

Analiza hałasu oddziaływania wariantu realizacyjnego

WindPRO version 2.8.552 Jul 2012

Project:

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Calculated:

2014-11-20 14:02/2.8.552

DECIBEL - Main Result

Calculation: wariant 1 G=0,3

Noise calculation model:

ISO 9613-2 General

Wind speed:

8,0 m/s

Ground attenuation:

General, Ground factor: 0,3

Meteorological coefficient, C0:

0,0 dB

Type of demand in calculation:

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

Noise values in calculation:

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

Pure tones:

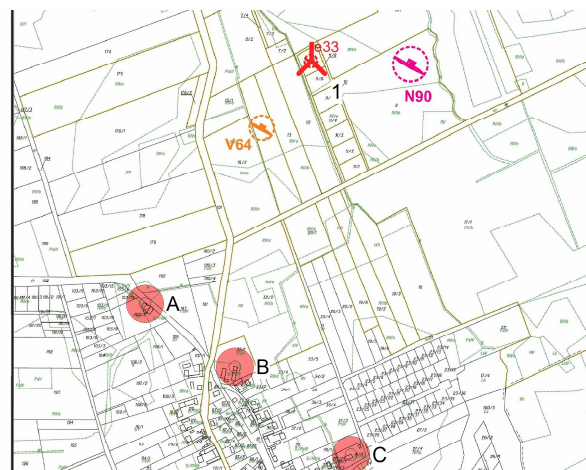
Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m Don't allow override of model height with height from NSA object

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

0,0 dB(A)



Scale 1:20 000

New WTG

Noise sensitive area

WTGs

Geo [deg,min,sec]-WGS84		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
Longitude	Latitude			Valid	Manufact.	Type-generator				Creator	Name				
16°30'42,79" East	54°29'18,85" North	[m]	6,1 ENERCON E-33 300 33,0 !O! ...	No	ENERCON	E-33-300	300	33,0	49,0	EMD	8m/s DEWI 09/92	8,0	User value	100,0	0 dB h

h) Generic octave distribution used

Calculation Results**Sound Level**

Noise sensitive area No.	Name	Geo [deg,min,sec]-WGS84		Z [m]	Immission height [m]	Demands Noise [dB(A)]	Sound Level From WTGs [dB(A)]	Demands fulfilled ? Noise
		Longitude	Latitude					
A Noise sensitive point: (1)		16°30'19,06" East	54°28'57,69" North	10,0	4,0	45,0	30,7	Yes
B Noise sensitive point: (2)		16°30'32,48" East	54°28'52,47" North	15,0	4,0	45,0	30,0	Yes
C Noise sensitive point: (3)		16°30'49,85" East	54°28'45,16" North	34,2	4,0	45,0	27,5	Yes

Distances (m)

NSA	WTG
1	
A	781
B	836
C	1049

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DECIBEL - Detailed results**Calculation:** wariant 1 G=0,3**Noise 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 Noise sensitive point: (1)****WTG****Wind speed: 8,0 m/s**

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	781	782	30,67	100,0	0,00	68,87	-	-	0,00	0,00	-	0,00

Sum 30,67

- Data undefined due to calculation with octave data

Noise sensitive area: B Noise sensitive point: (2)**WTG****Wind speed: 8,0 m/s**

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	836	837	29,96	100,0	0,00	69,46	-	-	0,00	0,00	-	0,00

Sum 29,96

- Data undefined due to calculation with octave data

Noise sensitive area: C Noise sensitive point: (3)**WTG****Wind speed: 8,0 m/s**

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	1 049	1 049	27,53	100,0	0,00	71,42	-	-	0,00	0,00	-	0,00

Sum 27,53

- Data undefined due to calculation with octave data

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DECIBEL - Assumptions for noise calculation**Calculation:** wariant 1 G=0,3 **Noise calculation model:** ISO 9613-2 General 8,0 m/s**Noise calculation model:**

ISO 9613-2 General

Wind speed:

8,0 m/s

Ground attenuation:

General, Ground factor: 0,3

Meteorological coefficient, C0:

0,0 dB

Type of demand in calculation:

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

Noise values in calculation:

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

Pure tones:

Pure and Impulse tone penalty are added to WTG source noise

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

4,0 m Don't allow override of model height with height from NSA object

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

0,0 dB(A)

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-33 300 33.0 !O!**Noise:** 8m/s DEWI 09/92

Source	Source/Date	Creator	Edited
DEWI	1992-09-23	EMD	2003-08-08 16:34

Status	Wind speed [m/s]	LwA,ref [dB(A)]	Pure tones No	Octave data								
				63 [dB]	125 [dB]	250 [dB]	500 [dB]	1000 [dB]	2000 [dB]	4000 [dB]	8000 [dB]	
User value	8,0	100,0	No	Generic data	81,6	88,6	92,0	94,6	94,4	91,5	86,7	77,2

NSA: Noise sensitive point: (1)-A**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 45,0 dB(A)**Distance demand:****NSA:** Noise sensitive point: (2)-B**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 45,0 dB(A)**Distance demand:****NSA:** Noise sensitive point: (3)-C**Predefined calculation standard:****Imission height(a.g.l.):** Use standard value from calculation model**Noise demand:** 45,0 dB(A)**Distance demand:**

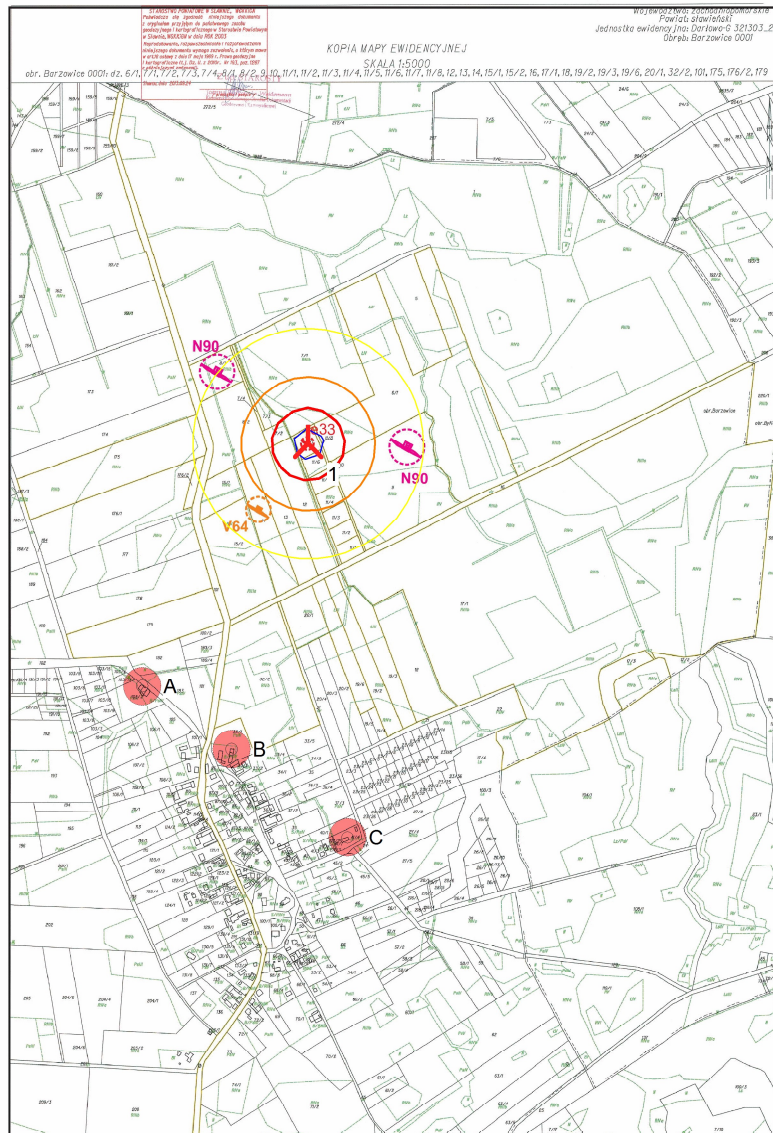
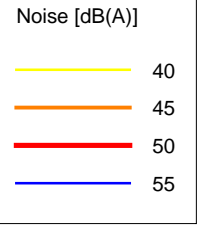
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DECIBEL - Map 8,0 m/s

Calculation: wariant 1 G=0,3 Noise calculation model: ISO 9613-2 General 8,0 m/s



0 250 500 750 1000m

New WTG

Noise sensitive area

Map: mapa , Print scale 1:20 000, Map center Geo WGS84 East: 16°30'42,86" East North: 54°29'18,82" North

Noise calculation model: ISO 9613-2 General. Wind speed: 8,0 m/s
Height above sea level from active line object