

Leppämäki

- Voimalapaikka
- Etäisyysvyöhyke
- Leppämäen voimaloista
- Leppäkankaan voimala
- Melutarkastelupiste (A-J)

Rakennuspisteet

- Asuinrakennus
- Lomarakennus
- Asuntolarakennus
- Muu rakennus
- Rakennus, jonka käyttötarkoitus on muuttumassa

Äänitaso (dB(A))

- 35-40
- 40-45
- 45-50
- 50-55

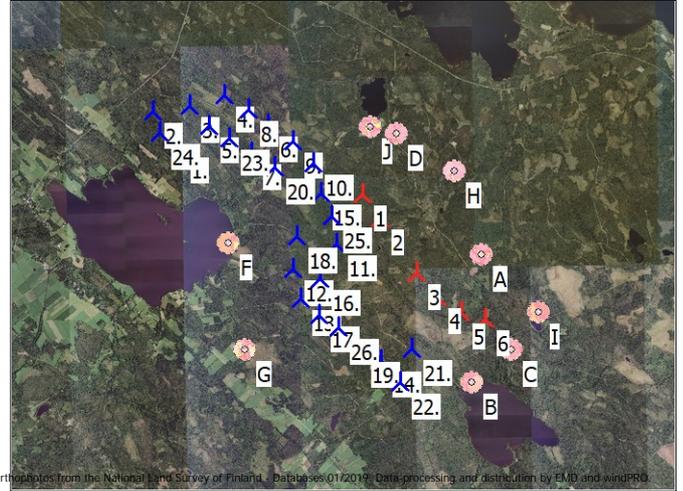


DECIBEL - Main Result

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025

Calculation is done according to Finnish guideline " Ympäristöhallinnon ohjeita 2 | 2014" from the Ministry of the Environment of Finland

All coordinates are in
Finish TM ETRS-TM35FIN-ETRS89



WTGs

	East	North	Z	Row data/Description	WTG type			Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Noise data		Wind speed [m/s]	LwA,ref [dB(A)]	Uncertainty [dB(A)]
					Valid	Manufact.	Type-generator				Creator	Name			
1.	437,052	7,041,348	139.1	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
1	441,867	7,040,011	152.0	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
2.	436,383	7,042,309	148.6	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
2	442,303	7,039,356	154.4	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
3.	443,255	7,037,904	177.4	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
3	437,321	7,042,440	151.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
4.	438,258	7,042,709	141.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
4	443,774	7,037,232	168.1	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
5	444,415	7,036,812	170.3	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
5.	437,830	7,041,885	142.0	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
6.	439,417	7,041,889	141.3	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
6	445,072	7,036,630	171.8	NORDEX N163/6.X 7000 163... Yes	Yes	NORDEX	N163/6.X-7,000	7,000	163.0	190.0	USER	Mode 0 - without serrated trailing edge	8.0	109.4	2.0
7.	438,962	7,041,139	139.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
8.	438,900	7,042,328	141.6	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
9.	440,054	7,041,429	143.0	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
10.	440,594	7,040,853	141.6	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
11.	441,154	7,038,686	162.0	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
12.	439,968	7,038,045	137.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
13.	440,185	7,037,283	140.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
14.	442,271	7,035,592	177.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
15.	440,782	7,040,055	150.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
16.	440,700	7,037,784	148.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
17.	440,638	7,036,809	145.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
18.	440,095	7,038,925	148.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
19.	441,742	7,035,850	160.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
20.	439,550	7,040,756	138.2	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
21.	443,098	7,035,876	164.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
22.	442,771	7,035,007	169.5	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
23.	438,377	7,041,525	139.4	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
24.	436,516	7,041,736	140.7	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
25.	441,042	7,039,424	157.7	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0
26.	441,165	7,036,465	151.9	NORDEX N175/6.X 6800 175... Yes	Yes	NORDEX	N175/6.X-6,800	6,800	175.0	200.0	USER	Mode 2 - Without serrated trailing edge	8.0	108.0	2.0

Calculation Results

Sound level

Noise sensitive area

No.	Name	East	North	Z	Immission height	Sound level From WTGs	Uncertainty margin	WTG+Uncertainty margin	2 dB penalty applied for one or more WTGs
		[m]	[m]	[m]	[m]	[dB(A)]	[dB]	[dB(A)]	
A	A.	444,988	7,038,334	200.0	4.0	36.7	2.0	38.7	No
B	B.	444,643	7,034,956	156.3	4.0	35.9	2.0	37.9	No
C	C.	445,720	7,035,802	166.2	4.0	37.4	2.0	39.4	No
D	D.	442,804	7,041,603	156.4	4.0	34.7	2.0	36.7	No
F	F.	438,273	7,038,791	125.5	4.0	36.5	2.0	38.5	No
G	G.	438,673	7,035,925	135.3	4.0	33.8	2.0	35.8	No
H	H.	444,304	7,040,581	226.3	4.0	32.7	2.0	34.7	No
I	I.	446,482	7,036,796	171.1	4.0	35.1	2.0	37.1	No
J	J.	442,116	7,041,782	147.6	4.0	36.1	2.0	38.1	No

Project:
Pyhäjärvi Leppämäki

Description:
Pyhäjärvi Leppämäki
Meluselvitys

Licensed user:
Sweco Finland Oy
Ilmalanportti 2
FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
8/30/2025 1:37 PM/4.1.287

DECIBEL - Main Result

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025

Distances (m)

WTG	A	B	C	D	F	G	H	I	J
1.	8489	9924	10291	5758	2833	5660	7293	10471	5083
1	3543	5767	5706	1847	3795	5186	2503	5624	1788
2.	9479	11059	11381	6459	3994	6782	8107	11506	5757
2	2873	4984	4930	2302	4069	4995	2346	4901	2433
3	1786	3258	3240	3726	5060	4991	2875	3412	4041
3.	8697	10470	10705	5547	3771	6653	7226	10760	4840
4.	8027	10043	10168	4678	3918	6796	6409	10129	3968
4	1640	2436	2415	4477	5718	5266	3391	2743	4842
5	1626	1870	1650	5055	6453	5810	3771	2067	5475
5.	7990	9717	9963	4982	3126	6019	6604	10038	4288
6.	6609	8682	8763	3399	3302	6010	5059	8709	2702
6	1706	1728	1051	5466	7134	6438	4025	1420	5939
7.	6646	8396	8611	3870	2447	5222	5371	8684	3219
8.	7282	9345	9440	3971	3592	6407	5680	9386	3263
9.	5824	7935	7986	2755	3183	5675	4334	7924	2092
10.	5064	7153	7196	2333	3105	5289	3719	7150	1783
11.	3850	5107	5400	3352	2883	3712	3676	5653	3242
12.	5028	5603	6174	4550	1852	2484	5023	6632	4310
13.	4917	5029	5730	5052	2435	2032	5277	6316	4896
14.	3860	2456	3456	6034	5120	3613	5387	4380	6191
15.	4545	6396	6517	2547	2809	4637	3561	6566	2182
16.	4323	4852	5397	4360	2628	2751	4562	5865	4241
17.	4610	4413	5181	5261	3085	2154	5260	5844	5188
18.	4928	6036	6433	3809	1827	3320	4523	6732	3499
19.	4088	3036	3978	5850	4548	3070	5380	4834	5943
20.	5953	7719	7913	3362	2344	4910	4757	7983	2764
21.	3101	1799	2624	5734	5637	4425	4857	3507	5986
22.	3998	1873	3055	6596	5878	4199	5781	4120	6806
23.	7341	9078	9310	4428	2736	5608	6002	9384	3748
24.	9130	10584	10951	6290	3429	6198	7873	11123	5601
25.	4094	5739	5917	2802	2841	4226	3461	6042	2590
26.	4255	3791	4603	5393	3711	2550	5176	5327	5400

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s
Assumptions

Calculated L(DW) = LWA,ref + K + Dc - (Adiv + Aatm + Agr + Abar + Amisc) - Cmet
(when calculated with ground attenuation, then Dc = Domega)

LWA,ref:	Sound pressure level at WTG
K:	Pure tone
Dc:	Directivity correction
Adiv:	the attenuation due to geometrical divergence
Aatm:	the attenuation due to atmospheric absorption
Agr:	the attenuation due to ground effect
Abar:	the attenuation due to a barrier
Amisc:	the attenuation due to miscellaneous other effects
Cmet:	Meteorological correction

Calculation Results

Noise sensitive area: A A.

Wind speed: 8.0 m/s

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	[dB]	[dB]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1.	3,543	3,546	0	20.00	2.00	22.00	109.4	0.00	81.99	-	-	0.00	0.00	-
1.	8,489	8,490	0	7.59	2.00	9.59	108.0	0.00	89.58	-	-	0.00	0.00	-
10.	5,064	5,066	0	14.21	2.00	16.21	108.0	0.00	85.09	-	-	0.00	0.00	-
11.	3,850	3,853	0	18.02	2.00	20.02	108.0	0.00	82.72	-	-	0.00	0.00	-
12.	5,028	5,030	0	14.31	2.00	16.31	108.0	0.00	85.03	-	-	0.00	0.00	-
13.	4,917	4,919	0	14.62	2.00	16.62	108.0	0.00	84.84	-	-	0.00	0.00	-
14.	3,860	3,864	0	17.97	2.00	19.97	108.0	0.00	82.74	-	-	0.00	0.00	-
15.	4,545	4,547	0	15.72	2.00	17.72	108.0	0.00	84.15	-	-	0.00	0.00	-
16.	4,323	4,325	0	16.41	2.00	18.41	108.0	0.00	83.72	-	-	0.00	0.00	-
17.	4,610	4,612	0	15.52	2.00	17.52	108.0	0.00	84.28	-	-	0.00	0.00	-
18.	4,928	4,930	0	14.59	2.00	16.59	108.0	0.00	84.86	-	-	0.00	0.00	-
19.	4,088	4,091	0	17.19	2.00	19.19	108.0	0.00	83.24	-	-	0.00	0.00	-
2	2,873	2,876	0	22.77	2.00	24.77	109.4	0.00	80.18	-	-	0.00	0.00	-
2.	9,479	9,480	0	6.23	2.00	8.23	108.0	0.00	90.54	-	-	0.00	0.00	-
20.	5,953	5,955	0	11.95	2.00	13.95	108.0	0.00	86.50	-	-	0.00	0.00	-
21.	3,101	3,105	0	20.96	2.00	22.96	108.0	0.00	80.84	-	-	0.00	0.00	-
22.	3,998	4,002	0	17.49	2.00	19.49	108.0	0.00	83.04	-	-	0.00	0.00	-
23.	7,341	7,342	0	9.37	2.00	11.37	108.0	0.00	88.32	-	-	0.00	0.00	-
24.	9,130	9,131	0	6.69	2.00	8.69	108.0	0.00	90.21	-	-	0.00	0.00	-
25.	4,094	4,097	0	17.17	2.00	19.17	108.0	0.00	83.25	-	-	0.00	0.00	-
26.	4,255	4,257	0	16.63	2.00	18.63	108.0	0.00	83.58	-	-	0.00	0.00	-
3	1,786	1,793	0	28.84	2.00	30.84	109.4	0.00	76.07	-	-	0.00	0.00	-
3.	8,697	8,698	0	7.29	2.00	9.29	108.0	0.00	89.79	-	-	0.00	0.00	-
4	1,640	1,647	0	29.90	2.00	31.90	109.4	0.00	75.33	-	-	0.00	0.00	-
4.	8,027	8,028	0	8.28	2.00	10.28	108.0	0.00	89.09	-	-	0.00	0.00	-
5	1,626	1,634	0	30.00	2.00	32.00	109.4	0.00	75.26	-	-	0.00	0.00	-
5.	7,990	7,992	0	8.33	2.00	10.33	108.0	0.00	89.05	-	-	0.00	0.00	-
6	1,706	1,713	0	29.41	2.00	31.41	109.4	0.00	75.68	-	-	0.00	0.00	-
6.	6,609	6,610	0	10.64	2.00	12.64	108.0	0.00	87.40	-	-	0.00	0.00	-
7.	6,646	6,648	0	10.58	2.00	12.58	108.0	0.00	87.45	-	-	0.00	0.00	-
8.	7,282	7,283	0	9.47	2.00	11.47	108.0	0.00	88.25	-	-	0.00	0.00	-
9.	5,824	5,826	0	12.26	2.00	14.26	108.0	0.00	86.31	-	-	0.00	0.00	-
Sum						38.72								

- Data undefined due to calculation with octave data

Noise sensitive area: B B.

Wind speed: 8.0 m/s

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	[dB]	[dB]	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1	5,767	5,770	0	13.43	2.00	15.43	109.4	0.00	86.22	-	-	0.00	0.00	-

To be continued on next page...

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

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WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1.	9,924	9,925	0	5.66	2.00	7.66	108.0	0.00	90.93	-	-	0.00	0.00	-
10.	7,153	7,155	0	9.69	2.00	11.69	108.0	0.00	88.09	-	-	0.00	0.00	-
11.	5,107	5,111	0	14.09	2.00	16.09	108.0	0.00	85.17	-	-	0.00	0.00	-
12.	5,603	5,606	0	12.80	2.00	14.80	108.0	0.00	85.97	-	-	0.00	0.00	-
13.	5,029	5,032	0	14.31	2.00	16.31	108.0	0.00	85.03	-	-	0.00	0.00	-
14.	2,456	2,466	0	24.03	2.00	26.03	108.0	0.00	78.84	-	-	0.00	0.00	-
15.	6,396	6,399	0	11.03	2.00	13.03	108.0	0.00	87.12	-	-	0.00	0.00	-
16.	4,852	4,856	0	14.80	2.00	16.80	108.0	0.00	84.73	-	-	0.00	0.00	-
17.	4,413	4,417	0	16.12	2.00	18.12	108.0	0.00	83.90	-	-	0.00	0.00	-
18.	6,036	6,039	0	11.76	2.00	13.76	108.0	0.00	86.62	-	-	0.00	0.00	-
19.	3,036	3,042	0	21.23	2.00	23.23	108.0	0.00	80.66	-	-	0.00	0.00	-
2	4,984	4,987	0	15.41	2.00	17.41	109.4	0.00	84.96	-	-	0.00	0.00	-
2.	11,059	11,060	0	4.32	2.00	6.32	108.0	0.00	91.88	-	-	0.00	0.00	-
20.	7,719	7,721	0	8.76	2.00	10.76	108.0	0.00	88.75	-	-	0.00	0.00	-
21.	1,799	1,810	0	28.01	2.00	30.01	108.0	0.00	76.15	-	-	0.00	0.00	-
22.	1,873	1,885	0	27.50	2.00	29.50	108.0	0.00	76.50	-	-	0.00	0.00	-
23.	9,078	9,080	0	6.79	2.00	8.79	108.0	0.00	90.16	-	-	0.00	0.00	-
24.	10,584	10,585	0	4.86	2.00	6.86	108.0	0.00	91.49	-	-	0.00	0.00	-
25.	5,739	5,742	0	12.47	2.00	14.47	108.0	0.00	86.18	-	-	0.00	0.00	-
26.	3,791	3,796	0	18.22	2.00	20.22	108.0	0.00	82.59	-	-	0.00	0.00	-
3	3,258	3,265	0	21.10	2.00	23.10	109.4	0.00	81.28	-	-	0.00	0.00	-
3.	10,470	10,472	0	5.03	2.00	7.03	108.0	0.00	91.40	-	-	0.00	0.00	-
4	2,436	2,444	0	24.89	2.00	26.89	109.4	0.00	78.76	-	-	0.00	0.00	-
4.	10,043	10,045	0	5.51	2.00	7.51	108.0	0.00	91.04	-	-	0.00	0.00	-
5	1,870	1,881	0	28.24	2.00	30.24	109.4	0.00	76.49	-	-	0.00	0.00	-
5.	9,717	9,719	0	5.95	2.00	7.95	108.0	0.00	90.75	-	-	0.00	0.00	-
6	1,728	1,740	0	29.24	2.00	31.24	109.4	0.00	75.81	-	-	0.00	0.00	-
6.	8,682	8,684	0	7.31	2.00	9.31	108.0	0.00	89.77	-	-	0.00	0.00	-
7.	8,396	8,398	0	7.72	2.00	9.72	108.0	0.00	89.48	-	-	0.00	0.00	-
8.	9,345	9,347	0	6.40	2.00	8.40	108.0	0.00	90.41	-	-	0.00	0.00	-
9.	7,935	7,937	0	8.42	2.00	10.42	108.0	0.00	88.99	-	-	0.00	0.00	-
Sum						37.91								

- Data undefined due to calculation with octave data

Noise sensitive area: C C.

Wind speed: 8.0 m/s

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1	5,706	5,709	0	13.57	2.00	15.57	109.4	0.00	86.13	-	-	0.00	0.00	-
1.	10,291	10,292	0	5.24	2.00	7.24	108.0	0.00	91.25	-	-	0.00	0.00	-
10.	7,196	7,198	0	9.61	2.00	11.61	108.0	0.00	88.14	-	-	0.00	0.00	-
11.	5,400	5,404	0	13.31	2.00	15.31	108.0	0.00	85.65	-	-	0.00	0.00	-
12.	6,174	6,176	0	11.46	2.00	13.46	108.0	0.00	86.81	-	-	0.00	0.00	-
13.	5,730	5,732	0	12.49	2.00	14.49	108.0	0.00	86.17	-	-	0.00	0.00	-
14.	3,456	3,462	0	19.48	2.00	21.48	108.0	0.00	81.79	-	-	0.00	0.00	-
15.	6,517	6,520	0	10.81	2.00	12.81	108.0	0.00	87.28	-	-	0.00	0.00	-
16.	5,397	5,400	0	13.32	2.00	15.32	108.0	0.00	85.65	-	-	0.00	0.00	-
17.	5,181	5,184	0	13.89	2.00	15.89	108.0	0.00	85.29	-	-	0.00	0.00	-
18.	6,433	6,436	0	10.97	2.00	12.97	108.0	0.00	87.17	-	-	0.00	0.00	-
19.	3,978	3,983	0	17.55	2.00	19.55	108.0	0.00	83.00	-	-	0.00	0.00	-
2	4,930	4,933	0	15.55	2.00	17.55	109.4	0.00	84.86	-	-	0.00	0.00	-
2.	11,381	11,382	0	4.00	2.00	6.00	108.0	0.00	92.12	-	-	0.00	0.00	-
20.	7,913	7,915	0	8.45	2.00	10.45	108.0	0.00	88.97	-	-	0.00	0.00	-
21.	2,624	2,631	0	23.18	2.00	25.18	108.0	0.00	79.40	-	-	0.00	0.00	-
22.	3,055	3,061	0	21.15	2.00	23.15	108.0	0.00	80.72	-	-	0.00	0.00	-
23.	9,310	9,311	0	6.46	2.00	8.46	108.0	0.00	90.38	-	-	0.00	0.00	-
24.	10,951	10,952	0	4.46	2.00	6.46	108.0	0.00	91.79	-	-	0.00	0.00	-
25.	5,917	5,919	0	12.04	2.00	14.04	108.0	0.00	86.45	-	-	0.00	0.00	-
26.	4,603	4,606	0	15.54	2.00	17.54	108.0	0.00	84.27	-	-	0.00	0.00	-
3	3,240	3,246	0	21.17	2.00	23.17	109.4	0.00	81.23	-	-	0.00	0.00	-
3.	10,705	10,707	0	4.72	2.00	6.72	108.0	0.00	91.59	-	-	0.00	0.00	-

To be continued on next page...

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
4	2,415	2,422	0	25.01	2.00	27.01	109.4	0.00	78.68	-	-	0.00	0.00	-
4.	10,168	10,169	0	5.36	2.00	7.36	108.0	0.00	91.15	-	-	0.00	0.00	-
5	1,650	1,661	0	29.79	2.00	31.79	109.4	0.00	75.41	-	-	0.00	0.00	-
5.	9,963	9,964	0	5.62	2.00	7.62	108.0	0.00	90.97	-	-	0.00	0.00	-
6	1,051	1,069	0	35.13	2.00	37.13	109.4	0.00	71.58	-	-	0.00	0.00	-
6.	8,763	8,764	0	7.20	2.00	9.20	108.0	0.00	89.85	-	-	0.00	0.00	-
7.	8,611	8,612	0	7.42	2.00	9.42	108.0	0.00	89.70	-	-	0.00	0.00	-
8.	9,440	9,441	0	6.28	2.00	8.28	108.0	0.00	90.50	-	-	0.00	0.00	-
9.	7,986	7,987	0	8.34	2.00	10.34	108.0	0.00	89.05	-	-	0.00	0.00	-
Sum						39.35								

- Data undefined due to calculation with octave data

Noise sensitive area: D D.

Wind speed: 8.0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,847	1,856	0	28.40	2.00	30.40	109.4	0.00	76.37	-	-	0.00	0.00	-
1.	5,758	5,761	0	12.42	2.00	14.42	108.0	0.00	86.21	-	-	0.00	0.00	-
10.	2,333	2,340	0	24.72	2.00	26.72	108.0	0.00	78.39	-	-	0.00	0.00	-
11.	3,352	3,358	0	19.90	2.00	21.90	108.0	0.00	81.52	-	-	0.00	0.00	-
12.	4,550	4,553	0	15.70	2.00	17.70	108.0	0.00	84.17	-	-	0.00	0.00	-
13.	5,052	5,055	0	14.24	2.00	16.24	108.0	0.00	85.07	-	-	0.00	0.00	-
14.	6,034	6,038	0	11.76	2.00	13.76	108.0	0.00	86.62	-	-	0.00	0.00	-
15.	2,547	2,554	0	23.57	2.00	25.57	108.0	0.00	79.14	-	-	0.00	0.00	-
16.	4,360	4,364	0	16.29	2.00	18.29	108.0	0.00	83.80	-	-	0.00	0.00	-
17.	5,261	5,264	0	13.68	2.00	15.68	108.0	0.00	85.43	-	-	0.00	0.00	-
18.	3,809	3,814	0	18.15	2.00	20.15	108.0	0.00	82.63	-	-	0.00	0.00	-
19.	5,850	5,854	0	12.19	2.00	14.19	108.0	0.00	86.35	-	-	0.00	0.00	-
2	2,302	2,310	0	25.62	2.00	27.62	109.4	0.00	78.27	-	-	0.00	0.00	-
2.	6,459	6,462	0	10.92	2.00	12.92	108.0	0.00	87.21	-	-	0.00	0.00	-
20.	3,362	3,367	0	19.86	2.00	21.86	108.0	0.00	81.55	-	-	0.00	0.00	-
21.	5,734	5,738	0	12.47	2.00	14.47	108.0	0.00	86.18	-	-	0.00	0.00	-
22.	6,596	6,599	0	10.66	2.00	12.66	108.0	0.00	87.39	-	-	0.00	0.00	-
23.	4,428	4,431	0	16.08	2.00	18.08	108.0	0.00	83.93	-	-	0.00	0.00	-
24.	6,290	6,292	0	11.24	2.00	13.24	108.0	0.00	86.98	-	-	0.00	0.00	-
25.	2,802	2,809	0	22.31	2.00	24.31	108.0	0.00	79.97	-	-	0.00	0.00	-
26.	5,393	5,396	0	13.33	2.00	15.33	108.0	0.00	85.64	-	-	0.00	0.00	-
3	3,726	3,732	0	19.31	2.00	21.31	109.4	0.00	82.44	-	-	0.00	0.00	-
3.	5,547	5,550	0	12.94	2.00	14.94	108.0	0.00	85.89	-	-	0.00	0.00	-
4	4,477	4,482	0	16.85	2.00	18.85	109.4	0.00	84.03	-	-	0.00	0.00	-
4.	4,678	4,682	0	15.31	2.00	17.31	108.0	0.00	84.41	-	-	0.00	0.00	-
5	5,055	5,059	0	15.21	2.00	17.21	109.4	0.00	85.08	-	-	0.00	0.00	-
5.	4,982	4,985	0	14.44	2.00	16.44	108.0	0.00	84.95	-	-	0.00	0.00	-
6	5,466	5,469	0	14.15	2.00	16.15	109.4	0.00	85.76	-	-	0.00	0.00	-
6.	3,399	3,404	0	19.71	2.00	21.71	108.0	0.00	81.64	-	-	0.00	0.00	-
7.	3,870	3,874	0	17.94	2.00	19.94	108.0	0.00	82.76	-	-	0.00	0.00	-
8.	3,971	3,975	0	17.58	2.00	19.58	108.0	0.00	82.99	-	-	0.00	0.00	-
9.	2,755	2,761	0	22.53	2.00	24.53	108.0	0.00	79.82	-	-	0.00	0.00	-
Sum						36.73								

- Data undefined due to calculation with octave data

Noise sensitive area: F F.

Wind speed: 8.0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	3,795	3,801	0	19.07	2.00	21.07	109.4	0.00	82.60	-	-	0.00	0.00	-
1.	2,833	2,841	0	22.42	2.00	24.42	108.0	0.00	80.07	-	-	0.00	0.00	-
10.	3,105	3,112	0	20.96	2.00	22.96	108.0	0.00	80.86	-	-	0.00	0.00	-
11.	2,883	2,892	0	21.93	2.00	23.93	108.0	0.00	80.22	-	-	0.00	0.00	-

To be continued on next page...

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

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WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
12.	1,852	1,864	0	27.69	2.00	29.69	108.0	0.00	76.41	-	-	0.00	0.00	-
13.	2,435	2,444	0	24.48	2.00	26.48	108.0	0.00	78.76	-	-	0.00	0.00	-
14.	5,120	5,126	0	14.42	2.00	16.42	108.0	0.00	85.20	-	-	0.00	0.00	-
15.	2,809	2,818	0	22.26	2.00	24.26	108.0	0.00	80.00	-	-	0.00	0.00	-
16.	2,628	2,637	0	23.18	2.00	25.18	108.0	0.00	79.42	-	-	0.00	0.00	-
17.	3,085	3,093	0	21.37	2.00	23.37	108.0	0.00	80.81	-	-	0.00	0.00	-
18.	1,827	1,840	0	27.80	2.00	29.80	108.0	0.00	76.30	-	-	0.00	0.00	-
19.	4,548	4,554	0	16.09	2.00	18.09	108.0	0.00	84.17	-	-	0.00	0.00	-
2.	4,069	4,075	0	18.15	2.00	20.15	109.4	0.00	83.20	-	-	0.00	0.00	-
2.	3,994	4,000	0	17.71	2.00	19.71	108.0	0.00	83.04	-	-	0.00	0.00	-
20.	2,344	2,353	0	24.76	2.00	26.76	108.0	0.00	78.43	-	-	0.00	0.00	-
21.	5,637	5,642	0	12.85	2.00	14.85	108.0	0.00	86.03	-	-	0.00	0.00	-
22.	5,878	5,883	0	12.52	2.00	14.52	108.0	0.00	86.39	-	-	0.00	0.00	-
23.	2,736	2,744	0	22.72	2.00	24.72	108.0	0.00	79.77	-	-	0.00	0.00	-
24.	3,429	3,436	0	19.85	2.00	21.85	108.0	0.00	81.72	-	-	0.00	0.00	-
25.	2,841	2,850	0	22.12	2.00	24.12	108.0	0.00	80.10	-	-	0.00	0.00	-
26.	3,711	3,718	0	18.86	2.00	20.86	108.0	0.00	82.41	-	-	0.00	0.00	-
3	5,060	5,066	0	15.21	2.00	17.21	109.4	0.00	85.09	-	-	0.00	0.00	-
3.	3,771	3,777	0	18.41	2.00	20.41	108.0	0.00	82.54	-	-	0.00	0.00	-
4	5,718	5,722	0	13.55	2.00	15.55	109.4	0.00	86.15	-	-	0.00	0.00	-
4.	3,918	3,923	0	17.83	2.00	19.83	108.0	0.00	82.87	-	-	0.00	0.00	-
5	6,453	6,457	0	12.09	2.00	14.09	109.4	0.00	87.20	-	-	0.00	0.00	-
5.	3,126	3,133	0	20.96	2.00	22.96	108.0	0.00	80.92	-	-	0.00	0.00	-
6	7,134	7,138	0	10.90	2.00	12.90	109.4	0.00	88.07	-	-	0.00	0.00	-
6.	3,302	3,309	0	20.13	2.00	22.13	108.0	0.00	81.39	-	-	0.00	0.00	-
7.	2,447	2,456	0	24.14	2.00	26.14	108.0	0.00	78.80	-	-	0.00	0.00	-
8.	3,592	3,599	0	18.99	2.00	20.99	108.0	0.00	82.12	-	-	0.00	0.00	-
9.	3,183	3,190	0	20.65	2.00	22.65	108.0	0.00	81.08	-	-	0.00	0.00	-
Sum						38.50								

- Data undefined due to calculation with octave data

Noise sensitive area: G G.

Wind speed: 8.0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	5,186	5,190	0	14.87	2.00	16.87	109.4	0.00	85.30	-	-	0.00	0.00	-
1.	5,660	5,663	0	12.83	2.00	14.83	108.0	0.00	86.06	-	-	0.00	0.00	-
10.	5,289	5,293	0	13.60	2.00	15.60	108.0	0.00	85.47	-	-	0.00	0.00	-
11.	3,712	3,718	0	18.50	2.00	20.50	108.0	0.00	82.41	-	-	0.00	0.00	-
12.	2,484	2,492	0	23.89	2.00	25.89	108.0	0.00	78.93	-	-	0.00	0.00	-
13.	2,032	2,042	0	26.48	2.00	28.48	108.0	0.00	77.20	-	-	0.00	0.00	-
14.	3,613	3,621	0	18.87	2.00	20.87	108.0	0.00	82.18	-	-	0.00	0.00	-
15.	4,637	4,642	0	15.43	2.00	17.43	108.0	0.00	84.33	-	-	0.00	0.00	-
16.	2,751	2,759	0	22.55	2.00	24.55	108.0	0.00	79.81	-	-	0.00	0.00	-
17.	2,154	2,164	0	25.73	2.00	27.73	108.0	0.00	77.71	-	-	0.00	0.00	-
18.	3,320	3,327	0	20.02	2.00	22.02	108.0	0.00	81.44	-	-	0.00	0.00	-
19.	3,070	3,078	0	21.08	2.00	23.08	108.0	0.00	80.76	-	-	0.00	0.00	-
2	4,995	4,999	0	15.38	2.00	17.38	109.4	0.00	84.98	-	-	0.00	0.00	-
2.	6,782	6,786	0	10.48	2.00	12.48	108.0	0.00	87.63	-	-	0.00	0.00	-
20.	4,910	4,914	0	14.66	2.00	16.66	108.0	0.00	84.83	-	-	0.00	0.00	-
21.	4,425	4,431	0	16.08	2.00	18.08	108.0	0.00	83.93	-	-	0.00	0.00	-
22.	4,199	4,206	0	16.80	2.00	18.80	108.0	0.00	83.48	-	-	0.00	0.00	-
23.	5,608	5,611	0	12.78	2.00	14.78	108.0	0.00	85.98	-	-	0.00	0.00	-
24.	6,198	6,202	0	11.57	2.00	13.57	108.0	0.00	86.85	-	-	0.00	0.00	-
25.	4,226	4,232	0	16.72	2.00	18.72	108.0	0.00	83.53	-	-	0.00	0.00	-
26.	2,550	2,559	0	23.54	2.00	25.54	108.0	0.00	79.16	-	-	0.00	0.00	-
3	4,991	4,996	0	15.38	2.00	17.38	109.4	0.00	84.97	-	-	0.00	0.00	-
3.	6,653	6,657	0	10.69	2.00	12.69	108.0	0.00	87.47	-	-	0.00	0.00	-
4	5,266	5,270	0	14.66	2.00	16.66	109.4	0.00	85.44	-	-	0.00	0.00	-
4.	6,796	6,799	0	10.30	2.00	12.30	108.0	0.00	87.65	-	-	0.00	0.00	-
5	5,810	5,814	0	13.32	2.00	15.32	109.4	0.00	86.29	-	-	0.00	0.00	-

To be continued on next page...

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

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WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
5.	6,019	6,023	0	11.87	2.00	13.87	108.0	0.00	86.60	-	-	0.00	0.00	-
6	6,438	6,442	0	12.12	2.00	14.12	109.4	0.00	87.18	-	-	0.00	0.00	-
6.	6,010	6,014	0	11.85	2.00	13.85	108.0	0.00	86.58	-	-	0.00	0.00	-
7.	5,222	5,225	0	13.80	2.00	15.80	108.0	0.00	85.36	-	-	0.00	0.00	-
8.	6,407	6,411	0	11.02	2.00	13.02	108.0	0.00	87.14	-	-	0.00	0.00	-
9.	5,675	5,678	0	12.64	2.00	14.64	108.0	0.00	86.08	-	-	0.00	0.00	-
Sum						35.82								

- Data undefined due to calculation with octave data

Noise sensitive area: H H.

Wind speed: 8.0 m/s

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1	2,503	2,505	0	24.57	2.00	26.57	109.4	0.00	78.98	-	-	0.00	0.00	-
1.	7,293	7,294	0	9.45	2.00	11.45	108.0	0.00	88.26	-	-	0.00	0.00	-
10.	3,719	3,721	0	18.49	2.00	20.49	108.0	0.00	82.41	-	-	0.00	0.00	-
11.	3,676	3,679	0	18.65	2.00	20.65	108.0	0.00	82.31	-	-	0.00	0.00	-
12.	5,023	5,024	0	14.33	2.00	16.33	108.0	0.00	85.02	-	-	0.00	0.00	-
13.	5,277	5,278	0	13.64	2.00	15.64	108.0	0.00	85.45	-	-	0.00	0.00	-
14.	5,387	5,389	0	13.35	2.00	15.35	108.0	0.00	85.63	-	-	0.00	0.00	-
15.	3,561	3,563	0	19.09	2.00	21.09	108.0	0.00	82.04	-	-	0.00	0.00	-
16.	4,562	4,563	0	15.67	2.00	17.67	108.0	0.00	84.19	-	-	0.00	0.00	-
17.	5,260	5,262	0	13.69	2.00	15.69	108.0	0.00	85.42	-	-	0.00	0.00	-
18.	4,523	4,524	0	15.79	2.00	17.79	108.0	0.00	84.11	-	-	0.00	0.00	-
19.	5,380	5,382	0	13.37	2.00	15.37	108.0	0.00	85.62	-	-	0.00	0.00	-
2	2,346	2,349	0	25.40	2.00	27.40	109.4	0.00	78.42	-	-	0.00	0.00	-
2.	8,107	8,108	0	8.16	2.00	10.16	108.0	0.00	89.18	-	-	0.00	0.00	-
20.	4,757	4,758	0	15.09	2.00	17.09	108.0	0.00	84.55	-	-	0.00	0.00	-
21.	4,857	4,859	0	14.81	2.00	16.81	108.0	0.00	84.73	-	-	0.00	0.00	-
22.	5,781	5,783	0	12.38	2.00	14.38	108.0	0.00	86.24	-	-	0.00	0.00	-
23.	6,002	6,003	0	11.84	2.00	13.84	108.0	0.00	86.57	-	-	0.00	0.00	-
24.	7,873	7,874	0	8.51	2.00	10.51	108.0	0.00	88.92	-	-	0.00	0.00	-
25.	3,461	3,463	0	19.47	2.00	21.47	108.0	0.00	81.79	-	-	0.00	0.00	-
26.	5,176	5,177	0	13.91	2.00	15.91	108.0	0.00	85.28	-	-	0.00	0.00	-
3	2,875	2,878	0	22.76	2.00	24.76	109.4	0.00	80.18	-	-	0.00	0.00	-
3.	7,226	7,227	0	9.56	2.00	11.56	108.0	0.00	88.18	-	-	0.00	0.00	-
4	3,391	3,393	0	20.58	2.00	22.58	109.4	0.00	81.61	-	-	0.00	0.00	-
4.	6,409	6,410	0	11.01	2.00	13.01	108.0	0.00	87.14	-	-	0.00	0.00	-
5	3,771	3,773	0	19.17	2.00	21.17	109.4	0.00	82.53	-	-	0.00	0.00	-
5.	6,604	6,605	0	10.65	2.00	12.65	108.0	0.00	87.40	-	-	0.00	0.00	-
6	4,025	4,027	0	18.29	2.00	20.29	109.4	0.00	83.10	-	-	0.00	0.00	-
6.	5,059	5,060	0	14.23	2.00	16.23	108.0	0.00	85.08	-	-	0.00	0.00	-
7.	5,371	5,372	0	13.39	2.00	15.39	108.0	0.00	85.60	-	-	0.00	0.00	-
8.	5,680	5,681	0	12.61	2.00	14.61	108.0	0.00	86.09	-	-	0.00	0.00	-
9.	4,334	4,335	0	16.38	2.00	18.38	108.0	0.00	83.74	-	-	0.00	0.00	-
Sum						34.74								

- Data undefined due to calculation with octave data

Noise sensitive area: I I.

Wind speed: 8.0 m/s

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
1	5,624	5,627	0	14.37	2.00	16.37	109.4	0.00	86.01	-	-	0.00	0.00	-
1.	10,471	10,473	0	5.68	2.00	7.68	108.0	0.00	91.40	-	-	0.00	0.00	-
10.	7,150	7,152	0	10.26	2.00	12.26	108.0	0.00	88.09	-	-	0.00	0.00	-
11.	5,653	5,656	0	13.37	2.00	15.37	108.0	0.00	86.05	-	-	0.00	0.00	-
12.	6,632	6,634	0	11.35	2.00	13.35	108.0	0.00	87.44	-	-	0.00	0.00	-
13.	6,316	6,318	0	11.96	2.00	13.96	108.0	0.00	87.01	-	-	0.00	0.00	-
14.	4,380	4,385	0	16.97	2.00	18.97	108.0	0.00	83.84	-	-	0.00	0.00	-

To be continued on next page...

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

...continued from previous page

WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
15.	6,566	6,568	0	11.35	2.00	13.35	108.0	0.00	87.35	-	-	0.00	0.00	-
16.	5,865	5,868	0	12.91	2.00	14.91	108.0	0.00	86.37	-	-	0.00	0.00	-
17.	5,844	5,847	0	12.98	2.00	14.98	108.0	0.00	86.34	-	-	0.00	0.00	-
18.	6,732	6,734	0	11.13	2.00	13.13	108.0	0.00	87.57	-	-	0.00	0.00	-
19.	4,834	4,837	0	15.62	2.00	17.62	108.0	0.00	84.69	-	-	0.00	0.00	-
2	4,901	4,904	0	16.28	2.00	18.28	109.4	0.00	84.81	-	-	0.00	0.00	-
2.	11,506	11,507	0	4.40	2.00	6.40	108.0	0.00	92.22	-	-	0.00	0.00	-
20.	7,983	7,985	0	8.96	2.00	10.96	108.0	0.00	89.05	-	-	0.00	0.00	-
21.	3,507	3,512	0	19.99	2.00	21.99	108.0	0.00	81.91	-	-	0.00	0.00	-
22.	4,120	4,125	0	17.78	2.00	19.78	108.0	0.00	83.31	-	-	0.00	0.00	-
23.	9,384	9,385	0	6.95	2.00	8.95	108.0	0.00	90.45	-	-	0.00	0.00	-
24.	11,123	11,124	0	4.89	2.00	6.89	108.0	0.00	91.93	-	-	0.00	0.00	-
25.	6,042	6,044	0	12.40	2.00	14.40	108.0	0.00	86.63	-	-	0.00	0.00	-
26.	5,327	5,330	0	14.27	2.00	16.27	108.0	0.00	85.53	-	-	0.00	0.00	-
3	3,412	3,417	0	21.20	2.00	23.20	109.4	0.00	81.67	-	-	0.00	0.00	-
3.	10,760	10,761	0	5.22	2.00	7.22	108.0	0.00	91.64	-	-	0.00	0.00	-
4	2,743	2,749	0	24.08	2.00	26.08	109.4	0.00	79.78	-	-	0.00	0.00	-
4.	10,129	10,130	0	5.93	2.00	7.93	108.0	0.00	91.11	-	-	0.00	0.00	-
5	2,067	2,075	0	27.68	2.00	29.68	109.4	0.00	77.34	-	-	0.00	0.00	-
5.	10,038	10,039	0	6.11	2.00	8.11	108.0	0.00	91.03	-	-	0.00	0.00	-
6	1,420	1,432	0	32.28	2.00	34.28	109.4	0.00	74.12	-	-	0.00	0.00	-
6.	8,709	8,711	0	7.81	2.00	9.81	108.0	0.00	89.80	-	-	0.00	0.00	-
7.	8,684	8,685	0	7.92	2.00	9.92	108.0	0.00	89.78	-	-	0.00	0.00	-
8.	9,386	9,388	0	6.87	2.00	8.87	108.0	0.00	90.45	-	-	0.00	0.00	-
9.	7,924	7,925	0	8.98	2.00	10.98	108.0	0.00	88.98	-	-	0.00	0.00	-
Sum						37.07								

- Data undefined due to calculation with octave data

Noise sensitive area: J J.

Wind speed: 8.0 m/s

WTG

No.	Distance [m]	Sound distance [m]	Penalty [dB]	From WTGs [dB(A)]	Uncertainty margin [dB]	WTG+Uncertainty margin [dB]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]
1	1,788	1,798	0	28.80	2.00	30.80	109.4	0.00	76.10	-	-	0.00	0.00	-
1.	5,083	5,087	0	14.16	2.00	16.16	108.0	0.00	85.13	-	-	0.00	0.00	-
10.	1,783	1,793	0	28.13	2.00	30.13	108.0	0.00	76.07	-	-	0.00	0.00	-
11.	3,242	3,249	0	20.35	2.00	22.35	108.0	0.00	81.23	-	-	0.00	0.00	-
12.	4,310	4,314	0	16.45	2.00	18.45	108.0	0.00	83.70	-	-	0.00	0.00	-
13.	4,896	4,899	0	14.68	2.00	16.68	108.0	0.00	84.80	-	-	0.00	0.00	-
14.	6,191	6,195	0	11.42	2.00	13.42	108.0	0.00	86.84	-	-	0.00	0.00	-
15.	2,182	2,191	0	25.57	2.00	27.57	108.0	0.00	77.81	-	-	0.00	0.00	-
16.	4,241	4,245	0	16.67	2.00	18.67	108.0	0.00	83.56	-	-	0.00	0.00	-
17.	5,188	5,191	0	13.87	2.00	15.87	108.0	0.00	85.31	-	-	0.00	0.00	-
18.	3,499	3,505	0	19.31	2.00	21.31	108.0	0.00	81.89	-	-	0.00	0.00	-
19.	5,943	5,947	0	11.97	2.00	13.97	108.0	0.00	86.49	-	-	0.00	0.00	-
2	2,433	2,440	0	24.91	2.00	26.91	109.4	0.00	78.75	-	-	0.00	0.00	-
2.	5,757	5,761	0	12.42	2.00	14.42	108.0	0.00	86.21	-	-	0.00	0.00	-
20.	2,764	2,770	0	22.49	2.00	24.49	108.0	0.00	79.85	-	-	0.00	0.00	-
21.	5,986	5,990	0	11.87	2.00	13.87	108.0	0.00	86.55	-	-	0.00	0.00	-
22.	6,806	6,810	0	10.28	2.00	12.28	108.0	0.00	87.66	-	-	0.00	0.00	-
23.	3,748	3,753	0	18.37	2.00	20.37	108.0	0.00	82.49	-	-	0.00	0.00	-
24.	5,601	5,604	0	12.80	2.00	14.80	108.0	0.00	85.97	-	-	0.00	0.00	-
25.	2,590	2,599	0	23.34	2.00	25.34	108.0	0.00	79.29	-	-	0.00	0.00	-
26.	5,400	5,404	0	13.31	2.00	15.31	108.0	0.00	85.65	-	-	0.00	0.00	-
3	4,041	4,047	0	18.23	2.00	20.23	109.4	0.00	83.14	-	-	0.00	0.00	-
3.	4,840	4,845	0	14.84	2.00	16.84	108.0	0.00	84.71	-	-	0.00	0.00	-
4	4,842	4,847	0	15.79	2.00	17.79	109.4	0.00	84.71	-	-	0.00	0.00	-
4.	3,968	3,973	0	17.59	2.00	19.59	108.0	0.00	82.98	-	-	0.00	0.00	-
5	5,475	5,479	0	14.13	2.00	16.13	109.4	0.00	85.77	-	-	0.00	0.00	-
5.	4,288	4,292	0	16.52	2.00	18.52	108.0	0.00	83.65	-	-	0.00	0.00	-
6	5,939	5,943	0	13.06	2.00	15.06	109.4	0.00	86.48	-	-	0.00	0.00	-
6.	2,702	2,708	0	22.79	2.00	24.79	108.0	0.00	79.65	-	-	0.00	0.00	-

To be continued on next page...

Project:
Pyhäjärvi Leppämäki

Description:
Pyhäjärvi Leppämäki
Meluselvitys

Licensed user:
Sweco Finland Oy
Ilmalanportti 2
FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
8/30/2025 1:37 PM/4.1.287

DECIBEL - Detailed results

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025 Noise calculation model: ISO 9613-2:2024 Finland 8.0 m/s

...continued from previous page

WTG

No.	Distance	Sound distance	Penalty	From WTGs	Uncertainty	WTG+Uncertainty	LwA,ref	Dc	Adiv	Aatm	Agr	Abar	Amisc	A
	[m]	[m]	[dB]	[dB(A)]	margin	margin	[dB(A)]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]	[dB]
7.	3,219	3,224	0	20.46	2.00	22.46	108.0	0.00	81.17	-	-	0.00	0.00	-
8.	3,263	3,268	0	20.26	2.00	22.26	108.0	0.00	81.29	-	-	0.00	0.00	-
9.	2,092	2,101	0	26.12	2.00	28.12	108.0	0.00	77.45	-	-	0.00	0.00	-
Sum						38.15								

- Data undefined due to calculation with octave data

Project:
Pyhäjärvi Leppämäki

Description:
Pyhäjärvi Leppämäki
Meluselvitys

Licensed user:
Sweco Finland Oy
Ilmalanportti 2
FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
8/30/2025 1:37 PM/4.1.287

DECIBEL - Assumptions for noise calculation

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025

Noise calculation model:

ISO 9613-2:2024 Finland

Wind speed (at 10 m height):

8.0 m/s

Ground attenuation:

General, terrain specific

Ground factor for porous ground: 0.4

Area object with hard ground: Vesistoaineisto

Area type with hard ground: Vesistoaineisto

Ground factor for hard ground: 0.0

Meteorological coefficient, CO:

Selected option: Fixed value: 0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

Pure tones penalty is added to total noise impact at receptors

Noise sensitive area

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

Uncertainty margin:

Uncertainty added to source noise level of the WTGs in the calculation

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

0.0 dB(A)

Octave data required

Input parameters for calculation of air absorption:

Temperature 15.0 °C

Relative humidity 70.0 %

Pressure 101.325 kPa

Frequency dependent air absorption

63	125	250	500	1,000	2,000	4,000	8,000
[dB/km]							
0.1	0.4	1.1	2.4	4.1	8.7	26.4	93.7

All coordinates are in

Finish TM ETRS-TM35FIN-ETRS89

WTG: NORDEX N175/6.X 6800 175.0 !-!

Noise: Mode 2 - Without serrated trailing edge

Source Source/Date Creator Edited

Nordex 10/13/2023 USER 4/14/2025 4:25 PM

Nordex: Third octave sound power levels, Rev.03

Doc. 9003492, F008_278_A17_EN, 13.10.2023

p.16

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Uncertainty [dB(A)]	Pure tones	Octave data							
						63	125	250	500	1000	2000	4000	8000
From Windcat	200.0	8.0	108.0	2.0	No	88.8	95.6	99.8	101.3	103.2	101.4	90.2	72.5

WTG: NORDEX N163/6.X 7000 163.0 !O!

Noise: Mode 0 - without serrated trailing edge

Source Source/Date Creator Edited

Nordex 10/13/2023 USER 8/26/2025 2:05 PM

Nordex: Third octave sound power levels Nordex N163/6.x

F008_277_A17_EN, Rev.09

p.13

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Uncertainty [dB(A)]	Pure tones	Octave data							
						63	125	250	500	1000	2000	4000	8000
From Windcat	190.0	8.0	109.4	2.0	No	88.6	97.8	100.3	101.6	103.5	104.2	97.4	83.0

Project:
Pyhäjärvi Leppämäki

Description:
Pyhäjärvi Leppämäki
Meluselvitys

Licensed user:
Sweco Finland Oy
Ilmalanportti 2
FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
8/30/2025 1:37 PM/4.1.287

DECIBEL - Assumptions for noise calculation

Calculation: Leppämäki_Leppäkangas_melumallinnus_29082025

Noise sensitive area: A A.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: B B.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: C C.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: D D.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: F F.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: G G.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: H H.

No noise demand

No distance demand
Pure tone penalty: 0 dB

Noise sensitive area: I I.

No noise demand

No distance demand
Pure tone penalty: 0 dB

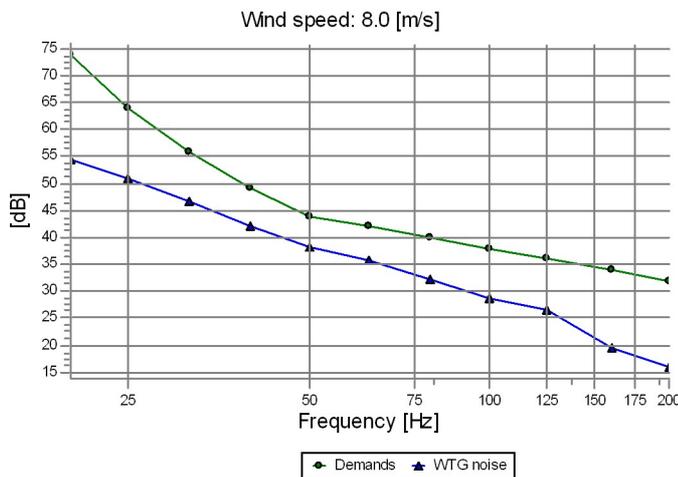
Noise sensitive area: J J.

No noise demand

No distance demand
Pure tone penalty: 0 dB

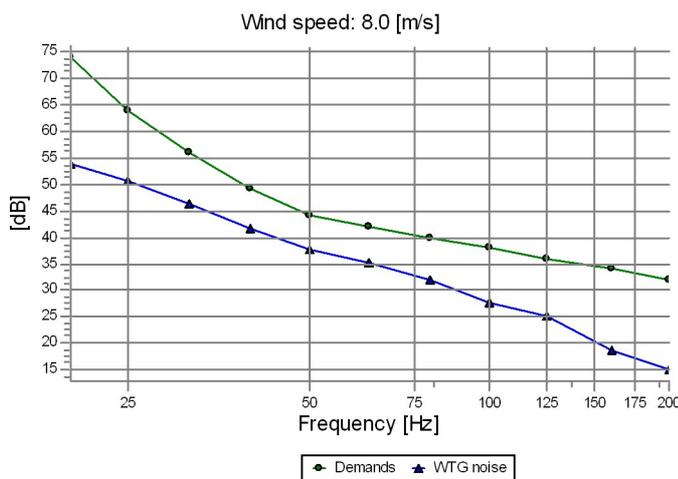
DECIBEL - Detailed results, graphic

Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025 Noise calculation model: Finland Low frequency 8.0 m/s
A A.



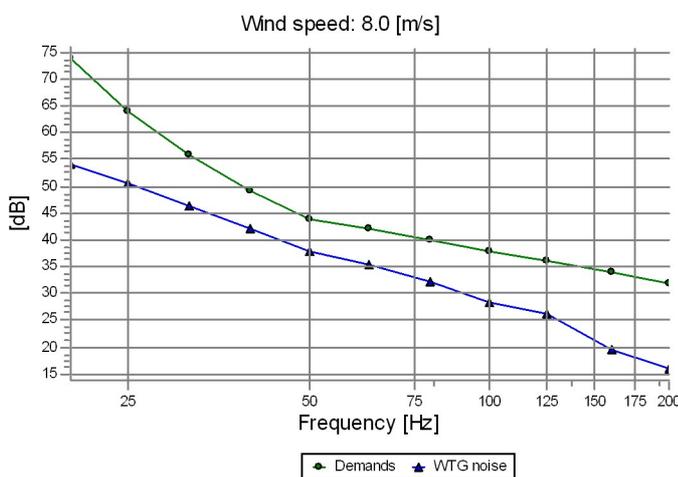
Frequency [Hz]	Sound level			Demands fulfilled ?
	Demands [dB]	WTG noise [dB]		
20.0	74.0	54.3		Yes
25.0	64.0	51.0		Yes
31.5	56.0	46.7		Yes
40.0	49.0	42.2		Yes
50.0	44.0	38.3		Yes
63.0	42.0	35.7		Yes
80.0	40.0	32.4		Yes
100.0	38.0	28.5		Yes
125.0	36.0	26.5		Yes
160.0	34.0	19.6		Yes
200.0	32.0	15.9		Yes

B B.



Frequency [Hz]	Sound level			Demands fulfilled ?
	Demands [dB]	WTG noise [dB]		
20.0	74.0	53.9		Yes
25.0	64.0	50.5		Yes
31.5	56.0	46.2		Yes
40.0	49.0	41.5		Yes
50.0	44.0	37.6		Yes
63.0	42.0	35.3		Yes
80.0	40.0	31.9		Yes
100.0	38.0	27.8		Yes
125.0	36.0	25.2		Yes
160.0	34.0	18.7		Yes
200.0	32.0	15.0		Yes

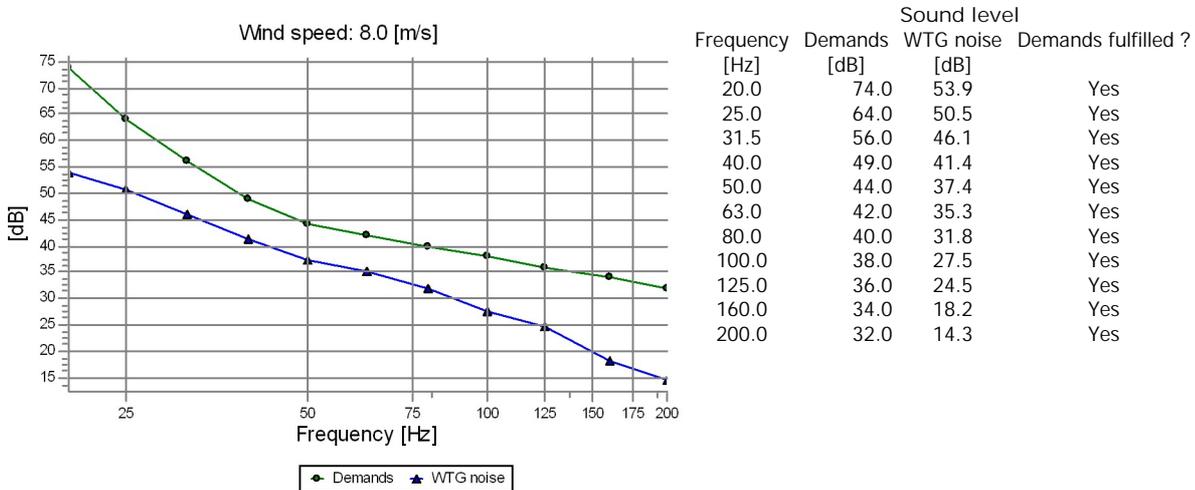
C C.



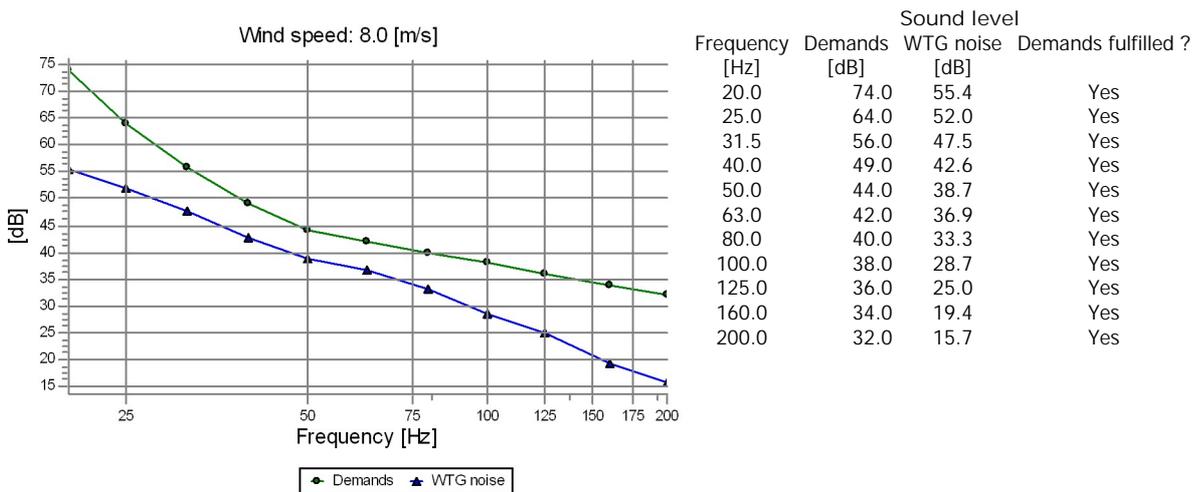
Frequency [Hz]	Sound level			Demands fulfilled ?
	Demands [dB]	WTG noise [dB]		
20.0	74.0	54.0		Yes
25.0	64.0	50.6		Yes
31.5	56.0	46.3		Yes
40.0	49.0	41.9		Yes
50.0	44.0	38.0		Yes
63.0	42.0	35.4		Yes
80.0	40.0	32.0		Yes
100.0	38.0	28.3		Yes
125.0	36.0	26.4		Yes
160.0	34.0	19.5		Yes
200.0	32.0	15.8		Yes

DECIBEL - Detailed results, graphic

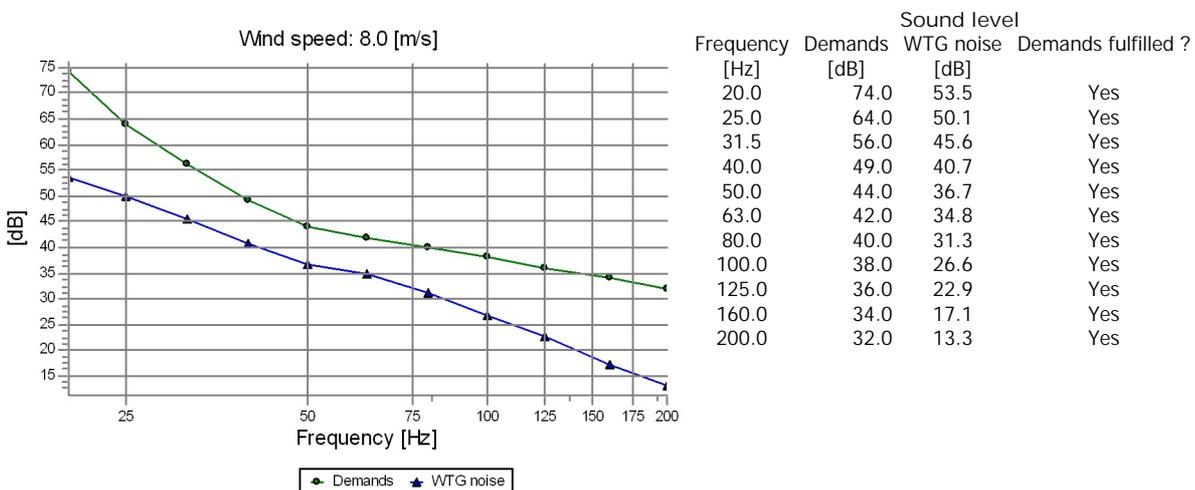
Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025 Noise calculation model: Finland Low frequency 8.0 m/s D D.



F F.

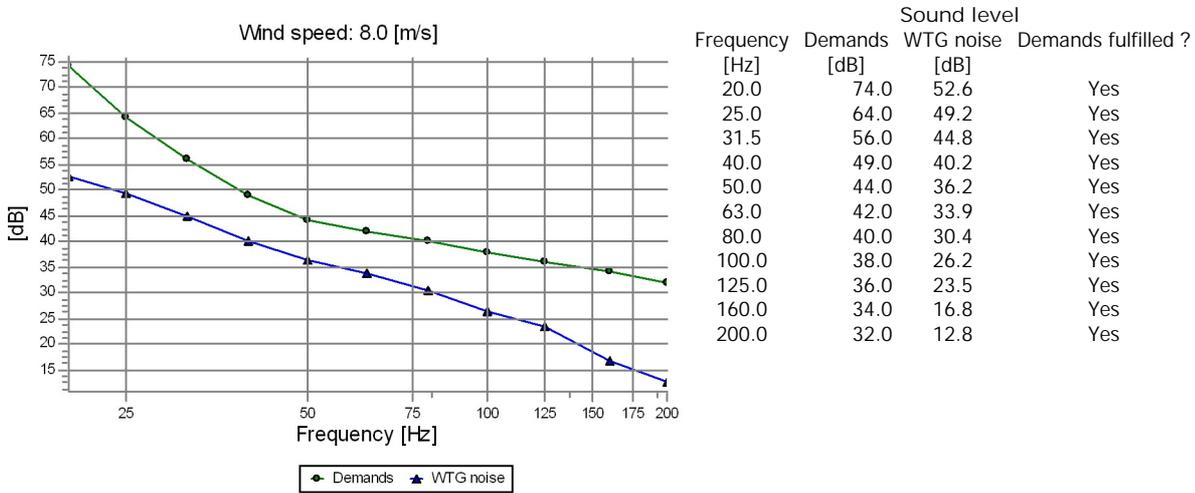


G G.

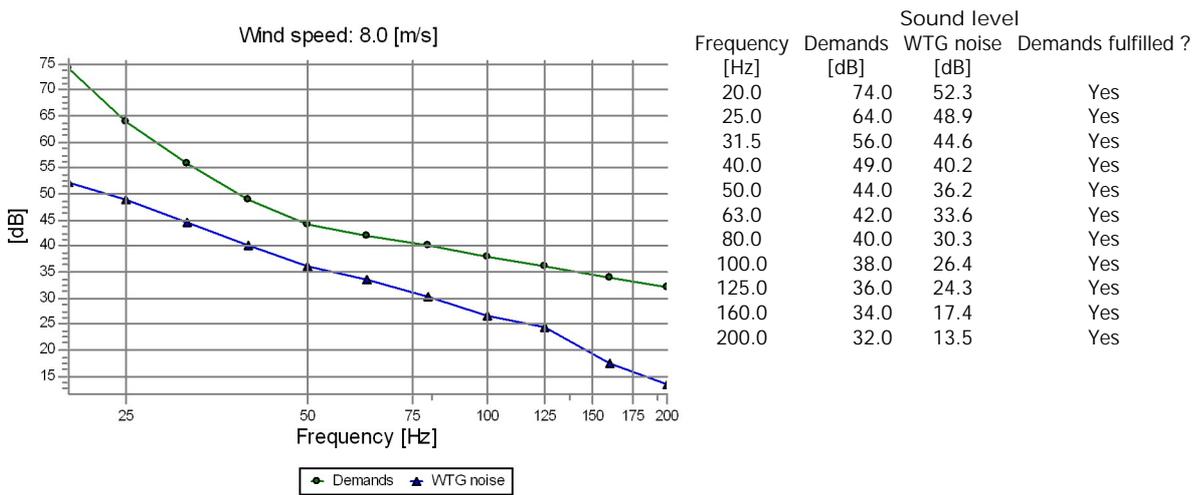


DECIBEL - Detailed results, graphic

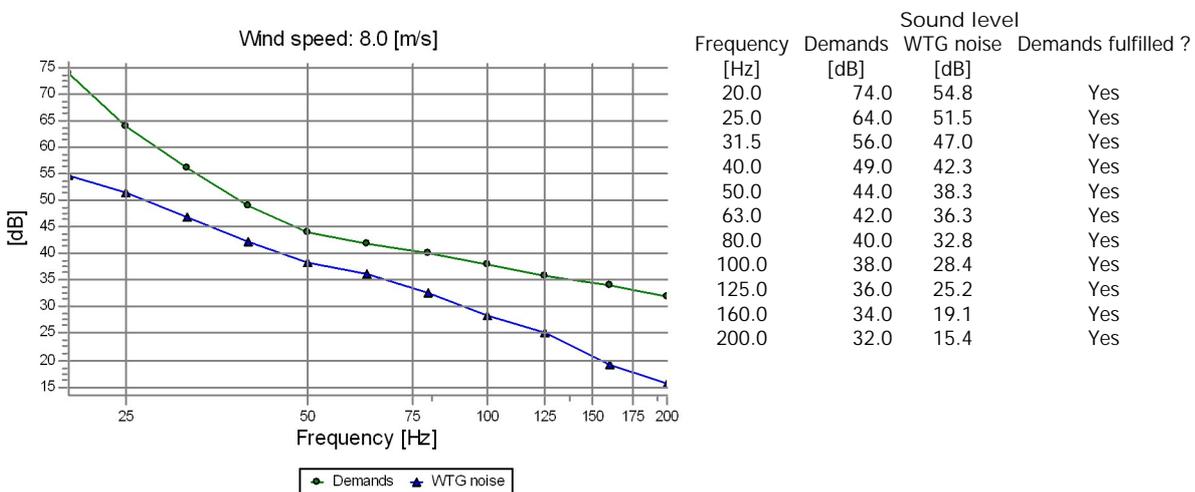
Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025 Noise calculation model: Finland Low frequency 8.0 m/s H H.



I I.



J J.



Project:
Pyhäjärvi Leppämäki

Description:
Pyhäjärvi Leppämäki
Meluselvitys

Licensed user:
Sweco Finland Oy
Ilmalanportti 2
FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
9/19/2025 1:47 PM/4.1.292

DECIBEL - Assumptions for noise calculation

Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025

Noise calculation model:

Finland Low frequency

Wind speed (at 10 m height):

8.0 m/s

Spectral distribution:

From 20.0 Hz to 200.0 Hz

Meteorological coefficient, CO:

Selected option: Fixed value: 0.0 dB

Type of demand in calculation:

1: WTG noise is compared to demand (DK, DE, SE, NL etc.)

Noise values in calculation:

All noise values are mean values (Lwa) (Normal)

Pure tones:

Pure tone penalty is subtracted from demand

Model: 5.0 dB(A)

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

Uncertainty margin:

0.0 dB; Uncertainty margin in NSA has priority

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

0.0 dB(A)

Low frequency calculation

dLsigma

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
[dB]	[dB]	[dB]	[dB]							
7.6	8.3	9.2	10.3	11.5	13.0	14.8	16.8	18.8	21.1	22.8

All coordinates are in

Finish TM ETRS-TM35FIN-ETRS89

WTG: NORDEX N175/6.X 6800 175.0 !-!

Noise: Mode 2 - Without serrated trailing edge_2db_added

Source Source/Date Creator Edited

Nordex 10/13/2023 USER 5/7/2025 12:17 PM

Nordex: Third octave sound power levels, Rev.03

Doc. 9003492, F008_278_A17_EN, 13.10.2023

p.16

2db added manually to 1/3-octaves

Status	Hub height	Wind speed	LwA,ref	20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
	[m]	[m/s]	[dB(A)]	[dB]	[dB]	[dB]	[dB]							
From Windcat	200.0	8.0	100.4	72.9	76.3	78.2	79.4	81.4	85.7	88.4	90.0	92.6	94.6	95.9

WTG: NORDEX N163/6.X 7000 163.0 !O!

Noise: Mode 0 - without serrated trailing edges_2dB_added

Source Source/Date Creator Edited

Nordex 10/13/2022 USER 8/27/2025 1:54 PM

Nordex: Third octave sound power levels Nordex N163/6.x

F008_277_A17_EN, Rev.09

p.13

2 dB uncertainty added

Status	Hub height	Wind speed	LwA,ref	20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
	[m]	[m/s]	[dB(A)]	[dB]	[dB]	[dB]	[dB]							
From Windcat	190.0	8.0	102.1	72.5	75.9	78.2	80.2	82.2	85.2	88.2	91.2	96.2	96.2	97.2

Noise sensitive area: A A.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

Project:
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Description:
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Meluselvitys

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FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
9/19/2025 1:47 PM/4.1.292

DECIBEL - Assumptions for noise calculation

Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: B B.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: C C.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: D D.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: F F.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: G G.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: H H.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

Project:
Pyhäjärvi Leppämäki

Description:
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Meluselvitys

Licensed user:
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FI-00240 Helsinki

Juho Ali-Tolppa / juho.ali-tolppa@sweco.fi
Calculated:
9/19/2025 1:47 PM/4.1.292

DECIBEL - Assumptions for noise calculation

Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_sisällä_19092025

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: I I.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

No distance demand

Noise sensitive area: J J.

Predefined calculation standard: Residential health guide 2003, indoor - night

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

Uncertainty margin: 0.0 dB

No temporal binning

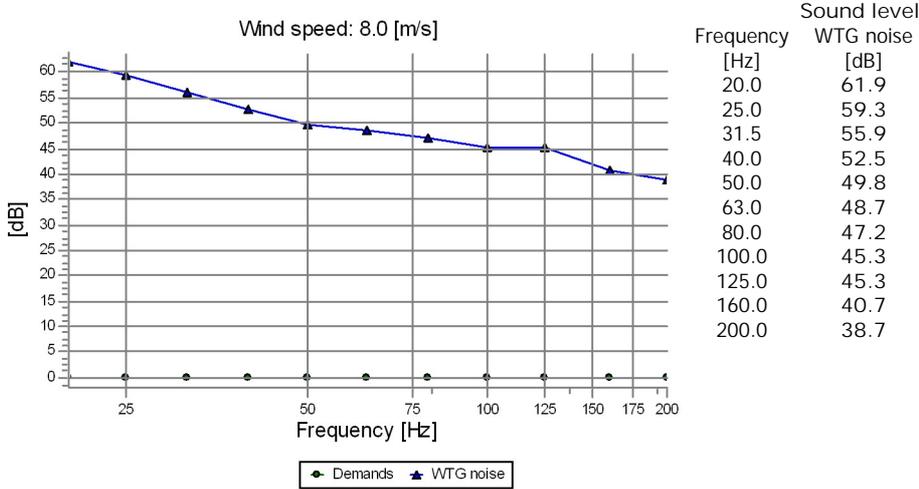
Noise demand:

20.0 Hz	25.0 Hz	31.5 Hz	40.0 Hz	50.0 Hz	63.0 Hz	80.0 Hz	100.0 Hz	125.0 Hz	160.0 Hz	200.0 Hz
74.0 dB	64.0 dB	56.0 dB	49.0 dB	44.0 dB	42.0 dB	40.0 dB	38.0 dB	36.0 dB	34.0 dB	32.0 dB

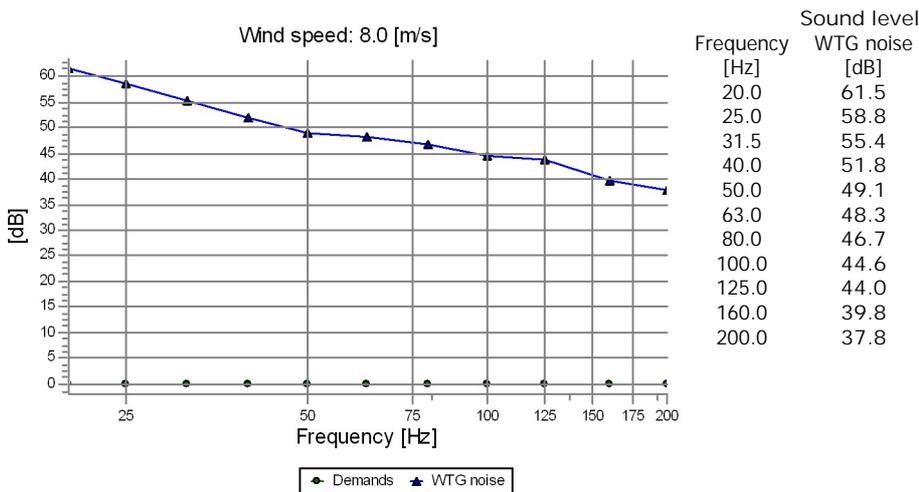
No distance demand

DECIBEL - Detailed results, graphic

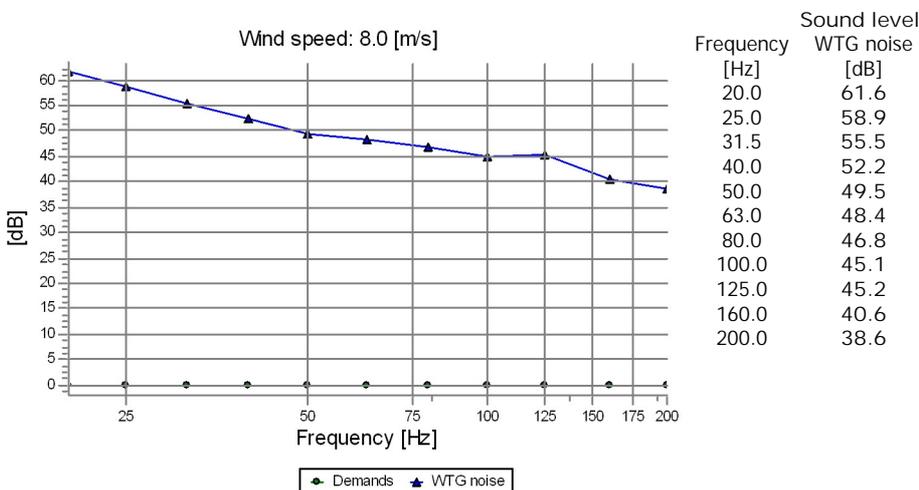
Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_ulkona_19092025 Noise calculation model: Finland Low frequency 8.0 m/s
A A.



B B.

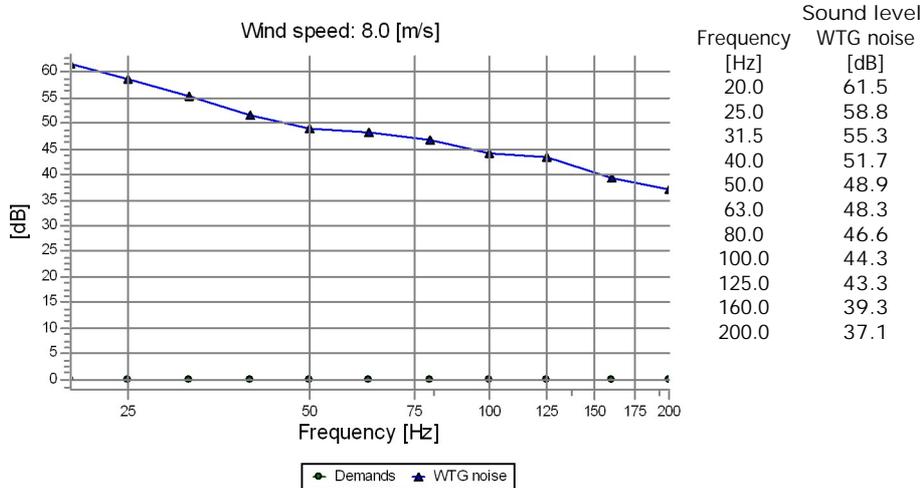


C C.

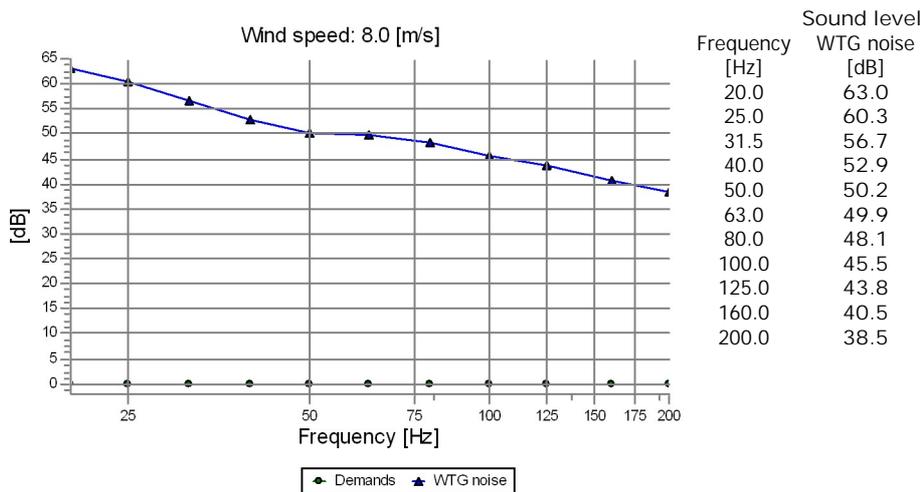


DECIBEL - Detailed results, graphic

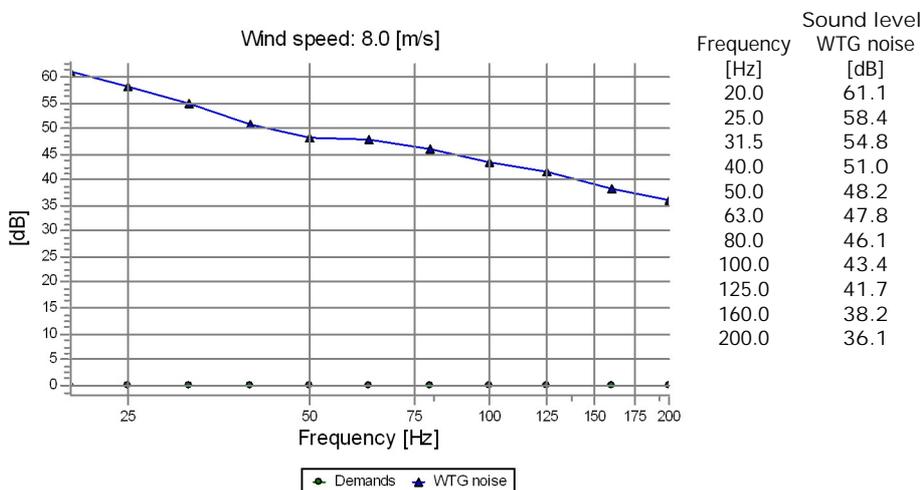
Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_ulkona_19092025 Noise calculation model: Finland Low frequency 8.0 m/s
D D.



F F.

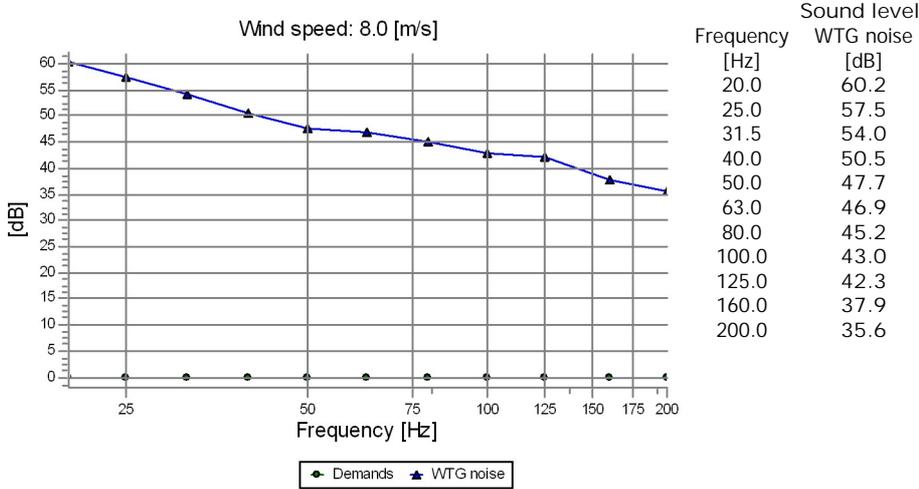


G G.

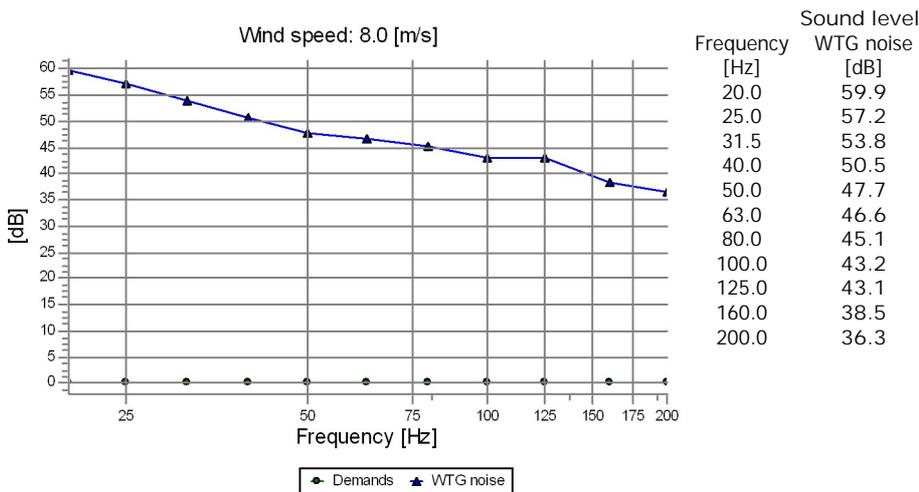


DECIBEL - Detailed results, graphic

Calculation: Leppämäki_ja_Leppäkangas_pienitaajuinen_melu_ulkona_19092025 Noise calculation model: Finland Low frequency 8.0 m/s
H H.



I I.



J J.

