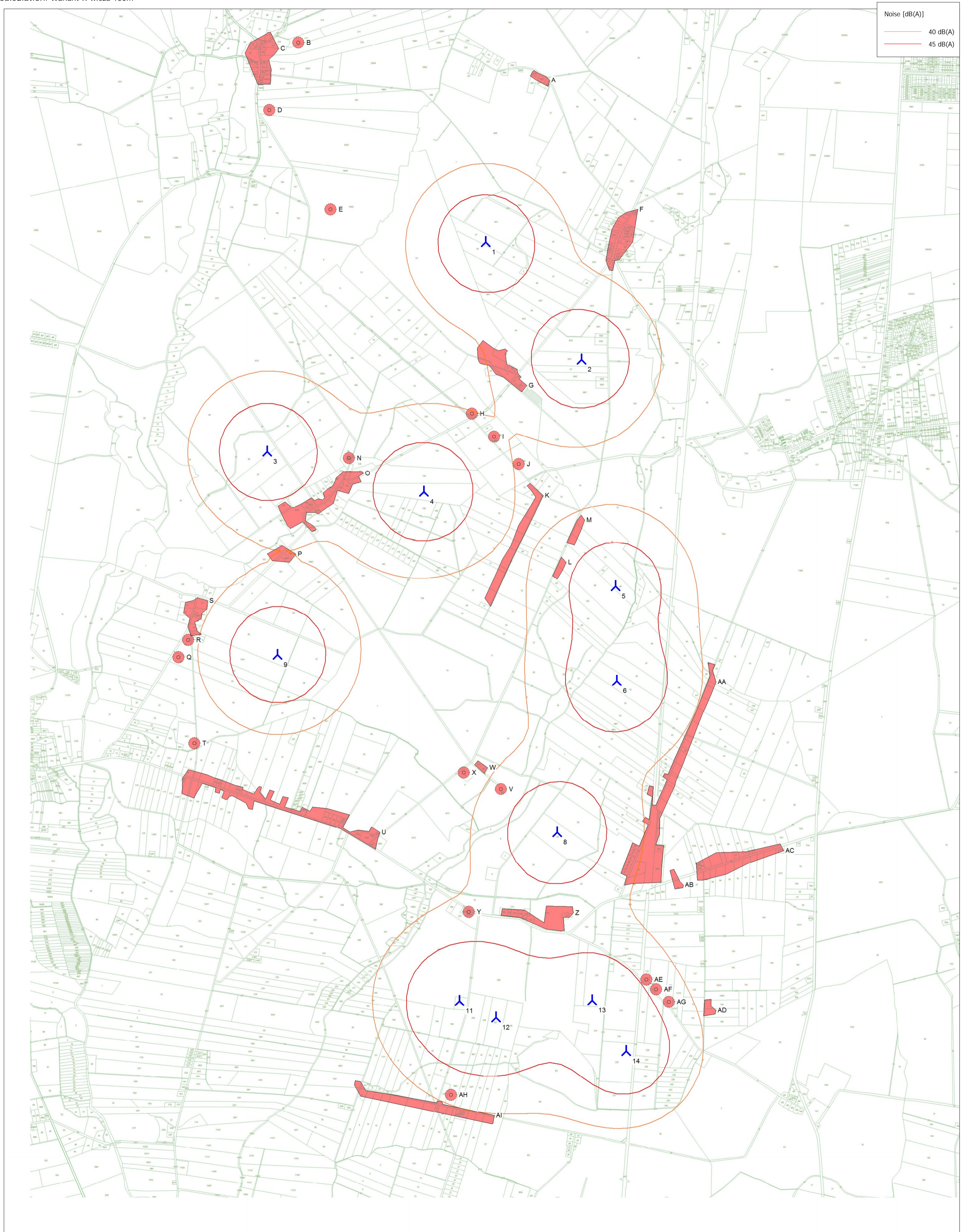
Noise sensitive area

Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 785 North: 508 948

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



DECIBEL - Map 10,0 m/s  
Calculation: Wariant II wieza 150m



New WTG

Noise sensitive area

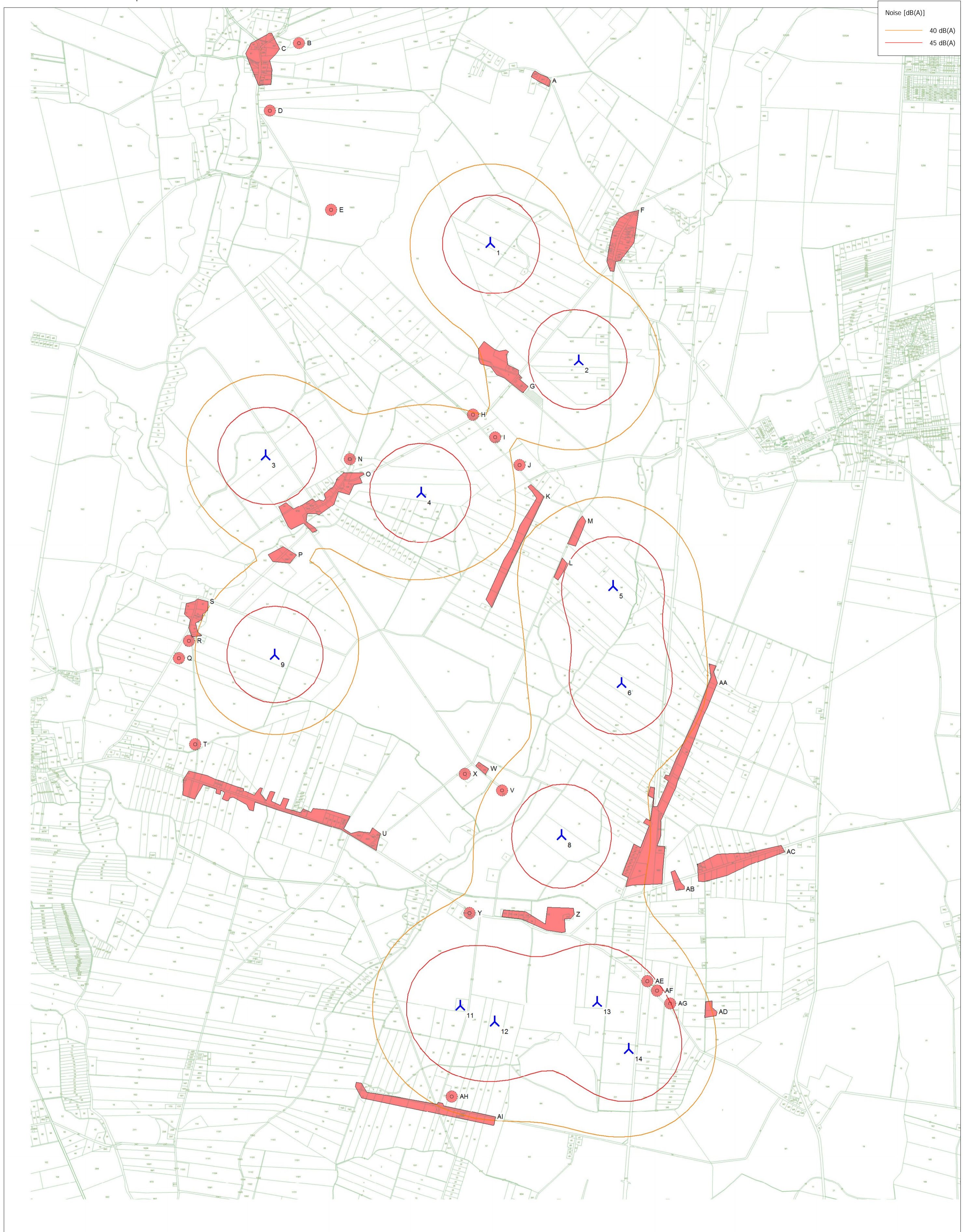
0 250 500 750 1000m  
Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 785 North: 508 948

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



### DECIBEL - Map 10,0 m/s

Calculation: Wariant II wieża 150m przesuniecie dzien



0 250 500 750 1000m  
Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 781 North: 508 962

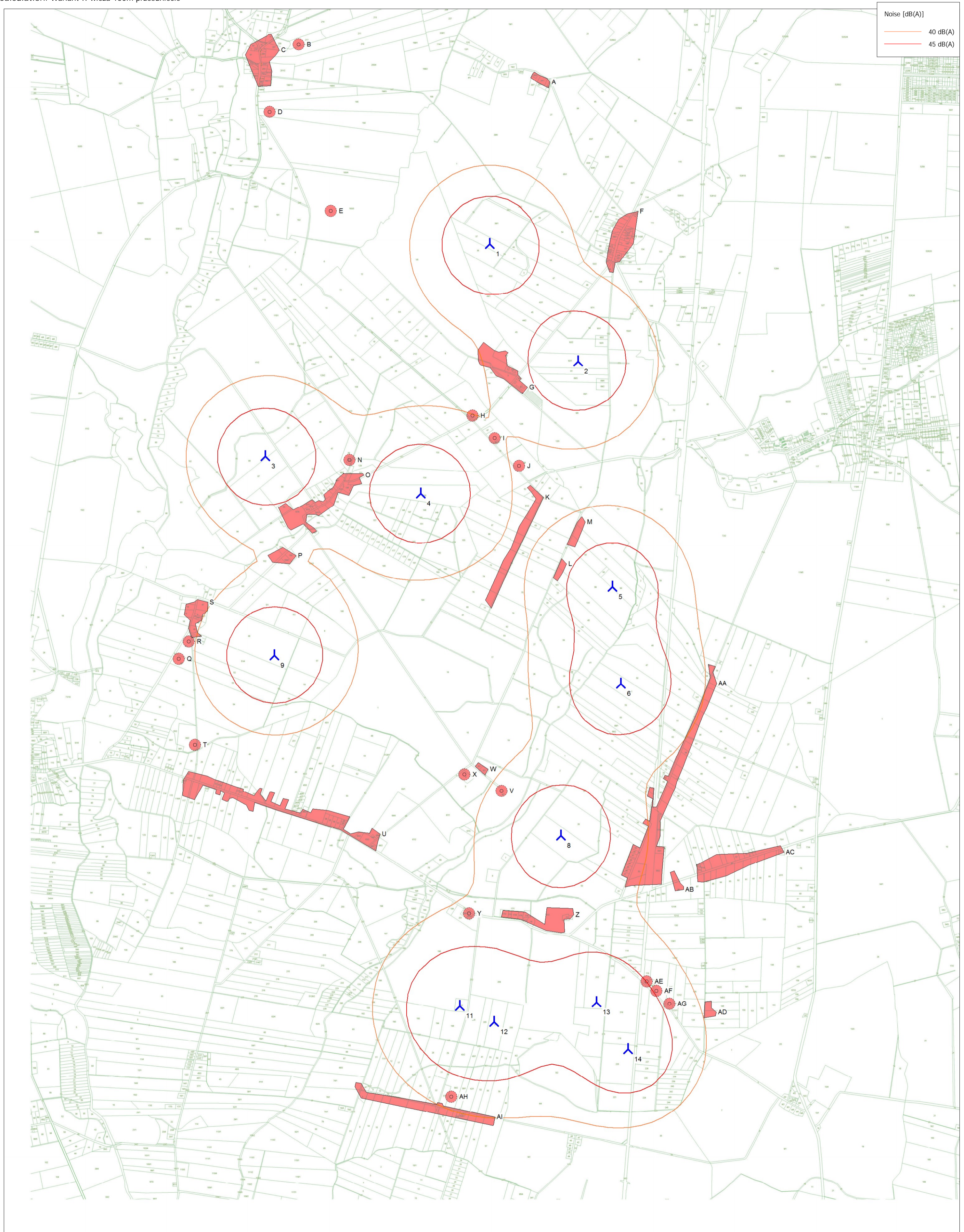
Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object

New WTG Noise sensitive area



DECIBEL - Map 10,0 m/s

Calculation: Wariant II wieża 150m przesuniecie



New WTG

Noise sensitive area

Map: ewidencyjna , Print scale 1:20 000, Map center Poland CS 92 East: 400 781 North: 508 962

Noise calculation model: ISO 9613-2 Poland. Wind speed: 10,0 m/s  
Height above sea level from active line object



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m przesuniecie dzien

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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:

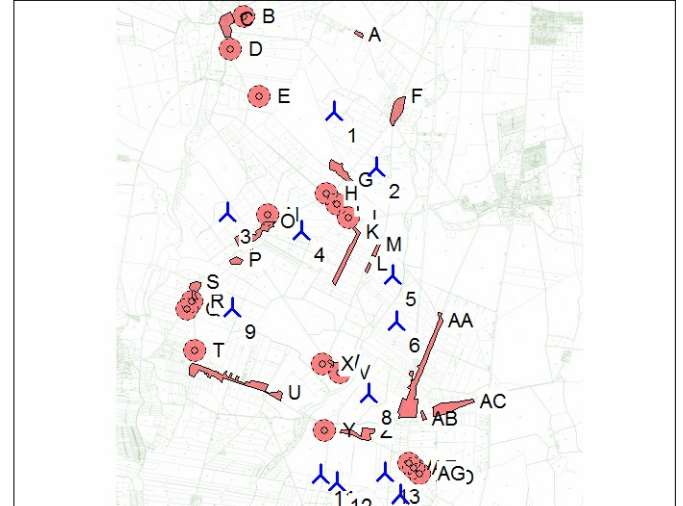
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m 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)



All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	Lwa,ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 132	512 242	111,0	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 852	511 287	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 304	510 514	108,2	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 570	510 209	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 131	509 449	104,8	Dz. 99 Goraniec	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
6	402 199	508 660	106,0	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 711	507 424	107,6	Dz. 26 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 379	508 890	108,2	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 889	506 034	108,0	Dz. 197 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 169	505 904	108,0	Dz. 207 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	402 002	506 065	108,6	Dz. 212 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
14	402 259	505 682	110,0	Dz. 220 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No

## Calculation Results

### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	55,0	31,1	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	55,0	25,6	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	55,0	26,3	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	55,0	27,0	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	55,0	32,4	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	55,0	39,1	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	55,0	44,0	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	55,0	40,1	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	55,0	40,3	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	55,0	39,7	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 394	509 816	108,0	4,0	55,0	39,9	Yes
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	55,0	44,9	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	55,0	44,3	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	55,0	42,6	Yes
O	Zab_zagrodowa_45dB_Motylowka	399 470	510 130	110,6	4,0	55,0	44,8	Yes
P	Zab_zagrodowa_45dB	399 447	509 772	110,0	4,0	55,0	40,4	Yes
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	55,0	37,8	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	55,0	39,0	Yes
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	55,0	40,8	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	55,0	35,1	Yes
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	55,0	35,0	Yes
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	55,0	41,6	Yes
W	Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	55,0	39,0	Yes

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m przesuniecie dzien

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Noise sensitive area

No.	Name	X(East)	Y(North)	Z [m]	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
	X Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	55,0	37,6	Yes
	Y Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	55,0	41,3	Yes
	Z Zab_zagrodowa_45dB	401 743	506 637	109,3	4,0	55,0	43,5	Yes
	AA Zab_zagrodowa_45dB_Kosowo	402 240	507 194	110,0	4,0	55,0	42,4	Yes
	AB Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	55,0	38,1	Yes
	AC Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 825	507 046	112,0	4,0	55,0	36,6	Yes
	AD Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	55,0	41,1	Yes
	AE Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	55,0	46,0	Yes
	AF Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	55,0	45,8	Yes
	AG Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	55,0	45,1	Yes
	AH Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	55,0	41,8	Yes
	AI Zab_zagrodowa_45dB_Pakszynek	400 955	505 177	106,0	4,0	55,0	40,6	Yes

## Distances (m)

WTG

NSA	1	12	6	13	11	4	3	9	2	8	5	14
A	1357	7624	4890	7461	7517	3465	3767	5135	2240	6092	4099	7861
B	2251	8126	5835	8176	7948	3795	3368	4986	3443	6792	5108	8620
C	2202	7845	5647	7927	7657	3541	3015	4641	3364	6551	4943	8375
D	2093	7643	5471	7733	7454	3348	2809	4434	3234	6359	4776	8182
E	1322	6742	4519	6803	6565	2417	2068	3652	2357	5423	3827	7249
F	962	6184	3354	5952	6106	2374	3182	4151	771	4609	2565	6335
G	802	5128	2498	4999	5019	1140	1902	2904	464	3616	1740	5415
H	1405	4947	2498	4888	4815	764	1721	2536	968	3498	1804	5319
I	1584	4758	2250	4672	4637	753	1874	2521	925	3282	1546	5098
J	1824	4538	1960	4418	4430	834	2071	2524	978	3032	1246	4838
K	1993	3374	1223	3326	3254	846	2116	1776	1081	1938	824	3765
L	2630	3631	983	3448	3555	1264	2545	2357	1614	2074	418	3860
M	2347	3928	1176	3716	3858	1261	2561	2549	1268	2355	448	4118
N	2099	4731	2866	4858	4542	642	687	1708	2029	3512	2380	5314
O	2138	4249	2668	4466	4036	487	419	1030	1977	3179	2210	4926
P	2991	4089	2842	4361	3862	1133	756	755	2790	3126	2588	4822
Q	4226	3919	3606	4406	3639	2387	1797	779	4058	3428	3581	4849
R	4065	3976	3537	4437	3703	2242	1635	708	3910	3419	3481	4885
S	3715	3946	3421	4388	3677	1947	1279	613	3600	3347	3298	4838
T	4737	3323	3505	3886	3031	2752	2422	974	4418	3070	3637	4314
U	4800	1694	2311	2180	1437	2688	2643	1088	4150	1470	2762	2614
V	4459	1884	1307	1889	1786	2511	3339	2154	3557	604	1892	2345
W	4227	2013	1287	2063	1893	2241	3040	1868	3369	791	1799	2521
X	4328	2033	1474	2147	1889	2316	3059	1826	3492	930	1947	2608
Y	5461	906	2245	1264	757	3446	4083	2636	4589	981	2908	1702
Z	5430	853	1874	629	800	3463	4179	2789	4460	593	2641	1086
AA	3861	1530	660	967	1658	2725	3988	3240	2687	576	1003	1323
AB	5327	1821	1587	1112	1990	3697	4733	3678	4227	942	2369	1348
AC	5305	2013	1593	1281	2186	3765	4838	3837	4172	1129	2337	1478
AD	6418	1709	2679	880	1990	4743	5708	4500	5319	1791	3462	669
AE	6147	1287	2437	444	1537	4383	5292	4034	5086	1382	3229	573
AF	6239	1346	2522	497	1607	4487	5401	4144	5173	1489	3313	528
AG	6363	1435	2638	594	1708	4625	5546	4291	5288	1632	3428	502
AH	6957	701	3638	1411	741	4921	5436	3874	6082	2308	4356	1490
AI	6920	757	3679	1249	806	4827	5156	3541	6144	2358	4426	1217



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m przesuniecie

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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:

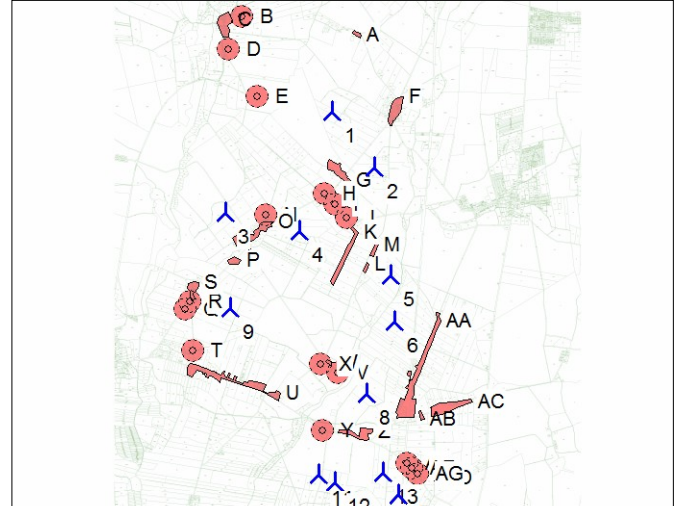
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m 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 1:130 000

New WTG

Noise sensitive area

All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	Status	Lwa,ref [dB(A)]	Pure tones
					Valid	Manufact.	Type-generator				Creator	Name				
1	401 132	512 242	111,0	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 852	511 287	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 304	510 514	108,2	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 570	510 209	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 131	509 449	104,8	Dz. 99 Goraniec	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	105,0	No
6	402 199	508 660	106,0	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 711	507 424	107,6	Dz. 26 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 379	508 890	108,2	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 889	506 034	108,0	Dz. 197 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 169	505 904	108,0	Dz. 207 Szczytniki Czernieje...	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	402 002	506 065	108,6	Dz. 212 Szczytniki Czernieje...	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	105,0	No
14	402 259	505 682	110,0	Dz. 220 Szczytniki Czernieje...	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands		Sound Level		Demands fulfilled ?
						Noise [dB(A)]	From WTGs [dB(A)]	Distance to noise demand [m]	Noise	
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	45,0	31,1	967	Yes	
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	45,0	25,5	1 866	Yes	
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	45,0	26,2	1 813	Yes	
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	45,0	27,0	1 704	Yes	
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	45,0	32,4	934	Yes	
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	45,0	39,1	371	Yes	
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	45,0	44,0	59	Yes	
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	45,0	40,0	364	Yes	
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	45,0	40,3	352	Yes	
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	45,0	39,5	432	Yes	
K	Zab_zagrodowa_45dB_Goraniec	401 345	509 871	108,0	4,0	45,0	39,5	447	Yes	
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	45,0	44,1	53	Yes	
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	45,0	43,5	89	Yes	
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	45,0	42,6	226	Yes	
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	45,0	44,8	12	Yes	
P	Zab_zagrodowa_45dB	399 447	509 772	110,0	4,0	45,0	40,4	352	Yes	
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	45,0	37,7	392	Yes	
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	45,0	39,0	319	Yes	
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	45,0	40,8	226	Yes	
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	45,0	35,1	588	Yes	
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	45,0	34,9	988	Yes	

To be continued on next page...



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m przesuniecie

...continued from previous page

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level From WTGs	Distance to noise demand	Demands fulfilled ? Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	45,0	41,5	203	Yes
W	Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	45,0	38,9	389	Yes
X	Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	45,0	37,5	530	Yes
Y	Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	45,0	41,2	267	Yes
Z	Zab_zagrodowa_45dB	401 709	506 832	109,3	4,0	45,0	43,1	168	Yes
AA	Zab_zagrodowa_45dB_Kosowo	402 240	507 194	110,0	4,0	45,0	42,3	172	Yes
AB	Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	45,0	37,8	536	Yes
AC	Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 813	507 183	112,0	4,0	45,0	36,1	724	Yes
AD	Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	45,0	39,9	287	Yes
AE	Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	45,0	44,9	5	Yes
AF	Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	45,0	44,6	24	Yes
AG	Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	45,0	43,9	64	Yes
AH	Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	45,0	41,6	179	Yes
AI	Zab_zagrodowa_45dB_Pakszynek	400 955	505 177	106,0	4,0	45,0	40,4	261	Yes

## Distances (m)

NSA	WTG											
	1	12	6	13	11	4	3	9	2	8	5	14
A	1357	7624	4890	7461	7517	3465	3767	5135	2240	6092	4099	7861
B	2251	8126	5835	8176	7948	3795	3368	4986	3443	6792	5108	8620
C	2202	7845	5647	7927	7657	3541	3015	4641	3364	6551	4943	8375
D	2093	7643	5471	7733	7454	3348	2809	4434	3234	6359	4776	8182
E	1322	6742	4519	6803	6565	2417	2068	3652	2357	5423	3827	7249
F	962	6184	3354	5952	6106	2374	3182	4151	771	4609	2565	6335
G	802	5128	2498	4999	5019	1140	1902	2904	464	3616	1740	5415
H	1405	4947	2498	4888	4815	764	1721	2536	968	3498	1804	5319
I	1584	4758	2250	4672	4637	753	1874	2521	925	3282	1546	5098
J	1824	4538	1960	4418	4430	834	2071	2524	978	3032	1246	4838
K	1993	3374	1223	3326	3254	846	2116	1776	1081	1938	824	3765
L	2630	3631	983	3448	3555	1264	2545	2357	1614	2074	418	3860
M	2347	3928	1176	3716	3858	1261	2561	2549	1268	2355	448	4118
N	2099	4731	2866	4858	4542	642	687	1708	2029	3512	2380	5314
O	2138	4249	2668	4466	4036	487	419	1030	1977	3179	2210	4926
P	2991	4089	2842	4361	3862	1133	756	755	2790	3126	2588	4822
Q	4226	3919	3606	4406	3639	2387	1797	779	4058	3428	3581	4849
R	4065	3976	3537	4437	3703	2242	1635	708	3910	3419	3481	4885
S	3715	3946	3421	4388	3677	1947	1279	613	3600	3347	3298	4838
T	4737	3323	3505	3886	3031	2752	2422	974	4418	3070	3637	4314
U	4800	1694	2311	2180	1437	2688	2643	1088	4150	1470	2762	2614
V	4459	1884	1307	1889	1786	2511	3339	2154	3557	604	1892	2345
W	4227	2013	1287	2063	1893	2241	3040	1868	3369	791	1799	2521
X	4328	2033	1474	2147	1889	2316	3059	1826	3492	930	1947	2608
Y	5461	906	2245	1264	757	3446	4083	2636	4589	981	2908	1702
Z	5430	853	1874	629	800	3463	4179	2789	4460	593	2641	1086
AA	3861	1530	660	967	1658	2725	3988	3240	2687	576	1003	1323
AB	5327	1821	1587	1112	1990	3697	4733	3678	4227	942	2369	1348
AC	5305	2013	1593	1281	2186	3765	4838	3837	4172	1129	2337	1478
AD	6418	1709	2679	880	1990	4743	5708	4500	5319	1791	3462	669
AE	6147	1287	2437	444	1537	4383	5292	4034	5086	1382	3229	573
AF	6239	1346	2522	497	1607	4487	5401	4144	5173	1489	3313	528
AG	6363	1435	2638	594	1708	4625	5546	4291	5288	1632	3428	502
AH	6957	701	3638	1411	741	4921	5436	3874	6082	2308	4356	1490
AI	6920	757	3679	1249	806	4827	5156	3541	6144	2358	4426	1217



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m dzien

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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:

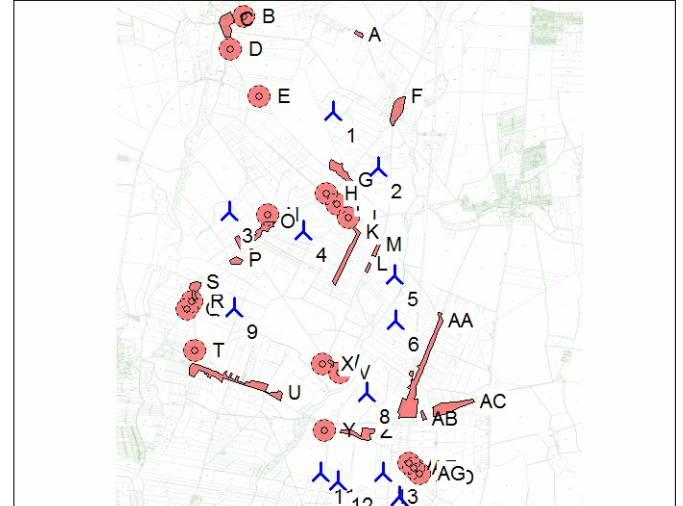
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m 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)



All coordinates are in  
Poland CS 92

### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	Lwa,ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 102	512 242	110,9	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 882	511 289	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 323	510 538	108,3	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 599	510 210	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 160	509 439	104,6	Dz. 99 Goraniec	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
6	402 171	508 670	105,9	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 684	507 437	107,2	Dz. 26 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 407	508 880	108,6	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 890	506 063	108,0	Dz. 197 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 188	505 927	108,0	Dz. 207 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	401 971	506 066	108,4	Dz. 212 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
14	402 248	505 654	110,0	Dz. 220 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	55,0	31,1	Yes
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	55,0	25,6	Yes
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	55,0	26,3	Yes
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	55,0	27,1	Yes
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	55,0	32,6	Yes
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	55,0	39,2	Yes
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	55,0	43,6	Yes
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	55,0	40,2	Yes
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	55,0	40,5	Yes
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	55,0	39,8	Yes
K	Zab_zagrodowa_45dB_Goraniec	401 345	509 871	108,0	4,0	55,0	39,9	Yes
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	55,0	44,4	Yes
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	55,0	43,9	Yes
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	55,0	42,5	Yes
O	Zab_zagrodowa_45dB_Motylowka	399 470	510 130	110,6	4,0	55,0	44,5	Yes
P	Zab_zagrodowa_45dB	399 487	509 638	110,0	4,0	55,0	40,1	Yes
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	55,0	37,3	Yes
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	55,0	38,5	Yes
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	55,0	40,2	Yes
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	55,0	35,0	Yes
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	55,0	35,2	Yes
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	55,0	42,1	Yes
W	Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	55,0	39,4	Yes

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## DECIBEL - Main Result

Calculation: Wariant II wieza 150m dzien

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Noise sensitive area

No.	Name	X(East)	Y(North)	Z [m]	Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
	X Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	55,0	37,9	Yes
	Y Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	55,0	41,6	Yes
	Z Zab_zagrodowa_45dB	401 743	506 637	109,3	4,0	55,0	43,6	Yes
	AA Zab_zagrodowa_45dB_Kosowo	402 231	507 171	110,0	4,0	55,0	41,9	Yes
	AB Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	55,0	37,9	Yes
	AC Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 825	507 046	112,0	4,0	55,0	36,4	Yes
	AD Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	55,0	40,7	Yes
	AE Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	55,0	45,4	Yes
	AF Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	55,0	45,3	Yes
	AG Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	55,0	44,6	Yes
	AH Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	55,0	41,3	Yes
	AI Zab_zagrodowa_45dB_Pakszynek	401 004	505 166	106,0	4,0	55,0	40,3	Yes

## Distances (m)

NSA	WTG											
	1	12	6	13	11	4	3	9	2	8	5	14
A	1368	7601	4877	7458	7488	3456	3737	5132	2241	6079	4112	7888
B	2230	8108	5813	8166	7920	3801	3343	4995	3462	6772	5131	8643
C	2177	7827	5624	7916	7629	3551	2991	4652	3385	6529	4967	8398
D	2067	7626	5448	7721	7426	3358	2785	4444	3256	6337	4801	8205
E	1292	6724	4495	6792	6537	2425	2040	3658	2382	5402	3852	7272
F	992	6159	3344	5951	6078	2354	3155	4140	760	4598	2574	6363
G	801	5105	2480	4994	4991	1123	1875	2895	492	3601	1760	5441
H	1402	4925	2475	4881	4786	747	1698	2526	996	3480	1829	5344
I	1585	4736	2228	4665	4609	729	1854	2508	949	3265	1572	5123
J	1828	4515	1939	4412	4402	806	2053	2508	995	3016	1271	4864
K	1998	3351	1193	3317	3225	818	2108	1751	1095	1918	854	3789
L	2637	3606	960	3444	3527	1238	2538	2332	1619	2061	448	3887
M	2357	3902	1158	3713	3830	1234	2550	2526	1270	2343	474	4145
N	2082	4714	2838	4844	4514	669	669	1707	2058	3488	2410	5335
O	2124	4235	2639	4449	4009	515	434	1036	2005	3152	2240	4945
P	2974	4076	2812	4342	3835	1160	776	763	2817	3098	2618	4839
Q	4208	3914	3578	4381	3618	2412	1826	807	4084	3398	3608	4860
R	4046	3971	3508	4413	3680	2267	1664	738	3936	3389	3509	4896
S	3697	3940	3391	4365	3654	1973	1309	644	3626	3317	3327	4850
T	4722	3322	3479	3860	3012	2773	2450	986	4441	3041	3660	4321
U	4791	1687	2292	2153	1412	2697	2670	1081	4166	1444	2775	2623
V	4460	1861	1293	1875	1758	2504	3348	2125	3565	575	1898	2366
W	4226	1991	1269	2048	1864	2236	3050	1838	3379	762	1807	2541
X	4327	2013	1455	2131	1860	2312	3070	1796	3503	901	1958	2627
Y	5460	889	2238	1238	729	3444	4097	2610	4597	970	2911	1712
Z	5433	825	1878	615	774	3459	4191	2763	4463	605	2635	1106
AA	3875	1501	690	974	1641	2700	3981	3209	2677	606	975	1351
AB	5336	1793	1605	1129	1976	3682	4737	3648	4224	971	2354	1378
AC	5316	1984	1615	1300	2172	3748	4841	3807	4166	1158	2318	1508
AD	6427	1689	2696	911	1991	4729	5715	4471	5315	1819	3446	691
AE	6153	1263	2450	472	1533	4372	5301	4006	5085	1407	3217	603
AF	6246	1323	2536	528	1604	4475	5410	4116	5171	1514	3301	559
AG	6370	1414	2652	625	1707	4613	5555	4263	5286	1658	3415	531
AH	6955	730	3636	1385	770	4921	5454	3854	6089	2310	4356	1472
AI	6915	783	3681	1230	834	4831	5178	3526	6155	2365	4424	1195



## DECIBEL - Main Result

Calculation: Wariant II wieza 150m

Noise calculation model:

ISO 9613-2 Poland

Wind speed:

10,0 m/s

Ground attenuation:

Alternative

Meteorological coefficient, CO:

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

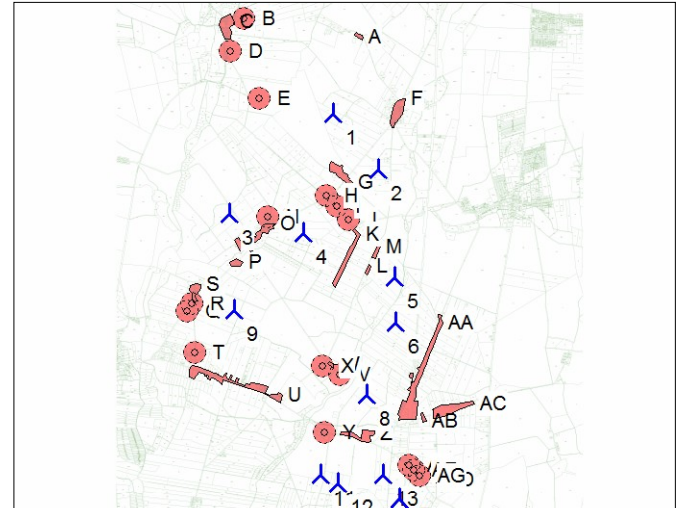
Height above ground level, when no value in NSA object:

4,0 m 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)

All coordinates are in  
Poland CS 92



### WTGs

	X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data				Wind speed [m/s]	Status	LWA_ref [dB(A)]	Pure tones	
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator					Name
1	401 102	512 242	110,9	Dz. 37 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
2	401 882	511 289	110,0	Dz. 92/1 Gębarzewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
3	399 323	510 538	108,3	Dz. 86 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
4	400 599	510 210	110,0	Dz. 135 Nidom Goranin	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
5	402 160	509 439	104,6	Dz. 99 Goraniec	Yes	SWT	W 130 (105 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	105,0	No
6	402 171	508 670	105,9	Dz. 51 Kosowo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
8	401 684	507 437	107,2	Dz. 26 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
9	399 407	508 880	108,6	Dz. 48 Kapiel	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
11	400 890	506 063	108,0	Dz. 197 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
12	401 188	505 927	108,0	Dz. 207 Szczytniki Czerniejewo	Yes	SWT	W 130 (106 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	106,0	No
13	401 971	506 066	108,4	Dz. 212 Szczytniki Czerniejewo	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No
14	402 248	505 654	110,0	Dz. 220 Szczytniki Czerniejewo	Yes	SWT	W 130 (104,5 dB)-5 000	5 000	150,0	150,0	USER	Runtime input	10,0	User value	104,5	No

### Calculation Results

#### Sound Level

Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height [m]	Demands		Sound Level		Demands fulfilled ?
						Noise [dB(A)]	From WTGs [dB(A)]	Distance to noise demand [m]	Noise	
A	Zab_zagrodowa_Gębarzewko	401 610	513 512	116,0	4,0	45,0	31,0	978	Yes	
B	Zab_zagrodowa_45dB	399 577	513 869	110,0	4,0	45,0	25,6	1 843	Yes	
C	Zab_zagrodowa_45dB_Paw <sup>3</sup> owo	399 348	513 530	113,2	4,0	45,0	26,3	1 790	Yes	
D	Zab_zagrodow_45dB	399 340	513 321	112,0	4,0	45,0	27,1	1 678	Yes	
E	Zab_zagrodowa_45dB	399 839	512 511	112,0	4,0	45,0	32,6	905	Yes	
F	Zab_zagrodowa_45dB_Gębarzewo	402 109	512 013	113,6	4,0	45,0	39,1	359	Yes	
G	Zab_wielorodzinna_45dB_Kosmowo	401 438	511 077	112,0	4,0	45,0	43,5	91	Yes	
H	Zab_zagrodowa_45dB	400 992	510 845	110,0	4,0	45,0	40,1	345	Yes	
I	Zab_zagrodowa_45dB	401 172	510 660	110,0	4,0	45,0	40,4	326	Yes	
J	Zab_zagrodowa_45dB	401 372	510 436	109,6	4,0	45,0	39,7	405	Yes	
K	Zab_zagrodowa_45dB_Goraniec	401 345	509 871	108,0	4,0	45,0	39,6	421	Yes	
L	Zab_zagrodowa_45dB	401 748	509 614	107,2	4,0	45,0	43,6	83	Yes	
M	Zab_zagrodowa_45dB	401 825	509 775	106,0	4,0	45,0	43,1	112	Yes	
N	Zab_zagrodowa_45dB	399 990	510 484	110,0	4,0	45,0	42,4	252	Yes	
O	Zab_zagrodowa_45dB_Motyłowka	399 470	510 130	110,6	4,0	45,0	44,5	30	Yes	
P	Zab_zagrodowa_45dB	399 487	509 638	110,0	4,0	45,0	40,1	365	Yes	
Q	Zab_zagrodowa_45dB	398 601	508 861	109,1	4,0	45,0	37,3	421	Yes	
R	Zab_zagrodowa_45dB	398 681	509 003	110,0	4,0	45,0	38,5	350	Yes	
S	Zab_zagrodowa_45dB_Kapiel	398 786	509 048	110,0	4,0	45,0	40,2	255	Yes	
T	Zab_zagrodowa_45dB	398 732	508 162	108,0	4,0	45,0	34,9	603	Yes	
U	Zab_zagrodowa_45dB_Pakszyn	400 206	507 297	108,0	4,0	45,0	35,0	967	Yes	

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## DECIBEL - Main Result

Calculation: Wariant II wieza 150m

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Noise sensitive area

No.	Name	X(East)	Y(North)	Z	Imission height	Demands Noise	Sound Level From WTGs	Distance to noise demand	Demands fulfilled ? Noise
				[m]	[m]	[dB(A)]	[dB(A)]	[m]	
V	Zab_wielorodzinna_45dB	401 228	507 787	104,0	4,0	45,0	42,1	175	Yes
W	Zab_wielorodzinna_45dB	401 091	507 915	106,8	4,0	45,0	39,3	363	Yes
X	Zab_wielorodzinna_45dB	400 925	507 922	106,0	4,0	45,0	37,8	499	Yes
Y	Zab_zagrodowa_45dB	400 965	506 787	106,2	4,0	45,0	41,5	241	Yes
Z	Zab_zagrodowa_45dB	401 713	506 633	109,3	4,0	45,0	42,9	206	Yes
AA	Zab_zagrodowa_45dB_Kosowo	402 240	507 194	110,0	4,0	45,0	41,7	200	Yes
AB	Zab_zagrodowa_45dB	402 603	507 123	110,0	4,0	45,0	37,4	566	Yes
AC	Zab_zagrodowa_45dB_Szczytniki_Czerniejewskie	402 813	507 183	112,0	4,0	45,0	35,9	754	Yes
AD	Zab_zagrodowa_45dB	402 876	505 940	110,4	4,0	45,0	39,4	319	Yes
AE	Zab_zagrodowa_45dB	402 412	506 234	109,9	4,0	45,0	44,1	53	Yes
AF	Zab_zagrodowa_45dB	402 491	506 157	111,6	4,0	45,0	43,9	75	Yes
AG	Zab_zagrodowa_45dB	402 596	506 054	111,9	4,0	45,0	43,2	112	Yes
AH	Zab_zagrodowa_45dB_Pakszynek	400 820	505 297	106,5	4,0	45,0	41,2	208	Yes
AI	Zab_zagrodowa_45dB_Pakszynek	400 955	505 177	106,0	4,0	45,0	40,1	291	Yes

## Distances (m)

NSA	WTG											
	1	12	6	13	11	4	3	9	2	8	5	14
A	1368	7601	4877	7458	7488	3456	3737	5132	2241	6079	4112	7888
B	2230	8108	5813	8166	7920	3801	3343	4995	3462	6772	5131	8643
C	2177	7827	5624	7916	7629	3551	2991	4652	3385	6529	4967	8398
D	2067	7626	5448	7721	7426	3358	2785	4444	3256	6337	4801	8205
E	1292	6724	4495	6792	6537	2425	2040	3658	2382	5402	3852	7272
F	992	6159	3344	5951	6078	2354	3155	4140	760	4598	2574	6363
G	801	5105	2480	4994	4991	1123	1875	2895	492	3601	1760	5441
H	1402	4925	2475	4881	4786	747	1698	2526	996	3480	1829	5344
I	1585	4736	2228	4665	4609	729	1854	2508	949	3265	1572	5123
J	1828	4515	1939	4412	4402	806	2053	2508	995	3016	1271	4864
K	1998	3351	1193	3317	3225	818	2108	1751	1095	1918	854	3789
L	2637	3606	960	3444	3527	1238	2538	2332	1619	2061	448	3887
M	2357	3902	1158	3713	3830	1234	2550	2526	1270	2343	474	4145
N	2082	4714	2838	4844	4514	669	669	1707	2058	3488	2410	5335
O	2124	4235	2639	4449	4009	515	434	1036	2005	3152	2240	4945
P	2974	4076	2812	4342	3835	1160	776	763	2817	3098	2618	4839
Q	4208	3914	3578	4381	3618	2412	1826	807	4084	3398	3608	4860
R	4046	3971	3508	4413	3680	2267	1664	738	3936	3389	3509	4896
S	3697	3940	3391	4365	3654	1973	1309	644	3626	3317	3327	4850
T	4722	3322	3479	3860	3012	2773	2450	986	4441	3041	3660	4321
U	4791	1687	2292	2153	1412	2697	2670	1081	4166	1444	2775	2623
V	4460	1861	1293	1875	1758	2504	3348	2125	3565	575	1898	2366
W	4226	1991	1269	2048	1864	2236	3050	1838	3379	762	1807	2541
X	4327	2013	1455	2131	1860	2312	3070	1796	3503	901	1958	2627
Y	5460	889	2238	1238	729	3444	4097	2610	4597	970	2911	1712
Z	5433	825	1878	615	774	3459	4191	2763	4463	605	2635	1106
AA	3875	1501	690	974	1641	2700	3981	3209	2677	606	975	1351
AB	5336	1793	1605	1129	1976	3682	4737	3648	4224	971	2354	1378
AC	5316	1984	1615	1300	2172	3748	4841	3807	4166	1158	2318	1508
AD	6427	1689	2696	911	1991	4729	5715	4471	5315	1819	3446	691
AE	6153	1263	2450	472	1533	4372	5301	4006	5085	1407	3217	603
AF	6246	1323	2536	528	1604	4475	5410	4116	5171	1514	3301	559
AG	6370	1414	2652	625	1707	4613	5555	4263	5286	1658	3415	531
AH	6955	730	3636	1385	770	4921	5454	3854	6089	2310	4356	1472
AI	6915	783	3681	1230	834	4831	5178	3526	6155	2365	4424	1195