



Landscape and Visual Impact Assessment of a single Wind Turbine 36.6m to hub, 24m rotor diameter, 49m to blade tip on land at Dyson Cote Farm, Penistone, South Yorkshire.

July 2014

DISCLAIMER

- a. Except where otherwise stated in this report, any information provided by third parties (and which is identified as such) has not been independently verified by us. We publish this content as supplied to us and we are not responsible for its accuracy or completeness. You must take appropriate steps to verify this information before acting or relying upon it.
- b. This report has been prepared by us with reasonable skill and care in accordance with our terms of business. No other warranty, express or implied is made in relation to the accuracy or completeness of this report, or any use of the information, apparatus or products or processes disclosed in this report. We shall have no liability in respect of any errors or omissions in the report, except as set out in our terms of business. Any recommendations, opinions or findings stated in this report are based on the circumstances and facts as they existed at the time we prepared this report and any such information is subject to change without notice. The content of this report is solely for your use and you agree not to disclose the report or any part of it, to any third party without our prior written consent (such consent will not be reasonably withheld). Any such third party must interpret or rely on this report at their own risk.

DC21 Ltd
Dene House
North Road
Kirkburton,
Huddersfield
HD8 0RW

01484 607808
www.dc21group.com

This report is prepared in accordance with the guidelines in 'Guidelines for landscape and Visual Impact Assessment. Published by The Landscape Institute & The Institute of Environmental Management & Assessment ' 3rd Edition & 'Visual Representation of Windfarms: Good Practice Guide'. Published by Scottish Natural Heritage and other guidance

CONTENTS

- 1. Scope and Aims**
- 2. Proposed Development**
- 3. Landscape and Visual Impact Assessment**
 - 3.1 Landscape Character and Sensitivity Assessment**
 - 3.1.1 Methodology**
 - 3.1.2 Site Specific Assessment and Conclusions**
 - 3.1.3 Landscape Character and Sensitivity Conclusions**
 - 3.2 Visual Impact Assessment**
 - 3.2.1 Methodology**
 - 3.2.2 Viewpoint Assessment Conclusions**
- 4. Conclusion**

APPENDICES

- | | |
|--------------------|--|
| Appendix 1 | 5km ZTV |
| Appendix 2 | 5km Viewpoint map |
| Appendix 3 | Viewpoint 1, existing, photomontage and wireframe Projection. |
| Appendix 4 | Viewpoint 2, existing, photomontage and Wireframe Projection. |
| Appendix 5 | Viewpoint 3, existing, photomontage and Wireframe Projection. |
| Appendix 6 | Viewpoint 4, existing, photomontage and Wireframe Projection. |
| Appendix 7 | Viewpoint 5, existing, photomontage and Wireframe Projection. |
| Appendix 8 | Viewpoint 6, existing, photomontage and Wireframe Projection. |
| Appendix 9 | Viewpoint 7, existing, photomontage and Wireframe Projection |
| Appendix 10 | Viewpoint 8, existing, photomontage and Wireframe Projection |
| Appendix 11 | Viewpoint 9, existing, photomontage and Wireframe Projection |
| Appendix 12 | Viewpoint 10, existing, photomontage and Wireframe Projection |
| Appendix 13 | Viewpoint 11, existing, photomontage and Wireframe Projection |
| Appendix 14 | Viewpoint 12, existing, photomontage and Wireframe Projection |

1. Introduction

It is accepted that the consequence of locating a wind energy development is that it will have impact and resultant degrees of effect on landscape, the landscape & visual amenity, neighbouring landscape character areas and the receptors therein.

The aim of the Landscape and Visual Impact Assessment is to identify, analyse and report all predicted effects caused by the proposed wind energy development upon a baseline area. Potential effects resulting from the construction and operation of a wind energy development are dependent on the scale of development, site specifics and the characteristics/sensitivity of area receptors. The study and assessment of all potential effects is to enable identification and rating of predicted effects:

Assessment of landscape effects considers:

- Elements: Individual landscape components (e.g. hills, trees, buildings) which are quantifiable and easily described
- Characteristics: Combination of elements that contribute to the character and area;
- Character; The distinct and recognisable pattern of landscape elements that occur consistently in a particular type of landscape and how this is perceived by people. It reflects the particular combination of geology, landform, vegetation, land use and settlement pattern. Each character area has a particular distinctiveness and 'sense of place' and can be appraised at a range of scales (national, regional, district and local).

Visual Impact is very much a subjective issue. What some people may class as an intrusive and significant visual impact, others may see the opposite. Methods, techniques, assessment and presentation are constantly evolving.

Each LVIA should be assessed on its own merits and it should be proportionate to the size and scale of the project.

DC21 have undertaken this LVIA study which is intended to form part of an application for the determination of the erection of one wind turbine 36.6m to hub, 24m rotor diameter, 49m to blade tip on land near Dyson Cote Farm, Penistone. The report identifies the impact of this turbine on the receiving landscape through photography and other methods.

Turbine Grouping is classified as the following:

Single	1 Turbine
Small Group	Up to 3 Turbines
Small Wind Farm	Up to 5 Turbines
Medium Wind Farm	6 to 10 Turbines
Large Wind Farm	11 to 20 Turbines
Very Large Wind Farm	21 to >30 Turbines

Turbine Size is classified as the following:

Very Small	25m or less to Blade Tip (approx power = 12Kw)
Small	25 to 50m to Blade Tip (approx power = 0.50KW)
Medium	50 to 90m to Blade Tip (approx power = 1MW)
Large	90 to >130m to Blade Tip (approx power = 2.5MW >)

This Landscape and Visual Impact Appraisal (LVIA) are intended to support the planning application for a single wind turbine on land at grid reference: 425736 // 400302 and this position is illustrated in Figure 1.



Figure 1: Turbine Location

The aim of this report is to assess the significance of effect of the proposed development upon landscape character and visual amenity. This assessment has been made via a process of systematic classification based on a series of criteria which are detailed within Section 3 of this document and with regard to extant good practice guidance on the preparation of landscape and visual impact assessments, landscape character assessments and the visual representation of wind energy developments.

In summary this report will:

Identify and describe the character and sensitivity of the receiving landscape

- Identify and describe a series of visual amenity receptors within the landscape
- Describe the magnitude of impact and significance of effect on landscape character and the selected visual amenity receptors.
- Provide conclusions on the overall landscape and visual effects of the proposed development.

The existing condition of landscape character and of the visual amenity receptors assessed has been established through a process of desk top and site surveys. Reference has been made to a range of material including:

- Ordnance Survey map data
- Natural England. National Character Area Profile 37: Yorkshire Southern Pennine Fringe
- Barnsley Borough Landscape Character Assessment (2002)

2. PROPOSED DEVELOPMENT

The proposed development would consist of a single 3 bladed wind turbine; 36.6m to hub height. This type of turbine is considered by wind industry experts and landscape planning professionals to be small in scale.

The wind turbines would be white in colour - RAL 9016 'Traffic White'. The coatings of the turbine blades, hub, nacelle and tower have been carried out to industry standards in order to minimise reflected light. A small cabinet would be installed at the base of the turbine tower to house the turbine control system.

All cables linking the proposed turbine to the National Grid would be buried. Temporary tracks would be created to support traffic access over the brief construction phase. These would then be removed with no resultant loss of land or land use. The proposal would have a lifespan of 25 years after which the turbine could be removed, the foundations grubbed up and the land returned to its former use.

The precise siting of the proposed turbine has been carefully selected, balancing considerations such visual impact, optimum exploitation of the wind resource, ease of grid connection and ease of access.

As a useful comparison, the table below shows the heights of other commonly found infrastructures.

Landscape Element	Typical Height (m)
Single Storey House	5
Two Storey House	8.5 - 10
Farmyard Grain Silo	10
Telegraph Pole	10.5
Mature Tree	15
Pylon	35 - 50

3. LANDSCAPE AND VISUAL IMPACT ASSESSMENT

3.1 Landscape Character and Sensitivity Assessment

3.1.1 Methodology

This section of the report sets out the predicted significance of effect of the proposal on landscape character.

Landscape character is an amalgamation of natural, aesthetic, perceptual and cultural factors all of which combine to create a common 'sense of place' which can be used to categorise the landscape into definable units at the local, regional and national level.

Due to the small scale of the proposed turbines, the scope of the landscape character and sensitivity assessment will be limited to this LCT.

Landscape Resources are defined as:

Landscape fabric	Physical landscape elements present within the landscape such as landform, land cover, boundary features, trees and woodland, that make up the landscape we see, and that may be affected during the construction and operation of the proposed development
Landscape character	The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. It creates the particular sense of place of different areas of the landscape
Landscape quality (or condition)	A term based on judgements about the physical state of the landscape, and about its intactness, from visual, functional and ecological perspectives. It also reflects the state of repair of individual features and elements which make up the character in any one place.
Landscape value	The intrinsic value that is attached to a landscape, often (but not always) reflected in designation or recognition. It expresses national or local consensus as to the (degree of) importance of a landscape, for reasons including landscape quality, scenic (or visual) quality, wildness and tranquillity, natural and cultural heritage interests, cultural associations and recreational opportunities.
Amenity	The benefits afforded to people by a particular area in terms of what is seen and experienced. Amenity includes not just visual amenity and views but also the experience of landscape in its widest sense. Different groups of people such as walkers, residents and motorists may have different amenity expectations.

Landscape Quality is defined as:

For the purpose of this proposal an assessment of landscape quality has been carried out based on a five point scale and compared against the following criteria:

Highest Quality	Contributing together to create a stimulating composition which is aesthetically and scenically outstanding; or which is an outstanding example in the area of a well cared for “pure” and “undiluted” landscape or set of features;
Very attractive	Contributing together to create a composition which is aesthetically and scenically pleasing; or which is a good example in the area of a reasonably well cared for “pure” landscape or set of features;
Good Landscape	Contributing together to create a composition which is aesthetically and scenically unremarkable; or an area or set of features which is neutral or of mixed character;
Ordinary Landscape	Contributing together to create a composition which is aesthetically and scenically poor; or which is an example of an un-stimulating landscape or set of features; or with few or poorly related/ unrelated features;
Poor Landscape	Contributing together to create a composition which is aesthetically and scenically very poor; or which is an example of monotonous, unattractive, visually conflicting or degraded landscape or set of features.
Very poor	Degraded landscape structure, characteristic patterns and combinations of landform and land cover are masked by land use; mixed land use dominates; Lack of Management/intervention has resulted in degradation; extensive detractive features
Damaged Landscape	Damaged landscape structure or where single land use dominates. Where the land is disturbed or derelict and requires treatment* detracting features dominate.

- Derelict means land so damaged by industrial or other development that it is incapable of beneficial use without treatment.

The landscape is classed as: Good Landscape

Note: The criteria used in the analysis of landscape quality are related to landscapes in the local context. Areas of landscape quality do not necessarily correlate directly with landscape character areas or statutory designated sites as defined by the statutory agencies or local planning authorities.

The sensitivity of a landscape varies according to its key characteristics and the values placed on these. Table A sets out the proposed approach to determining sensitivity within the landscape unit identified. The assessment of each characteristic may produce conflicting results therefore a degree of professional judgement has been used to determine the overall sensitivity of landscape character as being Very High, High, Medium or Low .

Study Area

The extent of the study area for this landscape assessment has been set at a 5km radius from the turbine blade tip; this reflects the limit of potential visual significance for this specific single turbine proposal. Visual impacts beyond 5km are not considered to be significant given the small scale of the proposed turbine and the constraints of landform and vegetation cover.

A ZTV drawing has been prepared for the 5km study area and this is presented in Appendix 2. The 5km study area is divided into three zones of visibility marked by concentric circles:

- ZONE 1: Visibility within 1000m radius of the proposed turbine (Near Distance Views)
- ZONE 2: Visibility between 1000m and 2500m of the proposed turbine (Middle Distance Views)
- ZONE 3: Visibility between 2500->6000m of the proposed turbine (Far Distance Views)

This theoretical zone of visibility takes the screening effect of topography into account but not that provided by structures or land cover; it therefore offers a worst case scenario assessment.

Key Characteristic	Attributes likely to indicate higher sensitivity to wind energy development	↔	Attributes likely to indicate lower sensitivity to wind energy development
Landform and Scale	Complex, dramatic or rugged landform. Small-scale landform/ land-cover/built development	↔	Simple, smooth and convex or flat and uniform landform. Large-scale landform/land cover/ built development
Landcover	Complex or irregular land cover patterns/smaller field sizes	↔	Simple, regular patterns with sweeping lines and extensive areas of consistent ground cover
Skylines	Prominent, undeveloped or distinctive skylines with important landmark features.	↔	Landscape with no prominent or low skylines with no distinctive backdrop or context
Human Influence	Perceived 'wild' landscapes absence of man-made elements, buildings or structures, traditional or historic settlements	↔	Frequency of man-made elements (e.g. utility infrastructure or industrial elements), brownfield or industrial landscapes, landscapes already affected by built and contemporary structures (e.g. pylons, masts, cranes, silos) provided there are no visual conflicts where the structures are seen in close proximity to one another
Perceptual Qualities (Remoteness/Tranquillity)	Physically or perceptually remote, peaceful or tranquil, little or no evident movement	↔	Close to visible audible signs of human activity, prominent movement
Visibility and views	Extensive close and mid-range views from scenic routes, well-known tourist viewpoints.	↔	Landscapes visually contained by topography, buildings, trees or woodlands with limited inward and outward views
Scenic Quality	Landscapes of distinctive character valued for their high scenic quality. Nationally designated landscape.	↔	Landscape of low-medium scenic quality unlikely to have a scenic quality designation

Table A: Criteria for Assessing Landscape Sensitivity to Wind Energy Development

The magnitude of predicted landscape change within the landscape unit identified is based on the criteria set out in Table B.

Magnitude	Description
Very Large	The development would form a dominant landscape element or would result in a total loss or major change to key landscape characteristics.
Large	The development would form a prominent landscape element, or would result in a substantial alteration to key landscape characteristics.
Medium	The development would form a conspicuous landscape element or would result in a partial loss of or alteration to key landscape characteristics.
Small	The development would form an apparent, small landscape element or would result in a minor alteration to key landscape characteristics.
Very Small	The development would form an inconspicuous minor landscape element, or would result in a very minor alteration to key landscape characteristics.
Negligible	The development would be a barely perceptible landscape element, or would not change the key landscape characteristics.

Table B: Definition of Magnitude of Change (Landscape)

The significance of landscape effect has been determined by assessing landscape sensitivity against magnitude of change (as set out in Tables A and B above). The outcomes of this assessment are set out in Table C. Table C is given as a guide only and the final assessment of significance of landscape effect may take into account any modifying factors based on professional judgement.

Magnitude of Change	Sensitivity			
	Very High	High	Medium	Low
Very Large	Major	Major	Major	Major/Moderate
Large	Major	Major	Major/Moderate	Moderate
Medium	Major	Major/Moderate	Moderate	Moderate/Minor
Small	Major/Moderate	Moderate	Moderate/Minor	Minor
Very Small	Moderate	Minor	Minor/Negligible	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Table C: Significance of Landscape and Visual Effects

High	Total loss of or major alteration to key elements/features/characteristics of the baseline i.e. pre-development landscape or view and-or introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape
Medium	Partial loss of or alteration to one or more key elements/features/characteristics of the baseline i.e. pre-development landscape or view and-or introduction of elements that may be prominent but may not necessarily be considered to be substantially uncharacteristic
Low	Minor loss or alteration to one or more key elements/features/characteristics of the baseline i.e. pre-development landscape that may not be uncharacteristic when set within the attributes of the receiving landscape
Negligible	Very minor loss or alteration to one or more key elements/features/characteristics of the baseline is. pre-development landscape or view and-or introduction of elements that are not uncharacteristic with the surrounding landscape e.g. a 'no change' position

Table D: Determination of magnitude of impact on landscape

The proposal is located in National Character Area: 37 Yorkshire Southern Pennine Fringe

The key characteristics for NCA 37 are:

A transitional landscape dissected by steep-sided valleys, dropping from the high gritstone hills in the west to lower land in the east, and thus creating an important backdrop to the many industrial towns and villages within and beyond the NCA.
Sandstones and gritstone beds of Millstone Grit (Namurian) age underlying smooth hills and plateaux in the west. These are overlain in the east by beds of sandstone, siltstone and mudstone of Coal Measures age.
Rivers creating a deeply dissected landscape, with high plateaux cut by steep-sided valleys, and fanning out in 'fingers' across valleys of the NCA.
Treeless hill tops with tracts of rough grazing and extensive areas of enclosed pasture to the west, but with broadleaved woodland on steeper valley sides, giving the impression of a well-wooded landscape, especially to the north and west of Sheffield.
Predominantly pastoral farming, especially in western areas, with a shift to more arable land in the drier eastern areas.
Boundary features that change from distinctive patterns of drystone walls on the upland hills, to hedgerows becoming the predominant field boundary in the east.
Close conjunction between rural landscapes and the rich industrial heritage of the urban areas, including settlements associated with the textile industry, with large mills and tall chimneys, and large factories and forges associated with the iron, steel and manufacturing industries.
Urban development constrained within valley floors and up side slopes, with location and layout strongly influenced by the landform.
Industrial wealth revealed in magnificent civil architecture in town centres, notably Bradford, Halifax, Hud-
Evidence of bronze-age and Roman habitation still present on uplands, and old pack-horse routes that once
Extensive and dramatic views from higher land out over lower-lying land to the east, even from within urban
Several reservoirs contained within narrow valleys contributing a distinct character as well as providing
Small patches of fragmented priority habitats providing important refuges locally for wildlife. Grassland mosaics are particularly important in supporting waders and the twite that breeds on adjacent moorland areas;
In places a dense network of roads and urban development, with many road, rail and canal routes crossing the NCA, and a high density of footpaths throughout.

The document Barnsley Landscape Character further defines the area as F2: Penistone Upland Farmland and the key characteristics are:

Stepped landform rising to 364m at Hartcliffe Hill
Fields of pasture comprising small to medium geometric field units strongly defined by distinctive stone walls.
Linear or circular beech plantations stand out on the skyline, sometimes enclosed by stone walls
Unimproved pasture with scrub on steeper slopes
Scattered farmsteads of local light coloured stone.
Penistone is the largest settlement in the area, lying on the edge of the Don Valley. Isolated trees form silhouettes against the skyline.
Pylons and power lines are visually prominent on the skyline.
Single lane rural roads criss-cross the open countryside, bounded by stone walls
Disused industrial quarries, shafts and mines indicate the historical importance of the area for the extraction of coal and stone.
Panoramic views over adjacent river valleys and towards the open moorland of the Peak.
The western boundary of the area is defined by the open Moorland of character area <i>Thurlstone and Langsett Unenclosed Moorland</i> .
The underlying solid geology of this area is formed by complex beds of the Lower Carboniferous, comprising bedded sandstones, shale's and mudstones with intermittent coal seams. The area has an upland character which is enhanced by its proximity to and views across unenclosed Moorland.

3.2 Landscape Impact Assessment

Baseline Description

3.2.1 Immediate Site

The site of the proposed development is situated to the southwest of Dyson Cote Farm. The proposal stands at 425736, 400302 at an AOD of approximately 291m. The maximum elevation of the landscape nearby is 300m AOD. The topography of the proposed site area is one of regular shaped fields bounded by hedges and trees, the land falls sharply away to the south to its lowest elevation of 166m. There is a small area of woodland to the north of the proposed site which offers partial screening to views from that direction.

The geology of the immediate area is: Bedrock; Pennine Lower Coal Measures, Mudstone, Siltstone, Sandstone, Coal, Ironstone and Ferricrete. Superficial Deposits: Alluvium, Silt and Sand.

3.2.2 Wider Area

The area around the site is lightly populated, built structure in the main being farms and isolated residential properties. The area is crossed by a series of linear power lines and associated vertical infrastructure which dominate the landscape. There are a number of reservoirs in the area. The site of the proposed development is situated 2.8km to north-east of Stocksbridge and 3.17km to the south-east of the town of Penistone. The Peak Park is approximately 2.98km to the south-west.

3.2.3 Major Roads and Public Rights of Way

Nearby public highways are the A616 (T) which is 930m to the south and at an elevation some 90m lower than the proposal.

The Barnsley Boundary Walk passes in an approximate east-west direction 600m to the south and at a much lower elevation in the landscape. The Trans-Pennine Trail is approximately 2.04km to the north-east and the Penistone Boundary Walk 2.07km to the northwest. There are other footpaths nearby to the site.

3.2.4 Cultural Heritage

Examination of the OS1:25k local map indicates no archaeological surface or sub-surface assets nearby. Examination of English Heritages Web Site shows no assets nearby.

3.2.5 National/International quality effects

The Baseline assessment reveals that the site is in the vicinity of the Peak Park, but not near any other statutorily protected areas, planning zones or other features of National or International significance and therefore at this level the proposal will not cause any likely adverse or beneficial effects at this level. Impact at this level though is considered to be **Moderate**.

3.2.6 Regional quality effects.

There will be some visual impact at a moderate level to the Peak Park and recreational areas around the reservoirs in the valley base. However in the case of the reservoirs the impact layer is considered low/moderate due to elevation differences.

3.2.7 Local & Site Level effects

3.2.7.1 Landform

The small footprint of the proposed turbine base along with associated infrastructure, crane platform and being able to fully make right the disruption caused by the temporary works involved in the construction of the site indicates that long term physical effects arising through landform change is considered to be **negligible**

3.2.7.2 Land Use

The small footprint of the proposed turbine base and other associated infrastructure will allow the continuous, almost uninterrupted use of the surrounding land. Land use impact is **negligible**

3.2.7.3 Land Cover

The small footprint of the turbine platforms and infrastructure will not have an impact on the Land Cover it is therefore considered to be **negligible**

3.2.7.4 Landscape Features

<i>Grassland/Pasture</i>	Negligible. The small footprint of the turbine base would have a minimal reduction in farm resource
<i>Woodland</i>	No Impact. The siting of the turbine and other infrastructure - permanent & temporary will avoid any impact on existing trees or woodland
<i>Hedgerows</i>	Negligible. The siting of the proposal and other associated infrastructure will avoid impact on existing hedgerows
<i>Wetland/Marsh</i>	Not applicable

3.3 Landscape Character

Wind turbines are by scale and nature discordant features to place in any landscape, however the accepted need for renewable energy from wind power is making their presence in rural and other landscape more visually acceptable. In this context the overall effect of introducing this *small scale turbine* into a generally agricultural landscape would be low to moderate

3.3.1 Landscape Quality (Short Term)

The proposal and its infrastructure will not result in any loss or alteration to any of the key elements, features, characteristics of the baseline existing landscape and view. A newly built turbine would be relatively prominent, but not a unique element in the landscape or in the wider region.

3.3.2 Landscape Quality (Long Term)

In the long term, the implications of the proposal, which will present few opportunities to mitigate against indicates that the longer term effect would continue to be **Medium** although there may be an increase in the number of similar structures over a wider area of the landscape. The structures would become more accepted visually into the landscape e.g. as in the case of the many pylons and associated linear features that criss cross the area and would become a mature feature eventually being removed after a period of approximately 25 - 30 years.

3.3.3 Summary

In summary it is felt that given the Medium value and Moderate sensitivity of the receiving landscape with very few significant natural or built features which would be affected and the extremely compact footprints of the turbine developments and infrastructure would, overall, have no more than a Medium impact on the landscape and quality.

3.4 Visual Impact Assessment

This is an LVIA Report for one small wind turbine. It is not a utility scale turbine and should not be considered as such

3.4.1 Methodology

This section of the report considers the sensitivity of change of selected viewpoints in the landscape surrounding the proposal. Due to the small scale of the proposed wind turbine, a study area extending to a 5km radius has been adopted for the visual impact assessment.

Because of the siting of the turbine in the landscape and major differences in topography and access, viewpoints to the site are limited. These viewpoints were chosen to provide illustrative near (within 1000m), Middle (1000m-2500m) and Far (2500-5000m) distance views of the proposal.

By examining the km ZTV 12 viewpoints were identified that would represent the site in its environment.

See Appendix 3 to 14

For each viewpoint a wire frame drawing and corresponding photomontage visualisation has been prepared. This has been done using Resoft Ltd's WindFarm software. This software uses a 3D DTM model of the existing landscape derived from OS Landform Panorama data based on a 50m grid and 10m contour intervals. The software is used to create a 3D model of the proposed wind turbine using turbine grid coordinates and specified turbine geometry. Specified viewpoint coordinates direction of view and horizontal field of view data were used to generate wireframe views of the proposed turbine within the existing landform.

To create the photomontage visualisations single images on a flat plane projection are imported into the software and aligned to the corresponding wire frame drawing. To aid alignment, geographic features in the image are matched with the corresponding coordinates of those features on the base map.

Viewpoint photographs were taken in July 2014 using a Digital SLR Camera fitted with a 50mm equivalent lens & the viewpoint location data logged with a Garmin Montana 650t GPS. Conditions on the day were excellent.

For all photomontages there is an element of judgement, the finished image is only intended as a representation of the likely appearance of the proposed development. The completed photomontages and other related materials are presented in Appendix 3 to 14

The assessment of the sensitivity, magnitude of change and significance of effect for the selected viewpoints has been conducted using the criteria set out in Tables D, E and F. Table F is given as a guide only and the final assessment of significance of visual effect may take into account any modifying factors based on professional judgement. The conclusions of the visual assessment are set out in section 3.4.2 below.

Typical Visual Receptors	Sensitivity
Locations defined by special interest in the available view: Promoted viewpoints. Special tourist or visitor locations. Recreational hilltops and peaks.	Very High
Visual receptors with a particular interest in their surroundings or prolonged viewing opportunities. Residential locations within 1km of the proposal. Special visitor or recreational sites. Nationally or locally recognised footpaths and cycleways. Recognised scenic drives or promoted tourist routes.	High
Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.	Medium
Visual receptors with limited or passing interest in their surroundings. Views from places of work. In-door facilities. Users of A-roads and trains.	Low

Table D: Visual Receptor Sensitivity Criteria

1) Multiple images stitched together to create a panoramic view have not been used.

Magnitude	Description
Very Large	The development would form a dominant element of the view dramatically altering its overall quality and character. Dominating and controlling the view.
Large	The development would form a prominent element within the view resulting in a prominent change to its overall quality and character. Standing out, striking.
Medium	The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable.
Small	The development would form an apparent small element within the view without affecting the overall quality or character of the view. Evident.
Very Small	The development would form an inconspicuous minor element within the view, without affecting the overall quality or character of the view. Not obvious, lacking definition.
Negligible	The development would result in a barely perceptible change in the view, or would cause a 'no change' situation to the existing view. Weak, not legible.

Table E: Definition of Magnitude of Change (Visual)

Magnitude of Change	Sensitivity			
	Very High	High	Medium	Low
Very Large	Major	Major	Major	Major/Moderate
Large	Major	Major	Major/Moderate	Moderate
Medium	Major	Major/Moderate	Moderate	Moderate/Minor
Small	Major/Moderate	Moderate	Moderate/Minor	Minor
Very Small	Moderate	Minor	Minor/Negligible	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Table F: Significance of Visual Effects

3.4.2 Viewpoint Assessment.

The following conclusions should be read in conjunction with the photomontage and wire frame visualisations presented in Appendix's 3 to 14

Viewpoint 1:
Hunshelf Hall Lane. A near distance view. Distance to site = 765m. Bearing 297 deg. 281m AOD
Existing View
A mixed landscape of agriculture and industry, with dominant vertical structures and linear features, including an established wind turbine
Predicted View with Operational Wind Turbine
The proposal will be seen as a new vertical structure in the landscape, dwarfed in scale by other vertical features.
Type and Sensitivity of Visual Receptor
Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Medium; The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable.
Assessed Significance of Visual impact
Moderate.

Viewpoint 2:
Public Footpath to the south of Cranberry Rd. A near distance view. Distance to site = 875m, Bearing 116 deg. 300m AOD
Existing View
The existing view is taken from a public footpath. The landscape is one of fields bounded by dry-stone walls, some of which appear to be in a bad state of repair. The view is dominated pylons and associated linear cabling as well as the Woodland area adjacent to Salter Hill Lane.
Predicted View with Operational Wind Turbine
The proposed turbine is perpendicular to the line of the footpath. It will be seen as a new vertical structure in the landscape against a background of established pylons and other infrastructure.
Type and Sensitivity of Visual Receptor
Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Medium; The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable
Assessed Significance of Visual impact
Moderate

Viewpoint 3:
Hartcliff Hill Rd. A far distant view. The site is 2940m to the east/south-east, bearing 111deg, 336m AOD
Existing View
An agricultural landscape with regular shaped fields bounded by dry stone walls. The predominant feature from this position is the large wooded area on the right of the photograph, with more open and distant views to the left of the image. Numerous pylons can be seen.
Predicted View with Operational Wind Turbine
The proposal is not seen, screened by the wooded areas.
Type and Sensitivity of Visual Receptor
Low; Visual receptors with limited or passing interest in their surroundings. Views from places of work. Indoor facilities. Users of A-roads and trains.
Magnitude of Change to Baseline View
Negligible. The development would result in a barely perceptible change in the view, or would cause a 'no change' situation to the existing view. Weak, not legible.
Assessed Significance of Visual impact
Zero.

Viewpoint 4:
Hartcliff Rd (Hartcliff Nick). A far distant view. The site is 3609m to the south-east, bearing 111 deg, 346m AOD
Existing View
A wide distant view over agricultural land. Regular/irregular shaped fields and woodland areas
Predicted View with Operational Wind Turbine
Proposal not seen due to differences in elevations and screening by intermediate woodland.
Type and Sensitivity of Visual Receptor
Zero. Low; Visual receptors with limited or passing interest in their surroundings. Views from places of work. Indoor facilities. Users of A-roads and trains. NOT SEEN
Magnitude of Change to Baseline View
Negligible. The development would result in a barely perceptible change in the view, or would cause a 'no change' situation to the existing view. Weak, not legible.
Assessed Significance of Visual impact
Zero.

Viewpoint 5:
Fullshaw Lane. A long distance. The proposal is 4831m to the east, bearing 99 deg. Elevation 294m.
Existing View
A long distance open view over a rising landform. The landscape shows fields of different shapes and sizes. Large woodland plantations are clearly seen with some dominating the skyline. Some trees form part of the boundary lines for fields. Power lines and associated infrastructure are clearly seen along the mid slope of the valley side. There are reservoirs clearly seen in the valley bottom.
Predicted View with Operational Wind Turbine
Only the upper geometry of the turbine may be seen, a minor element on the skyline in combination with a number of high voltage pylons of a different scale.
Type and Sensitivity of Visual Receptor
Low; Visual receptors with limited or passing interest in their surroundings. Views from places of work. Indoor facilities. Users of A-roads and trains
Magnitude of Change to Baseline View
Very Small; The development would form an inconspicuous minor element within the view, without affecting the overall quality or character of the view. Not obvious, lacking definition.
Assessed Significance of Visual impact
Slight.

Viewpoint 6:
Mortimer Rd. The viewpoint is from within the Peak Park. Distance to site = 2993m, bearing 45 deg north-east. 305m AOD.
Existing View
This is a far distance view. It was taken from within the Peak Park. We see a rising landscape with large areas of woodland on its slopes. Field systems are regular in shape. The skyline is dominated by a number of pylons. An existing turbine can be seen with its base slightly below the ridge line.
Predicted View with Operational Wind Turbine
The proposal will be seen in combination with the existing wind turbine of similar manufacture. The upper arts of the proposal will be seen on the skyline with its lower portions placed against the backcloth of woodland. However the more dominant features on the skyline are the pylons.
Type and Sensitivity of Visual Receptor
Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Medium; The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable
Assessed Significance of Visual impact
Moderate.

Viewpoint 7:
Midhope Cliff Lane. A far distant view. Distance to the site 4038m, bearing 82 deg, 274m AOD
Existing View
An open view across a rising landscape. The ridge line shows numerous pylons and woodland plantations. Reservoirs clearly seen.
Predicted View with Operational Wind Turbine
The proposal will be clearly seen in the landscape. The upper part of the geometry on the skyline, whilst the lower parts and other infrastructure connected to the turbine will be against the background hillside. The existing turbine will also be seen in combination with the proposal. Due to the number of other more visible and striking vertical structures seen in the vicinity of the site visual impact is not seen as significant. (See below)
Type and Sensitivity of Visual Receptor
Medium; The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable.
Magnitude of Change to Baseline View
Medium; Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Assessed Significance of Visual impact
Moderate.

Viewpoint 8:
Back Lane, and nearby footpaths. A near distance view. Distance to site = 618m, bearing 177 deg, 286m AOD
Existing View
A representative view for users of the footpath which crosses the area. Viewpoint shows a network of regular shaped fields overlooking Dyson Cote Farm. Woodland is evident. On the left of the image the existing Endurance turbine can be seen.
Predicted View with Operational Wind Turbine
Only the very upper parts of the proposed turbine will be seen.
Type and Sensitivity of Visual Receptor
Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Medium; Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Assessed Significance of Visual impact
Moderate.
Mitigation
N/A

Viewpoint 9:
Pond Common Lane. A middle distance view. The site is 618m to the west. Bearing 262 deg, 275m AOD
Existing View
The area and adjacent surroundings is dominated by a landscape of high voltage infrastructure and other vertical structures. Farms and other built structure are seen.
Predicted View with Operational Wind Turbine
The proposal will be seen as an almost inconspicuous feature, low on the ridgeline, seen in combination with the existing turbine but smaller in scale. The pylons are the dominant feature in the landscape.
Type and Sensitivity of Visual Receptor
Medium/Low; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Small; The development would form an apparent small element within the view without affecting the overall quality or character of the view. Evident.
Assessed Significance of Visual impact
Slight.

Viewpoint 10:
Roughbitchworth Lane. A middle distance view. The site is 1710m to the south-west, bearing 209 deg, 225m AOD
Existing View
Representative view for the numerous properties nearby including those on fields end. A landscape of regular shaped fields, bounded by dry stone walls. Views into the area of the site are again dominated by large scale pylons.
Predicted View with Operational Wind Turbine
Only the upper parts of the turbines geometry will be seen. Again visual impact is dominated by the much larger pylons and other linear structure.
Type and Sensitivity of Visual Receptor
Low/Medium; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces.
Magnitude of Change to Baseline View
Small; The development would form an apparent small element within the view without affecting the overall quality or character of the view. Evident.
Assessed Significance of Visual impact
Moderate.

Viewpoint 11:
Churchill Rd, Stocksbridge. A middle distance view; the proposal is 1523m to the north, bearing 359 deg. 184m AOD
Existing View
The photograph was taken from a residential street looking up to the site. As can be seen the view is predominantly one of a rising wooded landscape. As in previous views High voltage power lines and infrastructure dominate the landscape.
Predicted View with Operational Wind Turbine
The profile of the proposal is disturb by its position behind a pylon with the lower parts of the mast screened by trees. Views from either further left or further right will show the turbine as a strong feature in combination with the pylons.
Type and Sensitivity of Visual Receptor
Medium/High; Visual receptors with a general interest in their surroundings or with transient viewing opportunities. General footpaths. Residential locations over 1km from the proposal. Residential and local roads. Public spaces
Magnitude of Change to Baseline View
Medium; The development would form a conspicuous element within the view resulting in conspicuous change. Distinct, noticeable.
Assessed Significance of Visual impact
Moderate / High.

Viewpoint 12:
A629. A far distant view. The site is 3494m to the south
Existing View
This viewpoint is of a type representative to traffic. The views will be rapid, changing and transient. The landscape is defined by numerous rectangular and other regular shaped fields, bounded by dry stone walls. Isolated trees and small wooded areas are seen. The ridgeline shows a larger area of woodland and the skyline and middle areas of the landscape shows prominent vertical structures. Industrial and residential built form is seen in the near distance area of the photograph.
Predicted View with Operational Wind Turbine
The proposal will be an a small feature on the skyline. Only the very upper parts of it will be noticed - if at all.
Type and Sensitivity of Visual Receptor
Low; Visual receptors with limited or passing interest in their surroundings. Views from places of work. Indoor facilities. Users of A-roads and trains.
Magnitude of Change to Baseline View
Negligible; The development would result in a barely perceptible change in the view, or would cause a 'no change' situation to the existing view. Weak, not legible.
Assessed Significance of Visual impact
Extremely Slight.

4. CONCLUSION

The proposal would result in the introduction of a single vertical structure of a small scale to the baseline landscape. The small footprint of the proposal and the absence of permanent access roads will result in only a minor and reversible loss of land. The visual assessment suggests that in middle distance views the proposal would have only have a Moderate overall effect on the character of the view, whilst at near distance impact would be significant; at far distant views Visual impact, sensitivity and magnitude will be low.

The area has a large number of other vertical structures which dominate the skyline and other views into the site; these are high voltage power line pylons, which are of a far greater size and scale than the proposal. Because of this visual impact associated with the addition of this turbine will be limited. There is an existing turbine nearby. There are moderate views from the Peak Park. Views from residential areas are limited to the immediate area. There are no significant views from Penistone or Oxspring. Views from the area around Fields End are slight, only the upper parts of the turbine will be seen (if at all). There will be views from certain areas of Stocksbridge.

Views to main roads are rapid, broken and transient, particularly along the A616. Views from the A629 are similar in type.

On balance the visual impact of this proposal on the area will be moderate