

Photomontage



Proposed 2 No 11kw Gaia Wind Turbines at Bird Lane House Farm, Bird Lane, Oxspring, Sheffield, S36 8YD

Revision B - February 2nd 2012

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Date of Report: January 30th 2012

Report Reference: A1778 Revision B

Issued by: MJB

Checked by: NTB

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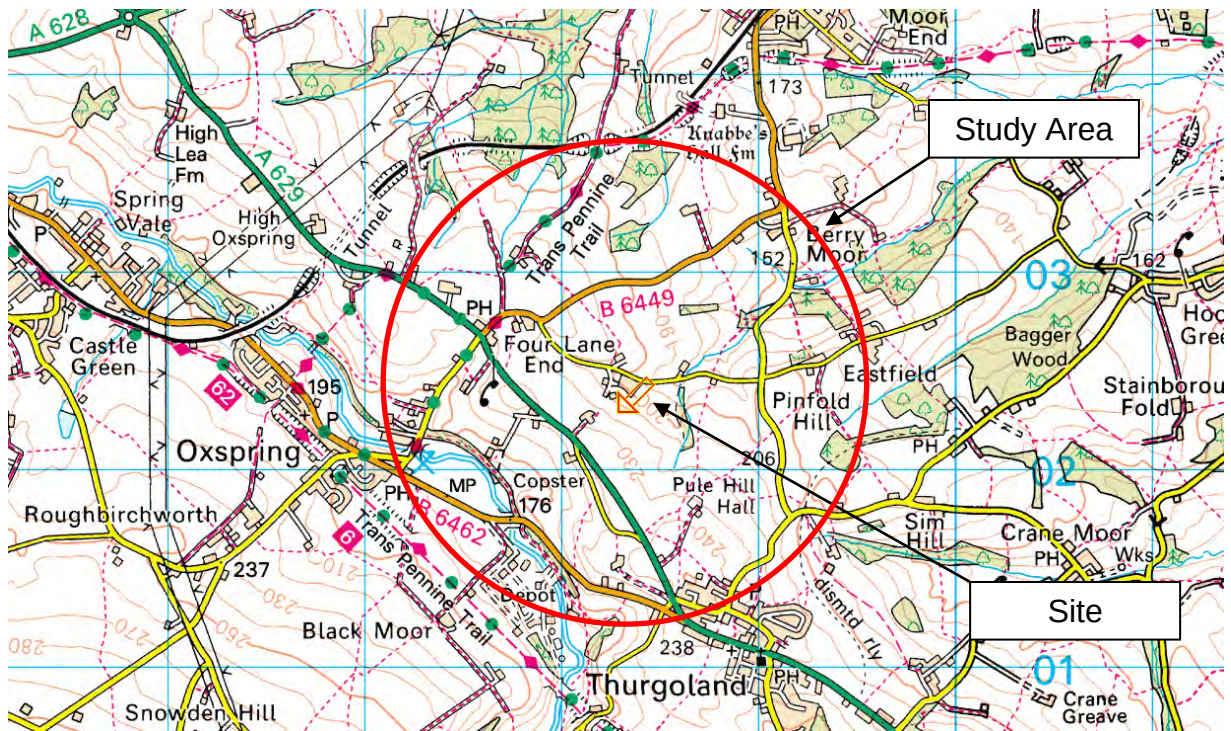
1 INTRODUCTION

- 1.1 Encon Associates were commissioned by Bowler Energy on behalf of Mr Mark Wartigg in response to a request from the Planning Officer at the local authority regarding the erection of 2 no 11kW wind turbines at Bird Lane House Farm, Oxspring, Sheffield, S36 8YD.
- 1.2 The Report has been produced in accordance with the Landscape Institute and IEMA publication "Guidelines for Landscape and Visual Impact Assessment" Second Edition and includes photomontages which have been produced at the request of the Planning Officer at the local authority.
- 1.3 This report seeks to "illustrate the proposed development within the 'real' landscape from known viewpoints using the visualisation technique of *photomontage*"

2 DESCRIPTION OF SITE AND SURROUNDING AREA

- 2.1 The application site consists of 32 acres used for rearing cattle for beef and turkeys for Christmas trade. The proposed turbines are located on land in proximity to Bird Lane House Farm which is off the A629 to the north of Sheffield and south west of Barnsley. It is a semi-urban/rural location at approximately 215m AOD located between Oxspring and Thurgoland.

Map 1 - Site Location & Study Area



- 2.2 The land on which the wind turbines are proposed to be located lies to the south-west of Stock within the ownership of the applicant shown edged blue in the aerial photograph overleaf. The location of the turbines are also illustrated.

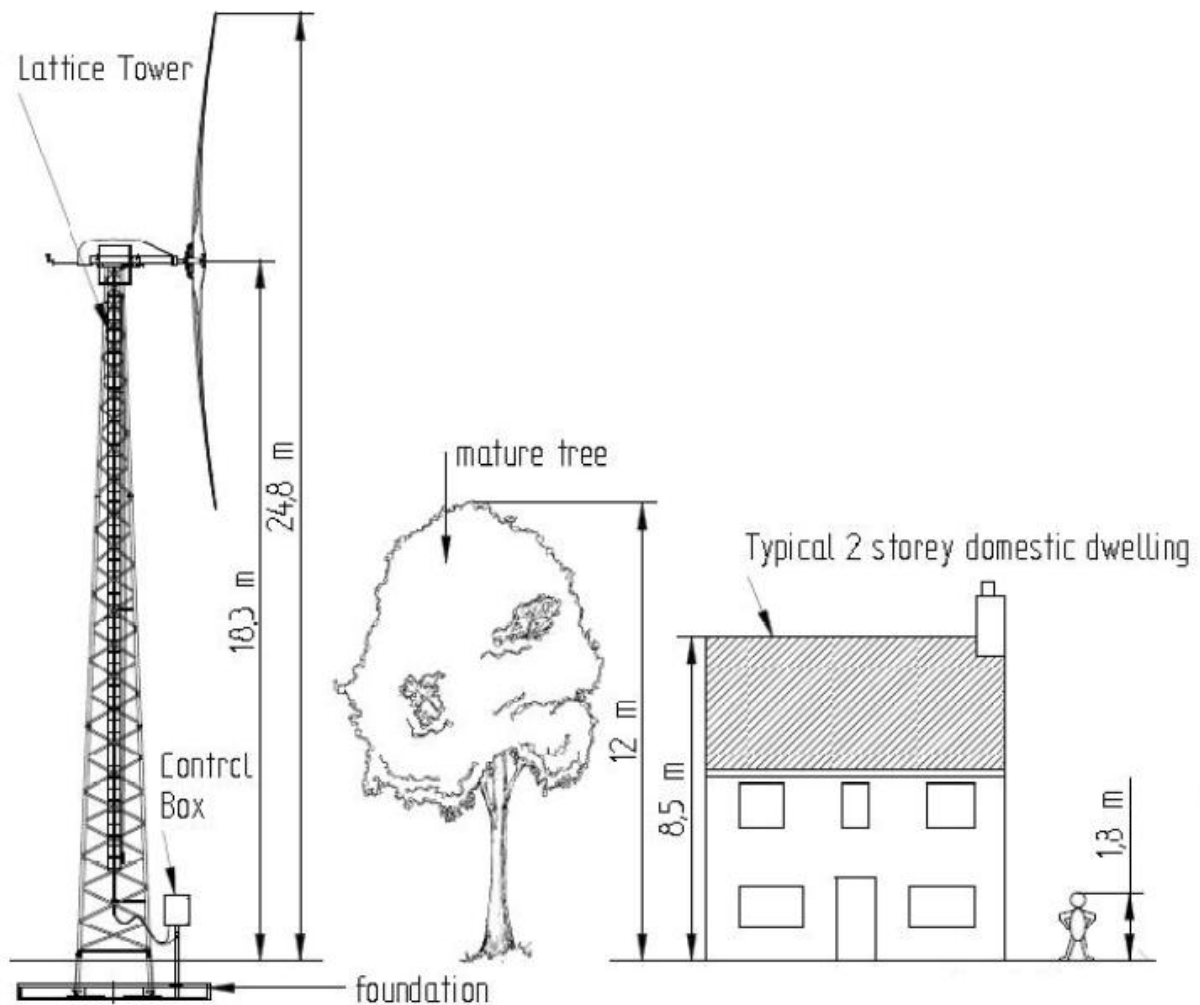


2.3 Turbine 1 is located 240m to the south of the Farmhouse. The nearest residential property beyond the applicants land is Highfield Farm which 250m to the north west. The location of Turbine 1 is 250m from the eastern field boundary, 40m from the western field boundary and 290m from the northern field boundary. The ground level at Turbine 1 is 215m AOD therefore the overall height of the tower is 233.3m AOD.

2.4 Turbine 2 is 100m to the south of Turbine 1. The closest residential property beyond the applicants land is 340m to the south east. The location of Turbine 2 is 150m from the eastern field boundary, 60m from the western field boundary and 330m from the northern field boundary. The ground level at Turbine 2 is 215m AOD therefore the overall height of the tower is 233.3m AOD.

3 PROPOSALS

- 3.1 The wind turbines proposed for this site are 2 no 18.3m high 11kw Gaia turbines.
- 3.2 The drawing below provides an illustration the comparative heights of the turbines:



- 3.3 A lattice tower is being proposed which is similar in appearance to an electricity pylon and helps to minimise the visibility when compared to a solid tower.

- 3.4 The photograph below shows an actual turbine in situ which is the same as the ones proposed for this site:



4 PHOTOMONTAGE METHODOLOGY

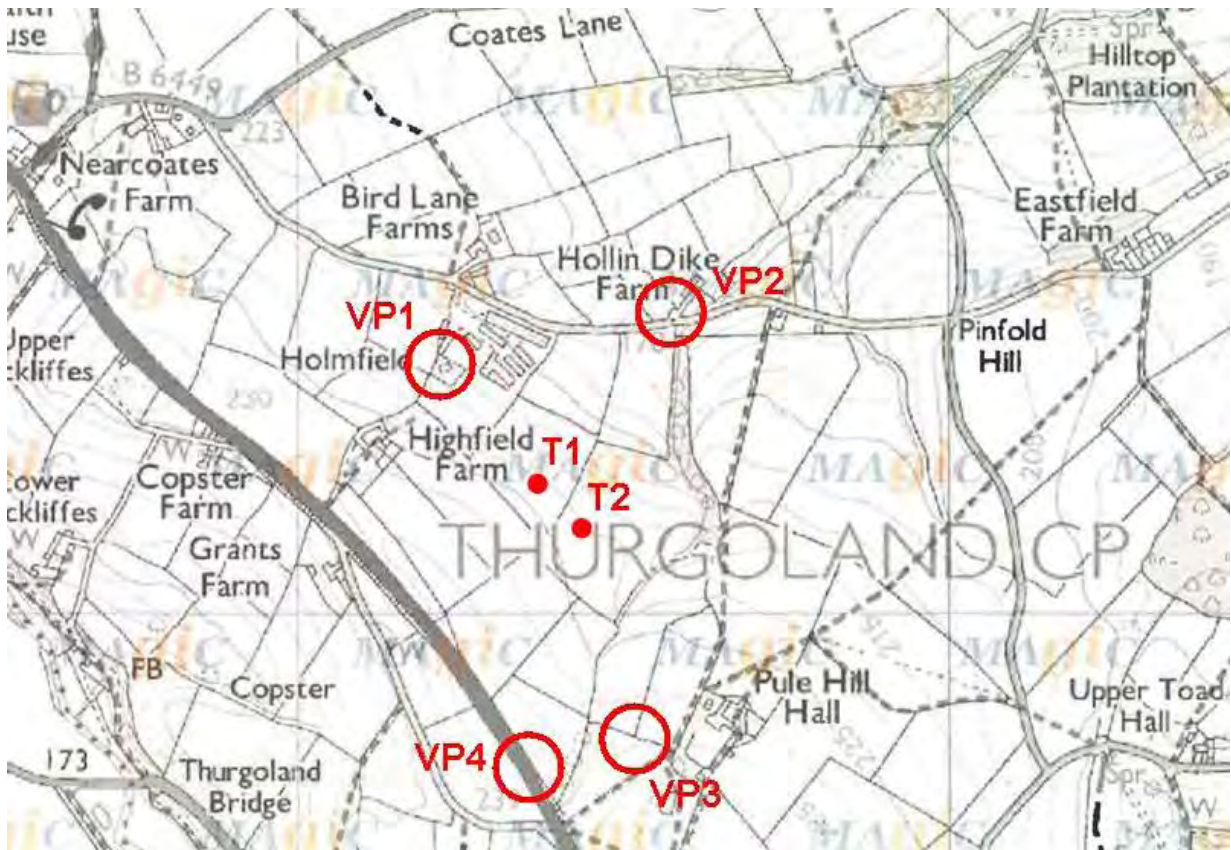
4.1 Photomontages have been requested by the Planning Officer in order assess the capability of the turbines to be satisfactorily integrated into the landscape.

4.2 The requirements are to provide photomontage from a selection of public viewpoints as follows:

1. Field boundary to the north west of the site, to the rear of bungalow at Holmfield
2. Close to the entrance to Hollin Dike Farm on Hopping Lane
3. In the field in vicinity of Pule Hill Hall
4. Field boundary to the South of the site off the A629

4.3 The location of the viewpoints are illustrated on the following map:

Map 2 - Viewpoint Locations



- 4.4 A 35mm digital film format with a 50mm lens has been used to take a photographic view towards the location of the proposed turbines from each of the locations illustrated above. For each of the viewpoints, the same focal length has been used ie no zoom has been applied to the photographs.
- 4.5 All viewpoints have been fixed at a known Ordnance Survey point and precise co-ordinates have been provided for the camera position. The angle of direction through the centre of the lens, the height of the camera above ground level and the Ordnance Datum at each viewpoint and the height above or below the ground level of each turbine has also been provided.

4.6 The location and height of a minimum of 3 reference points in the photographic view have also been recorded for example a visible building or transmission tower, or a known triangulation point, height of landform or landmark.

4.7 The following methodology is used to create the photomontage images:

- The proposed turbine is accurately modeled to scale from the manufacturers construction specification using the 3D modeling tool "Sketchup"
- The model is converted to a "collada file" which is exported directly to the specified longitude and latitude location for each of the proposed turbines.
- The 3D turbines are imported into Google Earth to the specified locations.
- The topographical map of the area from Google Earth is exported back into Sketchup.
- Features within the landscape are modeled to scale such as telegraph poles, pylons, fences, trees and buildings.
- The image is used as an overlay with the photograph from each viewpoint.

4.8 A 2D image of the turbines is placed into the view using Photoshop software and corresponds with the location and scale derived from the 3D model.

5 PHOTOMONTAGE RESULTS

- 5.1 The 'before' and 'after' photomontages have been produced to illustrate how the proposed turbines will look once erected in the landscape.
- 5.2 The results are included in Appendix A at the rear of this report.

6 CONCLUSION

- 6.1 The Report has been produced in accordance with the Landscape Institute and IEMA publication "Guidelines for Landscape and Visual Impact Assessment" Second Edition and includes photomontages which have been produced at the request of the Planning Officer at the local authority.
- 6.2 Photomontages have been produced in order to assess the capability of the turbines to be satisfactorily integrated into the landscape from 4 viewpoints requested by the Planning Officer.
- 6.3 The photomontages show the turbines are visible from vantage such as the A629 (view 4) and the public footpath close to Pule Hill Hall (view 3). However, from Hopping Lane the turbines become less visible or are not visible at all being obscured by the rolling topography and blocks of woodland. From closer positions the 'lattice' tower construction helps to blend the turbines with the skyline making them less visible. It should also be noted that some of the photos depict deciduous trees which were not in leaf at the time (view 1), thus enabling views of the turbines which would not be possible when the trees are in full leaf.

Signed for and on behalf of Encon Associates Limited



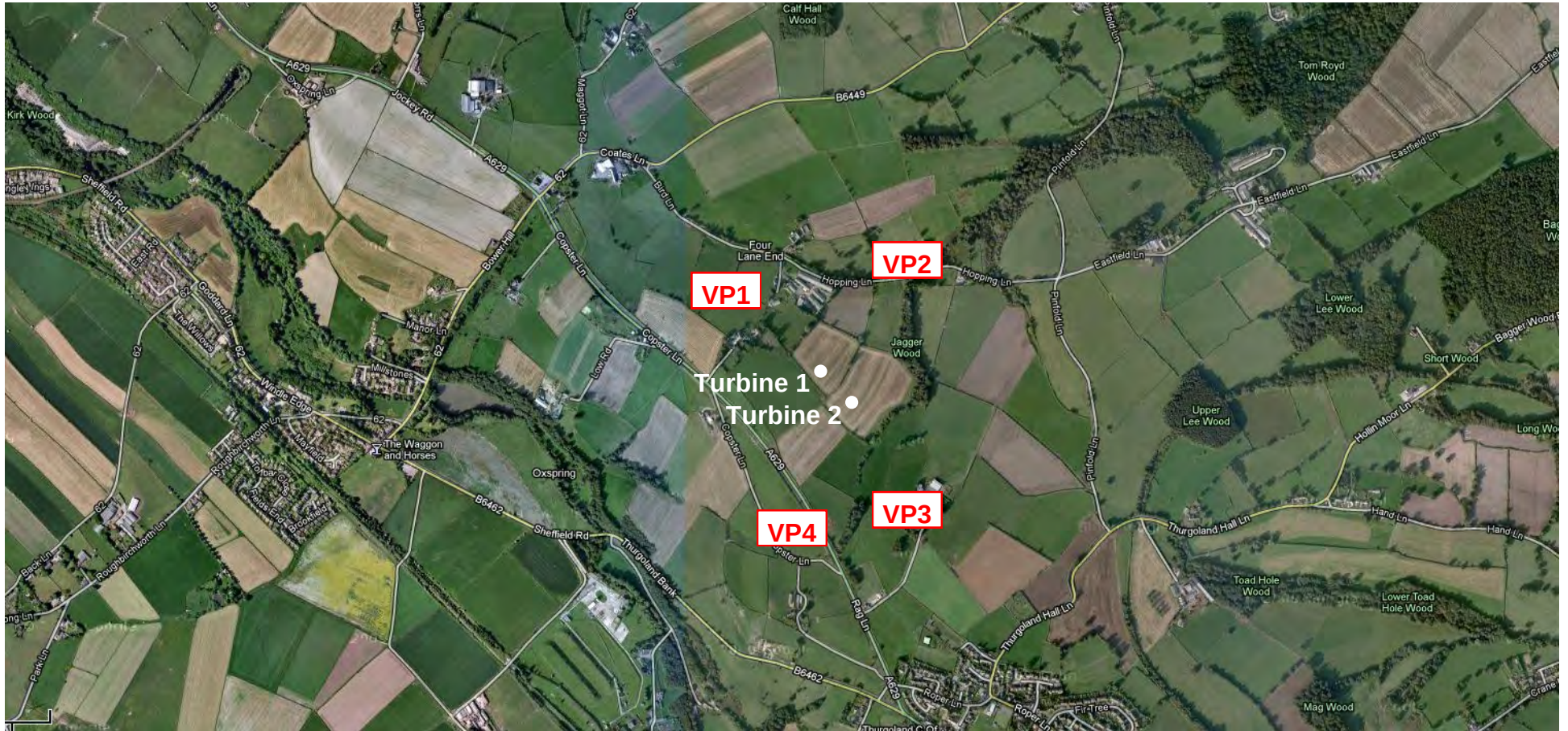
Mark Bentley BA (Hons), Dip LA, MCIHT

Landscape Architecture Division

Date: 31st January 2012

7 APPENDIX A - Location of Viewpoints

Location of Viewpoints - Google Earth



8 APPENDIX B - Photomontage

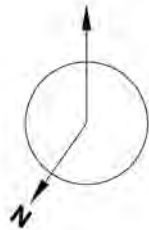
Title: Viewpoint 1 (before) **Location:** Field boundary to the North-west of the site to the rear of bungalow at Holmfield



Longitude: 53.517404
Latitude: -1.576002
OS Datum: 205m AOD
Camera ht: 206.6m AOD
Height difference to top of tower from eye level: 26.7m AOD below top of T1

Distance: 277m to T1
357m to T2

Angle of direction: 145° from N



Reference Points:

1. Garage verge height = 2.4m
2. Fence posts = 1.2m

Title: Viewpoint 1 (after) **Location:** Field boundary to the North-west of the site to the rear of bungalow at Holmfield



Longitude: 53.517404
Latitude: -1.576002
OS Datum: 205m AOD
Camera ht: 206.6m AOD
Height difference to top of tower from eye level: 26.7m AOD below top of T1

Distance: 277m to T1
357m to T2

Angle of direction: 145° from N



- Reference Points:**
- 1. Garage verge height = 2.4m
 - 2. Fence posts = 1.2m

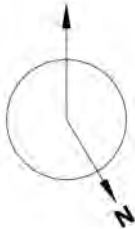
Title: Viewpoint 2 (before) **Location:** Field boundary to the North of the site close to Hollin Dike Farm



Longitude: 53.517843
Latitude: -1.570439
OS Datum: 180m AOD
Camera ht: 181.6m AOD
Height difference to top of tower from eye level: 51.7m AOD below top of T1

Distance: 348m to T1
372m to T2

Angle of direction: 149° from N

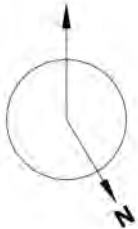


Reference Points: 1. Fence Post height = 1.2m
2. Telegraph pole = 6m

Title: Viewpoint 2 (after) **Location:** Field boundary to the North of the site close to Hollin Dike Farm



Longitude: 53.517843
Latitude: -1.570439
OS Datum: 180m AOD
Camera ht: 181.6m AOD
Height difference to top of tower from eye level: 51.7m AOD below top of T1
Distance: 348m to T1
372m to T2
Angle of direction: 149° from N



- Reference Points:**
- 1. Fence Post height = 1.2m
 - 2. Telegraph pole = 6m

Title: Viewpoint 3 (before) **Location:** In the field in vicinity of Pule Hill Hall



Longitude: 53.512031
Latitude: -1.571245
OS Datum: 235m AOD
Camera ht: 236.6m AOD
Height difference to top of tower from eye level: -3.3m AOD below top of T1

Distance: 388m to T1
313m to T2

Angle of direction: 21° from N



Reference Points: 1. Telegraph Pole = 6m
2. Fence Posts = 1.2m

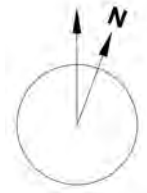
Title: Viewpoint 3 (after) **Location:** In the field in vicinity of Pule Hill Hall



Longitude: 53.512031
Latitude: -1.571245
OS Datum: 235m AOD
Camera ht: 236.6m AOD
Height difference to top of tower from eye level: -3.3m AOD below top of T1

Distance: 388m to T1
313m to T2

Angle of direction: 21° from N



- Reference Points:**
- 1. Telegraph Pole = 6m
 - 2. Fence Posts = 1.2m

Title: Viewpoint 4 (before) **Location:** Field boundary to the South of the site



Longitude: 53.511809
Latitude: -1.573896
OS Datum: 236m AOD
Camera ht: 237.6m AOD
Height difference to top of tower from eye level: -4.3m AOD below top of T1

Distance: 445m to T1
363m to T2

Angle of direction: 7° from N



Reference Points: 1. Telegraph Pole = 6m
2. Fence Posts = 1.2m

Title: Viewpoint 4 (after) **Location:** Field boundary to the South of the site



Longitude: 53.511809
Latitude: -1.573896
OS Datum: 236m AOD
Camera ht: 237.6m AOD
Height difference to top of tower from eye level: -4.3m AOD below top of T1

Distance: 445m to T1
363m to T2

Angle of direction: 7° from N



Reference Points: 1. Telegraph Pole = 6m
2. Fence Posts = 1.2m