LOCATION PLAN

NOTES

REV	DATE	DESCRIPTION	BY

PROJECT
WIND TURBINE INSTALLATION AT PARROCK, BACUP

DRAWING TITLE
SITE LOCATION

DRAWING NUMBER	REVISION	DATE	SCALE
01		FEB 12	NTS

SHEET	STATUS
A0	PLANNING

DC21 Holistic Energy Solutions

JOB NO. 11149

SITE ACCESS

To aid the planning permission for the installation of one Endurance E-3120 25m nacelle height, 9.6m blade radius (50KW) wind turbine located at:

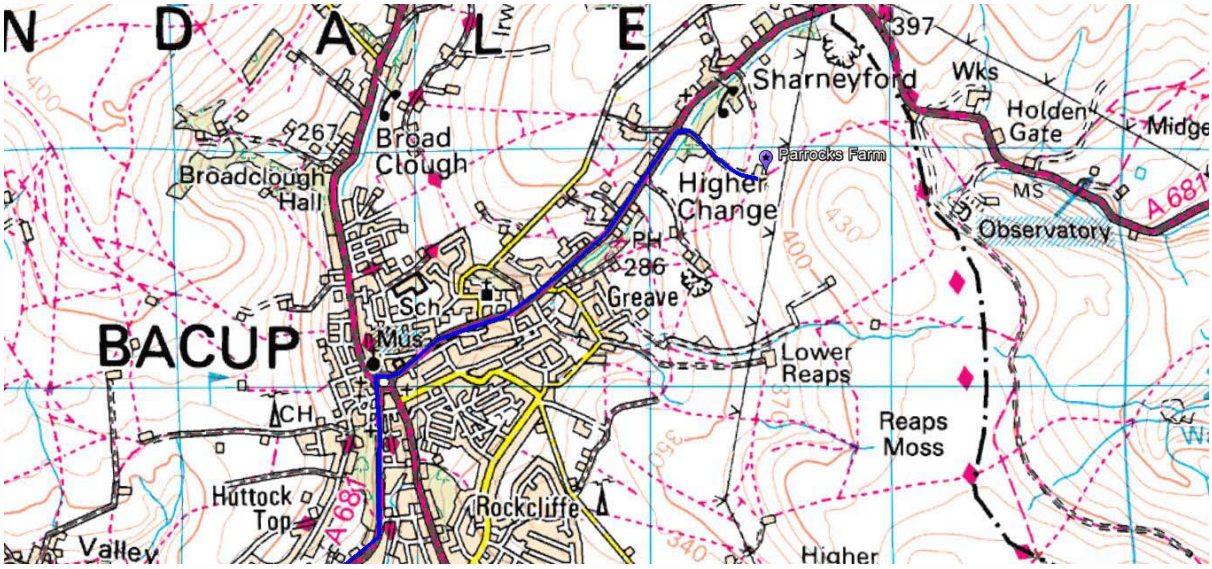
Parrocks Farm,

Bacup,

OL13 9UF

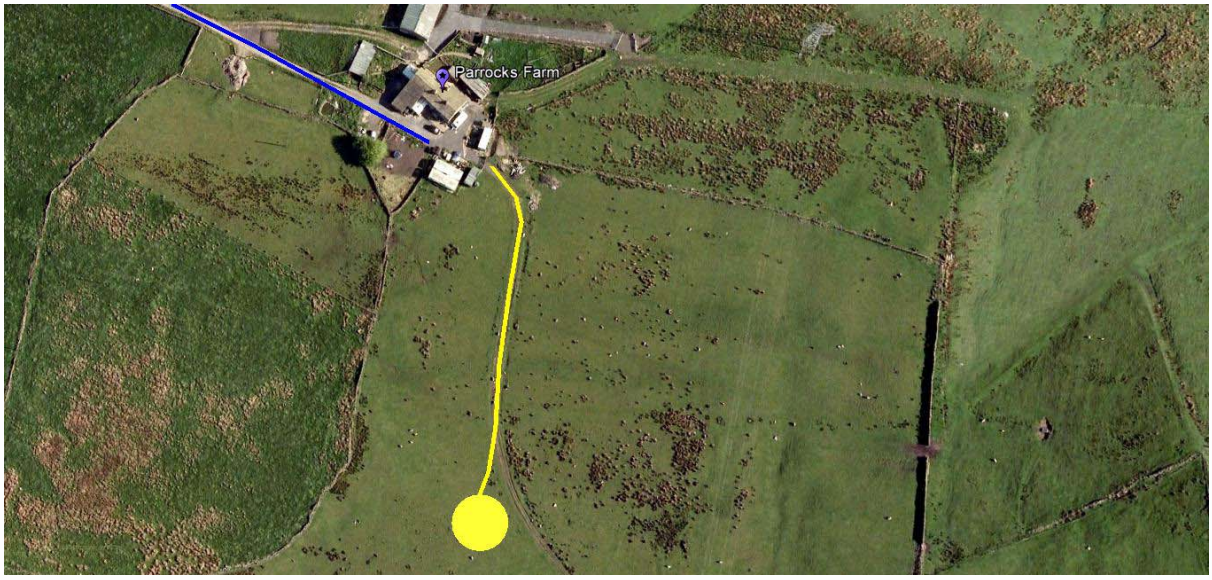
Transport of equipment to site

All of the wind turbine components will be transported to site using standard 40ft lorry haulage. In addition a normal road going crane and other smaller equipment will travel to the site. The route used shall be the A681 from Bacup to the turning into the track up to Parrocks Farm. This route and the track from the A681 to the farm has been assessed buy the haulage company and crane operator as suitable for the construction traffic.



Onsite routing

The farm yard at Parrocks, which has existing hard standing shall be used for temporary storage of the wind turbine components. From the farm yard to the turbine location is an existing track, this cuts across the field which is grazed land. An aluminium temporary track way will be installed to allow movement of heavy equipment and the main turbine components.



The pictures below are an example of the aluminium track way used to access the site, and a picture 6 months after construction has been completed at the same location. There is no noticeable long term impact.

LOCATION PLAN

NORTH

NOTES

- LAND OWNERSHIP BOUNDARY
- PROPOSED WORKS - WIND TURBINES
- PROPOSED CABLE RUN TO GRID CONNECTION
- NOISE - 105m
- MAXIMUM HEIGHT
- PROPOSED CALBE RUN TO FARM
- TURBINE FOUNDATION AND BASE
- HIDDEN FOUNDATION

TOTAL SITE AREA = 0.02 HECTARE

REV	DATE	DESCRIPTION	BY

REVISIONS

PROJECT TITLE
WIND TURBINE INSTALLATION AT PARROCK, BACUP

DRAWING TITLE
SITE PLAN

DRAWING NUMBER	REVISION	DATE	SCALE
02		MAR 12	1:1250

SHEET	STATUS
A0	PLANNING

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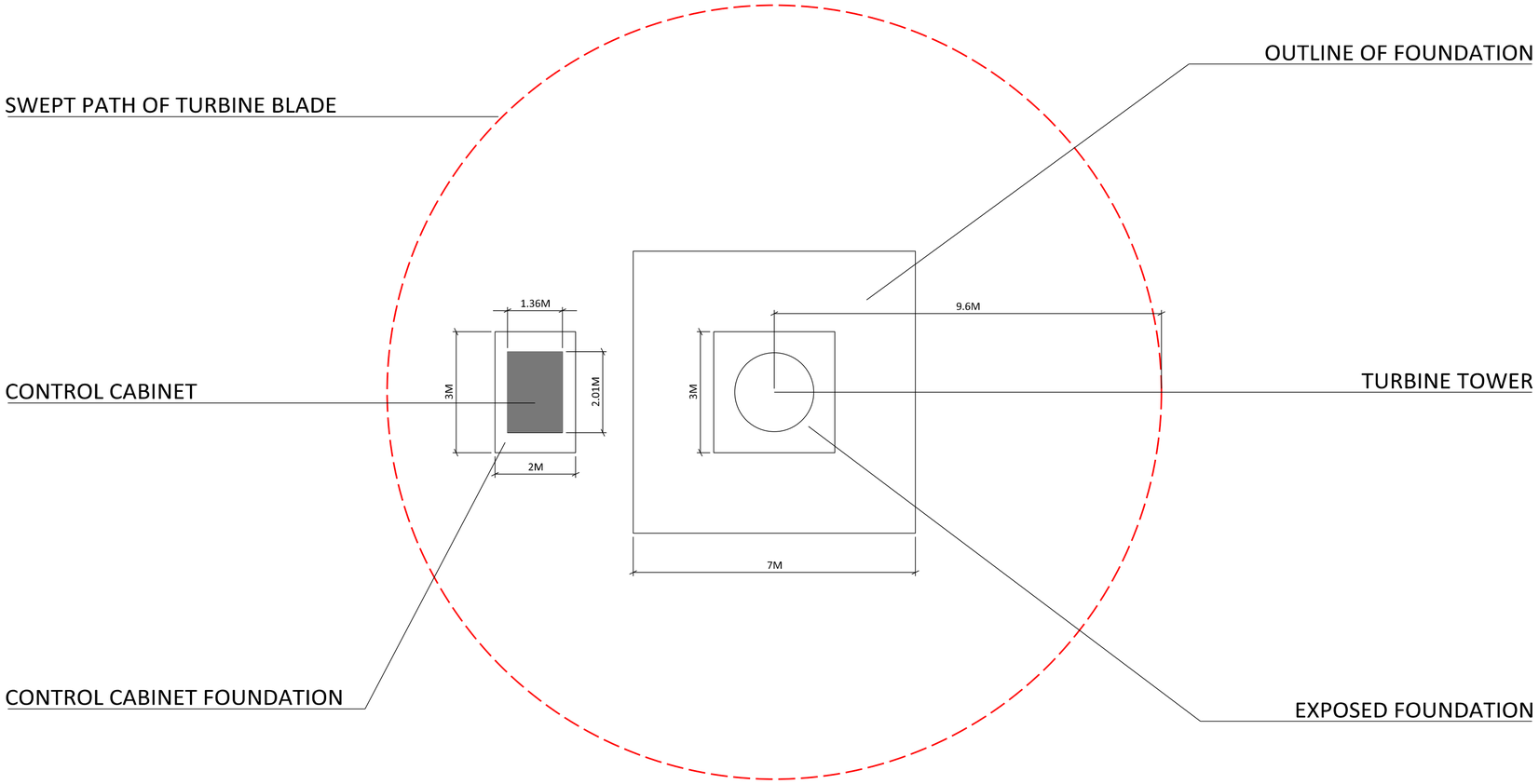
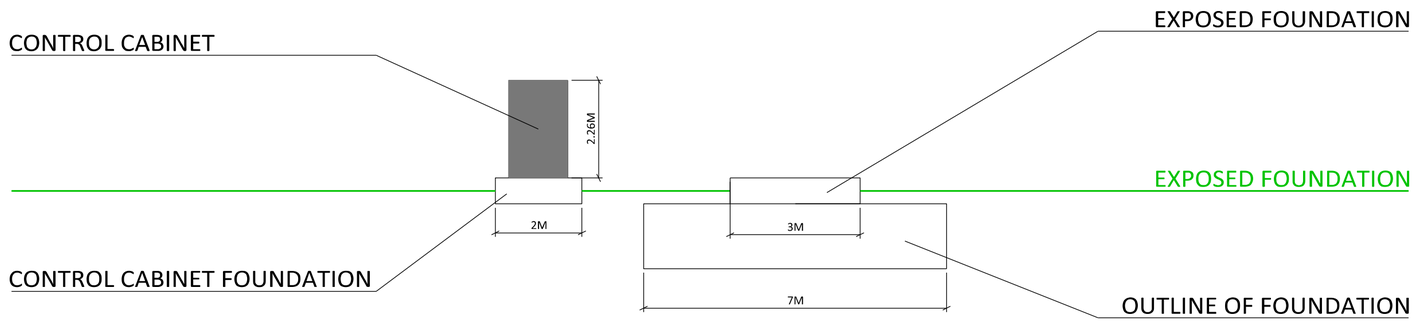


PLAN VIEW OF TURBINE FOUNDATION AND SEPARATE CONTROL CABINET



0 1 2 3 4 5 METRES

ELEVATION OF TURBINE FOUNDATION AND SEPARATE CONTROL CABINET

LOCATION PLAN

NOTES

REV	DATE	DESCRIPTION	BY
REVISIONS			

PROJECT TITLE
WIND TURBINE INSTALLATION AT PARROCK, BACUP

DRAWING TITLE
WIND TURBINE FOUNDATION DETAIL

DRAWING NUMBER	REVISION	DATE	SCALE
04		FEB 12	1:100

SHEET	STATUS
A2	PLANNING

DC21 Ltd, Dene House, North Road, Kirkburton, W. Yorks, HD8 0RW
Registered Number: 6855149
www.dc21group.com

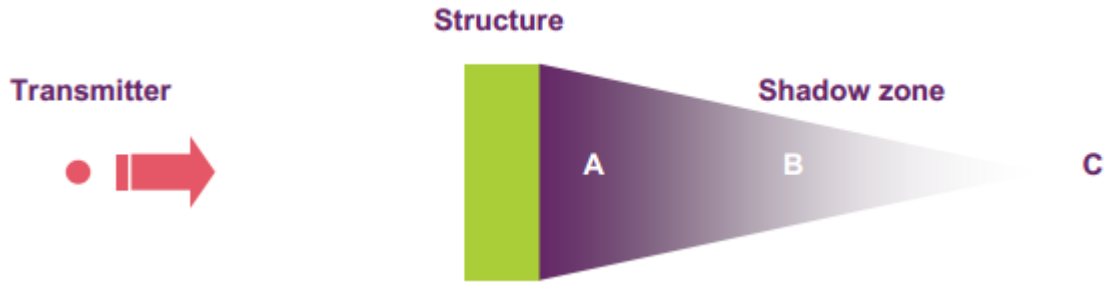
DC21 Holistic Energy Solutions

JOB NO. 11149

Transmitter Line of Sight Assessment: Parrock Farm

Rossendale Council have requested that an assessment be carried out to establish if the development of 1.No Endurance E-3120 wind turbine will have a significant impact on local Telecommunications. The concern is that a tall reflective structure (a wind turbine) may block signals to receivers.

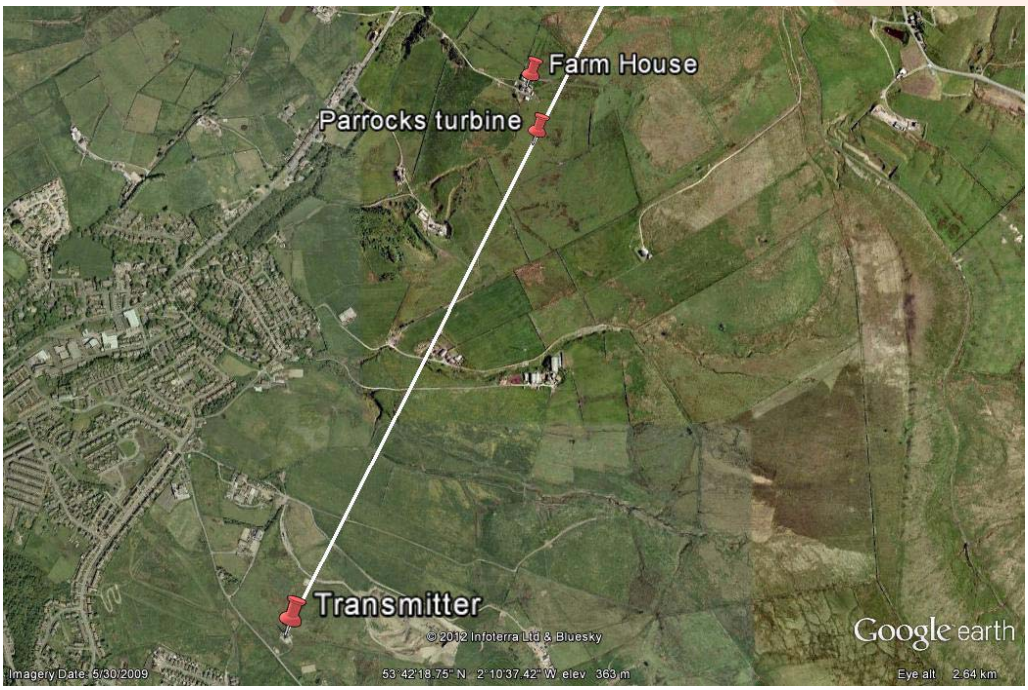
Signal Blocking occurs when a structure obstructs a transmitter's Line of Sight (or LOS). This blocking creates a shadow zone; inside which signal reception becomes weaker. The weakness is dependant upon the proximity of the receiver to the obstruction. Receivers closer to the obstruction will receive a weaker signal from the tower. Whereas receivers further away from the obstruction (but still in the shadow zone) will receive a much stronger signal – to the point where the obstruction's presence makes a negligible difference. According to Ofcom[1], any receiver at a distance of more than 1km from an obstruction, will lie outside the Main body of the Shadow Zone, hence being unaffected (see diagram below).

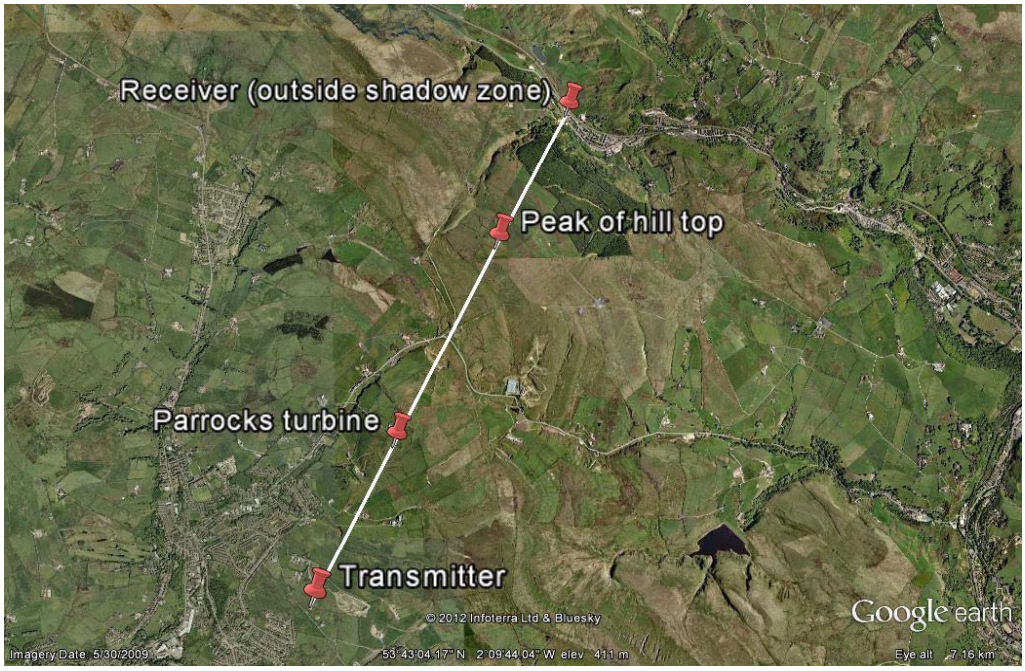


Where: Zone A is typically a few tens of metres from the obstruction and results in a large reduction in signal level. Zone B is typically a few hundred metres away and results in a less severe signal reduction. Zone C is typically at least 1km away from the obstruction and lies outside the shadow.

As shown in the images below, Parrocks turbine sits approximately 1.43km away from the nearest telecommunications transmitter (Ofcom[2]). Though Parrocks farm house is behind the turbine, it is not within the LOS, so it should still receive a signal. The nearest receiver behind the turbine in the LOS is approximately 3km away. The receiver is also behind a large hill. Hence there is no receiver directly in the LOS of the transmitter behind the turbine. In the case that the hill was not present, a receiver 2km outside the potential shadow zone should not be affected.

[1] http://licensing.ofcom.org.uk/binaries/spectrum/fixed-terrestrial-links/wind-farms/tall_structures.pdf
Ofcom: Tall structures and their impact on Broadcast and other Wireless Services.
[2] http://stakeholders.ofcom.org.uk/binaries/broadcast/guidance/tech-guidance/816898/granada_v2.3.pdf
Ofcom: UK Transmitter groups





DC21 Limited
Dene House, North Road,
Kirkburton, Huddersfield,
West Yorkshire HD8 0RW

Tel: +44 (0)1484 607 808
Fax: +44 (0)1484 605 514
Email: info@dc21group.com
Web: www.dc21group.com

Registered in England: 6855349
VAT No. 973 1573 03