

Project:

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Karoliina Joensuu / karoliina.joensuu@wpd.fi

Calculated:

28.7.2011 11:03/2.7.486

DECIBEL - Main Result

Calculation: Decibel maxlayout 14WTG EIAR KJ

Noise calculation model:

ISO 9613-2 General

Wind speed:

95% rated power

Ground attenuation:

None

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

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

Noise values in calculation:

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

Pure tones:

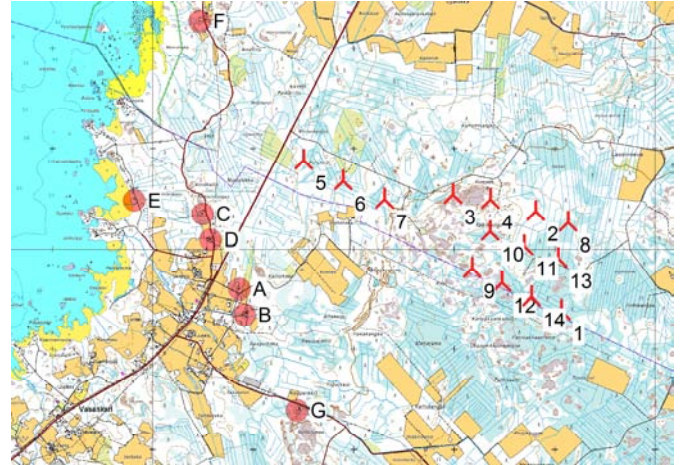
Pure tone penalty are added to demand: 0.0 dB(A)

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)



New WTG

Scale 1:75 000

Noise sensitive area

WTGs

KKJ Zone: 2	East	North	Z	Row data/Description	WTG type				Noise data									
					Valid	Manufact.	Type-generator	Power, rated [kW]	Rotor diameter [m]	Hub height [m]	Creator	Name	Wind speed [m/s]	Status	Hub height [m]	LwA,ref [dB(A)]	Pure tones	Octave data
1	2 504 067	7 139 390	25.0	WTG 7	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
2	2 503 811	7 140 379	25.3	WTG 12	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
3	2 502 987	7 140 546	22.4	WTG 14	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
4	2 503 360	7 140 495	30.0	WTG 13	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
5	2 501 501	7 140 887	10.0	WTG 1	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
6	2 501 894	7 140 680	14.0	WTG 2	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
7	2 502 308	7 140 499	18.3	WTG 3	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
8	2 504 135	7 140 268	24.7	WTG 11	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
9	2 503 178	7 139 811	30.0	WTG 4	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
10	2 503 358	7 140 178	30.0	WTG 10	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
11	2 503 695	7 140 033	28.2	WTG 9	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
12	2 503 475	7 139 670	27.8	WTG 5	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
13	2 504 035	7 139 907	26.0	WTG 8	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)
14	2 503 770	7 139 529	25.0	WTG 6	Yes	ENERCON	E-82 E2-2-300	2 300	82.0	138.4	EMD	Level 0 - man.spec. - Op.Mode 1 - 04/2010	(95%)	User value	138.4	104.0	No	Generic *)

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

Calculation Results

Sound Level

Noise sensitive area	No.	Name	KKJ Zone: 2			Imission height [m]	Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ?
			East	North	Z				
A Talus 1			2 500 864	7 139 600	9.9	1.5	50.0	35.6	Yes
B Talus 2			2 500 916	7 139 352	10.0	1.5	50.0	35.0	Yes
C Tarkisenkangas			2 500 498	7 140 353	5.0	1.5	50.0	35.9	Yes
D Vainio			2 500 578	7 140 092	5.9	1.5	50.0	35.7	Yes
E Rantavainio_holiday			2 499 818	7 140 485	0.9	1.5	40.0	32.0	Yes
F Kivitolppa_holiday			2 500 468	7 142 273	1.7	1.5	40.0	31.9	Yes
G Rianperkiö			2 501 436	7 138 398	18.3	1.5	50.0	33.6	Yes

Distances (m)

WTG	A	B	C	D	E	F	G
1	3211	3152	3697	3560	4389	4612	2812
2	3048	3072	3313	3246	3995	3842	3092
3	2324	2390	2497	2452	3170	3055	2649
4	2652	2698	2866	2811	3542	3395	2846
5	1436	1643	1137	1219	1731	1729	2490
6	1492	1649	1435	1442	2086	2139	2327
7	1701	1804	1816	1777	2490	2555	2275
8	3339	3347	3638	3562	4323	4179	3284
9	2324	2308	2734	2615	3427	3662	2243
10	2561	2578	2866	2782	3554	3570	2620

To be continued on next page...

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DECIBEL - Main Result**Calculation:** Decibel maxlayout 14WTG EIAR KJ*...continued from previous page*

WTG	A	B	C	D	E	F	G
11	2864	2861	3213	3118	3903	3928	2789
12	2612	2579	3055	2928	3747	3977	2403
13	3186	3168	3565	3462	4257	4280	3005
14	2908	2860	3375	3242	4067	4294	2594

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Calculated:

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DECIBEL - Detailed results**Calculation:** Decibel maxlayout 14WTG EIAR KJNoise calculation model: ISO 9613-2 General 8.0 m/s**Assumptions**

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

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

Calculation Results**Noise sensitive area: A Talus 1**

WTG		95% rated power										
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
1	3 211	3 214	19.50	104.0	3.00	81.14	6.37	0.00	0.00	0.00	87.51	0.00
2	3 048	3 052	20.17	104.0	3.00	80.69	6.15	0.00	0.00	0.00	86.84	0.00
3	2 324	2 329	23.54	104.0	3.00	78.34	5.13	0.00	0.00	0.00	83.47	0.00
4	2 652	2 656	21.92	104.0	3.00	79.49	5.61	0.00	0.00	0.00	85.09	0.00
5	1 436	1 443	29.16	104.0	3.00	74.18	3.67	0.00	0.00	0.00	77.85	0.00
6	1 492	1 499	28.72	104.0	3.00	74.52	3.77	0.00	0.00	0.00	78.29	0.00
7	1 701	1 707	27.23	104.0	3.00	75.65	4.14	0.00	0.00	0.00	79.78	0.00
8	3 339	3 342	19.00	104.0	3.00	81.48	6.53	0.00	0.00	0.00	88.01	0.00
9	2 324	2 329	23.54	104.0	3.00	78.34	5.13	0.00	0.00	0.00	83.47	0.00
10	2 561	2 565	22.35	104.0	3.00	79.18	5.48	0.00	0.00	0.00	84.66	0.00
11	2 864	2 868	20.95	104.0	3.00	80.15	5.90	0.00	0.00	0.00	86.06	0.00
12	2 612	2 617	22.10	104.0	3.00	79.36	5.55	0.00	0.00	0.00	84.91	0.00
13	3 186	3 190	19.60	104.0	3.00	81.08	6.33	0.00	0.00	0.00	87.41	0.00
14	2 908	2 912	20.76	104.0	3.00	80.28	5.96	0.00	0.00	0.00	86.25	0.00
Sum	35.62											

Noise sensitive area: B Talus 2

WTG		95% rated power										
No.	Distance [m]	Sound distance [m]	Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
1	3 152	3 156	19.74	104.0	3.00	80.98	6.29	0.00	0.00	0.00	87.27	0.00
2	3 072	3 075	20.07	104.0	3.00	80.76	6.18	0.00	0.00	0.00	86.94	0.00
3	2 390	2 395	23.19	104.0	3.00	78.59	5.23	0.00	0.00	0.00	83.82	0.00
4	2 698	2 703	21.70	104.0	3.00	79.64	5.67	0.00	0.00	0.00	85.31	0.00
5	1 643	1 648	27.64	104.0	3.00	75.34	4.03	0.00	0.00	0.00	79.38	0.00
6	1 649	1 655	27.59	104.0	3.00	75.38	4.05	0.00	0.00	0.00	79.42	0.00
7	1 804	1 810	26.55	104.0	3.00	76.15	4.31	0.00	0.00	0.00	80.46	0.00
8	3 347	3 350	18.97	104.0	3.00	81.50	6.54	0.00	0.00	0.00	88.04	0.00
9	2 308	2 313	23.62	104.0	3.00	78.29	5.11	0.00	0.00	0.00	83.39	0.00
10	2 578	2 583	22.26	104.0	3.00	79.24	5.50	0.00	0.00	0.00	84.75	0.00
11	2 861	2 866	20.97	104.0	3.00	80.14	5.90	0.00	0.00	0.00	86.04	0.00
12	2 579	2 583	22.26	104.0	3.00	79.24	5.50	0.00	0.00	0.00	84.75	0.00
13	3 168	3 172	19.67	104.0	3.00	81.03	6.31	0.00	0.00	0.00	87.34	0.00
14	2 860	2 864	20.97	104.0	3.00	80.14	5.90	0.00	0.00	0.00	86.04	0.00
Sum	34.98											

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DECIBEL - Detailed results**Calculation:** Decibel maxlayout 14WTG EIAR KJNoise calculation model: ISO 9613-2 General 8.0 m/s**Noise sensitive area: C Tarkisenkangas**

No.	Distance [m]	Sound distance [m]	95% rated power										
			Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]	
1	3 697	3 701	17.67	104.0	3.00	82.37	6.97	0.00	0.00	0.00	0.00	89.34	0.00
2	3 313	3 317	19.10	104.0	3.00	81.41	6.50	0.00	0.00	0.00	0.00	87.91	0.00
3	2 497	2 502	22.66	104.0	3.00	78.96	5.39	0.00	0.00	0.00	0.00	84.35	0.00
4	2 866	2 870	20.94	104.0	3.00	80.16	5.91	0.00	0.00	0.00	0.00	86.07	0.00
5	1 137	1 146	31.72	104.0	3.00	72.18	3.11	0.00	0.00	0.00	0.00	75.29	0.00
6	1 435	1 442	29.16	104.0	3.00	74.18	3.67	0.00	0.00	0.00	0.00	77.85	0.00
7	1 816	1 822	26.47	104.0	3.00	76.21	4.33	0.00	0.00	0.00	0.00	80.54	0.00
8	3 638	3 642	17.88	104.0	3.00	82.23	6.90	0.00	0.00	0.00	0.00	89.13	0.00
9	2 734	2 739	21.53	104.0	3.00	79.75	5.73	0.00	0.00	0.00	0.00	85.48	0.00
10	2 866	2 871	20.94	104.0	3.00	80.16	5.91	0.00	0.00	0.00	0.00	86.07	0.00
11	3 213	3 217	19.49	104.0	3.00	81.15	6.37	0.00	0.00	0.00	0.00	87.52	0.00
12	3 055	3 059	20.14	104.0	3.00	80.71	6.16	0.00	0.00	0.00	0.00	86.87	0.00
13	3 565	3 569	18.15	104.0	3.00	82.05	6.81	0.00	0.00	0.00	0.00	88.86	0.00
14	3 375	3 379	18.86	104.0	3.00	81.57	6.58	0.00	0.00	0.00	0.00	88.15	0.00
Sum	35.87												

Noise sensitive area: D Vainio

No.	Distance [m]	Sound distance [m]	95% rated power										
			Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]	
1	3 560	3 563	18.17	104.0	3.00	82.04	6.80	0.00	0.00	0.00	0.00	88.84	0.00
2	3 246	3 250	19.36	104.0	3.00	81.24	6.41	0.00	0.00	0.00	0.00	87.65	0.00
3	2 452	2 456	22.88	104.0	3.00	78.81	5.32	0.00	0.00	0.00	0.00	84.13	0.00
4	2 811	2 816	21.19	104.0	3.00	79.99	5.83	0.00	0.00	0.00	0.00	85.82	0.00
5	1 219	1 227	30.97	104.0	3.00	72.77	3.26	0.00	0.00	0.00	0.00	76.04	0.00
6	1 442	1 449	29.11	104.0	3.00	74.22	3.68	0.00	0.00	0.00	0.00	77.90	0.00
7	1 777	1 784	26.72	104.0	3.00	76.03	4.26	0.00	0.00	0.00	0.00	80.29	0.00
8	3 562	3 565	18.16	104.0	3.00	82.04	6.81	0.00	0.00	0.00	0.00	88.85	0.00
9	2 615	2 620	22.09	104.0	3.00	79.37	5.56	0.00	0.00	0.00	0.00	84.93	0.00
10	2 782	2 787	21.32	104.0	3.00	79.90	5.79	0.00	0.00	0.00	0.00	85.69	0.00
11	3 118	3 122	19.88	104.0	3.00	80.89	6.24	0.00	0.00	0.00	0.00	87.13	0.00
12	2 928	2 932	20.68	104.0	3.00	80.34	5.99	0.00	0.00	0.00	0.00	86.34	0.00
13	3 462	3 466	18.53	104.0	3.00	81.80	6.68	0.00	0.00	0.00	0.00	88.48	0.00
14	3 242	3 246	19.38	104.0	3.00	81.23	6.41	0.00	0.00	0.00	0.00	87.63	0.00
Sum	35.74												

Noise sensitive area: E Rantavainio_holiday

No.	Distance [m]	Sound distance [m]	95% rated power										
			Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]	
1	4 389	4 392	15.40	104.0	3.00	83.85	7.76	0.00	0.00	0.00	0.00	91.61	0.00
2	3 995	3 998	16.65	104.0	3.00	83.04	7.32	0.00	0.00	0.00	0.00	90.36	0.00
3	3 170	3 174	19.67	104.0	3.00	81.03	6.31	0.00	0.00	0.00	0.00	87.34	0.00
4	3 542	3 546	18.23	104.0	3.00	82.00	6.78	0.00	0.00	0.00	0.00	88.78	0.00
5	1 731	1 737	27.03	104.0	3.00	75.80	4.19	0.00	0.00	0.00	0.00	79.98	0.00
6	2 086	2 091	24.84	104.0	3.00	77.41	4.76	0.00	0.00	0.00	0.00	82.17	0.00
7	2 490	2 495	22.69	104.0	3.00	78.94	5.38	0.00	0.00	0.00	0.00	84.32	0.00
8	4 323	4 326	15.60	104.0	3.00	83.72	7.69	0.00	0.00	0.00	0.00	91.41	0.00
9	3 427	3 431	18.66	104.0	3.00	81.71	6.64	0.00	0.00	0.00	0.00	88.35	0.00
10	3 554	3 558	18.19	104.0	3.00	82.02	6.80	0.00	0.00	0.00	0.00	88.82	0.00
11	3 903	3 907	16.96	104.0	3.00	82.84	7.22	0.00	0.00	0.00	0.00	90.05	0.00
12	3 747	3 751	17.50	104.0	3.00	82.48	7.03	0.00	0.00	0.00	0.00	89.51	0.00
13	4 257	4 260	15.81	104.0	3.00	83.59	7.62	0.00	0.00	0.00	0.00	91.20	0.00
14	4 067	4 070	16.41	104.0	3.00	83.19	7.40	0.00	0.00	0.00	0.00	90.60	0.00
Sum	32.04												

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No.	Distance [m]	Sound distance [m]	95% rated power									
			WTG Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
1	4 612	4 615	14.73	104.0	3.00	84.28	8.00	0.00	0.00	0.00	92.28	0.00
2	3 842	3 846	17.17	104.0	3.00	82.70	7.14	0.00	0.00	0.00	89.84	0.00
3	3 055	3 059	20.14	104.0	3.00	80.71	6.16	0.00	0.00	0.00	86.87	0.00
4	3 395	3 399	18.78	104.0	3.00	81.63	6.60	0.00	0.00	0.00	88.23	0.00
5	1 729	1 735	27.04	104.0	3.00	75.78	4.18	0.00	0.00	0.00	79.97	0.00
6	2 139	2 144	24.54	104.0	3.00	77.62	4.85	0.00	0.00	0.00	82.47	0.00
7	2 555	2 560	22.37	104.0	3.00	79.16	5.47	0.00	0.00	0.00	84.64	0.00
8	4 179	4 182	16.05	104.0	3.00	83.43	7.53	0.00	0.00	0.00	90.96	0.00
9	3 662	3 665	17.80	104.0	3.00	82.28	6.93	0.00	0.00	0.00	89.21	0.00
10	3 570	3 574	18.13	104.0	3.00	82.06	6.82	0.00	0.00	0.00	88.88	0.00
11	3 928	3 931	16.88	104.0	3.00	82.89	7.24	0.00	0.00	0.00	90.14	0.00
12	3 977	3 981	16.71	104.0	3.00	83.00	7.30	0.00	0.00	0.00	90.30	0.00
13	4 280	4 283	15.73	104.0	3.00	83.64	7.64	0.00	0.00	0.00	91.28	0.00
14	4 294	4 297	15.69	104.0	3.00	83.66	7.66	0.00	0.00	0.00	91.32	0.00
Sum	31.93											

Noise sensitive area: G Rianperkkiö

No.	Distance [m]	Sound distance [m]	95% rated power									
			WTG Calculated [dB(A)]	LwA,ref [dB(A)]	Dc [dB]	Adiv [dB]	Aatm [dB]	Agr [dB]	Abar [dB]	Amisc [dB]	A [dB]	Cmet [dB]
1	2 812	2 816	21.19	104.0	3.00	79.99	5.83	0.00	0.00	0.00	85.82	0.00
2	3 092	3 096	19.99	104.0	3.00	80.81	6.21	0.00	0.00	0.00	87.02	0.00
3	2 649	2 653	21.93	104.0	3.00	79.47	5.60	0.00	0.00	0.00	85.08	0.00
4	2 846	2 849	21.04	104.0	3.00	80.10	5.88	0.00	0.00	0.00	85.97	0.00
5	2 490	2 493	22.70	104.0	3.00	78.93	5.37	0.00	0.00	0.00	84.31	0.00
6	2 327	2 331	23.53	104.0	3.00	78.35	5.13	0.00	0.00	0.00	83.48	0.00
7	2 275	2 279	23.80	104.0	3.00	78.15	5.06	0.00	0.00	0.00	83.21	0.00
8	3 284	3 287	19.22	104.0	3.00	81.34	6.46	0.00	0.00	0.00	87.79	0.00
9	2 243	2 248	23.97	104.0	3.00	78.03	5.01	0.00	0.00	0.00	83.04	0.00
10	2 620	2 624	22.07	104.0	3.00	79.38	5.56	0.00	0.00	0.00	84.94	0.00
11	2 789	2 793	21.29	104.0	3.00	79.92	5.80	0.00	0.00	0.00	85.72	0.00
12	2 403	2 408	23.13	104.0	3.00	78.63	5.25	0.00	0.00	0.00	83.88	0.00
13	3 005	3 009	20.35	104.0	3.00	80.57	6.09	0.00	0.00	0.00	86.66	0.00
14	2 594	2 598	22.19	104.0	3.00	79.29	5.53	0.00	0.00	0.00	84.82	0.00
Sum	33.57											

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Calculated:

28.7.2011 11:03/2.7.486

DECIBEL - Assumptions for noise calculation**Calculation:** Decibel maxlayout 14WTG EIAR KJ **Noise calculation model:** ISO 9613-2 General 8.0 m/s**Noise calculation model:**

ISO 9613-2 General

Wind speed:

95% rated power

Ground attenuation:

None

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

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

Noise values in calculation:

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

Pure tones:

Pure tone penalty are added to demand: 0.0 dB(A)

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)

Octave data required

Air absorption

63	125	250	500	1 000	2 000	4 000	8 000
[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]	[db/km]
0.1	0.4	1.0	1.9	3.7	9.7	32.8	117.0

WTG: ENERCON E-82 E2 2300 82.0 !O!**Noise:** Level 0 - man.spec. - Op.Mode I - 04/2010

Source Source/Date Creator Edited

Enercon 2.4.2010 EMD 4.5.2010 14:27

According to manufacturer specification SIAS-04-SPL E-82 E2 OM I 2,3MW Rev1_0-ger-ger.pdf

Status	Hub height [m]	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones	Generic data	Octave data							
						63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]
User value	138.4	95% rated power	104.0	No		85.6	92.6	96.0	98.6	98.4	95.5	90.7	81.2

NSA: Talus 1-A**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 50.0 dB(A)**Distance demand:** 0.0 m**NSA:** Talus 2-B**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 50.0 dB(A)**Distance demand:** 0.0 m**NSA:** Tarkisenkangas-C**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 50.0 dB(A)**Distance demand:** 0.0 m**NSA:** Vainio-D**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 50.0 dB(A)**Distance demand:** 0.0 m

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Calculated:

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DECIBEL - Assumptions for noise calculation

Calculation: Decibel_maxlayout_14WTG_EIAR_KJ **Noise calculation model:** ISO 9613-2 General 8.0 m/s

NSA: Rantavainio_holiday-E

Predefined calculation standard:

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

Noise demand: 40.0 dB(A)

Distance demand: 0.0 m

NSA: Kivitolppa_holiday-F

Predefined calculation standard:

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

Noise demand: 40.0 dB(A)

Distance demand: 0.0 m

NSA: Rianperkkiö-G

Predefined calculation standard:

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

Noise demand: 50.0 dB(A)

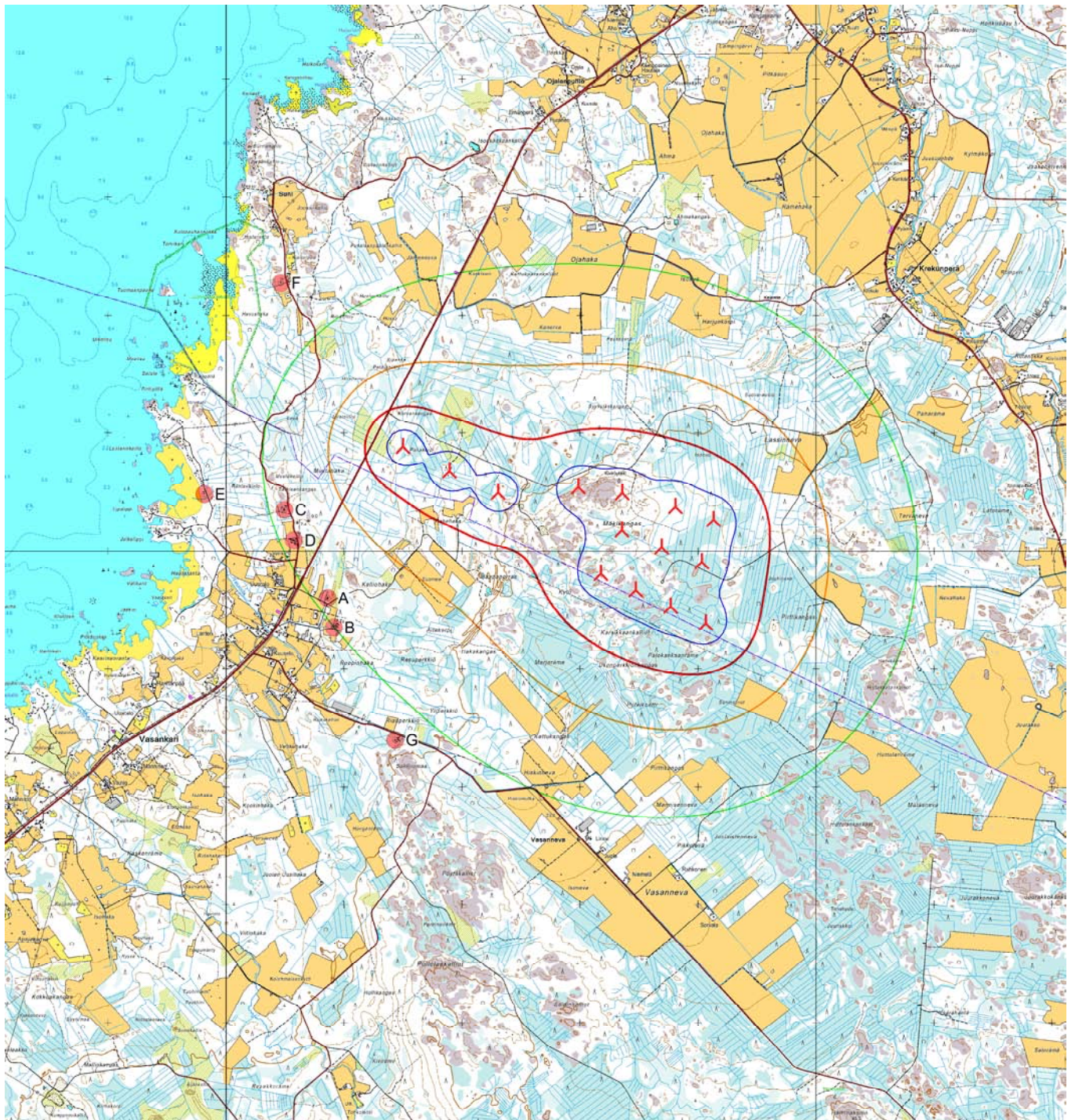
Distance demand: 0.0 m

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DECIBEL - Map 95% rated power

Calculation: Decibel maxlayout 14WTG EIAR KJNoise calculation model: ISO 9613-2 General 8.0 m/s



0 500 1000 1500 2000 m

Map: , Print scale 1:50 000, Map center KJ Finland Zone: 2 East: 2 502 998 North: 7 140 103
Noise calculation model: ISO 9613-2 General. Wind speed: 95% rated power

- ▲ New WTG
 - Noise sensitive area
 - 35.0 dB(A)
 - 40.0 dB(A)
 - 45.0 dB(A)
 - 50.0 dB(A)
 - 55.0 dB(A)
- Height above sea level from active line object