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Brief Design and Access Statement

Minor Material Amendment

Change of Single Wind Turbine Previously Consented

At Rainsbutt Farm, Crowle, Scunthorpe,

North Lincolnshire, DN17 4BJ

For

Richard Walker

August 2016

Enclosed Plans and Maps

1. Site Location Map (1:2500)
2. Block Plan (1:500)
3. Exemplary Turbine Elevation Drawing (1:200)
4. Desk Based Noise Assessment Proposed Enercon E53
5. Desk Based Noise Assessment Consented EWT 54

DEVELOPMENT CONTROL SECTION	
10 AUG 2016	
DATE RECEIVED	
Referred To	

This Design and Access Statement is submitted in conjunction with a set of plans for the proposed change of turbine type from the previous consented EWT 54 single wind turbine with a hub height of 50m and a maximum tip height of 79m (Planning Ref: PA/2014/059) to an Enercon E53 single wind turbine with a hub height of 50m and a maximum tip height of 77m.

Following the advice of the LPA, it was agreed that a Minor Material Amendment be submitted for the proposed turbine change. This brief statement is solely concerned with the difference between the consented turbine and the proposed one. It is considered that all planning considerations will remain unchanged for the revised turbine with the exception of the height and noise emissions which will be briefly discussed below.

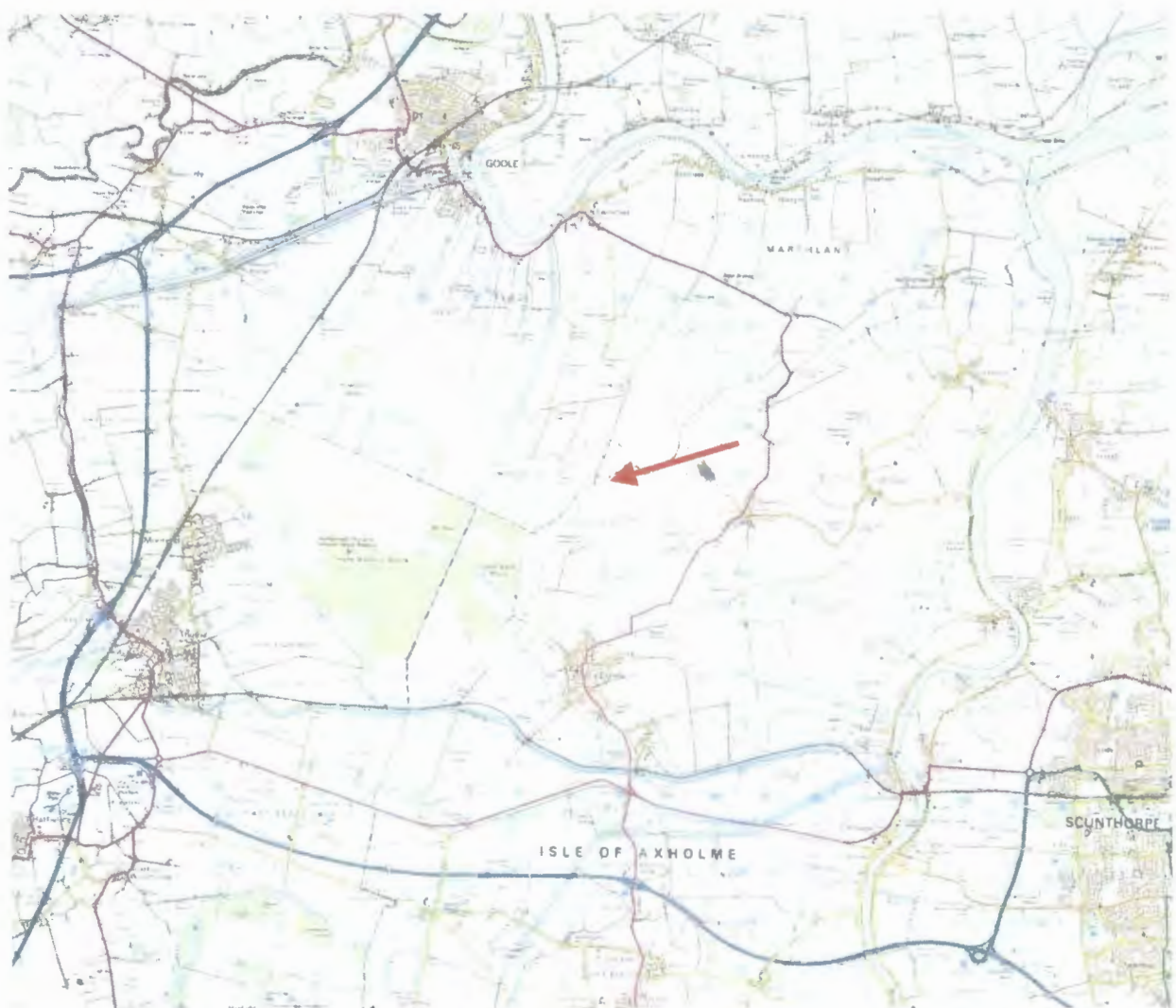


Figure 1: Site Location Map

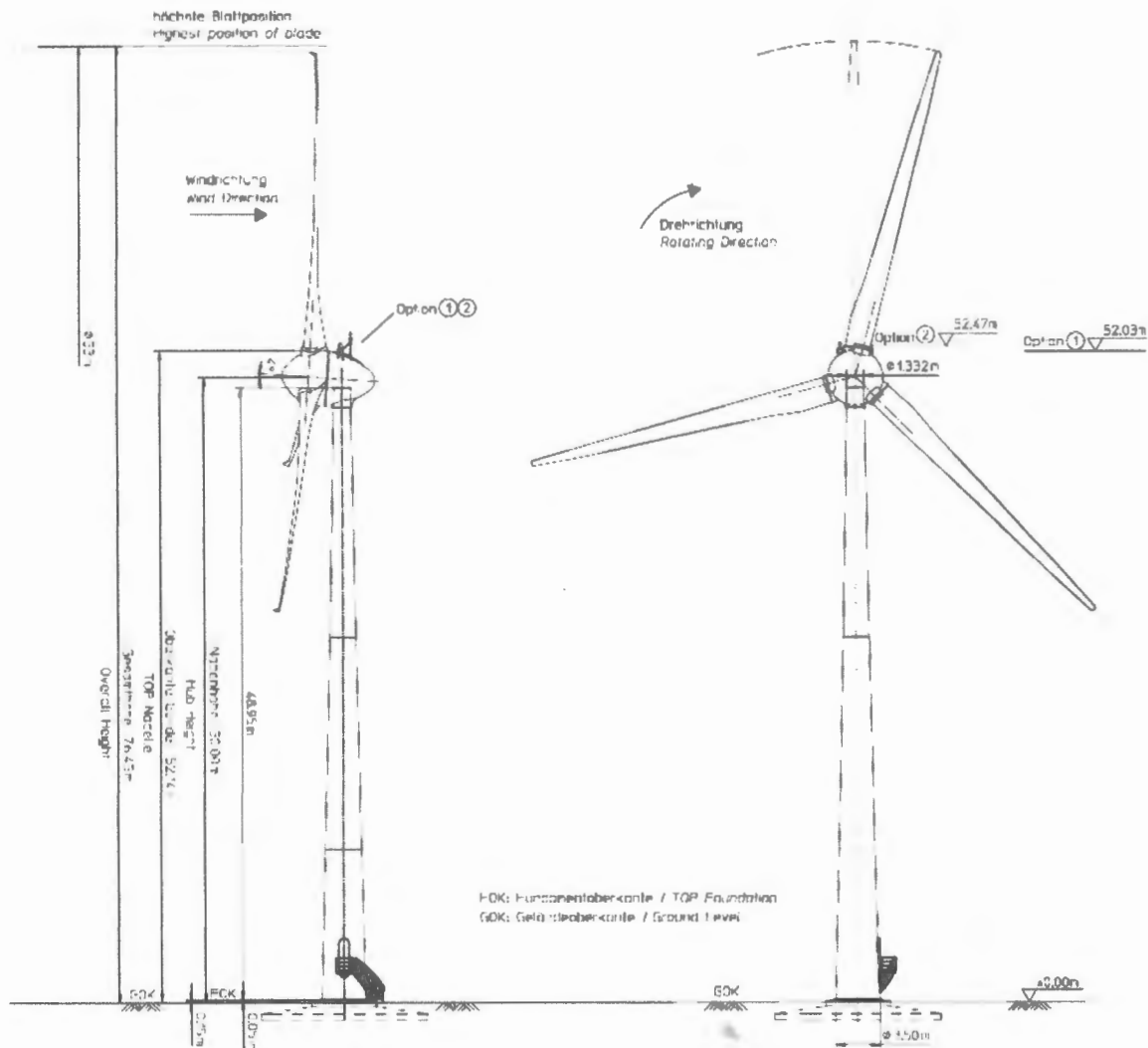


Figure 2: Indicative elevation of Enercon E53 wind turbine with 50m hub height.

In terms of the height difference of the previous consented wind turbine; EWT 54 single turbine with a hub height of 50m and a maximum tip height of 79m (Planning Ref: PA/2014/059), the proposed Enercon E53 single wind turbine will have a hub height of 50m and a maximum tip height of 77m. Therefore, it is considered that the proposal is lower in height by 2m and has less of a visual impact compared with the consented turbine, which is considered a positive change.

In terms of the noise impacts, the attached desk based noise assessment shows the Enercon turbine as having a very marginally higher noise output of 2db compared with the EWT turbine, however in this instance the noise omissions on the 3 nearest residential dwellings, 2 of which are not financially involved properties are well under the required 35dB under ETSU-R97 and as such there should be no concern with noise levels in this instance.

DECIBEL - Main Result

Calculation: Noise Impact Assessment - Enercon E53

Noise calculation model:

ISO 9613-2 General

Wind speed:

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

Ground attenuation:

General, fixed, Ground factor: 0.5

Meteorological coefficient, C0:

0.0 dB

Type of demand in calculation:

3: WTG noise is compared to ambient noise plus margin (UK, AT etc.)

Noise values in calculation:

All noise values are 90% exceedance values (L90)

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)



WTGs

X(East)	Y(North)	Z	Row data/Description	WTG type			Noise data								
				Valid	Manufact.	Type-generator	Power, rated	Rotor diameter	Hub height	Creator	Name				
1 477,660	416,669	2.0	ENERCON E-53 800 53.0 1-1 h... Yes	ENERCON	E-53-800	800	53.0	50.0	EMD	Level 0 - official - 800kW - 05/2010	4.0	92.0	12.0	102.5	No g

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

Calculation Results

Sound Level

Noise sensitive area No.	Name	X(East)	Y(North)	Z	Emission height	Demands		Sound Level		Distance to noise demand	Demands fulfilled ?
						Max Noise demand	Max From WTGs	Max exceedance	Distance to noise demand		
A	Noise sensitive point: British - British (1)	477,856	416,068	2.0	4.0	35.0	32.6	0.0	131	Yes	
B	Noise sensitive point: British - User defined (2)	477,628	417,320	2.0	4.0	35.0	32.3	0.0	151	Yes	
C	Noise sensitive point: British - User defined (3)	477,552	415,928	2.0	4.0	35.0	30.9	0.0	248	Yes	

Figure 3: Extract from Desk based Noise Assessment

The difference in the noise impacts of both turbines on the 3 dwellings are as follows;

	EWT	Enercon
Property A	30.6	32.6
Property B	30.3	32.3
Property C	28.9	30.9

Conclusion

In focussing solely on the material differences between the consented EWT single turbine at Rainsbutt Farm and the proposed Enercon turbine, it is respectfully requested to give consent to a revised proposal or amendment which has arguably less of an impact than the consented development given the reduction in height proposed and only a very marginally higher noise output. Given the urgency to build this proposal it is also respectfully requested to have this amendment determined as quickly as possible due to the ending of the government's support mechanism for this project.