

## **6 priedas**

### **PROGNOSTINIAI TRIUKŠMO MODELIAVIMO REZULTATAI**

Project:  
Telšiai, UAB "L-VĖJAS"

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Calculated:  
2018.10.02 16:33/2.9.269

## DECIBEL - Main Result

### Noise calculation model:

ISO 9613-2 General

### Wind speed:

10,0 m/s

### Ground attenuation:

General, Ground factor: 0,7

### Meteorological coefficient, C0:

2,0 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 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)

## WTGs

Lithuanian TM LKS94-LKS94 (LT)				WTG type			Noise data		Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones			
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]				Hub height [m]	Creator	Name
VE01	405.890	6.218.337	111,7	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE02	406.348	6.218.047	111,2	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE03	405.465	6.216.785	114,4	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE04	405.577	6.216.279	115,2	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE05	406.212	6.216.378	114,1	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE06	406.127	6.214.492	116,9	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE07	406.626	6.214.441	114,7	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE08	406.455	6.213.842	118,1	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE09	407.053	6.213.957	114,3	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE10	406.963	6.213.428	114,9	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE11	407.096	6.212.941	116,2	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE12	407.735	6.212.665	114,5	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE13	407.941	6.213.583	113,5	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE14	407.604	6.213.964	113,6	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE15	408.374	6.214.049	112,5	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE16	408.485	6.214.586	111,9	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE17	410.710	6.212.841	110,0	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE18	410.424	6.212.279	111,9	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE19	411.047	6.212.207	111,7	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE20	411.677	6.212.353	110,2	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE21	412.118	6.212.071	116,1	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE22	412.142	6.211.500	119,5	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE23	412.375	6.211.014	120,0	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE24	411.049	6.210.927	120,0	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE25	406.779	6.216.074	113,7	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h
VE26	405.863	6.217.127	113,3	VESTAS V150-4.2 4200 150... Yes	VESTAS	V150-4.2-4.200	4.200	150,0	166,0	EMD	Level 0 - Mode 0/PO1 - 10-2017	10,0	104,9	0 dB h

h) Generic octave distribution used

## Calculation Results

### Sound Level

Noise sensitive area No.	Name	Lithuanian TM LKS94-LKS94 (LT)			Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled? Noise
		East	North	Z				
A	Noise sensitive area: German TA Lärm - Unzoned countryside areas (1)	407.030	6.217.850	110,6	1,5	45,0	35,1	Yes
A1	Noise sensitive area: German TA Lärm - Unzoned countryside areas (23)	412.563	6.209.901	115,6	1,5	45,0	30,6	Yes
B	Noise sensitive area: German TA Lärm - Unzoned countryside areas (2)	406.795	6.217.717	111,1	1,5	45,0	37,3	Yes
B1	Noise sensitive area: German TA Lärm - Unzoned countryside areas (24)	411.406	6.209.857	102,0	1,5	45,0	31,0	Yes
C	Noise sensitive area: German TA Lärm - Unzoned countryside areas (3)	405.685	6.217.503	112,9	1,5	45,0	40,4	Yes
C1	Noise sensitive area: German TA Lärm - Unzoned countryside areas (25)	410.720	6.210.472	120,0	1,5	45,0	36,1	Yes
D	Noise sensitive area: German TA Lärm - Unzoned countryside areas (4)	405.038	6.214.856	129,2	1,5	45,0	32,8	Yes
D1	Noise sensitive area: German TA Lärm - Unzoned countryside areas (26)	410.344	6.210.872	119,0	1,5	45,0	34,8	Yes
E	Noise sensitive area: German TA Lärm - Unzoned countryside areas (5)	405.895	6.215.427	116,7	1,5	45,0	36,8	Yes
F	Noise sensitive area: German TA Lärm - Unzoned countryside areas (6)	407.689	6.215.028	112,8	1,5	45,0	36,6	Yes
G	Noise sensitive area: German TA Lärm - Unzoned countryside areas (7)	409.135	6.215.424	110,5	1,5	45,0	31,8	Yes
H	Noise sensitive area: German TA Lärm - Unzoned countryside areas (8)	408.392	6.212.999	113,4	1,5	45,0	37,7	Yes
I	Noise sensitive area: German TA Lärm - Unzoned countryside areas (9)	408.409	6.212.611	113,6	1,5	45,0	36,4	Yes
J	Noise sensitive area: German TA Lärm - Unzoned countryside areas (10)	408.682	6.212.599	112,2	1,5	45,0	34,6	Yes

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## DECIBEL - Main Result

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Noise sensitive area No.	Name	Lithuanian TM LKS94-LKS94 (LT)			Imission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
		East	North	Z				
K	Noise sensitive area: German TA Lärm - Unzoned countryside areas (11)	408.635	6.212.241	112,2	1,5	45,0	33,5	Yes
L	Noise sensitive area: German TA Lärm - Unzoned countryside areas (12)	409.317	6.213.281	110,0	1,5	45,0	33,9	Yes
M	Noise sensitive area: German TA Lärm - Unzoned countryside areas (13)	411.644	6.213.476	107,4	1,5	45,0	33,4	Yes
N	Noise sensitive area: German TA Lärm - Unzoned countryside areas (14)	411.877	6.212.719	109,2	1,5	45,0	40,1	Yes
O	Noise sensitive area: German TA Lärm - Unzoned countryside areas (15)	411.075	6.211.753	117,0	1,5	45,0	40,3	Yes
P	Noise sensitive area: German TA Lärm - Unzoned countryside areas (16)	411.355	6.211.616	118,1	1,5	45,0	39,4	Yes
R	Noise sensitive area: German TA Lärm - Unzoned countryside areas (17)	413.041	6.211.140	118,5	1,5	45,0	35,6	Yes
S	Noise sensitive area: German TA Lärm - Unzoned countryside areas (18)	413.317	6.211.144	118,8	1,5	45,0	32,7	Yes
T	Noise sensitive area: German TA Lärm - Unzoned countryside areas (19)	413.161	6.210.831	119,2	1,5	45,0	33,6	Yes
U	Noise sensitive area: German TA Lärm - Unzoned countryside areas (20)	413.205	6.210.611	119,1	1,5	45,0	32,2	Yes
V	Noise sensitive area: German TA Lärm - Unzoned countryside areas (21)	413.149	6.210.375	119,2	1,5	45,0	31,3	Yes
Z	Noise sensitive area: German TA Lärm - Unzoned countryside areas (22)	412.733	6.209.967	119,9	1,5	45,0	30,6	Yes

## Distances (m)

WTG		NSA																				
NSA	VE01	VE02	VE04	VE05	VE06	VE07	VE08	VE09	VE10	VE11	VE12	VE16	VE17	VE18	VE19	VE20	VE21	VE22	VE23	VE24	VE25	VE15
A	1240	710	2119	1657	3446	3400	4016	3859	4389	4875	5193	3523	6158	6468	6870	7139	7640	8093	8619	7950	1761	3983
A1	10754	10244	9458	9069	7904	7472	7267	6840	6617	6254	5562	6210	3475	3198	2759	2607	2215	1653	1129	1828	8458	5894
B	1097	555	1818	1389	3208	3185	3797	3668	4192	4684	5033	3448	6145	6428	6851	7146	7653	8092	8613	7902	1547	3883
B1	10114	9624	8671	8335	7023	6621	6354	5978	5699	5298	4620	5557	3063	2612	2376	2509	2275	1720	1296	1127	7748	5172
C	831	833	1204	1242	3028	3195	3729	3796	4263	4767	5251	4036	6845	7046	7527	7890	8409	8806	9310	8480	1795	4372
C1	9172	8690	7693	7368	6036	5636	5367	4992	4711	4315	3634	4628	2345	1797	1755	2110	2123	1754	1741	561	6789	4220
D	3583	3449	1522	1922	1133	1629	1713	2186	2367	2776	3443	3453	6001	5948	6545	7076	7588	7834	8257	7152	2124	3420
D1	8669	8190	7180	6858	5527	5124	4861	4481	4207	3818	3133	4133	2002	1407	1508	1992	2140	1904	2035	707	6281	3715
E	2905	2658	880	1002	944	1226	1665	1871	2257	2750	3314	2722	5464	6074	6547	7069	7377	7838	6841	1095	2836	
F	2985	2512	1924	1361	1429	1034	1590	1208	1740	2169	2363	910	3728	3877	4385	4801	5324	5680	6169	5300	719	1194
G	4322	3788	3646	3057	3149	2695	3112	2547	2950	3213	3094	1061	3000	3379	3717	3956	4456	4914	5443	4867	2429	1572
H	5894	5445	4321	4020	2712	2279	2112	1646	1491	1277	670	1587	2265	2067	2686	3274	3760	3944	4348	3251	3472	1050
I	6254	5812	4633	4360	2957	2554	2309	1910	1661	1354	676	1976	2223	1945	2572	3183	3651	3796	4177	3035	3827	1438
J	6380	5926	4814	4514	3180	2760	2550	2121	1908	1623	950	1996	1995	1701	2328	2950	3407	3532	3904	2752	3961	1482
K	6684	6239	5064	4793	3369	2978	2704	2333	2050	1690	994	2349	2115	1742	2364	2996	3439	3530	3877	2685	4258	1826
L	6107	5614	4792	4384	3411	2930	2914	2362	2352	1680	1547	1383	1408	1952	2456	2970	3255	3721	2839	3773	1216	
M	7499	6962	6664	6136	5605	5105	5200	4615	4680	4578	3991	3335	1129	1709	1402	1117	1457	2017	2544	2617	5493	3316
N	8163	7631	7202	6707	5997	5505	5523	4963	4955	4783	4142	3839	1168	1518	975	417	673	1236	1760	1974	6065	3723
O	8379	7870	7120	6710	5654	5197	5069	4585	4439	4152	3461	3838	1148	837	455	816	1039	1033	1426	790	6092	3544
P	8642	8130	7400	6986	5939	5482	5353	4870	4722	4431	3739	4109	1371	1118	653	804	888	788	1165	711	6366	3824
R	10096	9568	9025	8566	7657	7186	7097	6592	6475	6197	5507	5673	2848	2832	2234	1782	1264	951	678	2003	7931	5466
S	10338	9808	9287	8824	7930	7458	7373	6866	6751	6475	5785	5932	3111	3108	2507	2038	1516	1228	947	2276	8188	5733
T	10448	9922	9336	8890	7928	7465	7350	6860	6719	6421	5727	5996	3169	3096	2522	2125	1620	1219	807	2114	8258	5767
U	10638	10113	9502	9063	8071	7611	7482	7002	6847	6537	5842	6170	3346	3242	2684	2317	1820	1386	923	2172	8433	5929
V	10772	10251	9600	9172	8139	7685	7537	7069	6897	6574	5878	6283	3468	3324	2788	2465	1984	1510	1004	2171	8546	6024
Z	10809	10296	9540	9142	8005	7568	7376	6939	6727	6372	5678	6274	3513	3266	2802	2608	2191	1642	1106	1937	8527	5970

WTG		NSA		
NSA	VE03	VE13	VE14	VE26
A	1878	4320	3888	1360
A1	9886	5908	6409	9852
B	1567	4182	3733	1049
B1	9124	5087	5595	9140
C	719	4521	4025	416
C1	8151	4108	4616	8178
D	1975	3149	2700	2416
D1	7639	3595	4104	7669
E	1398	2754	2249	1695
F	2211	1466	1067	2069
G	3894	2194	2116	3662
H	4784	738	1245	4840
I	5107	1078	1574	5183
J	5279	1232	1739	5333
K	5539	1510	2007	5616
L	5206	1407	1844	5168
M	6987	3703	4068	6811
N	7556	4015	4432	7416

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**DECIBEL - Main Result**

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**WTG**

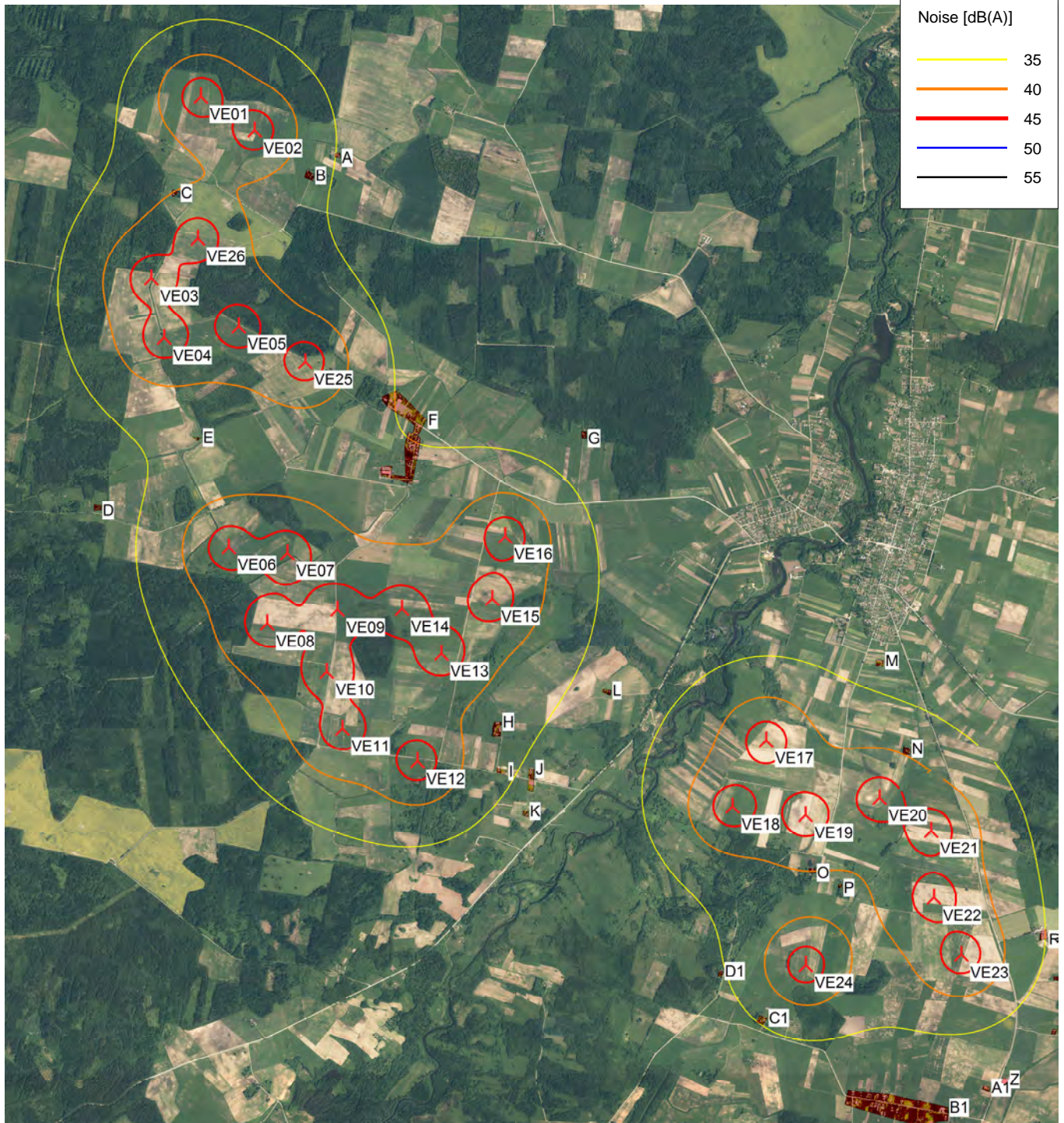
NSA	VE03	VE13	VE14	VE26
O	7535	3628	4115	7485
P	7812	3913	4399	7758
R	9408	5629	6099	9304
S	9667	5903	6371	9557
T	9729	5900	6378	9637
U	9899	6044	6527	9815
V	10005	6116	6604	9932
Z	9963	6002	6501	9920

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



0 500 1000 1500 2000 m

Map: Telsiai2 , Print scale 1:50.000, Map center Lithuanian TM LKS94-LKS94 (LT) East: 408.480 North: 6.214.169

New WTG

Noise sensitive area

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