

Project:
Young - Ardyne

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Licensed user:
Mint Energy (Scotland) Ltd
Station House South Street
GB-MILNATHORT KY13 9XB
+44 1577 865 910
Kirstin Gardner / k.gardner@mint-energy.co.uk
Calculated:
27/07/2012 09:37/2.8.552

DECIBEL - Main Result

Calculation: Noise Assessment

Noise propagation model:

ISO 9613-2 United Kingdom

Wind speed:

4.0 m/s - 12.0 m/s, step 1.0 m/s

Ground attenuation:

General, Ground factor: 0.5

Type of demand in calculation:

WTG noise is compared to ambient noise plus 5dB margin with the option of a floor setting (e.g. 35dB)

Noise values in calculation:

All noise values are 90% exceedance values (L90) designed to show compliance with ETSU-R-97 limits

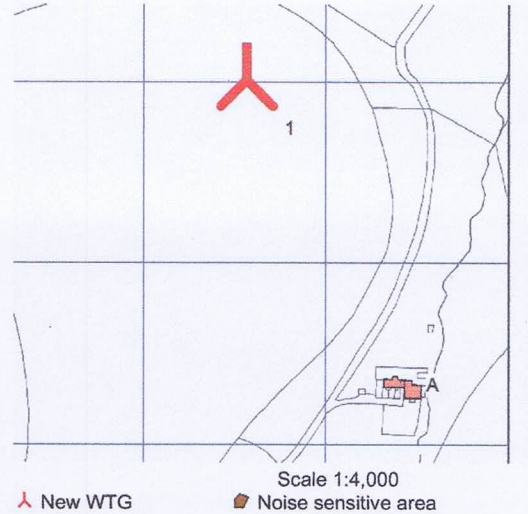
Pure tones:

Pure and Impulse tone penalty are added to WTG source noise

Calculation height above ground level:

4.0 m

Octave band data required



WTGs

BN (AIRY) (Normal)				WTG type			Noise data				First	LwaRef	Last	LwaRef	Pure	
East	North	Z	Row data/Description	Valid	Manufact.	Type-generator	Power, rated	Rotor diameter	Hub height	Creator	Name	wind speed [m/s]	[dB(A)]	wind speed [m/s]	[dB(A)]	tones
1	211,557	669,001	86.5 C&F CF20 20 13.1 IO! hub: 2... No	C&F		CF20-20	20 [kW]	13.1 [m]	20.5 [m]	USER	Acoustics performance test 2012	4.0 [m/s]	78.9 [dB(A)]	12.0 [m/s]	100.5 [dB(A)]	0 dB g

g) Data calculated from data for other wind speed (uncertain)

Calculation Results

Sound Level

Noise sensitive area No.	Name	BN (AIRY) (Normal)			Emission height [m]	Demand Max Noise demand [dB(A)]	Distance [m]	Sound Level		Demands fulfilled ?		
		East	North	Z				Max From WTGs [dB(A)]	Max exceedance [dB(A)]	Noise	Distance	All
A	Strathclyde Cottage	211,632	668,837	82.8	4.0	46.0	130	42.8	0.0	Yes	Yes	Yes

Distances (m)

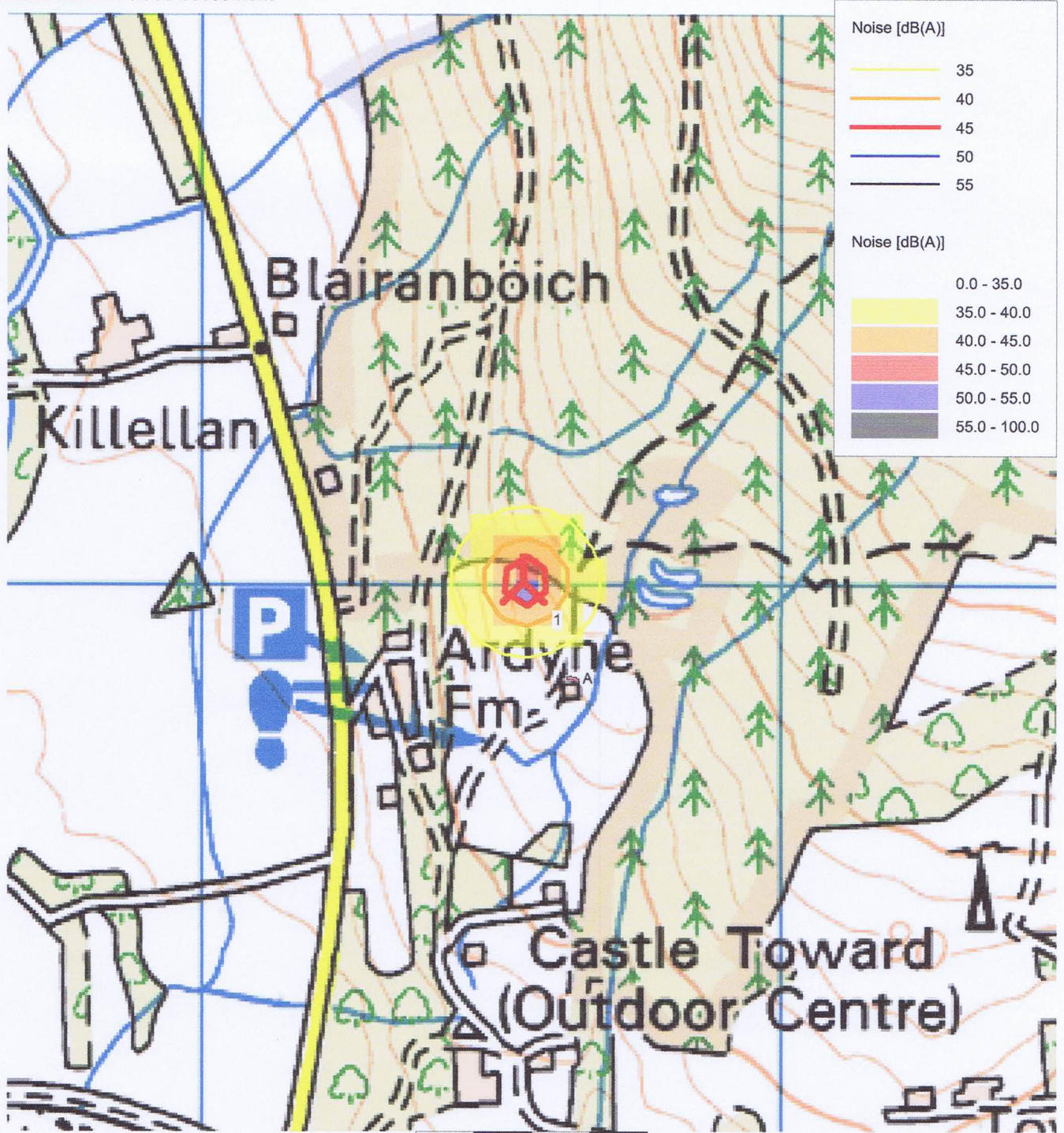
WTG	
NSA	1
A	181

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DECIBEL - Map 8.0 m/s
Calculation: Noise Assessment



Map: Ardyne , Print scale 1:10,000, Map center BN (AIRY) (Normal) East: 211,557 North: 669,001
 New WTG
 Noise sensitive area
 Noise calculation model: ISO 9613-2 United Kingdom. Wind speed: 8.0 m/s
 Height above sea level from active line object