Sheephouse Heights Windfarm

Supplementary Report

March 2009



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2 A6: LANDSCAPE AND VISUAL ASSESSMENT

A6.1 INTRODUCTION

This chapter seeks to provide further assessment of the Landscape and Visual Impact of the Sheephouse Heights Windfarm in response to requests made by Barnsley Metropolitan Borough Council (BMBC) after submission of the planning application. The original landscape and visual assessment of the proposed Sheephouse Heights Windfarm ("the Development") submitted as part of the Environmental Statement (ES) in May 2008, was prepared by Sitara Keppie of Circle Design Consultants. Following a post-application meeting, site meeting and various subsequent email communications with BMBC, the information presented in this chapter aims to supplement the original assessment in the ES.

There are five distinct sections to this additional assessment:

- Viewpoint Photography: discussions pointed to the need for additional photographs and amended positioning from the same viewpoint locations to assist in a better understanding of the windfarms impact. This section re-assesses the visual effects of the new visualisations;
- Settlements: a more detailed assessment of visual effects on the settlements;
- Registered Parks and Gardens: clarification of potential effects on these;
- Sequential views from roads: BMBC requested additional information to understand sequential visibility from roads; and,
- Cumulative effects: BMBC requested more detailed information regarding cumulative effects.

In addition this additional information seeks to clarify the following points:

- The second paragraph in Section 6.5.2 Study Area of the ES, refers to there being 9 existing turbines at Royd Moor Windfarm. This should read 13 turbines; and
- A site visit was carried out in the last week of February 2008 to verify all desk-based findings.

A6.2 ASSESSMENT METHODOLOGY

Assessment methodology is as outlined within section 6.2, Chapter 6 of the ES. Key elements are re-presented here for ease of reference. Further clarification is provided on the assessment of sensitivity of residential receptors.

For the purposes of assessing the effects on visual amenity, the sensitivity of the visual receptor is defined as High, Medium, Low or Negligible as outlined in Table A6.1.

Table A6.1 Definitions of Sensitivity of Receptors

Level of Sensitivity	Type of Receptor
High	Users of outdoor recreational facilities including strategic recreational footpaths, cycle routes or rights of way, whose attention may be focused on the landscape; important landscape features with physical, cultural or historic attributes; views from principal settlements; visitors to beauty spots and picnic areas.
Medium	Other footpaths; people travelling through or past the landscape on roads, train lines or other transport routes; views from passenger ferries and cruisers, views from minor settlements.
Low	People engaged in outdoor sports or recreation (other than appreciation of the landscape), people whose attention may be focused on their work or activity rather than the wider landscape.
Negligible	Views from heavily industrialised areas or where views are distant and/or severely filtered by intervening elements.

The sensitivity of settlements has been re-assessed to provide more detail of the potential effects of the Development. This has been achieved by taking account of the following:

- Orientation in relation to the Development; and
- Whether views are from the ground floor or upper floors of dwellings.

In general, dwellings with direct views of the Development will be more sensitive than those with oblique or very oblique views; and those with views from ground floor windows will tend to be more sensitive than those with views from upper floors. Table A6.2 sets out how these two factors have been taken into account to determine the sensitivity of dwellings within the study area.

The general orientation of the settlements has been ascertained by desk-top research which has been verified by an onsite survey.

Table A6.2 Definition of Sensitivity of Residential Settlements

High
Direct views of the Development from the ground floor of properties.
Medium
Oblique views of the Development from the ground floor of properties. Direct views from the upper floor of properties.
Low
Very oblique views of the Development from the ground floor of properties. Oblique views from the upper floors of properties.
Negligible
No views of the Development from the ground floor of properties. Very oblique views from the upper floors of properties.

Direct views occur where the orientation of the dwellings is such that windows (assumed to be flat against the side of the building) look out directly onto the Development, so that the turbines appear in the centre of the view. Where buildings are off-line of the Development, it is assumed that an oblique view is possible; that is where the Development is visible to the left or right of centre in the 90^{o} view. Very oblique views are considered to be those where the Development is very far off-line, yet still within a possible 90^{o} view; in other words, where the Development is visible in the extreme left or extreme right of the 90^{o} view.

A6.2.1 Magnitude

The magnitude of visual change arising from the Development is described as High, Medium, Low or Negligible, based on the overall extent of visibility, as defined in Table A6.3. For individual viewpoints it will depend upon:

- the distance of the receptor from the Development;
- the duration of effect;
- the angle of view in relation to main receptor activity;
- the proportion of the field of view occupied by the Development;
- the background to the Development; and
- the extent of other built development visible, particularly vertical elements.

Table A6.3 Definitions of Magnitude of Change on the Landscape/Visual Resource

Level of Magnitude	Definition of Magnitude
High	Total loss or major alteration to key elements, features or characteristics of the baseline landscape so that the post development character and composition of the baseline landscape resource will be fundamentally changed.
Medium	Partial loss or alteration to one or more key elements, features or characteristics of the baseline landscape so that the post development character and composition of the baseline landscape resource will be partially, but noticeably changed.
Low	Minor loss to one or more key elements, features or characteristics of the baseline landscape so that the post development character and composition of the baseline landscape resource will be noticeably changed but the underlying character of the baseline landscape will be similar to the pre-development character.
Negligible	Very minor loss or alteration to one or more key elements, features or characteristics of the baseline landscape. Change to the landscape character will be barely distinguishable.

A6.2.2 Assessment of Effects

The level of any identified landscape or visual effect has been assessed as Major, Major/Moderate, Moderate, Moderate/Minor, Minor, Minor/None or None. These categories have been determined by consideration of receptor sensitivity and predicted magnitude of change as described above, with the following table (Table A6.4), which is used as a guide to correlating sensitivity and magnitude to determine level of effects. It should be noted that this is only a guide and there will be times when the combination of sensitivity and magnitude yield a slightly different result from that predicted by the table. Where this discrepancy leads to prediction of a significant effect, it is explained in the text.

Table A6.4 Correlation of Sensitivity and Magnitude of Effect

Magnitude / Sensitivity	High	Medium	Low	Negligible
High	**Major**	**Major/Moderate**	Moderate	Moderate/Minor
Medium	**Major/Moderate**	**Moderate**	Moderate/Minor	Minor
Low	Moderate	Moderate/Minor	Minor	Minor/None
Negligible	Moderate/Minor	Minor	Minor/None	None

Where the landscape or visual effect has been identified as being Major or Major/Moderate this is considered to be a significant effect as referred to in Schedule 3 of the EIA Regulations. Significant effects are not necessarily negative and in some circumstances may be acceptable and may also be reversible.

This matrix (Table A6.4) is not used as a prescriptive tool and the methodology and analysis of potential effects at any particular location must take account of professional judgement, therefore in some situations, the analysis may not reflect the effects predicted by the grid.

A6.3 VIEWPOINT ANALYSIS

Seventeen viewpoints were originally selected as being representative of the various receptors within the study area. These were chosen to ensure that the settlements within 5km of the Development were represented whilst also ensuring that other visual receptor types accessible from public locations, from different distances and directions from the Development were also represented.

Post-application discussion identified a requirement for additional photographs at some locations in order to show a worst-case scenario of the Development. Photographs were re-taken and new visualisations prepared for thirteen of the original seventeen viewpoints. The four viewpoints not retaken are noted below:

- Viewpoint 6, from the A616 near Underbank reservoir was not retaken because the Development is screened by the bank and vegetation;
- Viewpoint 10 from Black Tor, on the track by triangulation point. This original viewpoint photography was considered acceptable by BMBC.
- Viewpoint 13 from A616, near Crimbles Farm, north of Stocksbridge. A viewpoint was retaken from this location however, the terrain data match to provide a suitable photomontage could not be established; and
- Viewpoint 17 from the Trans Pennine Trail, south of Dodworth was not retaken as the Development is not likely to be visible;

In addition, a new viewpoint, (VP A18) Cut Gate, from the edge of the Peak District National Park, has been included within this assessment, in order to provide a worst-case view from the National Park.

These viewpoints are listed in Table A6.5 and their locations are shown on the Viewpoint Location Plan, Figure A.6.00. The existing and/or predicted views from each of the eighteen locations are shown in Figures A.6.01 to A.6.18 of the Supplementary Visuals submitted with this document. Reference to the original viewpoints and analysis has been included for comparison.

In most cases the retaken viewpoint is from the same location, however, this opportunity has been used to obtain very clear views towards the Development, which show the worse possible case from the representative viewpoint.

A6.3.1 Illustrative Tools

Although this supplementary information endeavours to provide additional viewpoint and visualisation material as requested by BMBC, the limitations of such visualisations must be stressed; photography is only a tool to assist in the visualisation process and cannot be expected to replicate the actual view or predicted view that will be attained on the ground.

The viewpoint analysis is illustrated by a range of tools including photographs, computer generated wireframes and photomontages. The photographs used to construct the photomontages have been taken using a 50mm equivalent lens on a digital SLR camera, which is endorsed by the Landscape Institute (Guidelines for Landscape and Visual Impact Assessment, 2nd Edition 2002) and Scottish Natural Heritage (SNH) (Visual Assessment of Wind Farms – Best Practice 2002) for photomontage production. Computer generated wireframes have been generated using the same Ordnance Survey digital data used to generate the ZTVs and therefore illustrate a scenario of maximum theoretical visibility, because they do not take account of the screening effect of small-scale variations in landform or vegetation.

The photomontages have been prepared by combining a wireframe of the view with the photograph of the existing view of the Development and rendering the image using a model of the proposed wind turbines, also generated electronically. The resulting images should be viewed at a distance as recommended on each montage to most closely replicate the view that will be obtained from the viewpoint.

It is also worth restating that assessment of potential landscape or visual effects at any viewpoint cannot be extended to conclude the same effects on the whole of the landscape character area or other receptor type within which the viewpoint occurs.

The selected viewpoints are drawn from the receptors considered as being most sensitive to the anticipated change arising from the Development. Furthermore, viewpoints are selected on site to be as clear of obstructions as possible. Therefore, these viewpoints demonstrate the absolute worst-case visibility of the Development.

The predicted views from each of the original viewpoint locations are shown in the wireframes and photomontages in Figures 6.20 to 6.36 of the ES and for each of the new viewpoints refer to Figures A.6.01 to A.6.18 of this supplementary information.

A summary of the viewpoint analysis is given in the Table A6.5. Viewpoints described in more detail below.

Table A6.5 Viewpoint Analysis Summary

Original viewpoints are numbered; new viewpoints prefixed with an 'A'.

No	Viewpoint Location and brief description.	Approximate Distance to nearest Visible Turbine	Receptors at Viewpoint	Sensitivity of Receptors at Viewpoint	Magnitude of visual change	Predicted Effect and Significance on Viewpoint
1	Midhopestones	1.6km	Residents	Medium to High	High	Major Significant
A1	Midhopestones Retaken from the same location.	1.6km	Residents	Medium to High	High	Major Significant
2	South-western edge of Stocksbridge. This view shows the context of the settlement edge.	1.2km	Residents	Medium to High	High	Major Significant
A2	South-western edge of Stocksbridge. VP retaken from lower down the slope and through a gap in the boundary planting to the reservoir.	1.2km	Residents	Medium to High	High	Major Significant
3	Southern edge of Penistone.	1.0km	Road users Residents	Medium to High	High (hub and blades visible).	Major Significant
A3	Southern edge of Penistone. VP retaken closer to the Development and further from the settlement edge.	0.9km	Road users Residents	Medium to High	High (hub and blades visible).	Major Significant
4	Langsett, by the A616 through the centre of the settlement.	3.2km	Road users/ pedestrians	Medium	Medium to Low (hub and blades visible in distance).	Moderate-Minor Not Significant
A4	Langsett, by the A616. This VP is taken from north of the main road to allow for clear views of the Development.	3.2km	Road users/ pedestrians	Medium	Medium (hub and blades visible in distance).	Moderate Not Significant
5	Oxspring on minor road leaving settlement southbound.	1.8km	Road users	Medium	Medium to High (hub and blades seen through pylon line).	Major-Moderate Significant

No	Viewpoint Location and brief description.	Approximate Distance to nearest Visible Turbine	Receptors at Viewpoint	Sensitivity of Receptors at Viewpoint	Magnitude of visual change	Predicted Effect and Significance on Viewpoint
A5	Oxspring on minor road leaving settlement southbound. This view is taken closer to the Development, avoiding the obstruction of the lamp post.	1.7km	Road users	Medium	Medium to Low (hub and blades seen through pylon line, but heavily filtered by vegetation and structures).	Moderate Not Significant
6	A616 near Underbank reservoir. VP NOT RETAKEN.	0.8km	Road users	Medium	Low (glimpsed view through dense mature planting).	Moderate-Minor Not Significant
7	Trans Pennine Trail, parallel to A628 within Peak District National Park.	8.6km	Walkers	High	Low-Negligible (small section of panorama).	Minor Not Significant
A7	Trans Pennine Trail, parallel to A628 within Peak District National Park. From same location.	8.6km	Walkers	High	Low-Negligible (small section of panorama – does not introduce a new element in the view).	Minor Not Significant
8	Pennine Way long distance footpath, north of A635 crossing.	18km	Walkers	High	Negligible (blade tips in distance).	Minor Not Significant
A8	Pennine Way long distance footpath just north of A635 crossing. From the same location.	18km	Walkers	High	Negligible (blade tips in distance).	Minor Not Significant
9	Bolsterstone, on the minor road to Deepcar, on north side of settlement.	3.7km	Road users, Residents	Medium	Medium to Low (glimpsed views).	Moderate-Minor Not Significant
A9	Bolsterstone, on the minor road to Deepcar, on north side of settlement. This view is taken from directly behind Castle Farm ensuring no boundary planting or other buildings obstruct view.	3.7km	Residents (direct, clear views only from upper storeys – ground floor views likely to be limited by boundary planting as photo shows).	Medium	Medium (Development takes up a relatively small part - approximately 12.5% of horizontal length of view. The existing pylon lines and masts provide context).	Moderate Not Significant

No	Viewpoint Location and brief description.	Approximate Distance to nearest Visible Turbine	Receptors at Viewpoint	Sensitivity of Receptors at Viewpoint	Magnitude of visual change	Predicted Effect and Significance on Viewpoint
10	Black Tor, on track by triangulation point. VP NOT RETAKEN.	10.8km	Walkers	High	Low (blade tips in distance, small portion of panoramic view).	Moderate-Minor Not Significant
11	Area of active recreation, on southern edge of Green Moor village.	2.8km	Recreation	Low	Medium to Low (seen through pylon line).	Minor Not Significant
A11	Green Moor, from minor road on eastern edge of village.	2.8km	Residents Road Users	Medium	Medium (turbines filtered by built elements and trees and seen in context of pylon lines).	Moderate Not Significant
12	Formalised viewing point for Royd Moor windfarm at Royd Hill.	4.4km	Recreation	Low (given that this VP is to view Royd Moor windfarm).	Medium	Minor Not Significant
A12	Formalised viewing point for Royd Moor Windfarm at Royd Hill; From the same location.	4.4km	Recreation	Low (VP is to view Royd Moor windfarm).	Medium	Minor Not Significant
13	A616, near Crimbles Farm, north of Stocksbridge. VP NOT RETAKEN.	0.8km	Road uses	Medium	High	Major-Moderate Significant
14	From lay-by near junction of A629 and A628.	3.7km	Road users	Medium	Medium to Low (panoramic view with power line on horizon).	Moderate-Minor Not Significant
A14	From slightly different location on lay-by near junction of A629 and A628. (An additional 90^{o} view has been taken looking west from this viewpoint for the cumulative assessment).	3.7km	Road users	Medium	Medium to Low (panoramic view with power line on horizon).	Moderate-Minor Not Significant

No	Viewpoint Location and brief description.	Approximate Distance to nearest Visible Turbine	Receptors at Viewpoint	Sensitivity of Receptors at Viewpoint	Magnitude of visual change	Predicted Effect and Significance on Viewpoint
15	Bridleway on Broomhead Moor, east of Smallfield and SW of Bolsterstone.	5.6km	Horse riders and walkers	Medium	Medium to Low (2 hub and 5 blades visible in panoramic view).	Moderate-Minor Not Significant
A15	Bridleway on Broomhead Moor, east of Smallfield and SW of Bolsterstone. From the same location.	5.6km	Horse riders and walkers	High to Medium	Medium to Low (hub and blades visible, forming approximately 13% of panoramic view).	Moderate Not Significant
16	Deepcar, from main road (B6088).	3.5km	Road users Residents	Medium	Low (glimpses of 1 hub top and 4 tips over ridge).	Minor Not Significant
A16	Deepcar, from further along B6088.	3.5km	Road users Residents	Medium	Low (glimpse of 2 tips over ridge in gap between houses).	Minor Not Significant
17	Trans Pennine Trail south of Dodworth. VP NOT RETAKEN.	7.5km	Walkers/ recreation	Medium	Low (filtered view of specks in distance).	Minor Not Significant
A18	Cut Gate, from a footpath just within the boundary of the Peak District National Park (NP). Approximately 6% of the north-eastern edge of the National Park has theoretical visibility of the Development. This viewpoint is taken from the north-eastern edge and is used to demonstrate the worse case visual effect of the Development.	6.1km	Walkers and visitors to the NP	High-medium (NP is high sensitivity, but this viewpoint looks out onto settlement, existing turbines and lines of infrastructure which reduce sensitivity.	Medium	Moderate – Major/Moderate Significant As this viewpoint represents less than 6% of the NP, it is considered that there will be no significant effects on the NP generally.

Significant effects are predicted on four of the original seventeen viewpoints. These are detailed in the following pages. The effect on VP5 has been re-assessed as not significant, primarily as the magnitude of effect is reduced.

A significant effect is predicted on VP A18, although it is anticipated that this is localised and no significant effects are anticipated on the National Park more generally.

A6.3.2 Viewpoint Analysis Overview

This viewpoint desription has been provided in order to be absolutely transparent as to the process of analysing each viewpoint and as to how each residual effect has been arrived at. It has been prepared to show pertinent information for each viewpoint, both for the viewpoint analysis and the cumulative viewpoint analysis. For each viewpoint, a description has been outlined and the following details supplied;

- The distance to the Development;
- The Landscape Character Area that the viewpoint is within; and
- The amount of Development visible and how this sits in the landscape in the view.

The Landscape Character Areas stated within this text correspond to Figures 6.5 to 6.7 of the original submission and to the following documents;

- Countryside Agency: Countryside Character Volume 3: Yorkshire and the Humber (including JCA 37: Yorkshire Southern Pennine Fringe, JCA 51: Dark Peak and JCA 38: Nottinghamshire, Derbyshire and Yorkshire Coalfield);
- The Peak District National Park (PDNP) Draft Landscape Character Assessment; and
- The Barnsley MBC Landscape Character Assessment.

The sensitivity to change and magnitude of change are explained and the resulting level of effect outlined. This viewpoint description records these details within the Viewpoint Analysis for both the original and re-taken viewpoints. It should be noted that where there is no change in either the sensitivity or the magnitude of change from the original viewpoint to the updated viewpoint, this is stated. The cumulative viewpoint analysis includes only the updated and retained viewpoints, as the cumulative effects of further, additional cumulative windfarm developments were examined within the supplementary information.

The effects detailed are the residual effects of the Development upon the viewpoint. Construction effects are briefly described in paragraph A6.3.4, and Decommissioning effects are not described within this text, as these effects are short term, and will be limited to the receiving site and a discrete area around the Development. These short term effects will be restricted to the site itself and the nearby roads, which will experience a short term rise in traffic. Construction will lead to a short term rise in traffic carrying materials and construction workers to the site. Decommissioning of the turbines will involve removal of the turbines and associated structures and re-vegetating the turbine pads.

It should be noted that the residual visual effect of the operational phase of the Development is reversible and that the usual predicted operating span of a windfarm development is 25 years.

A6.3.3 Viewpoint Analysis

Viewpoint 1 - Chapel Lane, Midhopestones

This viewpoint is taken from Chapel Lane in Midhopestones, looking down into the valley floor. The hill slopes rise up behind the settlement, with large areas of deciduous and coniferous woodland rising up the slopes from the valley floor. Pasture fields can also be seen in the foreground and upon the hill slopes. A pylon line is clearly visible upon the upper slopes.

- Distance to nearest turbine: 1.6km;

- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 5 turbines (hubs, blades and towers). 3 turbines sit behind the ridgeline. The turbine are skylined and the bases are obscured by woodland and forestry.

The sensitivity to change is considered to be Medium to High. This is due to scale of the landscape in this view, which is medium to small scale.

The magnitude of change at this viewpoint is assessed to be High, due to the close proximity of settlement to the Development and as there are clear views of the Development from this viewpoint, with the blades and hubs of the turbines visible on the ridge.

Given that the sensitivity to change is Medium to High and the Magnitude of Change is High, the level of effect is **Major and Significant**.

Viewpoint A1 - Chapel Lane, Midhopestones

This viewpoint is from the same location as Viewpoint 1, slightly re-aligned to show more of the village and lane. The view is as per the description for Viewpoint 1, except that the fringes of the Midhopestones settlement can be seen in the middle ground and the drystone wall bordering Chapel Lane in the foreground.

The information recorded for Viewpoint 1, is still relevant for viewpoint A1. There is no change to the sensitivity and magnitude and therefore no change to the effect.

Viewpoint 2 - Claypits Lane, Stocksbridge

This viewpoint is taken from Claypits Lane in Stocksbridge. The landform dips down into the valley, with the opposite slope rising to form the horizon. Areas of farmland are evident through the tree belt that lines the lane; in summer, views will be more constrained by this tree planting. Several bungalows are set into the hill slope, as evident in the right side of this picture. A pylon line is evident just below the ridgeline.

- Distance to nearest turbine: 1.2km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 5 turbines (hubs, blades and towers), seen through tree cover. The turbines seen skylined upon the ridge, though partially filtered by trees and houses and with bases obscured by woodland.

The sensitivity to change is considered to be Medium to High. As with Viewpoint 1, the sensitivity to change is the result of the small to medium scale of the landscape in this view.

The magnitude of change at this viewpoint is assessed to be High, as the large scale of the turbines, which are seen on the horizon, is in direct juxtaposition to the small scale of the dwellings and at a relatively close distance to the Development.

The sensitivity to change is Medium to High and the magnitude of change is High, therefore the resulting level of effect is **Major and Significant**.

Viewpoint A2 - Claypits Lane, Stocksbridge

This viewpoint has been taken further down the valley slope, in a gap within the planting, overlooking the reservoir. In the immediate foreground, the ground rises to form the

reservoir banks. The hill slopes, which rise beyond the reservoir, are lined with coniferous woodlands. A pylon line is clearly visible along the upper slopes.

- Distance to nearest turbine: 1.2km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 5 turbines (5 sets of hubs and blades, 3 towers). Turbines are seen on the ridgeline, with hubs and blades skylined. 3 turbine bases are obscured by woodland. The Development sits behind a pylon line.

There is no change to the sensitivity to change and magnitude of change; therefore, there is no change to the level of effect and significance as recorded in Viewpoint 2.

Viewpoint 3 - Royd Lane, Penistone

This viewpoint is from Royd Lane at the southern fringe of Penistone. Pasture and arable fields bordered by drystone walls and occasional tree belts, occupy most of the view. A single storey dwelling and associated outbuildings are visible just off centre of the view. Small tree belts and a pylon line are visible upon the horizon.

- Distance to nearest turbine: 1km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (5 sets of hubs and blades, 2 towers). The turbines are visible on the horizon line, within a relatively flat landscape. Turbines 3 and 4 will be mostly screened by a tree belt, with the other turbines partially filtered by vegetation. Turbines, where visible, are skylined.

The sensitivity to change is considered to be Medium to High. This sensitivity is due to the fact that the Development is located on the ridge, in juxtaposition to the domestic scale of the farm buildings and tree belts in this view.

The magnitude of change is assessed to be High, given the proximity of the Development; the nearest turbine is just over 1km from this viewpoint. The Development takes up over 50% of the horizontal length of the 90^{o} view.

The sensitivity to change is Medium to High and the magnitude of change is High; therefore, the level of effect is **Major and Significant**.

Viewpoint A3 - Royd Lane, Penistone

This viewpoint is retaken nearer to the Development and further from the settlement of Penistone. The view is as described within Viewpoint 3, excepting the closer proximity of the tree belts and the pylon, and the clearer, brighter day upon which the image was taken.

- Distance to nearest turbine: 0.9km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (5 sets of blades, 3 sets of hubs and 2 towers). The turbines are visible on the horizon line, in context of a pylon line, and within a relatively flat landscape . Turbines 3 and 4 mostly screened by the tree belt, other turbines partially filtered by vegetation.

There is no change to the sensitivity to change and magnitude of change; therefore, there is no change to the level of effect and significance.

Viewpoint 4 - Gilbert Hill, Langsett

This view is from Gilbert Hill in Langsett and shows the landform dropping down into the valley. Upon the right, stone built houses follow the line of the road. A patchwork of fields is divided by drystone walls and hedges. Frequent tree belts extend across and down the hill slope. Pylons are visible upon the horizon, just off centre of the image.

- Distance to nearest turbine: 3.2km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 4 turbines (4 blades and hubs). Turbines are seen skylined and in the middle distance. There are many other vertical elements (pylon lines, lamp posts and telegraph poles) present in this view. The bases of the turbines are obscured by woodland. Turbine 1 is screened by tree cover, with the other turbines partially screened by the tree cover.

The sensitivity of this viewpoint is considered to be Medium because the scale of the landscape in this view is medium.

The magnitude of change is assessed to be Medium to Low, given that the Development takes up just over 10% of the 90^{o} view and due to the distance at which the turbines are seen. In addition, the trees, poles and other structures along the side of the road obscure open views to the Development.

The sensitivity to change is Medium, the magnitude of change is Medium to Low; therefore, the level of effect is **Moderate-Minor and Not Significant**.

Viewpoint A4 - Gilbert Hill, Langsett

This viewpoint is taken from the north of the main road to afford clear views towards the Development. The view contains a patchwork of fields, although with larger amounts of woodland and tree cover visible. Three dwellings are situated in the right of this view. Telegraph poles and pylon lines are visible within the view.

- Distance to nearest turbine: 3.2km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (hubs, blades and towers). Turbines are seen skylined on the far ridge, in conjunction with other pylon lines and telegraph poles. The bases of the turbines are obscured by woodland.

The sensitivity to change of this viewpoint is considered to be Medium, as recorded for Viewpoint 4.

The magnitude of change is assessed to be Medium, as all five of the turbines are visible in the distance.

Given that the sensitivity to change is Medium and the magnitude of change is Medium, the level of effect is **Moderate and Not Significant**.

Viewpoint 5 - Oxspring

This viewpoint is taken from Roughbirchworth Lane in Oxspring. The view shows the agricultural landscape of fields divided by drystone walls, with occasional tree groupings or belts. A small number of dwellings and farm buildings line the minor road. A pylon line is prominent on the horizon.

- Distance to nearest turbine: 1.8km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 4 turbines (4 sets of hubs and blades, part of 2 towers). Turbines are skylined on the horizon, and are of a similar scale to the pylon line. Turbine 1 is screened by trees.

The sensitivity to change is considered to be Medium, as the relatively open landscape in this view is of medium to large scale.

The magnitude of change is assessed to be Medium to High, as the Development occupies approximately 40% of the horizontal length of the 90^{o} view. Despite proximity, the vertical scale of turbines matches the overall height of pylons.

The sensitivity is Medium and the magnitude of change is Medium to High, resulting in a **Moderate-Major** level of effect, which is **Significant**.

Viewpoint A5 - Oxspring

This viewpoint is taken closer to the Development than Viewpoint 5. Single storey dwellings and farm buildings line the minor road in the foreground. Less of the field pattern is visible than in Viewpoint 5. The pylon line is still prominent on the horizon, whilst telegraph poles and street lights are also noticeable vertical features.

- Distance to nearest turbine: 1.7km;
- Landscape Character Area: Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 3 turbines (3 blades and 2 hubs). Turbines are screened and filtered by mature vegetation and structures. Where glimpsed, turbines are skylined and appear of similar scale to the pylon line visible upon the horizon.

The sensitivity to change is considered to be Medium, as recorded for Viewpoint 5.

The magnitude of change is assessed to be Medium to Low, as the turbines are heavily screened by vegetation and structures and consequently only 3 blades and 2 hubs of the turbines are visible.

Given that the sensitivity to change is Medium and the magnitude of change is Medium to Low, the level of effect is considered to be **Moderate** and **Not Significant**.

Viewpoint 6 - A616 near Underbank Works

Viewpoint 6 is from the A616 near Underbank Works. This view shows the A616 and the adjacent mature deciduous and coniferous tree belts, which terminate the view. This viewpoint was not retaken, due to the screening effects of the tree belts.

- Distance to nearest turbine: 0.8km;

- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: Glimpses of turbines (at most); the turbines are virtually screened from view by mature trees.

The sensitivity to change is considered to be Medium, given that the view is from an 'A' class road and, therefore, the receptors are road users.

The magnitude of change is assessed to be Low, as the turbines are generally screened from view. In a 'worst case' scenario, there may be the occasional glimpse of a blade through mature vegetation.

Given the Medium sensitivity and the Low magnitude, the level of effect will be **Moderate-Minor** and **Not Significant**.

Viewpoint 7 - Trans Pennine Trail

This viewpoint is taken from the Trans Pennine Trail. Open moorland and the trail dominate the foreground, with the A628 parallel to the trail at this point. Fences line the road. Farmland and settlements are visible in the middle distance. Pylons are noticeable upon the ridgeline in the distance.

- Distance to nearest turbine: 8.6km;
- Landscape Character Area: Thurlstone and Langsett Unenclosed Moorland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (hubs, blades and towers) in the distance. Turbines sit just below the distant ridgeline which provides a backcloth to the hubs, and are seen as a relatively small element within an open landscape.

The sensitivity to change is considered to be High, as the viewpoint is just within the Peak District National Park, which is considered to be of High sensitivity.

The magnitude of change at this viewpoint is assessed to be Low–Negligible as the turbines are seen as a tiny part of a wide, open panorama, as they occupy less than 5% of the horizontal view.

The sensitivity to change is High and the magnitude of change is Low-Negligible, leading to a **Minor** and **Not Significant** effect.

Viewpoint A7 - Trans Pennine Trail

Viewpoint A7 is retaken from the same location as Viewpoint 7 and therefore the view shows the same features and the information listed for Viewpoint 7 is applicable to Viewpoint A7 and the sensitivity, magnitude and predicted effect remain the same.

Viewpoint 8 - Pennine Way

This viewpoint is taken from the Pennine Way, north of the A635 crossing. Moorland occupies the foreground, giving way to farmland in the middle ground. Two masts are visible; the Emley mast to the far left, and a smaller mast to the far right of the 90^{o} view.

- Distance to nearest turbine: 18km;
- Landscape Character Area: Open Moor and Heath (PDNP); and

- Amount of Development visible: 3 turbines (3 sets of blade tips). Turbine tips just appear over the ridgeline in the distance, and are seen within an upland and upland fringe landscape. Turbine tips will be skylined.

The sensitivity to change is considered to be High, as this viewpoint is within the Peak District National Park, which is considered to have a High sensitivity.

The magnitude of change is considered to be Negligible, as only 3 turbine blade tips can be seen in the distance, as a small feature of a wide, open view.

Given that the sensitivity is High and the magnitude of change is negligible, the level of effect is **Minor and Not Significant**.

Viewpoint A8 - Pennine Way

Viewpoint A8 is taken from approximately the same location, and therefore the view contains the same features as Viewpoint 8, except that the A635 is now visible within the view.

The information given for the original Viewpoint 8 holds for Viewpoint A8. There is no change to either the sensitivity to change or to the magnitude of change; therefore, there is no change to the predicted effect.

Viewpoint 9 - Bolsterstone Road

Viewpoint 9 is from the Bolsterstone Road. The view is of the farm buildings and farm house known as Castle Farm. Areas of farmland and moorland fringe are visible on rising ground in the middle distance, visible through a gap in the building group.

- Distance to nearest turbine: 3.7km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 2 turbines (2 sets of blades, 1 hub and 1 tower). Turbines are seen skylined on the ridge, in the context of a pylon line and grain silo.

The sensitivity to change is considered to be Medium, given the generally open, medium scale of the landscape.

The magnitude of change is assessed to be Medium to Low, as only glimpsed views of the turbines will be available, through the built form of Castle Farm.

The sensitivity to change is Medium and the magnitude of change is Medium to Low, which results in a **Moderate-Minor** and **Not Significant** effect.

Viewpoint A9 - Bolsterstone Road

This Viewpoint is taken from behind Castle Farm, to ensure no obstruction by buildings to the view. Farmland occupies much of the view, with a pasture field in the foreground sloping down towards the settlement of Stocksbridge. The opposite valley slopes and the valley floor have small woodland blocks and belts. Pylon lines and lines of telegraph poles are noticeable vertical features.

- Distance to nearest turbine: 3.7km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and

- Amount of Development visible: 5 turbines (hubs, blades and towers). Turbines are seen on the ridgeline and hill slope, with 3 turbine bases partially obscured by woodland. Turbine hubs and blades are skylined, with the towers backclothed.

The sensitivity to change is considered to be Medium, reflecting the medium scale of the landscape.

The magnitude of change at this viewpoint is assessed to be Medium, as the Development only takes up a relatively small proportion of the horizontal length of view (approximately 12.5%), with the pylon lines and masts providing context.

Given that the sensitivity of change is assessed to be Medium and the magnitude of change Medium, the resulting level of effect is **Moderate and Not Significant**.

Viewpoint 10 - Black Tor

Viewpoint 10 is taken from Black Tor, upon the triangulation point. The view is open and panoramic, showing wide expanses of moorland. Coniferous plantations are visible in the middle-ground in the right side of the view. This viewpoint was not retaken.

- Distance to nearest turbine: 10.8km;
- Landscape Character Area: Open Moor and Heath (PDNP); and
- Amount of Development visible: 5 turbines (up to 5 blade tips). Turbine tips are seen skylined in the distance, within an open, upland landscape. There may be views of up to 5 tips; however this is likely to be reduced by vegetation.

The sensitivity to change is considered to be High, as this viewpoint is within the Peak District National Park, which as nationally designated landscape, has High sensitivity.

The magnitude of change is assessed to be Low, as only blade tips will be visible in the distance, with the Development occupying approximately 9% of the horizontal view, when tips are visible.

The sensitivity of change is High and the magnitude of change is Low; therefore, the effect is **Moderate-Minor and Not Significant**.

Viewpoint 11 – Isle of Sky

This viewpoint is taken from the recreation ground in Green Moor Village. There are areas of scrub in the foreground, with houses and fields beyond. A pylon line is prominent upon the horizon.

- Distance to nearest turbine: 2.8km;
- Landscape Character Area: Fringes of Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: Up to 5 (up to 5 tips). Turbines are seen through the pylon line and mostly screened by dwellings on the ridgeline. Where visible, turbines will be skylined. Turbine scale appears relatively small in comparison to the pylon on the horizon.

The sensitivity to change is considered to be Low, as the viewpoint is from an area of active recreation and the visual receptor at this location is considered to be children and teenagers playing in an active way, unconcerned with views outside of the recreation ground.

The magnitude of change is assessed to be Medium to Low, as the turbines are partially screened and seen through a pylon line.

The sensitivity is Low and the magnitude of change is Medium to Low, which gives rise to a **Minor and Not Significant** effect.

Viewpoint A11 - Green Moor Village

This viewpoint has been retaken at a minor road on the edge of Green Moor village. The view shows dwellings lining the left side of the road. Farmland slopes down from the road on the right side of the view. Pylons are prominent on the horizon.

- Distance to nearest turbine: 2.8km;
- Landscape Character Area: Fringes of Penistone Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (5 blades, 2 hubs and 2 towers). The turbines are seen skylined within a farmland setting. The scale of the turbines appears small in comparison to the pylon line and telegraph poles in this view.

The sensitivity to change is considered to be Medium, given that the landscape is of medium scale.

The magnitude of change is assessed to be Medium as the horizontal length of the Development is no greater than 6% of the 90^{o} view. Also, the turbines are filtered and screened by the by mature vegetation and are seen in context with the pylon line.

Given the Medium sensitivity to change and the Medium magnitude of change, the level of effect is **Moderate and Not Significant**.

Viewpoint 12 - Royd Moor Hill

This viewpoint is taken from the formalised viewpoint on Royd Moor Hill, in the shadow of the existing turbines, looking in the opposite direction towards the Development site. Farmland, which rises slightly, occupies the foreground, with further farmland and areas of settlement beyond this. Pylons are visible upon the horizon in the middle of the view.

- Distance to nearest turbine: 4.4km;
- Landscape Character Area: Ingbirchworth Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (blades, hubs and 3 towers). Turbines are seen skylined on the ridgeline, within an open farmland landscape.

The sensitivity to change is considered to be Low, given that this viewpoint is used for viewing the existing turbines of Royd Moor windfarm.

The magnitude of change is assessed to be Medium, given that the turbines will be seen against the backcloth of the sky, in a large scale landscape.

The Low sensitivity to change and the Medium magnitude of change result in a **Minor and Not Significant** effect.

Viewpoint A12 - Royd Moor Hill

Viewpoint A12 is taken from approximately the same location and therefore the view contains the same features as Viewpoint 12.

The information given for the original Viewpoint 12 holds for Viewpoint A12. There is no change to either the sensitivity to change or to the magnitude of change; therefore, there is no change to the predicted effect.

Viewpoint 13 - A616, north of Crimbles Farm

This viewpoint is taken from the A616, north of Crimbles Farm. The view shows the A616, with numerous trees deciduous and coniferous trees lining its route. Fields and areas of woodland occupy the rising ground to the right of the road. Pylons are clearly visible upon the horizon.

- Distance to nearest turbine: 0.8km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 5 turbines (hubs and blades). The tops of turbines will be seen skylined on the ridge which rises above the A616. The tree cover lining the road will partially screen/filter the turbines.

The sensitivity to change is considered to be Medium, due to the receptor group at this viewpoint (road users).

The magnitude of change is assessed to be High, given the scale and proximity of the turbines. The Development occupies approximately 40% of the horizontal length of the 90^{o} view.

The sensitivity to change is Medium and the magnitude of change is High, which gives rise to a **Major-Moderate and Significant effect**.

Viewpoint 14 - A629, south of roundabout

This viewpoint is taken from the layby near the junction of the A628 and A629. Pasture and arable farmland occupy much of the view. The settlements of Penistone and Oxspring are clustered in the valley floor and sides. A pylon line is visible on the horizon.

- Distance to nearest turbine: 3.7km;
- Landscape Character Area: Ingbirchworth Upland Farmland (Barnsley MBC); and
- Amount of Development visible: 5 turbines (hubs, blades and towers). Turbines are seen skylined upon the horizon, with the bases of the turbines partially obscured by tree belts, and by the landform.

The sensitivity to change is considered to be Medium, as this viewpoint is representative of the views of road users, which are generally considered to have a Medium sensitivity.

The magnitude of change is assessed to be Medium to Low, as the turbines are seen in an open, panoramic view and in context of human activity such as the pylon line upon the horizon and areas of settlement in the valley.

Given the Medium sensitivity of change and the Medium to Low magnitude of change, the effect is **Moderate-Minor and Not Significant**.

Viewpoint A14 - A629, south of roundabout

This viewpoint is taken from approximately the same location and therefore the view contains the same features as Viewpoint 14.

The information given for the original Viewpoint 14 holds for Viewpoint A14. There is no change to either the sensitivity to change or to the magnitude of change; therefore, there is no change to the predicted effect.

Viewpoint 15 - Broomhead Moor

Viewpoint 15 is taken from the Bridleway on Broomhead Moor. Open, gently rising, heather moorland stretches through much of the view. The Emley Mast, pylon lines and farmland beyond are visible upon the horizon.

- Distance to nearest turbine: 5.6km;
- Landscape Character Area: Moorland Slopes and Cloughs (PDNP); and
- Amount of Development visible: 5 turbines (5 blades and 2 hubs). Turbine tips and hubs are skylined upon the horizon, and are of relatively small scale, partially obscured by vegetation.

The scale of the landscape in this view is large and panoramic which normally equates to a Low sensitivity. However, as receptors are horse-riders, the sensitivity is considered to be Medium.

The magnitude of change is assessed to be Medium to Low, as the 5 blades and 2 hubs will be seen as a small element of a panoramic view which includes the Emley mast and the existing turbines at Royd Moor.

The sensitivity to change is Medium, and the magnitude of change is Medium to Low, resulting in a **Moderate-Minor and Not Significant** effect .

Viewpoint A15 - Broomhead Moor

This viewpoint is taken from a slightly different location along the Bridleway to that of Viewpoint 15. The view is the same as Viewpoint 15.

- Distance to nearest turbine: 5.6km;
- Landscape Character Area: Moorland Slopes and Cloughs (PDNP); and
- Amount of Development visible: 5 turbines (5 hubs and blades). Turbines are skylined on the horizon, within an open, predominantly moorland landscape. They occupy a small part of the view.

The sensitivity to change is High-Medium. The sensitivity to change of the National Park is generally considered to be High; however, the context of this viewpoint includes settlement, existing turbines and lines of infrastructure, which reduce the sensitivity to High-Medium.

The magnitude of change is assessed to be Medium to Low as the turbines do not introduce a new element to this view. The Emley mast, steel pylons and other turbines are visible in this view, close to the Development.

The High-Medium sensitivity to change and the Medium to Low magnitude of change combine to give a **Moderate and Not Significant** effect.

Viewpoint 16 - Deepcar

Viewpoint 16 is taken from Deepcar, on the main road (the B6088). The view shows a traditional settlement from the road near the junction with Haywood Lane. Houses extend along the road and up the slope and face inward towards the road. Hill slopes are seen through a gap in the houses, with a pylon line following the ridge.

- Distance to nearest turbine: 3.5km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 4 turbines (tips of 4 blades and 1 hub). The built form partially screens the Development. Where visible, the turbine tips will be skylined and seen through the pylon line.

The sensitivity to change is Medium in response to visual receptor of the road and houses which face the road and each other.

The magnitude of change is assessed to be Low, as only 4 turbine tips and 1 hub are seen over the ridgeline, through a small gap in the housing. The turbines are also seen in context with the pylon line on the ridgeline.

Given the Medium sensitivity to change and Low magnitude of change, the level of effect is **Minor and Not Significant**.

Viewpoint A16 - Deepcar

Viewpoint A16 is taken from slightly further along the B6088. The same elements as described for Viewpoint 16 are evident within this view, although with fewer houses upon Haywood Lane visible. A bus stop and telegraph pole are now evident in the foreground.

- Distance to nearest turbine: 3.5km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: 2 turbines visible (2 tips of blades). Housing screens most of the Development. Where visible, the turbine tips will be skylined and seen through the pylon line and garden planting.

There is no change to the sensitivity to change or the magnitude of change, and therefore, there is no change to effect of that recorded for Viewpoint 16.

Viewpoint 17 - Trans Pennine Trail, south of Dodworth

This viewpoint has been taken from the Trans Pennine Trail, south of Dodworth. An area of rough grassland, surrounded by trees and scrub, occupies the foreground. Wooded hill slopes rise beyond this.

- Distance to nearest turbine: 7.5km;
- Landscape Character Area: JCA 37: Yorkshire Southern Pennine Fringe; and
- Amount of Development visible: Filtered view of specks of turbines in the distance; turbines are screened from view by mature tree planting.

The sensitivity to change is Medium given the receptors present at this viewpoint, namely walkers and recreational users.

The magnitude of change is assessed to be Low, as the 'worst case' scenario is of glimpses of the turbines through the woodland. In summer, any possible glimpses will be screened by the vegetation.

The Medium sensitivity to change combined with the Low magnitude of change, results in a **Minor and Not Significant** effect.

Viewpoint A18 - Cut Gate

Viewpoint A18 has been taken from Cut Gate, upon a footpath just within the Peak District National Park boundary. Rolling, open moorland fills the foreground, with farmland and coniferous plantations in the middle distance. The view looks away from the National Park, towards the area of human activity, and the turbines of Royd Moor and the Emley Mast are clearly visible in this view.

- Distance to nearest turbine: 6.1km;
- Landscape Character Area: Open Moor and Heath (PDNP); and
- Amount of Development visible: 5 turbines (5 hubs, blades and towers). Turbines are seen in the distance, skylined. The Development is seen as a relatively small element within the large scale landscape of predominantly open moorland.

The sensitivity to change is considered to be High-Medium; although the National Park is of High sensitivity, this viewpoint looks out upon areas of settlement, with existing turbines and lines of infrastructure. This combination of factors reduces the sensitivity to High-Medium.

The magnitude of change is assessed to be Medium, as the turbines do not introduce a new element into the view. However, they do introduce turbines into a different part of the view.

The sensitivity to change is High-Medium and the magnitude of change is Medium, which leads to **Moderate to Major-Moderate and Significant** effect upon this viewpoint.

A6.3.4Construction Effects

The visual effects of construction of the Development will be limited to the site area and will involve the following elements:

- wind turbines;
- a track connecting the turbines;
- temporary site compound and cranes; and
- a borrow pit.

Significantly, there will be no substation or anemometer mast and no other overhead power lines.

Therefore, visual effects will be minimal and limited to the environs of the site area. The closest visual receptors that may be impacted are Cranberry Farm, Mossley House and Judd Field Farm. Of these, only Cranberry House has the potential of direct views from the western elevation of the house to the construction compound. The borrow pit may be visible in an oblique angle of view. Mossley House will have oblique views to the construction compound. Judd Field House will have slightly oblique views of the Development from the eastern elevation, however, these are likely to be seen in the context of the disused quarry north of the house.

All other visual receptors are further away from the site compound area and borrow pit, and any views to the site area are filtered by field boundary walls and planting. In addition, the Construction Phase is, by its very nature, short-term. Therefore, the visual effects arising at construction stage of the Development are considered to be **Minor and Not Significant**.

Taking into account the very limited extent of visibility generally within the National Park, the effects on the designated area as a whole are predicted to be **Not Significant**.

A6.4 ASSESSMENT OF EFFECTS ON SETTLEMENTS

A6.4.1Introduction

The assessment of visual impacts on settlements submitted within the ES was considered by the local authority to require further detail to demonstrate how the assessment conclusions on significance of effect were reached.

This additional assessment seeks to re-assess the potential visual effects on settlements by adopting a more detailed method of understanding the sensitivity of and likely effects upon, the existing settlements, particularly within 5km of the Development.

This is described in Section A6.4.3.

In addition, a residential survey has been undertaken to quantify the number of effected properties within 5km of the Development. The results of the residential survey are displayed in the Annex of this LVIA supplementary information.

A6.4.2General

The Development is located approximately 17.5km north-east of Sheffield, within the farmland landscape between Stocksbridge and Penistone. The study area contains several small towns and villages, with frequent scattered farmsteads. There are several larger settlements within the study area, including Barnsley and parts of Sheffield, Rotherham and Huddersfield. To the south-east, in the Peak District National Park, a large portion of the study area is unpopulated.

The undulating landform within the study area creates a 'folded' landscape, which limits visibility. The land is crossed by man-made features, including roads, power lines and other man-made structures. In particular, there are numerous masts, including the visually dominant communications mast at Emley Moor, which is 330m high.

The ZTV of the Development (Figure A.6.19) has been used as a guide to understanding the likely visual effects of the proposed turbines, in combination with site appraisal and photography. The ZTV shows how the undulations of the landscape limit visibility of the Development. The ZTV does not take account of local landform, buildings or vegetation. For this reason, it tends to over-estimate the actual visibility of the Development. In practice, the local landform associated with the roads, railway and the motorway corridor; the urban form within towns and cities and the vegetation cover and blocks of woodland and trees and built structures in the landscape will reduce the visibility of the proposed turbines. The assessment of effects on visual receptors takes this into account.

A6.4.3Assessment of Effects upon Settlements

There are numerous settlements within the study area. The larger settlements include: Huddersfield, Holmfirth, Rotherham, Sheffield and Barnsley. These are all further than 10km from the Development and the ZTV demonstrates that there is very limited theoretical visibility of the turbines from these settlements. Where the ZTV indicates theoretical visibility, intervening buildings within these settlements are likely to reduce visibility of the

Development in practice. Nonetheless, there may be some dwellings on the fringes of these settlements that have views to the Development, therefore the sensitivity of these settlements to the Development is considered to be Medium.

Within 10km of the Development, the ZTV indicates sporadic potential visibility. None of the settlements lying 5km to 10km of the site have direct views of the Development. All settlements within 5km to 10km are, therefore, considered to be of Medium sensitivity.

The orientation, sensitivity and predicted effects of all settlements within 5km of the Development are described in the following paragraphs.

Settlements within 5km of the Development

Stocksbridge

Stocksbridge is located approximately 1.2km south-east of the Development in the valley of the Little Don River. The town expanded to service the steelworks industry which is located along the valley floor. Despite industrial associations, Stocksbridge is a relatively greened town with several distinct areas of mature woodland planting in addition to the garden planting associated with dwellings. The main street of the town is routed along the valley floor and the main body of the town reaches upslope on the south side of the river. The Development is situated to the north-west of the town, beyond the ridge that forms the north slope of the valley.

The ZTV demonstrates that the entire town has potential visibility of the Development. In practice, buildings within the town and the existing groups of mature vegetation on the northern slope of the valley will limit visibility. Viewpoint A2 of this supplementary information and viewpoint 2 of the original ES demonstrates that, despite their close proximity, the turbines will not tend to be visually dominant from the town, due to their location on the far side of the ridge.

Due to the landform of the valley and the building pattern of the town, which follows the river, the first floor of most of the houses in Stocksbridge will not have direct views of the Development. Houses on the western edge of the town are orientated west and are likely to have oblique views. Any views from ground floor windows of houses on the upper slopes of the valley will be screened by the houses across the road, but upper floors of these houses may experience some filtered views of the Development.

Taking into account the small proportion of houses within Stocksbridge that may experience direct views from ground floor windows, the number of dwellings with potential views from upper floor windows and the effect of the intervening ridge in reducing the apparent scale of the turbines, this assessment concludes that the overall sensitivity of Stocksbridge to the Development is Medium.

The overall magnitude of change is assessed to be Medium, although in small localised areas this will rise to High, given the proximity of the Development, as demonstrated by Viewpoint A2.

The level of predicted effect on Stocksbridge is assessed as **Moderate and Not Significant**, rising to Major/Moderate and Significant in small localised areas.

Midhopestones

Midhopestones is a small hamlet of mainly two-storey stone houses, approximately 1.5km south-west of the Development. This is a small settlement, the main body of which is clustered around the junction of Morimer Road and Chapel Lane. The settlement has a distinctly rural character. The outlying properties include farmhouses with associated farm

buildings. There is a substantial amount of mature woodland planting around the buildings. The Development will be visible on the northern horizon, behind Sheephouse Wood and the electricity transmission line. The ZTV illustrates that all of Midhopestones has potential visibility of the Development. However, the substantial amount of mature woodland around the hamlet is likely to completely screen or heavily filter views. The bases of turbines will be obscured behind Sheephouse Wood, which has the effect of diminishing the perceived scale of the turbines, as Viewpoint A1 demonstrates.

No direct views of the Development from ground floor windows of houses on the lower slopes are likely, although there will be direct views from several dwellings on the southern edge of Midhopestones. Most of the houses will have filtered views to the Development from upper storey windows. Taking these factors into account, the sensitivity of Midhopestones to the Development is assessed as Medium on the lower slopes and High on the higher ground.

The magnitude of change is predicted to be Medium for the majority of the hamlet, rising to High in localised areas, where there are clear views of the Development. Viewpoint A1 illustrates the visual effect of the Development in clear views where the magnitude of change is High.

The level of predicted effect is assessed to be **Moderate and Not Significant**, rising to Major and Significant along the southern edge of the settlement.

Oxspring

Oxspring is located approximately 1.5km south-east of the Development in the valley of the Don River. Oxspring is a relatively young town that has grown in the last two hundred years. The character reflects the age of the town with mainly one and half storey houses within individual garden plots in cul-de sac layout or grid patterns. The main section of the village is situated between the river to the north-east and the Trans-Pennine Trail to the south-west. The B6462 runs through the village and the main rail link between Barnsley and Huddersfield bounds the village to the north.

The ZTV shows that the entire village has theoretical visibility of the Development. Viewpoint A5 demonstrates that the tops of hubs and blades of the Development will be visible on the horizon and that the buildings of Roughbirchworth will screen most of these from the south-western edge of Oxspring. The remaining houses in the village are located further down-slope towards the river, thus the majority of the buildings in the village are unlikely to have views of the Development.

Only houses on the southern fringe of the settlement may experience direct views from upper storey windows; views from ground floor windows of these properties will be filtered. Taking this into account, the overall sensitivity of Oxspring is assessed as Medium, increasing to High on the southern fringes of the town.

The overall magnitude of change is predicted to be Low for the northern section of Oxspring, which is situated lower on the slopes, increasing to Medium on the higher land. This corresponds to the magnitude of change at Viewpoint A5, which is assessed to be Medium to Low from the main road facing the Development. At Viewpoint A5, the turbines appear low on the horizon and so easily screened by intervening buildings and vegetation. The settlement lies at a lower elevation and so less of the turbines are likely to be visible.

The level of predicted effect on the majority of Oxspring is assessed to be **Moderate/Minor and Not Significant**, rising to Major/Moderate and Significant along the southern edge of the village.

Deepcar

Deepcar is located approximately 3km south-east of the Development, adjacent to and coalescing with Stocksbridge. The form of the settlement is broadly similar to that of Stocksbridge, which is described previously.

The ZTV demonstrates that the entire settlement has potential visibility of the Development. In practice, as for Stocksbridge, visibility will be limited by the buildings themselves and the existing groups of mature vegetation on the northern slope of the valley. Deepcar is situated on the far side of Stocksbridge from the Development, so more distant and will appear smaller on the horizon, as demonstrated in Viewpoint A16 (Figure A.6.16).

Due to the landform, existing mature tree planting and the buildings of the settlement, few of the houses in Deepcar will have direct views of the Development. Houses on the north-western edge of the town are orientated west and may experience oblique views. Any views from ground floor windows of houses on the upper slopes of the valley will be screened by the houses across the road, but upper floors of these houses may experience some filtered, oblique views of the Development. Taking this into account, the sensitivity of Deepcar is assessed as Medium.

The magnitude of change is predicted to be Medium on the upper slopes and Low on the lower slopes, where landform severely limits visibility to the Development, as illustrated by Viewpoint A16 (Figure A.6.16).

Overall, the level of visual effect on Deepcar is assessed to be **Moderate/Minor and Moderate** on the upper slopes. These effects are **Not Significant**.

Langsett

Langsett is a small hamlet of mainly two-storey stone houses, approximately 3km south-west of the Development. The western edge of the hamlet lies on the boundary of the Peak District National Park. The settlement clusters around the A616 and a minor road, with Langsett Reservoir situated on the south-western border. There are two substantial areas of mature woodland; one to the west of the hamlet extending into the Peak District National Park; the other to the east forming the boundary to the Langsett Reservoir.

The ZTV demonstrates that all of Langsett has potential visibility of the Development. However, given the amount of mature woodland around the hamlet and the local topography of the road, actual visibility is restricted to the northern side of the A616. Due to the orientation of the buildings, the ground floor windows of the majority of the settlement will not experience direct views of the Development, but some properties located to the north of the A616 will experience direct or slightly oblique views. Given the limited number of properties with direct views to the Development, the general sensitivity of Langsett is assessed as Medium, rising to High within the localised area to the north of the A616.

The magnitude of change is assessed to be Medium for the majority of the hamlet, as the local landform and groups of intervening mature trees will filter views of the Development, as illustrated by the corresponding Viewpoint, VP A4, from the northern edge of Langsett.

The level of effect is predicted to be **Moderate and Not Significant** for the **majority** of Langsett, rising to Major/Moderate and Significant on the northern edge of the settlement.

Penistone

The town of Penistone is located approximately 3km north of the Development. This town has developed around the crossroads of the A629 and the B6462 and other minor roads, as well as the railway link between Barnsley and Huddersfield. The railway viaduct

characterises the eastern approach to the town which is situated on the low land in the valley of the River Don between Hartcliffe Hill to the south-west, Spicer Hill to the north-west and Cat Hill to the north-east. The Development is situated to the south, on the slopes of the ridge that links Hartcliffe Hill to Snowden Hill. Much of the river corridor is wooded and there is a substantial amount of mature vegetation associated with the individual gardens. The southern boundary of the town, from which views to the Development will be likely, is 'V'-shaped, limiting the number of dwellings which will gain direct views to the Development.

The ZTV demonstrates that the entire settlement has potential visibility of the Development. In practice, the buildings forming the town will tend to screen views from all dwellings except those along the southern edge, where direct views of the Development may be possible. Although direct views will generally be experienced from upper level windows, some properties on the southern edge of the town may have direct views from ground floor windows. Consequently, the overall sensitivity of the settlement is assessed as Medium, rising to High in localised areas on the southern edge.

The magnitude of change is predicted to be Medium, due to the screening and filtering effects of the mature planting on the fringes of the settlement. A magnitude of High is predicted at Viewpoint A3 (Figure A.6.03), but this is located away from the town and the effects of vegetation on the boundary of the settlement.

The overall level of effect on the town of Penistone is predicted to be **Moderate and Not Significant** rising to Major/Moderate and Significant on the southern boundary.

Green Moor

Green Moor is a small hamlet situated downhill from the Hunshelf Bank and approximately 3.5km east of the Development. The character of the settlement is influenced by the electricity pylon line, which is routed through the settlement. This industrial influence is reinforced by the masts on Hunshelf Bank.

The ZTV illustrates that the entire settlement has theoretical visibility of the Development. In practice, local undulations in the landform will obscure the base of the turbines so that tops of hubs and blades are visible from select vantage points within the settlement, as illustrated by Viewpoint A11 (Figure A.6.11).

Most properties in Green Moor will experience oblique views of the Development, but those on the southern edge of the hamlet may have direct views from ground floor windows. Overall sensitivity to the proposed turbines is assessed as Medium, rising to High on the southern edge of the settlement.

The magnitude of change is predicted to be Medium, due to the presence of the industrial structures (electricity pylon line and masts) close to the settlement, as illustrated by Viewpoint A11 (Figure A.6.11).

Overall, the level of effect is predicted to be **Moderate and Not Significant** rising to Major/Moderate and Significant on the southern edge of the settlement.

Bolsterstone

The linear settlement of Bolsterstone is situated approximately 3.5km south-east of the Development. The settlement is stretched out along the roadside with points of focus at the junctions of the minor roads. The settlement is situated higher on the slope, directly south of Stocksbridge and Deepcar.

The ZTV illustrates that most of the settlement will have theoretical visibility, but dwellings on the eastern fringes will experience no visibility. Given the linear pattern of the settlement,

any views from ground storey windows are likely to be oblique and filtered by other dwellings and mature planting. Views from upper storey windows will tend to be oblique and sometimes filtered. Consequently, the sensitivity to the Development is assessed as Medium.

The magnitude of change is predicted to be Medium, due to the presence of the electricity pylon line, masts, as well as the filtering effect of the mature vegetation on the boundaries of the settlement. A Medium magnitude of change is predicted at the corresponding Viewpoint, A9 (Figure A.6.09).

The level of effect on the settlement of Bolsterstone is, therefore, predicted to be **Moderate and Not Significant**.

Thurgoland

Thurgoland is located approximately 3.5km east-north-east of the Development. The buildings of the village are clustered around the A629 and its junction with minor local roads. The settlement is situated on the higher ground, with areas of mature planting on the southern and south-western fringes of the village.

The ZTV illustrates that the entire village will have theoretical visibility of the Development. In practice, mature planting on the periphery of the village will screen and filter potential views. Intervening buildings will also tend to obscure views from much of the village. Most views will be oblique, although there may be some direct views from upper storey windows of properties along the local road to Deepcar, on the south side of the village. The overall sensitivity is therefore assessed as Medium.

The magnitude of change is predicted to be Medium, due to the presence of the pylon line and masts in most views.

The overall level of effect is predicted to be **Moderate and Not Significant**.

Hoylandswaine

Hoylandswaine is situated approximately 4.5km north-north-east of the Development. This village is clustered around a minor road on the north side of the A628. There are several blocks of mature trees in the general area and a mast is located on the rising ground to the south-west of the village.

The ZTV illustrates that the village has no visibility of the Development; consequently there will be **no effect** on visual amenity.

Ewden Village

Ewden Village is situated approximately 5km south-east of the Development, on the northern shores of More Hall Reservoir. There are substantial areas of woodland to the south and south-west of the village.

The ZTV demonstrates that there is no visibility of the Development from Ewden Village. Consequently, there will be **no effect** on the visual amenity.

Table A6.6 summarises the effects of the proposed turbines on settlements located within the 20km study area.

Table A6.6 Summary of Effects on Residential Settlements in Study Area

Settlement	Distance (Approx.)	Sensitivity	Magnitude of Change	Predicted Effect and Significance on Settlement
Stocksbridge	1.2km	Medium	Medium High in localised areas	Moderate and Not Significant Major/ Moderate and Significant in localised areas
Midhopestones	1.5km	Medium High in localised areas	Medium High in localised areas	Moderate and Not Significant Major and Significant in localised areas
Oxspring	1.5km	Medium High in localised areas	Low Medium in localised areas	Moderate/Minor and Not Significant Major/ Moderate and Significant in localised areas
Deepcar	3km	Medium	Low Medium in localised areas	Moderate/Minor Not Significant Moderate and Not Significant in localised areas.
Langsett	3km	Medium High in localised areas	Medium	Moderate and Not Significant Major/ Moderate and Significant in localised areas
Penistone	3km	Medium High in localised areas	Medium	Moderate and Not Significant Major/ Moderate and Significant in localised areas
Green Moor	3.5km	Medium High in localised areas	Medium	Moderate and Not Significant Major/ Moderate and Significant in localised areas
Bolsterstone	3.5km	Medium	Medium	Moderate Not Significant
Thurgoland	3.5km	Medium	Medium	Moderate Not Significant
Hoylandswaine	4.5km	N/A	N/A	None
Ewden Village	5km	N/A	N/A	None

Settlements within 5km – 10km of the Development				
Ingbirchworth	6km	Medium	Low	Moderate/Minor Not Significant
Wortley	6km	Medium	None	None Not Significant
Silkstone Common	6km	Medium	Low	Moderate/Minor Not Significant
Silkstone	6.5km	Medium	Low/Negligible	Minor/None Not Significant
Upper Denby & Lower Denby	6.5km	Medium	Low	Moderate/Minor Not Significant
Wharncliffe Side	7.5km	Medium	Low/Negligible	Minor/None Not Significant
Denby Dale	7.5km	Medium	Low/Negligible	Minor/None Not Significant
Dodworth	8km	Medium	Low/Negligible	Minor/None Not Significant
Pilley	8km	Medium	Low	Minor Not Significant
Oughtibridge	8.5km	Medium	Low/Negligible	Minor/None Not Significant
Skelmanthorpe	8.5km	Medium	Low/Negligible	Minor/None Not Significant
Upper Cumberworth	8.5km	Medium	None	None Not Significant
Clayton West	9km	Medium	Low/Negligible	Minor/None Not Significant
Lower Cumberworth	9km	Medium	Low/Negligible	Minor/None Not Significant
Birdwell	9.5km	Medium	Low/Negligible	Minor/None Not Significant
Chapeltown	10km	Medium	Low/Negligible	Minor/None Not Significant
Grenoside	10km	Medium	Negligible/None	Minor/None Not Significant
Settlements over 10km of the Development				
Worsbrough	10.5km	Medium	Low/Negligible	Minor/None Not Significant
Hoyland	10.5km	Medium	Low/Negligible	Minor/None Not Significant
Shepley	10.5km	Medium	None	None Not Significant
Shelley	11km	Medium	Low/Negligible	Minor/None Not Significant
Kexbrough	11km	Medium	Low/Negligible	Minor/None Not Significant
Barnsley	11km	Medium	Negligible/None	Minor/None Not Significant
Blacker Hill	11.5km	Medium	Low/Negligible	Minor/None Not Significant
Darton (including Mapplewell, due to close proximity).	12km	Medium	Low/Negligible	Minor/None Not Significant
Thorpe Hesley	12km	Medium	Low/Negligible	Minor/None Not Significant
Emley	12km	Medium	Low/Negligible	Minor/None Not Significant

Bretton & West Bretton	13km	Medium	Low/Negligible	Minor/None Not Significant
Kirkburton	13km	Medium	None	None Not Significant
Wentworth	13.5km	Medium	Low/Negligible	Minor/None Not Significant
Holmesfirth	12km	Medium	None	None Not Significant
Highburton	13.5km	Medium	None	None Not Significant
Wentworth	13.5km	Medium	Low/Negligible	Minor/None Not Significant
Flockton	14km	Medium	Low/Negligible	Minor/None Not Significant
Woolley	14.5km	Medium	None	None Not Significant
Royston	15km	Medium	Low	Minor Not Significant
Cudworth	15km	Medium	Low	Minor Not Significant
Netherton	15km	Medium	Low/Negligible	Minor/None Not Significant
Wombwell	15km	Medium	None	None Not Significant
Brampton	16km	Medium	None	None Not Significant
Chapelthorpe and Crigglestone (these are grouped due to close proximity).	16-18km	Medium	None	None Not Significant
Greasbrough	16km	Medium	Low/Negligible	Minor/None Not Significant
Middlestown (including Overton, due to close proximity).	16km	Medium	Low/Negligible	Minor/None Not Significant
Notton	16km	Medium	None	None Not Significant
Grange Moor	16.5km	Medium	Low/Negligible	Minor/None Not Significant
Darfield	16.5km	Medium	Low	Minor Not Significant
Sheffield	17.5km	Medium	Negligible/None	Minor/None Not Significant
Horbury	18km	Medium	Low/Negligible	Minor/None Not Significant
Grimethorpe	18km	Medium	Low	Minor Not Significant
Thornhill/Thornhill Edge	18km	Medium	None	None Not Significant
South Hiendley	18.5km	Medium	Negligible	Minor/None Not Significant
Ryhill	19km	Medium	Low	Minor Not Significant
Havercroft	20km	Medium	Low	Minor Not Significant
Huddersfield	20km	Medium	Negligible/None	Minor/None Not Significant
Rotherham	20km	Medium	Negligible/None	Minor/None Not Significant

A6.4.4 Conclusions of Effects upon Settlements

The visual effects of the Development upon a total of 66 settlements and settlement groups (where settlements are in close proximity to one another) have been identified and assessed. The settlements assessed include one city (Sheffield) and 3 large towns (Barnsley, Huddersfield and Rotherham). The remaining 62 settlements are small towns, villages and hamlets.

The Development is assessed to have no significant effects upon the 4 larger settlements or any of the other settlements between 5km to 10km from the Development.

Of the 11 settlements identified within 5km of the Development, significant effects are identified for small, localised sections of 6 settlements, all of which are located within 3.5km of the Development.

No significant effects are predicted for any other settlement.

A6.5 ASSESSMENT OF EFFECTS UPON SITES ON THE REGISTER OF PARKS AND GARDENS

The landscape and visual effects upon sites identified within the Register of Parks and Gardens (P&G), held by English Heritage, were assessed in Chapter 6: Landscape and Visual Impact Assessment (LVIA), of the ES submitted to Barnsley Metropolitan Borough Council in May 2008. This section seeks to expand upon this assessment in order to clarify the predicted visual effect of the Development on the settings of the sites identified within the study area.

The original LVIA Chapter identified twenty sites upon the Register of Parks and Gardens within 20km of the Development, in the districts of Barnsley, Kirklees, Rotherham, Sheffield and Wakefield. As within the original submission, where there is more than one designation in one reference location, these have been considered as a single site and are identified by site and approximate distance from the Development.

The sensitivity of all the sites is considered to be High, given their national designation and the low capacity for change inherent in historic landscapes. The assessment below identifies the magnitude of change and significance of effect resulting from the Development.

1. Wortley Hall

Wortley Hall is located within the village of Wortley, approximately 6km east of the Development. The 26 acres of gardens contain both formal Italianate features and informal parkland. There are substantial mature tree belts and woods at the boundaries.

The ZTV demonstrates that there is no visibility of the proposed turbines from the gardens of Wortley Hall. Therefore, **no effect** is predicted.

2. Wentworth Castle

The 18th Century park and gardens of Wentworth Castle are located 8km northeast of the Development, in the village of Stainborough. There are 50 acres of gardens and a further 500 acres of parkland and features include the 'castle' itself (a large folly), temples, monuments and various walks. There are a network of small woodlands and tree belts throughout the parkland.

The ZTV shows that some limited areas towards the extreme fringes of the grounds of Wentworth Castle may have theoretical visibility of the Development. However, boundary planting and intervening vegetation are likely to obstruct any views and the majority of the

gardens will not, therefore, experience any visibility. For this reason, the magnitude of change is **negligible** and the significance of predicted effect **Moderate-Minor**.

3. Cannon Hall

Cannon Hall is located approximately 8km north-north-east of the Development, near Cawthorne. This site encompasses 70 acres of 18th Century parkland, which are now used as a country park. The parkland contains frequent clumps of mature trees and tree belts. There is particularly dense woodland planting along the west-south-western boundary of the grounds which is likely to screen views to the Development.

The ZTV shows that approximately 50% of the country park may experience some restricted theoretical visibility of the Development and that up to three turbine tips may be visible from northern portions of the grounds. Dense woodland and mature trees and hedgerows along the western boundary of the park, in combination with other tree clumps and mature vegetation within the grounds, are likely to screen any views of turbine tips. For these reasons the magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor**.

4. Locke Park

Locke Park is on the fringes of Barnsley, approximately 10km northeast of the Development. This Victorian park, of more than 45 acres, has many meandering paths, with associated belts of trees and lakes and also has various amenity features, including tennis courts, bowling greens and cafe.

The ZTV shows that there are some areas with theoretical visibility of the turbine hubs and tips. However, the mature tree planting within the grounds and the adjacent houses on the western and south-western boundaries of the park, are likely to screen any views of the Development. For this reason the magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor**.

5. Bretton Hall

Bretton Hall, now part of Bretton Country Park and the Yorkshire Sculpture Park, is located approximately 12km north-north-east of the Development. The gardens were laid out in the 18th and 19th centuries and include 500 acres of parkland and lakes. There is substantial mature tree planting and woodland throughout the park.

The ZTV shows that theoretical visibility is limited to a small section of the north-eastern part of the designated area; the majority of the park will experience no views of the Development. In practice, scattered groups of mature tree planting within the park are likely to heavily filter or entirely screen any potential views. For this reason, the magnitude of change is **negligible** and the level of predicted effect **Moderate/Minor**.

6. Wentworth Woodhouse

Wentworth Woodhouse is located approximately 15km east of the Development, in the village of Wentworth. The gardens have been developed from the 16th Century and feature Japanese and ornamental gardens, set within parkland. There are numerous belts of trees, copses and small sections of woodland within the parkland.

The ZTV shows that there are some areas of theoretical visibility within the grounds of Wentworth Woodhouse. However, these occur in or near areas of woodland and/or belts of trees and any views will be screened by this mature vegetation. For this reason the magnitude of change is **negligible** and the level of effect is **Moderate-Minor**.

7. Boston Gardens and Moorgate Cemetery

Boston Gardens and Moorgate Cemetery are located approximately 20km southeast of the Development, within the urban area of Rotherham. The cemetery adjoins the gardens; both date from the 19th Century. Throughout both areas, there are mature tree clumps and belts and the gardens are abutted by the Canklow Woods.

The ZTV shows that there are some areas of theoretical visibility within the designated areas. However, tree planting within the gardens and cemetery, together with adjacent houses and the buildings of Rotherham are likely to screen any views of the Development. For these reasons, the magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor.**

8. Clifton Park

Clifton Park is within Rotherham, approximately 20km southeast of the Development. Various amenity features, including a bandstand and bowling greens, are present within the Georgian landscape park structure. The paths and boundaries of the park are lined by mature trees.

The ZTV shows some areas in the eastern section of Clifton Park with theoretical visibility of the Development. However, mature trees within the park, along the paths and the boundaries, as well as the surrounding buildings, are unlikely to allow any views in practice. For this reason, the magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor**.

9. Burngreave Cemetery

Burngreave Cemetery is located approximately 16km south-south-east of the Development, within the urban area of Sheffield. The 27 acre cemetery has several chapels and associated buildings and many mature trees.

There is no visibility of the proposed turbines from the grounds of Burngreave Cemetery, as demonstrated by the ZTV. **No effect** is therefore predicted.

10. Weston Park

Weston Park is within the urban area of Sheffield, approximately 16km south-south-east of the Development. It is the oldest municipal park within Sheffield, with curvilinear paths and mature trees and vegetation.

The ZTV demonstrates that there is no visibility of the proposal from within Weston Park and **no effect** is therefore predicted.

11. Sheffield Botanical Gardens

Sheffield Botanical Gardens are located 16km south-southeast of the Development. The 19 acres of gardens are primarily a botanical collection with associated pavilions, which are Grade II listed. There is extensive tree planting throughout the gardens.

The ZTV demonstrates that there is no visibility of the Development from Sheffield Botanical Gardens. **No effect** is therefore predicted.

12. Porter Valley Parks

The Porter Valley Parks are located approximately 16km south-south-east of the Development, within the city of Sheffield. The parks are a series of linked green spaces,

which include Endcliffe Park. Features of the parks include a riverside walk, lakes and woodlands.

Porter Valley Parks will not experience any views of the proposed turbines, as is demonstrated by the ZTV. **No effect** is therefore predicted.

13. Sheffield General Cemetery

Sheffield General Cemetery is located approximately 17km south-south-east of the Development. It is one of the oldest commercial cemeteries in Britain and retains much of the original layout. The main walks and boundaries within the cemetery are lined with mature trees.

Sheffield General Cemetery has no potential visibility, as is shown by the ZTV. **No effect** is therefore predicted.

14. City Road Cemetery

City Road Cemetery is within the urban area of Sheffield, approximately 18km south-southeast of the Development. The cemetery has a formal layout, emphasised by the tree planting alongside the main paths and boundaries.

The ZTV shows some restricted theoretical visibility of the Development from within sections of City Road Cemetery. In practice, tree planting within the cemetery, alongside the paths and boundaries and the surrounding buildings of Sheffield are unlikely to allow any views of the Development. For this reason the predicted magnitude of change is **negligible** and the level of effect **Moderate-Minor**.

15. Norfolk Park

Norfolk Park is located approximately 18km south-south-east of the Development, within the city of Sheffield. The park is Victorian and has thick belts of trees and avenues, which line the carriage drives and boundaries.

The ZTV demonstrates that there is theoretical visibility of the proposed turbines from within Norfolk Park at a distance of approximately 18km. In practice, mature tree planting along boundaries and within the park, in combination with the urban form of Sheffield, are likely to screen any views of the turbines tips. Any glimpses of a turbine tip will be seen in the context of the built form of Sheffield. For these reasons, the magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor**.

16. Monument Gardens

The Monument Gardens are within the urban area of Sheffield, approximately 18km south-south-east of the Development. The formal Victorian Monument Gardens are abutted by Clay Wood and throughout the grounds there are large mature trees and vegetation.

The ZTV shows that there are some areas within the Monument Gardens with theoretical visibility of up to 5 turbine tips and that most of the park has theoretical visibility of 4 turbines tips. However, views are likely to be screened by the combination of the tree planting within the gardens, the immediately adjacent tower blocks, as well as the buildings of Sheffield City Centre. For these reasons, the predicted magnitude of change is **negligible** and the level of predicted effect **Moderate-Minor**.

17. Whinfell Quarry Gardens

Whinfell Quarry Gardens are located approximately 20km south-south-east of the Development. The Edwardian gardens are located on the outskirts of Sheffield and largely consist of mature tree and shrub planting.

The ZTV demonstrates that no parts of Whinfell Quarry Gardens will experience any visibility. **No effect** is therefore predicted.

18. Beauchief Halls

Beauchief Halls is located within the Beauchief area of Sheffield, approximately 20km south-south-east of the Development. The gardens contain both formal and parkland elements.

The ZTV demonstrates that the grounds of Beauchief Halls will not experience any visibility of the Development. **No effect** is therefore predicted.

19. Beaumont Park

Beaumont Park is on the fringe of Huddersfield, 18km north-north-west of the Development. This Victorian public park contains many different features, including a promenade, cascades, grottos and bandstand, within a woodland and parkland context.

There is no visibility of the proposed turbines from Beaumont Park, as demonstrated by the ZTV. **No effect** is therefore predicted.

20. Greenhead Park

Greenhead Park is within the centre of Huddersfield, approximately 20km north-north-west of the Development. This 19th Century public park features include curvilinear walks leading off a main parade, a lake, and a bandstand and war memorial. The Park boundaries are defined by informal belts of trees.

The ZTV demonstrates that there is no visibility of the Development from Greenhead Park. **No effect** is therefore predicted.

Table A6.7 Summary of Landscape Effects to Designation Receptors

Landscape Receptors	Listing	Landscape Sensitivity	Magnitude of Change	Level of Effect	Significance of Effect
1. Wortley Hall	Grade II	High	None	None	Not Significant
2. Wentworth Castle	Grade I	High	Negligible	Moderate-Minor	Not Significant
3. Cannon Hall	Grade II	High	Negligible	Moderate-Minor	Not Significant
4. Locke Park	Grade II	High	Negligible	Moderate-Minor	Not Significant
5. Bretton Hall	Grade II	High	Negligible	Moderate-Minor	Not Significant
6. Wentworth Woodhouse	Grade II*	High	Negligible	Moderate-Minor	Not Significant
7. Boston Gardens, Moorgate Cemetery	Grade II, Grade II	High	Negligible	Moderate-Minor	Not Significant
8. Clifton Park	Grade II*	High	Negligible	Moderate-Minor	Not Significant
9. Burngreave Cemetery	Grade II	High	None	None	Not Significant
10. Weston Park	Grade II	High	None	None	Not Significant

11. Sheffield Botanical Gardens	Grade II	High	None	None	Not Significant
12. Porter Valley Parks	Grade II	High	None	None	Not Significant
13. Sheffield General Cemetery	Grade II	High	None	None	Not Significant
14. City Road Cemetery	Grade II	High	Negligible	Moderate-Minor	Not Significant
15. Norfolk Park	Grade II	High	Negligible	Moderate-Minor	Not Significant
16. Monument Gardens	Grade II	High	Negligible	Moderate-Minor	Not Significant
17. Whinfell Quarry Gardens	Grade II	High	None	None	Not Significant
18. Beauchief Halls	Grade II	High	None	None	Not Significant
19. Beaumont Park	Grade II	High	None	None	Not Significant
20. Greenhead Park	Grade II	High	None	None	Not Significant

A6.6 ASSESSMENT OF EFFECTS UPON PRINCIPAL ROAD TRANSPORT ROUTES

A6.6.1General

During post-application discussions, Barnsley Metropolitan Borough Council requested additional information regarding the sequential effects of the Development on the M1 motorway. This additional assessment seeks to provide this information through expanding upon the explanation of the predicted effects of the Development upon the M1 and three other main routes within the study area, namely the A628, A629 and A616. These three 'A' class roads come closest to the Development and are, therefore, the most susceptible to experience significant effects.

Effects have been assessed in relation to distance from the Development and have thus been separated into the following bands;

- Within 5km of the Development;
- Within 5 to 10km of the Development; and
- 10 to 20km of the Development.

'A' class roads, motorways and railways are generally considered to have a Medium sensitivity to change due to the speed at which vehicles travel and the general character associated with road and rail corridors. Sensitivity of receptors is noted in Table A6.1 in section A6.2.

An indicative Sequential Effects upon Major Roads drawing (Figure A.6.29) has been prepared, to aid in the explanation of effects by presenting these within a graphic format. This sequential figure has been prepared for illustrative purposes and is not intended to show exact locations of sequential views; rather it suggests general trends along the main road routes within a 20km radius of the Development.

A6.6.2Road Transport Routes

The M1 is the principal transport route through the study area and runs north-south. The road links the urban conurbations of Barnsley, Rotherham and Sheffield as it passes through the study area. Views from the motorway are often confined by the adjacent road embankments and mature vegetation that line parts of this transport corridor. Due to the orientation of the motorway, the views of road users will be predominantly oblique to the direction of travel.

The A628 links Manchester, Barnsley and Pontefract. Within the study, the road follows an east-west alignment. The road passes through the Peak District National Park and also adjoins the M1, A629 and A616. The road passes through several areas of settlement and has areas of mature roadside vegetation alongside much of the route. Potential views from the A628 to the Development will be predominantly oblique in nature; however for some brief stretches of the road, there may be potential for direct views. These are described more fully in the following sections.

The A629 links Huddersfield with the A61 and Sheffield and follows a north-west to south-east alignment. The road passes through several small towns, villages and hamlets and intersects the A616, A628 and A635. The route has frequent areas of mature roadside planting, which restrict user's views along some sections of the route. A small section of the route may experience potentially direct views; however, potential views will be predominantly oblique in nature.

The A616 links Huddersfield with the M1 and passes in close proximity to the Development. The road passes through the towns of Holmfirth, Stocksbridge and Deepcar and runs broadly north-west to south-east. The road has frequent areas of mature vegetation. Potential views from the A616 to the Development will be predominantly oblique in nature; however there may be brief direct views.

A6.6.3 Effects upon the Principal Road Transport Routes within 5km of the Development

A628

The A628, at its closest point passes approximately 3km north-west of the Development. The ZTV (Figure A.6.19) demonstrates that there are areas within 5km that experience no visibility. Clear views may be possible for 1 to 2km when travelling eastbound from the junction with the A616. Intermittent views will be available near Penistone; these views are likely to be partially filtered by the adjacent buildings and associated vegetation. Filtered views will be available when approaching the junction with the A629. Views from the A628 within 5km of the Development will be predominantly oblique in nature.

A629

The A629 is situated to the north-east of the Development, approximately 3km to the nearest turbine. The ZTV (Figure A.6.19) demonstrates that all of the A629 that falls within 5km of the Development has theoretical visibility, which is due to its elevated position along this section. Figure A.6.29, illustrates that in practice, views of the Development will be intermittent, due to the filtering and screening effects of roadside vegetation and nearby settlements. Brief direct clear views may be available northbound in the vicinity of Wortley. All views within 5km of the Development will be oblique in nature.

A616

The A616 at its closest point passes approximately 0.5km south of the Development. The ZTV (Figure A.6.19) illustrates that visibility of the Development is intermittent within 5km and that some sections of the route receive no visibility. Views to the Development will be further filtered and/or screened by areas of mature roadside vegetation. Figure A.6.29 illustrates that as the road passes nearest to the Development, views will be screened by the adjacent Sheephouse Wood. Direct clear views may be available eastbound in the vicinity of Langsett. Road users travelling westbound may experience brief direct views in the vicinity of Wortley. Potential views from the A616 within 5km of the Development will be predominantly oblique in nature.

A6.6.4 Effects upon Principal Road and Transport Routes within 5 to 10km of the Development

M1

The M1 corridor experiences fragmented theoretical visibility within 5 to 10km of the Development, as demonstrated by the ZTV (Figure A.6.19). In practice, visibility will be further restricted, due to the screening and filtering effects of the motorway embankments and mature vegetation that are associated with the road, as illustrated by Figure A.6.29. Views will be further screened and filtered by the buildings of the nearby settlements. Where views are available, they will be oblique to the direction of travel.

A628

The A628 within 5 to 10km of the Development experiences intermittent theoretical visibility, as demonstrated on the ZTV (Figure A.6.19). In practice, visibility will be further restricted by the mature vegetation and the adjacent buildings, as illustrated by Figure A.6.29. Road users travelling eastbound on a 4km section of the A628, between 5 to 10km west of the Development, may experience occasional direct views of short duration, which will become filtered in the vicinity of the junction with the A616. Road users travelling westbound may experience filtered, intermittent views, between 5 and 10km east of the Development. Where views are available, they will be predominantly oblique in nature.

A629

The ZTV (Figure A.6.19) demonstrates that the A629 receives theoretical visibility for much of its route within 5 to 10km of the Development. However, in practice, views are likely to be more intermittent, as illustrated by Figure A.6.29. Views are likely to be filtered by the roadside vegetation and intervening buildings. There are filtered direct views for a small section of approximately 2km in length; however the majority of views will be oblique in nature.

A616

The A616 experiences fragmented theoretical visibility between 5 and 10km of the Development, with some sections of the route experiencing no visibility, as demonstrated by the ZTV (Figure A.6.19). Views are likely to be restricted and filtered by intervening vegetation, as illustrated within Figure A.6.29. Views will be predominantly oblique in nature.

A6.6.5 Effects upon Principal Road and Transport Routes within 10 to 20km of the Development

M1

The M1 experiences increasingly intermittent theoretical visibility beyond 10km, with several sections experiencing no visibility, as demonstrated by the ZTV (Figure A.6.19). In practice, views of the turbines will be further constrained by the local roadside landform and planting, and by the towns situated within the M1 corridor. Figure A.6.29 illustrates the filtered nature of views, which will be oblique where available.

A628

The ZTV (Figure A.6.19) demonstrates that road users travelling eastbound between 10 and 20km from the Development will not experience any views, as there is no theoretical visibility. Westbound road users may experience intermittent views of the Development; however, the turbines will appear small in scale due to the distance, and views are likely to be filtered and potentially screened by the combined effect of the clusters of buildings along

the road, and the mature roadside vegetation. Brief, direct views may be available; however, views will be predominantly oblique.

A629

The A629 does not experience any visibility of the Development outwith 10km, as demonstrated by the ZTV (Figure A.6.19).

A616

The ZTV (Figure A.6.19) demonstrates that the A616 does not experience any visibility of the Development outwith 10km.

Table A6.8 summarises likely effects of the proposed turbines on the principal roads in the study area.

Table A6.8 Summary of Effects on Principal Roads

Route	Sensitivity	Magnitude of Change	Predicted Effect and Significance on Settlement
M1	Medium	Low	Minor Not Significant
A628	Medium	Low generally Medium in localised areas within 5km.	Moderate-Minor Not Significant Moderate in localised areas Not Significant
A629	Medium	Low generally Medium in localised areas within 5km.	Moderate-Minor Not Significant Moderate in localised areas Not Significant
A616	Medium	Low generally Medium in localised areas within 5km.	Moderate-Minor Not Significant Moderate in localised areas Not Significant

A6.7 ASSESSMENT OF CUMULATIVE EFFECTS ON LANDSCAPE AND VISUAL RECEPTORS

A6.7.1Introduction

This section undertakes the assessment of the potential landscape and visual effects arising from the proposal in conjunction with other built, consented and application stage windfarm developments with the potential to interact with the Development. This supplementary information reviews cumulative effects of windfarms within a 40km radius of the Development, as agreed with BMBC. This supplementary information provides a more detailed cumulative assessment than was originally submitted as part of the ES in May 2008.

The windfarms addressed in this section are:

- Blackstone Edge (proposed);
- Hazelhead (consented);
- Spicer Hill; (proposed)
- Royd Moor (operational);
- Marr (consented);
- Westfield Lane (proposed);
- Crook Hill (proposed);
- Hook Moor (proposed); and
- Ovenden Moor (operational).

Although these windfarms have the greatest potential to have a significant interaction with the Development, this does not eliminate the potential of interaction with more distant windfarms. Significant cumulative effects however, are unlikely to occur with these distant developments.

Figures A.6.20 to A.6.28 illustrate the patterns of theoretical inter-visibility of the turbines at Sheephouse Heights with those of each of the nine windfarms listed above.

A6.7.2Cumulative Assessment Methodology

The methodology used for the cumulative assessment remains the same as for the original LVIA chapter of the ES submitted in May 2008. However, for ease of reference, the methodology is restated in the following paragraphs.

Although a "Guide to Assessing the Cumulative Effects of Wind Energy Development" has been produced (DTI Final Consultation Draft December 1999), there are no published guidelines in Great Britain defining a unifying methodology for the assessment of cumulative effects on landscape and visual amenity that have been approved and endorsed by the Landscape Institute. The approach used is, therefore, based on the "Guidelines for Landscape and Visual Impact Assessment LI-IEMA 2002" and recent draft guidance notes on cumulative LVIA of windfarm developments produced by SNH (2005).

The Development forms the focus of the study and the cumulative landscape and visual impact assessment (CLVIA) provides a tool to consider ways in which the Development will have additional impacts when considered together with other existing or planned windfarm developments.

Types of Cumulative Effects

Cumulative landscape and visual effects may arise from the addition of one or more windfarm developments into an area with an existing pattern of windfarm visibility. Cumulative effects can result from:

- Increasing the number of turbines that can be seen from an area that has existing visibility of one or more windfarm developments. This can give rise to extended combined visibility of wind turbines at particular locations in the landscape. The effects may be either simultaneous or successive. Simultaneous cumulative effects

occur where more than one windfarm is visible in the same 90° view; successive cumulative effects arise where the viewer has to turn his or her head to see the other windfarms;

- Increasing the proportion of the study area where one or more windfarm developments may be seen. This may give rise to increased sequential visibility of wind turbines across the landscape. Sequential cumulative effects occur where the observer has to move to another viewpoint to see the other windfarms, so that they appear in sequence, depending on speed of travel and distance between the viewpoints; and

- Increasing total numbers of wind turbines visible generally.

The assessment of potential cumulative landscape and visual effects is carried out in a similar manner to the assessment of non-cumulative effects. It involves systematic, professional judgements of the likely magnitude of change caused by the Development to the existing landscape and visual baseline.

Magnitude of Cumulative Change

Cumulative landscape and visual effects may result from additional changes to the existing landscape and visual amenity, caused by the Development in conjunction with other windfarm developments. The emphasis of the assessment is on the additional changes that the Development would bring to the existing pattern of baseline cumulative visibility, rather than the combined effect of all the windfarms theoretically visible. The principle of magnitude of cumulative change thus makes it possible for the Development to have a Major effect on a particular receptor while having only a Minor cumulative effect.

The magnitude of cumulative change arising from the proposal is assessed as High, Medium, Low or Negligible, based on interpretation of the following factors, to take account of cumulative change:

- The number of existing and proposed windfarms and wind turbines visible;

- Distance between the proposed turbines and existing /proposed windfarms;

- Direction of view towards, and spatial distribution of, existing and proposed windfarms; and

- Landscape setting, context and degree of visual coalescence of existing and proposed windfarms.

Significance of Cumulative Effects

Best practice guidance on cumulative assessment describes the need to understand whether the Development exceeds the threshold of acceptability for the total number of windfarms in an area. In order to identify when a landscape has reached its capacity in terms of windfarms, it is necessary to refer to the plans and policies that identify the landscape objectives and policies for the area. This assessment takes the existing best practice guidance from statutory consultees and Local Authority Guidance into account in the prediction of cumulative effects.

The level of any cumulative landscape or visual effect has been assessed as Major, Major/moderate, Moderate, Moderate/minor, Minor, Minor/none or None in relation to the sensitivity of the receptor and the predicted magnitude of change. As in the assessment of non-cumulative effects, the matrix shown in Table 6.4 in the ES is used to bring together receptor sensitivity and magnitude of change.

In the first instance, ZTVs for each of the nine other windfarms have been overlain with that for the Development, in order to establish the likely intervisibility with each of the existing or planned windfarms (Figures A.6.20 to A.6.25). Following the interrogation of cumulative ZTVs, the representative viewpoints have been used to understand and predict the likely cumulative effects arising as a result of the proposed turbines in combination with other existing or planned developments.

A6.7.3Cumulative ZTV Analysis

General Cumulative Visibility

As noted in the original assessment, Blackstone Edge, Spicer Hill, Hazlehead and Royd Moor windfarms are all situated in close vicinity to each other, north-west of the Development and between Penistone and Holmfirth; the cumulative ZTVs (Figures A.6.20 to A.6.25) demonstrate that cumulative visibility of these four windfarms is broadly similar.

The Cumulative ZTVs show that the cumulative visibility of each of the windfarms in conjunction with the Development is likely to be concentrated in the area between the two developments and immediately surrounding them. Beyond this, cumulative visibility quickly becomes fragmented, with limited cumulative visibility in the south-western section of the study area, and fragmented cumulative visibility elsewhere. Cumulative visibility is likely to be reduced by areas of woodland and mature vegetation which is interspersed throughout the study area and by the local landform associated with the major roads within the study area.

Sheephouse Heights with Blackstone Edge

Blackstone Edge windfarm development is located approximately 6km north-west of the Development. Figure A.6.20 indicates that cumulative visibility of Sheephouse Heights and Blackstone Edge mainly occurs in the northern and eastern areas of the 35km study area. Individual visibility of Blackstone Edge predominantly occurs in the north and north-western sections of the study area. There is little cumulative visibility within the Peak District National Park, mainly restricted to the north-eastern fringes of the National Park. Cumulative visibility is generally intermittent and fragmented.

Sheephouse Heights with Royd Moor

Royd Moor windfarm development is located approximately 4.5km north-west of the Development. Figure A.6.21 suggests that cumulative visibility of the Development and Royd Moor is broadly similar to the cumulative visibility of the Development and Blackstone Edge; however cumulative visibility is more fragmented, whilst individual visibility of Royd Moor occurs more frequently. There is limited cumulative visibility within the Peak District National Park, with intermittent visibility predominantly occurring around the Midhope, Howden and Bradfield Moor areas.

Sheephouse Heights with Hazlehead

Hazlehead windfarm development is situated approximately 6km north-west-west of the Development. Figure A.6.22 demonstrates that cumulative visibility is fragmented, occurring in intermittent bands. Individual visibility of Hazlehead predominantly occurs in the north-eastern section of the study area. There are small areas of cumulative visibility at the north-eastern fringes of the Peak District National Park.

Sheephouse Heights with Spicer Hill

Spicer Hill windfarm development is situated approximately 5km north-west of the Development. Figure A.6.23 demonstrates that cumulative visibility is highest within 10km.

Outwith 10km, visibility is more fragmented and intermittent. Individual visibility of Spicer Hill mainly occurs within the north and north-eastern sections of the study area. There are small areas of cumulative visibility within the Peak District National Park, with similar distribution to Sheephouse Heights with the other cumulative windfarms.

Sheephouse Heights with Westfield Lane

Westfield Lane windfarm development is located some 29km north-east of the Development, near Pontefract. Figure A.6.24 demonstrates that cumulative visibility is highest around the individual developments. Generally, there are intermittent and fragmented bands of cumulative visibility from the north-west to the east of the study area. Cumulative visibility within the Peak District National Park is broadly similar to that of the Development with Hazlehead, Blackstone Edge, Royd Moor and Spicer Hill.

Sheephouse Heights with Marr

Marr windfarm development is located approximately 25.5km east-north-east of the Development, between Marr and Barnburgh. Figure A.6.25 suggests that the theoretical cumulative visibility is highest around the town of Goldthorpe and fragmented elsewhere. Generally, cumulative visibility is very intermittent and restricted to the north and eastern section of the study area. The ZTV also illustrates that there is potentially limited patches of cumulative visibility upon the north-eastern fringes of the Peak District National Park.

Sheephouse Heights with Crook Hill

Crook Hill windfarm development is located approximately 36.5km north-west of the Development, between Littleborough and Todmorden. Figure A.6.26 demonstrates that cumulative visibility is highest to the north of the Development. Generally, cumulative visibility is very intermittent and predominantly occurs outwith 20km of the Development. At this distance the Development will be visible as a very small element of the view. There are some limited and small, intermittent areas of theoretical cumulative visibility within the Peak District National Park in the region of the peak of Bleaklow Hill.

Sheephouse Heights with Ovenden Moor

Ovenden Moor windfarm development is located approximately 37.5km north-north-west of the Development. Figure A.6.27 suggests that cumulative visibility is highest in the north and east of the Development. Generally, cumulative visibility is intermittent and fragmented. There are small areas of theoretical cumulative visibility within the fringes of the Peak District National Park, which occur infrequently.

Sheephouse Heights with Hook Moor

Hook Moor windfarm development is located approximately 39km north-north-east of the Development. Figure A.6.28 suggests that cumulative visibility is highest on the north-eastern edge of the 40km radius study area for the cumulative assessment. There are small areas of theoretical cumulative visibility within the fringes of the Peak District National Park. Individual visibility of Hook Moor predominantly occurs within the north and east of the study area.

A6.7.4Cumulative Visibility from the Peak District National Park

The Peak District National Park falls partly within the study area, to the south and west of the Development. Cumulative views of Sheephouse Heights, in conjunction with other windfarms, can only occur where there are areas of visibility of the Development. More than 94% of the National Park is unaffected by views of the Development. Therefore, cumulative views can only affect up to 6% of the National Park.

The Peak District National Park experiences small, infrequent areas of cumulative visibility of the Development in conjunction with other windfarms. These areas of cumulative visibility occur within the north-eastern fringes of the National Park, in areas that are close to human activity and settlement. The pattern of cumulative visibility of the Development in conjunction with the other windfarms is broadly similar, mainly limited to small, discrete areas of higher ground, as demonstrated by Figures A.6.20 to A.6.28.

An additional cumulative viewpoint has been included in this supplementary information, namely Viewpoint A18; Cut Gate. This viewpoint is representative of the effects experienced in the small, restricted areas of visibility available within the Peak District National Park and will show the worst possible cumulative visibility. It has been assessed separately as part of this assessment of effects upon the Peak District National Park. Viewpoint A15 also illustrates cumulative effects on the Peak District National Park and, therefore, this is also included in this section.

The National Park is considered to have a High overall sensitivity to change; however from Viewpoint A18, the view is towards a well developed part of Yorkshire, with frequent settlements, lines of infrastructure and existing turbines forming part of the view. The sensitivity of change of this viewpoint is therefore assessed as Medium-High. From viewpoint 15, the view to the settled lowland is filtered by the ridgeline in the middle ground, however, the existing turbines at Royd Moor are still visible and the settled nature of the land in the distance will be evident on clear days. Therefore the sensitivity of change of this viewpoint is also assessed as Medium-High.

Viewpoint A15 - Bridleway on Broomhead Moor

Introduction

This viewpoint is taken from the bridleway on Broomhead Moor, east of Smallfield and south-west of Bolterstone, within the Peak District National Park.

Existing View

The existing view shows open moorland in the foreground and a wooded ridge in the middle ground. This ridge filters views to the settled area of land beyond. Although Emley Mast is visible as are the transmission lines and mast neighbouring the Development. This viewpoint has been taken under stormy weather conditions. It is notable that the existing turbines are visible as dark grey in these conditions and, in practice, under similar weather conditions, the Development turbines will not be as white as shown in the visualisation.

Predicted View

The Development will introduce additional turbines in the northern part of the view. In cumulative terms, this has the effect of extending the visibility of turbines, although they will generally be contained within the north and north-eastern part of the view. The Westfield Lane development will not be as distinctly visible as illustrated in the visualisation (Figure A.6.15).

Magnitude of Change

The magnitude of change is assessed to be Medium as the Development will add 14% to the horizontal extent of the view within which turbines are visible, as demonstrated within Figure A.6.15.

Effects on Visual Amenity

The level of effect is, therefore, considered to be **Moderate to Major/Moderate and Significant**. This viewpoint illustrates the 'worst case scenario' from the north-eastern edge of the National Park given that the theoretical visibility of the Development within the National Park is less than 6% of the National Park area and the total cumulative visibility will be even less. Therefore, the effects on the designated area as a whole are **not predicted to be significant**.

Viewpoint A18 - Cut Gate

Introduction

This viewpoint is taken from Cut Gate on the Midhope Moors within the Peak District National Park.

Existing View

The existing view shows open, gently rolling moorland, with human settlement and farmland evident in the distance. Existing wind turbines and the Emley Mast are clearly seen within the view.

Predicted View

The Development will introduce turbines into a new section of the view in the east-north-east, with the developments of Royd Moor, Blackstone Edge and Spicer Hill visible to the north-west.

Magnitude of Change

The magnitude of change is assessed to Medium as the Development will introduce turbines into a new part of the view, occupying approximately 12% of the total view as demonstrated within Figure A.6.18.

Effects on Visual Amenity

The level of effect is, therefore, considered to be Moderate to **Major/moderate and Significant**. Taking into account the relatively higher cumulative visibility from Viewpoint 18, and the very limited extent of cumulative visibility within the National Park, the effects on the designated area as a whole are **not predicted to be significant**.

A6.7.5Cumulative Visibility from Residential Settlements

Within 5km of the Development

Figures A.6.20 to A.6.28 illustrate the cumulative visibility of the residential settlements within 5km. Ewden Village, Hoylandswaine, Langsett and Midhopestones will not experience any cumulative views. The fringes of Stocksbridge and Deepcar do have theoretical cumulative visibility, but the affected areas are small and intermittent. Due to the orientation of Stocksbridge and Deepcar, any cumulative views would be oblique and are likely to be

screened by mature vegetation and the intervening urban development. The majority of Stocksbridge and Deepcar will not experience any cumulative visibility.

Dwellings on the fringes of Bolsterstone and Penistone may also have some cumulative views, but these will mostly be oblique and are likely to be filtered and/or screened by intervening vegetation.

Green Moor, Oxspring and Thurgoland may experience direct or slightly oblique cumulative views from the fringes of the settlements. Within the settlements, intervening buildings are likely to prevent any cumulative views. Where views are available, they are likely to be filtered by intervening vegetation.

Table A.6.9 Summary table of Cumulative Effects upon Settlements within 5km of the Development

Settlement	Sensitivity	Magnitude of Change	Predicted Cumulative Effect and Significance on Settlement
Stocksbridge	Medium	Low/Negligible	Moderate/Minor Not Significant
Midhopestones	Medium/High	None	No Cumulative Effect Not Significant
Oxspring	Medium/High	Medium/Low	Moderate Not Significant
Deepcar	Medium	Low/Negligible	Moderate/Minor Not Significant
Langsett	Medium/High	None	No Cumulative Effect Not Significant
Penistone	Medium/High	Low	Moderate/Minor Not Significant
Green Moor	Medium/High	Medium/Low	Moderate Not Significant
Bolsterstone	Medium	Low	Moderate/Minor Not Significant
Thurgoland	Medium	Medium/Low	Moderate/Minor Not Significant
Hoylandswaine	High	None	No Cumulative Effect Not Significant
Ewden Village	High	None	No Cumulative Effect Not Significant

Settlements within 5km to 10km of the Development

Theoretical cumulative visibility between 5km to 10km of the Development is fragmented and intermittent. Any cumulative views are likely to be restricted to the fringes of the settlements; within the settlements any theoretical cumulative views are likely to be screened by other buildings. Due to the orientation of these settlements, any potential views will be oblique.

Settlements within 10km to 20km of the Development

Theoretical cumulative visibility within 10 to 20km of the Development is very fragmented and several settlements will not experience any cumulative visibility. Where cumulative views are available, these are likely to be restricted to the fringes of the settlements and are likely to be filtered and/or screened by intervening mature vegetation, buildings and local landform associated with roads.

A6.7.6Cumulative Visibility from Transport Routes

Within 5km of the Development

The A628, A629 and A616 all pass within 5km of the Development and Figures A.6.20 to A.6.28 indicate that there are intermittent areas of theoretical cumulative visibility of all developments excepting Crook Hill along the A628 and A629. However, actual cumulative views will be extremely intermittent due to the filtering effect of vegetation and adjacent settlements. Figures A.6.20 to A.6.28 demonstrate that within 5km the A616 will not experience cumulative visibility of the proposed turbines.

5km to 10km of the Development

The A635 and A636 will both experience small, intermittent areas of cumulative visibility of the Development in conjunction with Ovenden Moor, Blackstone Edge, Hazlehead, Hook Moor, Royd Moor, Spicer Hill and Westfield Lane. However, roadside planting is likely to screen actual cumulative views in practice.

Figures A.6.20 to A.6.28 demonstrate that the A628, A629 and A616 may also experience intermittent theoretical cumulative visibility of all developments, except the Crook Hill development. Where available, cumulative views of the other developments will be filtered by mature vegetation.

The M1 has small areas of theoretical cumulative visibility of all other developments, as demonstrated by Figures A.6.20 to A.6.28. However, the local landform of the motorway embankments and the associated mature vegetation will screen and/or filter views.

10 to 20km of the Development

Figures A.6.20 to A.6.28 show that the following roads will not experience any cumulative visibility:

- A6102;
- A57;
- A6187; and
- A6013.

The A61, A636, A6195, A635, A642 and A6024 may potentially experience occasional or extremely intermittent views as illustrated by Figures A.6.20 to A.6.28. However, the intervening vegetation and urban development, coupled with the distances between the various developments, will limit the potential for any views.

Railway Line

Figures A.6.20 to A.6.28 demonstrate that there is one small area of theoretical visibility along the railway line between Barnsley and Huddersfield. However, it is anticipated that mature vegetation and the local landform associated with railway embankments will screen actual cumulative views.

The Pennine Way

Figures A.6.20 to A.6.28 show one small area of theoretical cumulative visibility of all developments, except Crook Hill. This occurs between the A635 and Black Hill. The majority of the Pennine Way will not experience any cumulative visibility.

Table A.6.10 Summary of Cumulative Effects on Transport Routes

Route	Sensitivity	Magnitude of Change	Predicted Cumulative Effect and Significance
M1	Medium	Low/Negligible	Moderate/Minor Not Significant
A628	Medium	Medium	Moderate Not Significant
A629	Medium	Medium	Moderate Not Significant
A635	Medium	Low	Moderate/Minor Not Significant
A636	Medium	Low	Moderate/Minor Not Significant
A616	Medium	Low/Negligible	Moderate/Minor Not Significant
A6024	Medium	Negligible	Minor Not Significant
A642	Medium	Low	Moderate/Minor Not Significant
A637	Medium	Low	Moderate/Minor Not Significant
A61	Medium	Low/Negligible	Moderate/Minor Not Significant
A6195	Medium	Low/Negligible	Moderate/Minor Not Significant
A6102	Medium	None	None Not Significant
A57	Medium	None	None Not Significant
A6187	Medium	None	None Not Significant
A6013	Medium	None	None Not Significant
Railway line	Medium	Negligible	Minor Not Significant
The Pennine Way	High	Low/Negligible	Moderate/Minor Not Significant

Cumulative Visibility from Viewpoints

This viewpoint analysis was undertaken in order to examine the potential cumulative effects of the Development in conjunction with other cumulative windfarms within 40km of the Development. The sensitivity of each viewpoint has been noted in the viewpoint analysis above and this will not change. The viewpoint description also remains the same, therefore, a brief summary has been provided in this section. The landscape character area relevant to each viewpoint is not listed within this section, to avoid unnecessary repetition (refer to the previous section of this text for this information).

There is theoretical cumulative visibility from 10 of the 18 viewpoints. These are described in the following paragraphs.

Viewpoint A3 - Royd Lane, Penistone

This viewpoint is from Royd Lane near Penistone. The view consists of farmland bordered by drystone walls and the occasional tree belt, with a single storey dwelling and associated outbuildings visible just off centre of the view.

- Distance to Development: 0.9km;
- Amount of Development visible: 5 turbines (5 sets of blades, 3 sets of hubs and 2 towers). Turbines 3 and 4 mostly screened by the tree belt, other turbines partially filtered by vegetation; and
- Other windfarm developments theoretically visible: Westfield Lane and Marr.

The sensitivity to change is considered to be Medium to High.

In a 90° view, centred upon the Development, no other windfarms will be visible. When facing south, the Development and Marr windfarm will be theoretically visible within a 90° view; both windfarms will be seen on the fringes of the view and Marr will be over 25km from this viewpoint. Turning north-east, Westfield Lane will be theoretically visible. However, as both Marr and Westfield Lane are over 25km distance from this viewpoint, both windfarms will be easily screened by intervening vegetation and built form and unlikely to register as a cohesive element in the view.

The Development will not generally be visible in combination with other windfarms from this viewpoint. In the worst-case, it may be possible to see the edges of the Development and Marr in the same 90° view, however, Marr is visible at a distance of over 25km. Westfield Lane is only visible by looking the opposite direction to the Development. This combined with the limited visibility of the other windfarms results in a Low magnitude of change.

The sensitivity to change is Medium to High and the cumulative magnitude of change Low, which results in a **Moderate/Minor and Not Significant** effect.

Viewpoint A7 – Trans Pennine Trail

This viewpoint is taken from the Trans Pennine Trail, with areas of open moorland in the foreground, with the A628 parallel to the trail at this point. Farmland and settlements are visible in the middle distance, and pylons in the distance.

- Distance to Development: 8.6km;
- Amount of Development visible: 5 turbines (hubs, blades and towers) in the distance; and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Royd Moor, Spicer Hill and Westfield Lane.

The sensitivity to change is considered to be High.

In a 90° view looking east-north-east, the Development will occupy less than 5% of the horizontal view, extending the percentage of the total horizontal view containing turbines from approximately 30% to approximately 35%. Therefore, the cumulative magnitude of change is assessed to be Low.

The High sensitivity to change and the Low magnitude of change have combined to give a **Moderate and Not Significant** effect.

Viewpoint A8 – Pennine Way

This viewpoint is taken from the Pennine Way, north of the A635 crossing. Moorland occupies the foreground, giving way to farmland in the middle ground, with two masts visible.

- Distance to Development: 18km;
- Amount of Development visible: 3 turbines (3 sets of blade tips); and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Royd Moor, Spicer Hill and Westfield Lane.

The sensitivity to change is considered to be High.

Within a 90° view, looking south-east, the Blackstone Edge, Royd Moor and Spicer Hill developments form a cluster visible upon the ridgeline, which occupies approximately 5% of the horizontal view, at a distance of over 12km. Three tips of the Hazlehead turbines are visible above the horizon, occupying approximately 1% of the horizontal view. The Westfield Lane turbines are theoretically visible; however, these are some 37km distance and as such are unlikely to be clearly visible. Three blade tips of the Development turbines will be visible and will occupy approximately 1.5% of the horizontal view.

The Development will extend the portion of view which contains turbines; however they will occupy an extremely small part of the horizontal and vertical view, with only 3 tips visible over the ridgeline. The combination of these considerations leads to a Low-Negligible cumulative magnitude of change.

The High sensitivity to change, combined with the Low-Negligible magnitude of change, produced a **Moderate/Minor and Not Significant** effect.

Viewpoint A9 – Bolsterstone Road

This viewpoint is taken from behind Castle Farm with a pasture field in the foreground sloping down towards the settlement of Bolsterstone. The valley floor and slopes have small woodland blocks and belts. Pylon lines and lines of telegraph poles are noticeable vertical features in the view.

- Distance to Development: 3.7km;
- Amount of Development visible: 5 turbines (hubs, blades and towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Royd Moor and Spicer Hill.

The sensitivity to change is considered to be Medium.

The 90° view, centred on the Development, contains the Blackstone Edge, Spicer Hill and Hazlehead turbines. The tips of the Royd Moor turbines, although theoretically visible, will be screened by woodland upon the ridgeline. The Hazlehead turbines will occupy approximately 1.3% of the horizontal view, at a distance of 11.4km, whilst the cluster of the Blackstone Edge and Spicer Hill turbines will occupy approximately 4.5%, at a distance of over 10km. The Development will occupy approximately 11% of the horizontal view, at a distance of 3.7km.

The Development introduces turbines at a closer distance to this viewpoint; however they occupy a relatively small proportion of the open view. This, combined with the relatively small vertical scale of the other cumulative developments, leads to a Medium cumulative magnitude of change.

The Medium sensitivity to change, combined with the Medium magnitude of change, results in a **Moderate and Not Significant** effect.

Viewpoint 10 – Black Tor

Viewpoint 10 is taken from Black Tor. The view is open and panoramic, with wide expanses of moorland, whilst plantations are visible in the middle-ground.

- Distance to Development: 10.8km;
- Amount of Development visible: 5 turbines (up to 5 blade tips). There may be views of up to 5 tips; however this is likely to be reduced by vegetation; and
- Other windfarm developments theoretically visible: Marr and Hook Moor.

The sensitivity to change is considered to be High.

Within a 90° view centred on the Development, Hook Moor is theoretically visible at over 49km. Turning eastwards, it is possible to see the Development, Hook Moor and Marr within a 90° view. Marr is approximately 30km from this view. Given the distance to Hook Moor and Marr, clear views are unlikely. The Development will occupy up to 7.5% of the horizontal view; however only tips of turbines are visible and these may be screened or filtered by intervening areas of vegetation. Therefore, the cumulative magnitude of change is considered to be Low/Negligible.

The sensitivity to change is High and the magnitude of change is Low/Negligible. The level of effect is assessed to be **Moderate/Minor and Not Significant**.

Viewpoint A11 – Green Moor Village

This viewpoint is from a minor road on the edge of Green Moor village, showing dwellings on one side of the road, with farmland sloping away on the other side. Pylons are prominent on the horizon.

- Distance to nearest turbine: 2.8km;
- Amount of Development visible: 5 turbines (5 blades, 2 hubs and 2 towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Hook Moor, Marr, Royd Moor, Spicer Hill and Westfield Lane.

The sensitivity to change is considered to be Medium.

Theoretically, in a 90° view centred on the Development, Blackstone Edge, Hazlehead, Royd Moor and Spicer Hill windfarms will be visible. However, given the screening effects of the houses which line the road, in reality the other developments will be screened from this view. Turning to face north-east, the Hook Moor and Westfield Lane windfarms are theoretically visible, at approximately 38km and 27km respectively. Turning east, Westfield Lane and Marr developments are theoretically visible, though at the fringes of this view and with Marr some 31km distance. These two views will not include the Development as this will be behind the viewer. Given the distance from this viewpoint to the developments of Westfield Lane, Marr and Hook Moor, it is unlikely that clear views will be available.

The cumulative magnitude of change is assessed to be Low, as the Development turbines are partially screened by intervening vegetation and built form (as shown by Figure A.6.11), which is also likely to screen or filter the other cumulative windfarm developments, given the distance of these developments from this viewpoint.

Given the Medium sensitivity to change and the Low magnitude of change, the level of effect is **Minor and Not Significant**.

Viewpoint A12 – Royd Moor Hill

This viewpoint is taken from the formalised viewpoint on Royd Moor Hill and shows areas of farmland and areas of settlement, with pylons visible upon the horizon.

- Distance to Development: 4.4km;
- Amount of Development visible: 5 turbines (5 sets of blades and hubs, and 4 towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Royd Moor and Spicer Hill.

The sensitivity to change is considered to be Low.

Within a 90° view centred on the Development, only the Development turbines will be visible, and will occupy approximately 7% of the view. Turning to face the opposite direction, the cluster of Blackstone Edge, Hazlehead and Spicer Hill turbines will be visible at close range, through those existing at Royd Moor. The cumulative magnitude of change is assessed to be Medium/High, as the Development introduces turbines into a new part of the view so that the viewer has successive views of turbines at relatively close range.

The Low sensitivity to change and the Medium/High cumulative magnitude of change combine to give a **Moderate and Not Significant** cumulative effect.

Viewpoint A14 – A629, south of roundabout

This viewpoint is taken from the layby near the junction of the A628 and A629. The view shows farmland, with the settlements of Penistone and Oxspring in the valley floor and sides, and a pylon line is visible on the horizon.

- Distance to Development: 3.7km;
- Amount of Development visible: 5 turbines (hubs, blades and towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Hazlehead, Royd Moor and Spicer Hill.

The sensitivity to change is considered to be Medium.

In a 90° view looking south from this viewpoint, the Development occupies approximately 21% of the horizontal view. Looking west a cluster of turbines will be visible, including Blackstone Edge, Hazlehead, Royd Moor and Spicer Hill. These occupy approximately 16% of the horizontal view, at a distance of over 4.6km. The nature of cumulative view is successive and the turbines do not form dominant features within the panorama. Therefore, the cumulative magnitude of change is assessed to be Medium/Low.

Given the Medium sensitivity of change and the Medium cumulative magnitude of change, the effect is **Moderate/Minor and Not Significant**.

Viewpoint A15 – Broomhead Moor

Viewpoint 15 is taken from the Bridleway on Broomhead Moor. The view shows open heather moorland, with the Emley Mast, pylon lines and farmland visible upon the horizon.

- Distance to Development: 5.6km;

- Amount of Development visible: 5 turbines (5 hubs and blades, 3 towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Royd Moor and Spicer Hill.

The sensitivity to change is High-Medium.

Within a 90° view the Blackstone Edge, Royd Moor and Spicer Hill windfarms will be visible and appear as a cluster which occupies approximately 8% of the horizontal view, at a distance of over 9.8km. The Development will occupy approximately 14% of the view, at a distance of 5.6km. Therefore, the cumulative magnitude of change is assessed to be Medium.

The High-Medium sensitivity to change and the Medium cumulative magnitude of change combine to give a **Moderate to Major/Moderate and Significant effect**.

Viewpoint A18 – Cut Gate

Viewpoint A18 has been taken from Cut Gate, upon a footpath just within the Peak District National Park boundary. Rolling, open moorland fills the foreground, with farmland, coniferous plantations and the Emley Mast in the middle distance.

- Distance to Development: 6.1km;
- Amount of Development visible: 5 turbines (5 hubs, blades and towers); and
- Other windfarm developments theoretically visible: Blackstone Edge, Royd Moor, Spicer Hill and Westfield Lane.

The sensitivity to change is considered to be High-Medium.

In a 90° view looking north-east, the developments of Blackstone Edge, Royd Moor and Spicer Hill will form a cluster that occupies approximately 15% of the horizontal view, at a distance of over 7.5km. Westfield Lane, whilst theoretically visible in this view, is unlikely to be clearly visible, given its distance of over 35.6km from this viewpoint. The Development will occupy approximately 12% of the horizontal view, at a distance of 6.2km. Therefore, the Development introduces turbines into a new portion of the view; however, both groups of turbines are seen in the middle distance and the Development occupies a relatively small proportion of the vertical view. The combination of these factors results in a Medium magnitude of change.

The sensitivity to change is High-Medium and the magnitude of change is Medium, which results in a Moderate to **Major/Moderate and Significant** effect upon this viewpoint.

The viewpoints representative of visual receptors within the study area have been analysed to understand the likely cumulative effects of the Development with the other nine windfarms. The viewpoint assessments are summarised in the Table A6.11.

The following abbreviations have been used in this table:

B. Blackstone Edge;

H. Hazelhead;

H.M. Hook Moor;

M. Marr;

R.M. Royd Moor;

S.H. Spicer Hill;

SHH Sheephouse Heights; and

W.L. Westfield Lane.

Table A.6.11 Cumulative Viewpoint Analysis

No	Viewpoint location and brief description of windfarms visible from this view	Likely view containing turbines- without Sheephouse Heights (SHH)	Likely view containing turbines- with Sheephouse Heights (SHH)	Cumulative Magnitude of Change	Predicted Cumulative Effect and Significance on Viewpoint
A1	Midhopestones	-	-	-	No Cumulative Effect **Not Significant**
A2	South-western edge of Stocksbridge	-	-	-	No Cumulative Effect **Not Significant**
A3	Southern edge of Penistone; Marr (M), Westfield Lane (W.L).	M & W.L theoretically visible E.N.E & N.E respectively; However given distance, intervening development and vegetation unlikely to be visible.	5 of the SHH turbines will be visible to the S.E	Low	Moderate/ Minor **Not Significant** Other windfarms unlikely to be visible.
A4	Langsett, by the A616, through the centre of the settlement.	-	-	-	No Cumulative Effect **Not Significant**
A5	Oxspring on minor road, leaving settlement southbound.	-	-	-	No Cumulative Effect **Not Significant**

No	Viewpoint location and brief description of windfarms visible from this view	Likely view containing turbines- without Sheephouse Heights (SHH)	Likely view containing turbines- with Sheephouse Heights (SHH)	Cumulative Magnitude of Change	Predicted Cumulative Effect and Significance on Viewpoint
6	A616 near Underbank reservoir.	-	-	-	No Cumulative Effect **Not Significant**
A7	Trans Pennine Trail, parallel to A628 within the Peak District National Park. Blackstone Edge (B), Hazlehead (H), Royd Moor (R.M), Spicer Hill (S.H), W.L visible.	5 windfarms likely to be visible, with H the nearest at 4.3km.	5 SHH turbines will be visible at 8.2km in the E portion of the view.	Low	Moderate **Not Significant** SHH turbines will add turbines into the SE portion of the view; however views are panoramic & turbines will only form a small part of this view.
A8	Pennine Way long distance footpath, north of A635 crossing B, H, R.M, S.H, W.L visible.	5 windfarms theoretically visible; however W.L is at 41.8km distance and unlikely to be clearly visible. Figure A.6.08 shows cluster of B, R.M & S.H turbines, and 1 tip of H.	Tips of all 5 SHH turbine visible at 18km distance (See Figure A6.08).	Low/Negligible	Moderate/Minor **Not Significant** SHH tips only just visible over the horizon.
A9	Bolsterstone; on the minor road to Deepcar, on the north side of the settlement. B, H, R.M S.H windfarms visible.	H turbines visible, tips of B, R.M and S.H just visible over the horizon.	5 SHH turbines visible.	Medium	Moderate **Not Significant** SHH does introduce turbines into a new part of the view; however the introduction does not make windfarms the dominant feature within the view.
A10	Black Tor; on track by triangulation point. M and Hook Moor (H.M) visible.	H.M and M theoretically visible to the N.N.E and E.N.E respectively.	Tips of SHH visible to N.	Low/Negligible	Moderate/Minor **Not Significant** SHH tips do introduce turbines into a new part of the view; however, only tips are visible, & H.M & M unlikely to be visible.
A11	Green Moor; B, H.M, M, R.M S.H, & W.L windfarms may be visible.	B, R.M & S.H theoretically visible to N.W, H.M to N.N.E, W.L to N.E & M to E.N.E.	SHH turbines partially filtered by intervening vegetation & buildings.	Low	Minor **Not Significant** Other windfarms likely to be screened by the buildings, topography and vegetation.

No	Viewpoint location and brief description of windfarms visible from this view	Likely view containing turbines- without Sheephouse Heights (SHH)	Likely view containing turbines- with Sheephouse Heights (SHH)	Cumulative Magnitude of Change	Predicted Cumulative Effect and Significance on Viewpoint
A12	Formalised viewpoint for Royd Moor windfarm at Royd Hill; B, H, & R.M S.H windfarms may be visible.	4 windfarms will be seen in N.W direction.	SHH turbines visible in opposite direction to main view.	Medium/High	Moderate; **Not Significant.** Successive views; SHH visible in middle distance & R.M. at close range. However this is a formalised VP for R.M.
A13	A616, near Crimbles Farm, north of Stocksbridge.	-	-	-	No Cumulative Effect **Not Significant**
A14	From the layby near junction of A629 and A628; The view of other developments (B, H, H.M R.M & S.H) will be visible just west of the 90° viewpoint, so that one must turn ones head slightly to see the other developments.	Tips of B, H, H.M, R.M & S.H H, R.M theoretically visible; however vegetation, local landform & buildings are likely to filter/ screen.	SHH hubs and tips visible to S.	Medium/Low	Moderate/Minor **Not Significant** SHH hubs and tips visible, but views of other turbines likely to be filtered/ screened.
A15	Bridleway on Broomhead Moor, east of Smallfield and SW of Bolsterstone; B, R.M & S.H windfarms visible.	B, R.M & S.H theoretically visible to N.N.W; however S.H screened by vegetation (See Fig A6.08).	SHH visible to N.	Medium	Moderate-Major/moderate **Significant** SHH does introduce turbines into a new part of the view; however the introduction does not make windfarms the dominant feature within the view.
A16	Deepcar	-	-	-	No Cumulative Effect **Not Significant**
A17	Trans Pennine Trail south of Dodworth.	-	-	-	No Cumulative Effect **Not Significant**

No	Viewpoint location and brief description of windfarms visible from this view	Likely view containing turbines- without Sheephouse Heights (SHH)	Likely view containing turbines- with Sheephouse Heights (SHH)	Cumulative Magnitude of Change	Predicted Cumulative Effect and Significance on Viewpoint
A18	Cut Gate	S.H., B, and R.M. take up approximately 15% of the horizontal view in the N.N.E of the viewpoint. (W.L. is not actually visible in the photograph).	The Development adds 5 turbines to the E.N.E portion of the view. These are visible backdropped against the landform.	Medium	Moderate – Major/moderate **Significant** This viewpoint is only representative of a very small part of the views from the National Park area, therefore this effect is not significant on the majority of the Peak District National Park.

Ten of the seventeen representative viewpoints and the additional viewpoint from Cut Gate, may experience cumulative effects. Of these ten, Viewpoint A15 is predicted to experience a significant effect. Both Viewpoints A15 and A18 have been discussed earlier in this section and will not be repeated here.

A6.8 SUMMARY

The additional information provided in this report supplements the LVIA which formed part of the EIA submitted in May 2008. The conclusions of the additional assessments are noted below.

Viewpoint Photography

Post-application consultations with Barnsley Metropolitan Borough Council (BMBC) highlighted the Council's preference to have new photographs for many of the original 17 viewpoints. Therefore, 8 viewpoints were retaken from alternative locations in order to provide clearer views to the Development and 4 viewpoints were retaken from the same viewpoint under better weather conditions. An additional viewpoint, A18, has also been added to the additional assessment.

The analysis and corresponding predicted visual effects of the Development on each of the original viewpoints and on all those retaken and the additional Viewpoint A18 are noted in Table A6.3. The following paragraph summarises the changes to predicted effects between the original viewpoints and those retaken.

Viewpoints from same location

Of the 17 original viewpoints 1, 7, 8, and 12 were retaken from the same location. The predicted effect on each of these viewpoints remains unchanged.

Viewpoints from different locations

Viewpoints 2, 3, 4, 5, 9, 11, 14, 15 and 16 were retaken from close to the original viewpoints to provide clearer views to the Development. The table below summarises the results.

Table A6.12 Summary of Changes to Predicted Effects on retaken Viewpoints

No.	Main change to location of viewpoint	Predicted effect on original viewpoint	Predicted effect on retaken viewpoint	Change to Significance of the effect
2-A2	Clearer view through a gap in the woodland edge.	Major	Major	No change
3-A3	Closer to Development to avoid obstructions (lamp post).	Major	Major	No change
4-A4	Clearer view from north side of settlement.	Moderate-Minor	Moderate	No change
5-A5	Closer to Development to avoid lamp post.	Major-Moderate	Moderate	Change from Significant to Not Significant.
9-A9	Clear view from edge of settlement.	Moderate-Minor	Moderate	No change
11-A11	View from higher location on settlement.	Minor	Moderate	No change
14-A14	View from slightly further along field boundary.	Moderate-Minor	Moderate-Minor	No change
15-A15	View from slightly higher location on path.	Moderate-Minor	Moderate	No change
16-A16	View from further along road.	Minor	Minor	No change

Additional Viewpoint

The additional viewpoint is taken from a footpath on the fringes of the Peak District National Park where views to the Development are possible. The view looks outwith the National Park towards the Development. The overall predicted effect was assessed to be **Moderate – Moderate/Major and locally Significant**.

Settlements

The additional information in regards to settlements has focussed on providing a more detailed analysis of the sensitivity of settlements to the Development; in particular, those within 5km of the Development.

There is no material change to the predicted effects of the Development on those settlements between 5km to 20km of the Development. However, the change to sensitivity of the settlements within 5km, resulting from the detailed assessment described in Section A6.3.6 of this supplementary LVIA, has changed the predicted effect of the Development on these settlements. The analysis of sensitivity and magnitude of change are illustrated in Table A6.7 of this report.

The following table summarises the changes to predicted effect of the Development on settlements within 5km.

Table A6.13 Summary of Changes to Predicted Effects on Settlements within 5km

Settlement	Predicted Effect in the EIA	Predicted effect based on additional information	Change to Significance of the effect
Stocksbridge	Major-Moderate.	Moderate generally. Major/Moderate in localised areas.	Changed from Significant, to Significant in localised areas.
Midhopestones	Major-Moderate.	Moderate generally. Major in localised areas.	Changed from Significant, to Significant in localised areas.
Oxspring	Major-Moderate.	Moderate/Minor generally. Major/Moderate in localised areas.	Changed from Significant, to Significant in localised areas.
Deepcar	Moderate.	Moderate/Minor generally. Moderate in localised areas.	No change.
Langsett	Major-Moderate.	Moderate generally. Major/Moderate in localised areas.	Changed from Significant, to Significant in localised areas.
Penistone	Moderate.	Moderate generally. Major/Moderate in localised areas.	Changed from Not Significant to Not Significant generally and Significant in localised areas.
Green Moor	Moderate-Minor.	Moderate generally. Major/Moderate in localised areas.	Changed from Not Significant to Not Significant generally and Significant in localised areas.
Bolsterstone	Major-Moderate.	Moderate.	Changed from Significant to Not Significant.
Thurgoland	Moderate-Minor.	Moderate.	No change.
Hoylandswaine	Low-None.	None.	No change.
Ewden Village	None.	None.	No change

Registered Parks and Gardens

The additional information provided in this report provides a greater degree of contextual description and expands upon the reasoning which underlies the predicted effect on each of the registered parks and gardens within the study area.

There is no change to the predicted effects noted in the original LVIA and those noted in this report.

Principal Roads

Post-application discussions with BMBC requested additional information to aid understanding of the sequential visibility from the M1 motorway. This assessment provides additional information regarding potential effects on the M1, and three of the 'A' class roads that come closest to the Development. A drawing illustrating the predicted sequential visibility of the Development forms part of this report (Figure A.6.29).

Changes to the predicted effects on each of these principal roads are noted in the table below.

Table A6.14 Summary of Changes to Predicted Effects on Principal Roads

Route	Predicted effect in EIA	Predicted effect based on additional information.	Change to Significance of the effect
M1	Minor-None.	Minor	No change.
A628	Moderate-Minor.	Moderate/minor generally. Moderate in localised areas within 5km.	No change.
A629	Locally Moderate.	Moderate/minor generally. Moderate in localised areas within 5km.	No change.
A616	Moderate-Minor.	Moderate/minor generally. Moderate in localised areas within 5km.	No change.

Cumulative Effects

The additional cumulative information provides further information upon the cumulative landscape and visual effects which arise from the proposal in conjunction with other built, consented and application stage windfarm developments. The supplementary information extended the cumulative study area to include windfarm developments within a 40km radius of the Development.

Therefore, in addition to Blackstone Edge, Hazelhead, Spicer Hill and Royd Moor windfarms, the following developments have also been addressed:

- Marr;
- Westfield Lane;
- Crook Hill;
- Hook Moor; and
- Ovenden Moor

In addition to a general discussion about the theoretical cumulative visibility of the Development with each of the other windfarms, this assessment provides an examination of the potential cumulative effects upon the following:

- The Peak District National Park;
- Settlements within 5km of the Development;
- Principal routes, and
- An analysis of potential cumulative effects upon representative viewpoints.

Peak District National Park

The ZTV illustrates that less than 6% of the National Park is predicted to experience views of the Development.

The cumulative visual effects of the Development from areas within the National Park that may experience views were explored using representative viewpoints. Viewpoint 15 was retaken from a slightly different location on the bridleway to allow as much of the Development as possible to be seen. A new viewpoint, A18, from the footpath at Cut Gate, has also been used.

The effect upon the original Viewpoint 15 was **Moderate/Minor and Not Significant**. The predicted cumulative effect on the retaken viewpoint has been upgraded to **Moderate to Major/Moderate and Significant**. The effect upon Viewpoint A18 is predicted to be **Moderate to Major/Moderate and Significant**. The significant nature of the cumulative effects is considered to be localised and not representative of the National Park in general for the following reasons:

- both viewpoints represent a very small portion of the National Park;
- both viewpoints face outwards from the National Park, and
- both illustrate 'worst-case scenarios'.

Settlements

The cumulative effects upon settlements within 5km of the Development range from **Moderate to None** and **no significant effects were found**.

Principal Routes

The cumulative effects upon principal routes within the study area are assessed as ranging from **Moderate to None, and Not Significant**.

Cumulative Viewpoint Analysis

The cumulative viewpoints analysis showed that 8 of the 18 viewpoints do not experience any cumulative effects. Of the remaining 10 viewpoints, 2 are assessed as Significant; namely Viewpoints A15 and A18. Of these, A15 and A18 have been discussed in the Peak District National Park section.

ANNEX TO THE ADDITIONAL LVIA INFORMATION: VISUAL AMENITY FROM RESIDENTIAL AREAS

INTRODUCTION

This annex has been provided in order to demonstrate the impact of the Development on the visual amenity of the residential receptors. Settlements within 5km and single dwellings within 1km of the Development have been considered.

The overall effect of the Development on settlements has been noted in the supplementary information. This annex seeks to provide clarity on the process that underpins the assessment and to illustrate the change to visual amenity of residential properties closest to the Development.

METHODOLOGY

General Approach

The approach adopted for this work was two-tiered and involved the following;

- A desk study to establish a list of all the properties that have the potential to be impacted by the Development. This was achieved by verifying all the settlements that fall within a 5km radius of the development and all lone dwellings that are located within 1km of the proposed turbines.

- Fieldwork to verify the orientation and potential views from the properties. Boundaries and elevated parts of settlements were identified and checked for potential views. Boundary treatment of single dwellings was also checked.

The approach to desk study and fieldwork is further explained in the following paragraphs.

Desk Study

The desk study was carried out in order to provide a basis for the fieldwork and analysis and involved the following stages;

- Identification of settlements and settlement groups within the defined area, including highlighting potential boundaries and elevated areas within settlements that need to be verified on site;

- A Geographical Information System (GIS) 'Ordnance Survey Address Layer 2' postcode search was carried out to establish the total number of properties within each settlement area;

- Identification of 'fringe' properties that may have potential views to the Development;

- Identification of single properties within the defined area. A subsequent postcode search also established the numbers of residential properties present (i.e. where more than one property is located within a farmstead cluster); and

- Screening (or elimination) of those settlements which are unlikely to have any visibility of the Development as identified by the Zone of Theoretical Visibility (ZTV) (see paragraph 6.2.2).

Fieldwork

Fieldwork aimed to verify the initial findings of the desk study and to further identify the potential visibility of the settlement areas and individual properties. During the course of the fieldwork, the following processes were undertaken;

- Each settlement within the defined area and with potential visibility was visited, and the potential visibility of the Development ascertained;
- Within each settlement, individual properties or areas with potential views were noted and the orientation of main windows ascertained;
- The boundaries and elevated parts of each settlement area were considered; and
- Individual properties within the defined area were visited and the orientation of main windows ascertained (as far as was feasible).

SCREENING

The ZTV mapping is used to illustrate the potential visibility pattern within the study area. This, along with fieldwork, was used to screen out or eliminate those residential properties which are unlikely to have any visibility of the Development. The screening process involved the following:

- In the first instance, the ZTV was used to establish those lone dwellings and settlements that will not have views of the Development and therefore will not be subject to any effect.
- Given that the ZTV does not take into account built form, trees and vegetation and local landform (such as railway embankments), fieldwork was undertaken to identify properties where views to the Development would be obstructed or filtered by intervening structures.

The fieldwork also verified the general orientation of properties so that the sensitivity to the Development could be established (generally, direct views to the Development confer a higher level of sensitivity to the effects of the Development.)

FACTORS AFFECTING THE SIGNIFICANCE OF VISUAL AMENTIY

The visual amenity of the residential properties (receptors) is directly linked to the view of the Development from settlements and single dwellings. Therefore, to analyse the effect on visual amenity, the following factors have been taken into consideration:

- The sensitivity of the receptor (i.e. single dwelling or part of settlement) to the Development; and
- The magnitude of change brought about by the Development.

The sensitivity of any receptor depends on:

- The location and context of the viewpoint. (therefore, where other industrial and vertical elements are present in the view, the sensitivity of the receptor will be reduced);
- The importance of the view. It is assumed that the view from the main living quarters is the most important consideration. As most living rooms are on the ground floor of

houses, the windows from ground floors are considered more sensitive than those on upper levels); and

- The location of the property in relation to the Development (where there are direct views from residential properties to the Development, the sensitivity of those properties is considered to be higher).

Table A6.15 details the sensitivity categories.

Table A6.15 Definition of Sensitivity of Residential Settlements

High
Direct views of the Development from the ground floor of properties.
Medium
Oblique views of the Development from the ground floor of properties. Direct views from the upper floor of properties.
Low
Very oblique views of the Development from the ground floor of properties. Oblique views from the upper floors of properties.
Negligible
No views of the Development from the ground floor of properties. Very oblique views from the upper floors of properties.

Direct views occur where the orientation of the dwellings is such that windows (assumed to be parallel with the side of the building) look directly onto the Development, so that the turbines appear in the centre of the view. An oblique view is where the Development is visible to the left or right of centre within a 90^{o} field of view. Very oblique views are considered to be those where the dwelling is located at an extreme angle to the Development and visible to the extreme left or right of the 90^{o} view.

The magnitude of change was considered in relation to the scale of the visual change and depends on:

- The scale of change in the view in respect to the loss or addition of features that alter the overall composition of the view;
- The distance between the receptor and the development;
- The extent of area over which the changes would be visible within the view; and
- The duration and nature of the change.

The magnitude of change is assessed as High, Medium, Low or Negligible, depending upon the combination of factors noted in the list above.

In the landscape and visual impact assessment, the overall effect of the Development is directly related to the sensitivity and magnitude. For the purposes of this analysis, the sensitivity and the magnitude of change have been considered in order to demonstrate the overall effect of the Development on the visual amenity of each dwelling (within 1km) and each settlement (within 5km).

RECORDING VISUAL AMENITY ANALYSIS

The following tables record the analysis of change to visual amenity of residential properties most likely to be impacted by the Development.

Table 6.16 notes all the settlements within a 5km radius of the Development. It illustrates the sensitivity of various parts of settlements to the Development (based on the considerations noted in section A6.3), as well as the predicted magnitude of change of views from these areas. The significance* of these changes is noted as being either Significant or Not Significant. The total number of properties within each part of the settlement and the percentage this equates to, are also recorded. This allows for the change to visual amenity of the settlement to be quantified and understood as a statistic.

This process has also been carried out for single properties in Table 6.16: Change to Visual Amenity of Individual Dwellings within 1km.

6.16 Change to Visual Amenity of Settlements within 5km

Sensitivity to Change	Magnitude of Change	Significance*	No. of Properties	% of total	Notes
STOCKSBRIDGE (including Deepcar) (5807 total residential properties)					
Medium Oblique views to Development mainly from upper levels. View contains other buildings (including. Steel works).	**High** Nearest turbine approx. 1.2km so horizontal extent of Development large in view.	**Significant**	**48**	**0.8%**	**Smithy Moor Avenue** Mostly 2-storey houses at western edge of Stocksbridge. Row of terrace houses with oblique views from upper storey windows.
Medium Direct view to Development but downstairs windows benefit most from screening.	**High** Nearest turbine approx. 1.2km so horizontal extent of Development large in view.	**Significant**	**6**	**0.1%**	**Clay Pits Lane** Views will be filtered by mature trees and vegetation associated with Underbank Reservoir.
Medium Oblique views to Development. View contains other buildings.	**High** High Nearest turbine approx. 1.2km so horizontal extent of Development large in view.	**Significant**	**9**	**0.1%**	**Churchill Road** 1 storey bungalows. Oblique views from ground floor windows.
Medium Oblique views to Development. View contains other buildings (incl. Steel works).	**High** Nearest turbine approx. 1.5km so horizontal extent of Development large in view.	**Significant**	**6**	**0.1%**	**Hawthorne Avenue** 2 storey houses. Oblique views over gap site opposite.
Medium Oblique views to Development. View contains other buildings (incl. Steel works).	**Medium** Nearest turbine approx. 1.9km. Horizontal extent of Development less pronounced in view.	**Not Significant**	**38**	**0.6%**	**Ridal Avenue** 2 storey houses. Oblique views.

Low Oblique views from rear windows filtered by other buildings.	**Medium** Nearest turbine approx. 2.3km Turbines scale slightly reduced from west side of town.	**Not Significant**	**13**	**0.2%**	**Glebelands Road and Grayson Close** Houses back onto school.
Low Oblique views from upper storey windows. Most of ridge and pylon line in view.	**Medium** Nearest turbine approx. 2.9km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**13**	**0.2%**	**Coal Pit Lane** (near Hollin Busk Farm) Oblique views over Stocksbridge.
Low Oblique views from rear windows.	**Medium** Nearest turbine approx. 3.2km.	**Not Significant**	**7**	**0.1%**	**Stone Moor Road** Houses face road and back onto fields.
Low Oblique views from rear windows partially screened by landform of Bracken Moor.	**Medium** Nearest turbine approx. 3.5km.	**Not Significant**	**8**	**0.1%**	**Broomfield Road** (south) Houses back onto sports ground.
Low Very oblique views from windows. Filtered view of Development through other buildings and partially screened by landform of Bracken Moor.	**Medium** Nearest turbine approx. 3.4km.	**Not Significant**	**5**	**0.1%**	**Broomfield Road** (north) Houses face onto sports ground.
Medium Direct views from upper storey windows. Views from downstairs filtered and partially screened by field boundary wall and hedgerow planting.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**4**	**0.1%**	**Carr Road,** (west of Royd Farm Deepcar) Houses face onto the road.

Low Oblique views from upper storey windows filtered through mature trees. Views from downstairs filtered and partially screened by field boundary wall and hedgerow planting.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**7**	**0.1%**	**Carr Road** (near the junction with The Royd) Houses face onto the road Views filtered by trees of Fox Glen Recreation Ground.
Low Oblique views from upper storey windows. Views from downstairs filtered and partially screened by field boundary wall and hedgerow planting.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**10**	**0.1%**	**Carr Road** (houses due north of junction with The Royd) Terrace houses. Clear views through gap in trees.
Low Oblique to very oblique views from upper storey windows. Views from downstairs screened by housing opposite.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**2**	**>0.1%**	**Carr Road** (nr junction with St Margaret Ave) Houses on corner.
Low Very oblique views from upper storey windows. Views from downstairs screened by housing opposite.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**48**	**0.8%**	**Carr Road** (near junction with Helliwell Lane) Tall block of flats. Filtered views through Royd Wood.
Low Very oblique views from upper storey windows. Views from downstairs screened by housing opposite.	**Medium** Nearest turbine approx. 3.5km Turbines appear similar scale to other vertical structures (pylons/masts).	**Not Significant**	**46**	**0.8%**	**Helliwell Court** (building on junction of Pen Nook Gardens and Helliwell Lane).
Low Views are oblique and filtered or screened by other buildings in town.	**Medium** Development partially screened by landform of Hunshelf Bank.	**Not Significant**	**5416**	**93%**	**Remainder of Houses In Stocksbridge with theoretical visibility (according to ZTV).**

N/A	**N/A**	**Not Significant**	**121**	**2%**	**Remainder of Houses In Stocksbridge without visibility (as shown by the ZTV).**
PENISTONE (including the Thurlstone, Millhouse Green and Cubley areas) (3828 total residential properties)					
Medium/High Direct views to Development filtered by garden planting and successive field hedgerows. Development seen in context of pylon line.	**High** Nearest turbine approx. 1.1km. Occupying approx. 50% of view.	**Significant**	**9**	**0.2%**	**Joan Royd Lane and Mortimer Road** Properties facing south towards Cliff House.
Medium Slightly oblique views from upper storey rear windows. Development seen in context of pylon line.	**High** Nearest turbine approx. 1.1km. Occupying approx. 50% of view.	**Significant**	**7**	**0.1%**	**Kirkhill Bank** Rear of properties facing SSE.
Low Views are oblique and filtered or screened by other buildings in town.	**Medium** Development is close by at approx. 1.1km but Development partially screened along southern edge of town by local undulations in the landform.	**Not Significant**	**3137**	**82 %**	**Remainder of Houses In Penistone with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**675**	**17.6%**	**Remainder of Houses In Penistone without visibility (as shown by the ZTV).**
OXSPRING (including Roughbirchworth) (462 total residential properties)					
Medium Direct views limited by local undulations in landform and filtered by field boundary walls and hedgerows.	**High** Nearest turbine approx. 1.8km. Occupying approx. 38% of view. Turbines in context of pylon line.	**Significant**	**19**	**4.1%**	**Fields End** Rear of houses face onto the fields to the SW of village.
Low Direct views screened by disused railway embankment. Upper storey views filtered by mature planting on embankment.	**High** Nearest turbine approx. 1.8km. Occupying approx. 38% of view. Turbines in context of pylon line.	**Not Significant**	**20**	**4.3%**	**Fox Field, East Close and West Cresc.** Rear of houses face onto the disused railway embankment and footpath, to the SW of village.

Low/None Some upper storey windows may have very oblique views.	**High** Nearest turbine approx. 1.8km. Occupying approx. 38% of view. Turbines in context of pylon line.	**Not Significant**	**10**	**2.2%**	**Roughbirchworth** A loose collection of farmsteads and cottages on the south-western edge of the village.
Low/None Views heavily filtered or screened by other buildings in village.	**Medium** Development partially screened local landform of disused railway on south-western edge.	**Not Significant**	**408**	**88.3%**	**Remainder of Houses In Oxspring with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**5**	**1.1%**	**Remainder of Houses In Oxspring without visibility (as shown by the ZTV).**
LANGSETT (32 total residential properties)					
Medium Oblique views may be possible from upper storey windows. Ground floor views will be filtered through garden planting and hedgerows beyond.	**Medium** Nearest turbine approx. 3.2km. Turbines clustered near pylon lines, and other vertical structures.	**Not Significant**	**2**	**6.2%**	**Ivy Cottages** On Gilbert Hill. On the north side of the A616.
Low If at all possible, views will be very oblique and filtered by mature vegetation.	**Medium** Nearest turbine approx. 3.2km. Turbines clustered near pylon lines, and other vertical structures.	**Not Significant**	**30**	**93.8%**	**Remainder of Houses In Langsett with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**0**	**0**	**Remainder of Houses in Langsett without visibility (as shown by the ZTV).**
MIDHOPESTONES (including Upper Midhope) (39 total residential properties)					
Medium/High Direct views. Views from ground floor windows will be filtered.	**High** Nearest turbine approx. 1.6km.	**Significant**	**2**	**5.1%**	**Chapel Style Farm and Forge Cottage**

Medium Oblique and filtered views.	**High** Nearest turbine approx. 1.6km.	**Significant**	**16**	**41%**	**Miller Lane, Mortimer Road and Oaks Lane** Generally well planted area with mature trees, field boundary walls and hedgerows.
Medium Oblique views, filtered.	**Medium/High** Nearest turbine approx. 1.8km. Properties are mainly inward looking.	**Significant**	**2**	**5.1%**	**Manor Farm and Townhead Cottage** Most elevated buildings in the hamlet.
Medium Oblique views, filtered.	**Medium/High** Nearest turbine approx. 1.8km. Mature groups of trees limit views to Development.	**Significant**	**9**	**23%**	**Midhope Lane** Inward looking dwellings.
Low Very oblique views if at all. High stone wall on boundary provides screening.	**Medium/High** Nearest turbine approx. 1.8km. Mature groups of trees limit views to Development.	**Not Significant**	**2**	**5.1%**	**Midhope Lane** Barn conversion.
Low Views are heavily filtered or screened by landform and mature groups of trees.	**Medium** Nearest turbine approx. 1.6km. Properties on lower slope so Development partially screened by landform.	**Not Significant**	**8**	**20.5%**	**Remainder of Houses in Midhopestones with theoretical visibility (according to ZTV), but lower down slope.**
N/A	**N/A**	**Not Significant**	**0**	**0**	**Remainder of Houses in Midhopestones without visibility (as shown by the ZTV).**
THURGOLAND (including Huthwaite Common) (632 total residential properties)					
Medium Oblique views filtered by tree planting.	**Medium** Nearest turbine approx 3.5km. Roper House will obstruct views.	**Not Significant**	**1**	**0.1 %**	**Rag Lane** House is at the NW fringe of Thurgoland.
Medium Ground floor views screened by garden boundary.	**Medium** Nearest turbine approx 3.5km seen in context of successive pylon lines and masts. Roper House buildings and mature trees on Rag Lane will limit views.	**Not Significant**	**8**	**1.3%**	**Roper Lane** Houses on fringe of NW Thurgoland.

Low Very oblique views, further filtered by mature boundary tree planting.	**Medium** Nearest turbine approx 3.5km. Turbines seen in context of successive pylon lines and masts.	**Not Significant**	**1**	**0.1%**	**Ingle Mount** Detached property, set back from the road.
Low Very oblique views glimpsed through gaps in houses opposite.	**Medium** Nearest turbine approx 3.5km. Turbines seen in context of successive pylon lines and masts.	**Not Significant**	**12**	**1.8%**	**Upper Churchfields** 1st block of houses, on an area of higher ground.
Low Oblique or very oblique views from upper storey windows. Ground floor views screened by boundary planting.	**Medium** Nearest turbine approx 3.5km. Turbines seen in context of successive pylon lines and masts.	**Not Significant**	**12**	**1.8%**	**Churchfields** Houses on the SW corner of Churchfields.
Low Views are oblique and will be screened by built form of the settlement.	**Medium** Nearest turbine approx 3.5km Properties are mainly inward looking.	**Not Significant**	**476**	**75.3%**	**Remainder of Houses in Thurgoland with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**122**	**19.3%**	**Remainder of Houses in Thurgoland without visibility (as shown by the ZTV).**
BOLSTERSONE (53 total residential properties)					
Medium Oblique views, filtered by hedgerow planting.	**Medium** Nearest turbine approx. 3.5km. Village buildings will limit views to the Development.	**Not Significant**	**4**	**7.5%**	**Stone Moor Road** At crossroads.
Low Very oblique views.	**Medium** Nearest turbine approx. 3.5km. Village buildings will limit views to the Development.	**Not Significant**	**8**	**15.1%**	**Stone Moor Road** Fringes of village, heading towards Stone Moor and Stocksbridge.
Low Views are oblique and filtered or screened by other buildings in village.	**Medium** Nearest turbine approx. 3.5km. Village buildings will limit views to the Development.	**Not Significant**	**23**	**43.4%**	**Remainder of Houses in Bolsterone with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**18**	**34.%**	**Remainder of Houses in Bolsterstone without visibility (as shown by the ZTV).**

GREEN MOOR (54 total residential properties)					
High Direct views. Filtered by mature hedgerow trees.	**Medium** Nearest turbine approx. 3.5km. Turbines seen with other vertical features (pylons).	**Significant**	**8**	**14.8%**	**Chapel Lane Houses on west side of Chapel Lane**
Medium Oblique views, filtered or screened by other properties in hamlet.	**Medium** Nearest turbine approx. 3.5km Turbines seen with other vertical features (pylons).	**Not Significant**	**46**	**85.2%**	**Remainder of Houses in Green Moor with theoretical visibility (according to ZTV).**
N/A	**N/A**	**Not Significant**	**0**	**0**	**Remainder of Houses in Green Moor without visibility (as shown by the ZTV).**
HOYLANDSWAINE					
N/A	**N/A**	**Not Significant**	**376**	**100%**	Technically, there are 10 properties that just fall within the ZTV. These are on the very edge of theoretical visibility so any small amount of ground cover will screen tips of Development.
EWDEN VILLAGE					
N/A	**N/A**	**Not Significant**	**17**	**100%**	All of village outwith of visibility.

***Significance:**

Significant: where both the Sensitivity and Magnitude is High; or where one is High and the other is Medium.

Not Significant: where one value is High and the other value is Low or None; or where both values are Medium or lower in value.

6.17 Change to Visual Amenity of Individual Dwellings within 1km

Sensitivity to Change	Magnitude of Change	Significance *	No of Properties	Approx. Distance from Nearest Turbine	Notes
Medium Oblique views. Only gable end windows look directly onto site.	**High** 1 turbine seen in close proximity.	**Significant**	**3**	**250m**	**Mossley House** House faces onto the road.
Medium Oblique views, screened by shed/barn immediately south of house.	**High** 2 of the turbines seen in close proximity.	**Significant**	**1**	**300m**	**Cranberry** (on crossroads). Farm buildings screen the site from the house. Main windows face east and west.
Medium Oblique views.	**Medium** Turbines on hill slope. 3 of turbines partially filtered or screened by Salter Hill Plantation.	**Not Significant**	**1**	**300m**	**Dyson Cote** House faces onto the road. Small areas of woodland immediately southwest of property.
Medium Oblique views, filtered by garden and field boundary trees.	**High** Turbines in relatively close proximity, with pylon line behind.	**Significant**	**1**	**400m**	**Cranberry Road** (east of Cranberry farm) Windows face east and west. Mature planting demarks boundary.
High Direct views possible, but filtered by garden planting.	**Medium/ High** 1 turbine at close range; other turbines partially screened by Sheephouse Plantation.	**Significant**	**2**	**500m**	**Judd Field Farm** Farm arranged in an 'L' shape close to the disused quarry. Main windows (and views) appear to face to northeast away from the site.
Medium Oblique views filtered through field boundaries.	**Medium/ High** Development will be partially screened. 2-3 turbines will be filtered by plantations opposite houses on Cranberry road.	**Significant**	**1**	**550m**	**Salter Hill House** House set at an angle to Back Lane.
Medium/Low Windows face northwest and southeast. Very oblique views.	**Medium** Turbines seen in context of pylon line, through Dyson Cote farm. Further filtered by field boundaries and plantations.	**Not Significant**	**2**	**550m**	**High Wells** Houses face perpendicular to access road.

Low Oblique views screened by local topography of steep slope. Garden planting substantiates screening effect.	**Medium** Turbines on higher ground, some 60-70m above house.	**Not Significant**	**2**	**580m**	**Underbank Hall** House faces inward onto a courtyard. Mature garden planting, set within belt of woodland.
Medium Oblique views, partially filtered by garden planting.	**Medium** Turbines seen on rising ground, through a pylon line.	**Not Significant**	**3**	**590m**	**Carr Head Farm** Houses mostly face onto the road. Set within mature garden planting and other farm buildings.
Medium/Low Windows face northwest and southeast. Very oblique views.	**Medium** Turbines seen in context of pylon line, through Dyson Cote farm. Further filtered by field boundaries and plantations.	**Not Significant**	**1**	**600m**	**Chapel Farm** House faces perpendicular to the road south of High Wells.
Medium/Low Oblique or very oblique views, filtered by garden and field boundary planting.	**Medium/ High** Development will be on and just behind ridgeline.	**Not Significant**	**2**	**620m**	**Cliff House** (due south of Penistone) Houses face onto each other and sit within mature garden planting.
Low Oblique views screened by adjacent buildings of High Wells.	**Medium** Turbines on slope in context of pylon line. Many intervening structures i.e. adjacent buildings, plantations and hedgerows.	**Not Significant**	**2**	**700m**	**Cloth Hall Farm** Houses face perpendicular to the road.
Low Possibly very oblique view to turbine 1. Other turbines screened from view.	**Medium** Views will be through pylon line.	**Not Significant**	**2**	**700m**	**Tenter House** House at an angle to the road, opposite Tenter House Farm.
Low Oblique views, screened by neighbouring farmsteads and field boundaries.	**Medium** Turbines on sloping ground. Any views would be through pylon line.	**Not Significant**	**2**	**750m**	**Tenter House Farm** Farmhouse sits within larger farm buildings. Other buildings to northwest, southwest and south of house.
Medium/Low Main view faces NE. Any possible views will be very oblique, and filtered by garden planting.	**Medium/ High** Development will be on and just behind ridgeline.	**Not Significant**	**1**	**750m**	**Mortimer Road, near Cliff House** House faces onto Mortimer Rd. Garden is heavily planted with mature trees.

Medium/ High Direct view of turbine 1; other turbines seen obliquely or very obliquely and filtered by garden trees.	**Medium** Turbines seen through pylon line in front of house.	**Significant**	**1**	**800m**	**Grudgby Farm** Farm faces onto the road and has pylon lines to front and rear of building.
Medium/ High Direct view of 1 turbine; other turbines seen obliquely. Views from ground floor windows will be filtered through boundary planting, Mature trees around Cranberry and other mature hedgerows.	**Medium/ High** Development seen on and just behind ridgeline, with pylon line behind.	**Significant**	**1**	**800m**	**Milbrook House** Southern boundary defined by hedgerow.
Medium Oblique views, filtered by boundary planting and field boundaries.	**Medium/ High** 1 turbine will be seen just behind ridge; others will appear smaller in scale due to lower position on slope and greater distance.	**Significant**	**4**	**840m**	**Doubting** 'L'shaped building. Main views to north and east. Mature garden/boundary planting.
Low/None Main windows on west side of house; only 1 window on east side. Oblique views likely screened by Doubting Plantation.	**Low/Medium** Turbines will be heavily filtered and virtually screened by Doubting Plantation.	**Not Significant**	**1**	**950m**	**Little Doubting** Very small property with few windows.
Low Very oblique views, if possible at all.	**Medium** Turbines on sloping ground. Views will be through pylon lines.	**Not Significant**	**5**	**960m**	**Pond Farm** Group of buildings, varying orientation, although mainly perpendicular to the road.
High Direct views available from main windows.	**Medium** Turbines seen on rising ground, through a pylon line and partially filtered by planting at Carr Head Farm.	**Significant**	**1**	**970m**	**Avice Royd Farm** Farm on hill/ridge, facing onto Carr Head Farm.

Medium/Low Windows face east-northeast. Very oblique views may be possible.	**Medium** Development will be on and just behind ridgeline. Turbines will add another vertical feature to a view that contains several pylon lines.	**Not Significant**	**2**	**980m**	**Cubley Hall Farm** (on southern fringe of Penistone) Houses face onto the road.
Medium/ High Direct view to turbine 1 filtered through garden planting. Other turbines will be oblique in view.	**Medium/ High** Turbines are on, or just behind the ridgeline, in context of pylon lines; filtered by intervening planting blocks and field boundaries. Turbines 2 to 5 are lower on horizon.	**Significant**	**1**	**1000m**	**Joan Royd Cottage.** House at slight angle to the road. Mature boundary garden planting will limit views from ground floor.

***Significance:**

Significant: where both the Sensitivity and Magnitude is High; or where one is High and the other is Medium.

Not Significant: where one value is High and the other value is Low or None; or where both values are Medium or lower in value.

SUMMARY

RESIDENTIAL PROPERTIES WITHIN 5KM

The significance of the impact of the Development on the visual amenity of properties situated in settlements within 5km is summarised in the table below:

Settlement	Total No. Properties	No. properties Significantly impacted	No. properties Not Significantly impacted	No. Properties with no view of Development
Stocksbridge (and Deepcar)	5807	69	5617	121
Penistone (inc: Thurlestone; Millhouse Green and Cubley)	3828	16	3137	675
Oxspring (and Roughbirchworth)	462	19	438	5
Langsett	32	0	32	0
Midhopestones (and Upper Midhope)	39	29	10	0
Thurgoland (and Huthwaite Common)	632	0	510	122
Bolsterstone	53	0	35	18

Greenmoor	54	8	46	0
Hoylandswaine	376	0	0	376
Ewden Village	17	0	0	17

RESIDENTIAL PROPERTIES WITHIN 1KM

This survey revealed that there are a total of 23 residential buildings or building groups within 1km of the Development. Within these buildings, there are a total of 42 individual properties. The significance of the predicted impact on the visual amenity of these properties was found to be:

- Significant for 16 properties, and
- Not Significant for 26 properties.

1 INTRODUCTION

1.1 PLANNING APPLICATION

A planning application for the development of five wind turbines at Sheephouse Heights with a maximum installed capacity of 15 Mega Watts (MW) was submitted to Barnsley Metropolitan Borough Council in May 2008 by Evelop UK Limited. The planning application was supported by an Environmental Statement (ES) a Planning Statement and a Design and Access Statement. Evelop UK Ltd are referred to as the "Applicant," Barnsley MBC as "BMBC" and the Sheephouse Heights Windfarm as "the Development" throughout this report.

This Supplementary Report has been prepared in response to comments on the planning application made by BMBC and other consultees. This Report is being submitted to BMBC to assist in the determination the planning application.

1.2 REPRESENTATIONS

Not all the representations made on the planning application require a specific response from the Applicant; most can be taken into account by BMBC in the normal way in the process of assessing the Development.

The following representations do however require a specific response from the Applicant:

a) Requests from BMBC for the following information:

- Additional photomontages to assist in the assessment of the Development;
- An assessment of the cumulative landscape and visual impact of the Development when considered in relation to other existing and proposed windfarms, illustrated by photomontages;
- Further assessment of the visual effects of the Development on Settlements;
- Clarification of the potential effects of the Development on Registered Parks and Gardens;
- Additional information to assist in evaluating sequential visibility from roads;
- Proposals for habitat enhancement;
- Proposals for post-construction bat monitoring;
- Proposals for the use of borrow pits; and
- The principles of a Highways Management Plan to cover the construction period.

b) Representations from Sheffield City Council

- No information has been presented on the impact of the Development on Conservation Areas within Sheffield – in particular the impact of the setting and views out of the Midhopestones Conservation Area.

c) Representations from the Peak District National Park Authority

- Concern about "unacceptable harm" to the National Park and its setting; and
- Concern about "cumulative impact when added to existing and approved windfarms".

d) Representations by a number of parties concerning impact on the Green Belt

e) Representations concerning "ice fling"

f) Representations concerning the route of construction traffic through Oxspring

g) Representations concerning TV reception

1.3 POLICY STATEMENTS AND CONSULTATIONS ISSUED SINCE SUBMISSION OF THE PLANNING APPLICATION

The following documents, published since the submission of the planning application in May 2008, are relevant to the determination of the application:

The Climate Change Act 2008

The Act came into force in December 2008, paragraph 1 (1) states: "*It is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 80% lower than the 1990 baseline*."

Paragraphs 4 & 5 of the Act require the Secretary of State to set carbon budgets for successive five year periods beginning with the period 2008-12. For the period including 2020 the carbon budget must be set 26% below the 1990 baseline.

The Yorkshire and Humber Plan – Regional Spatial Strategy to 2006

The Plan was adopted in May 2008 shortly after the completion of the Planning Statement that accompanied the planning application. The Planning Statement was based on the Secretary of State's Proposed Changes to Regional Spatial Strategy, RSS, issued in September 2007.

The adopted version of RSS is now part of the Development Plan. No further significant changes were introduced into the adopted version of RSS as regards renewable energy.

Adopted RSS Policy YH2: Climate change and resource use, requires action to reduce greenhouse gas emissions in the region in 2016 by 20-25% compared with 1990 levels, one proposed action being to increase renewable energy capacity.

The most recent RSS Annual Monitoring Report was published by the Yorkshire and Humber Assembly in February 2008. The maximum figures of new renewable energy installation indicate that during the period 2005-2007 a total renewable energy capacity of 135.76MW was installed. The conclusions state: "*It has been difficult to provide an accurate picture of Renewable Energy in the region. It is worrying that there seems to have been little progress towards meeting the challenging RSS targets and the implications of this need to be understood. It is not clear, however, whether the low levels of capacity reported are due to the difficulties of data capture. As with last year this remains a monitoring challenge that requires further investigation."*

On the basis of the above Monitoring Report's conclusions, it is clear that urgent action must be taken to increase installed renewable energy capacity in the region if the challenging 2010 target of 708MW is to be achieved.

UK Renewable Energy Strategy Consultation June 2008

This Consultation was issued by the Department for Business Enterprise and Regulatory Reform, BERR, in June 2008. The consultation period has closed and the final Strategy is expected to be published in early 2009.

The Consultation notes that the UK Government has agreed to a binding target of 20% of all the European Union's (EU) energy to come from renewable sources by 2020. The UK's share of this target is 15% of all energy consumption in the heat, transport and electricity sectors to come from renewable energy sources by 2020. To date electricity generation has been the main focus of UK renewable energy policy, the EU target signals a major change and will require that the pace of development of both heat and transport renewables is rapidly increased.

The Consultation recognizes that in the short-term renewable electricity will play a disproportionately large part in achieving the EU target because the relevant technologies and supply chains are more fully developed than is the case for heat and transport renewables. A series of scenarios to 2020 are considered under which renewables could supply between 32%-47% of UK electricity consumption. These options represent a considerable increase on the renewable electricity targets and aspirations of 10% by 2010 and 20% by 2020 put forward in the 2003 and 2007 Energy White Papers, which have formed the basis for RSS related targets across England.

Although some of the increased requirement for renewable electricity will be provided by offshore wind and other marine renewables it is to be expected that future RSS reviews will include proposals for heat and transport renewables and significantly increase the requirement for onshore renewable electricity.

Overview of New Policy Statements

The Climate Change Act 2008 significantly increases the scale of the CO_2 reduction challenge in terms of both the absolute reductions required and increasing the pace of achievement. The BERR UK Renewable Energy Strategy Consultation points out that achieving the EU target of 15% of all UK energy to come from renewables by 2020 will require renewable electricity to lead the way as heat and transport related renewables catch up. These recent policy statements highlight the importance of encouraging the early and rapid development of viable and eminently developable wind sites such as Sheephouse Heights.

In stark contrast to the increased scale of the challenge the actual achievement in installing renewable energy in the region has been very disappointing. Planning Policy Statement 1 Supplement Planning and Climate Change, PPS1, paragraph 34 states "*Where monitoring suggests that implementation is not being achieved in line with an agreed strategy or that strategy is not delivering the expected outcomes, it is essential to respond promptly and effectively*."

The Planning Statement submitted with the planning application points out in paragraph 6.3 that the 15MW capacity proposed at Sheephouse Heights equates to the full RSS installed renewable energy 2010 target for Barnsley Borough, and that in addition the Royd Moor windfarm and an extant planning approval at Hazelhead mean that the Borough could significantly exceed its minimum targets. There will also be numerous small scale renewable installations also to be added to the total.

The prospect that Barnsley Borough may exceed its minimum RSS targets is a matter for congratulation and points to an important role the Borough can play in helping to meet wider regional and national targets. The RSS Table 10.2 Borough and District targets are "indicative" and as RSS Policy ENV5 makes clear are intended for monitoring in order to "*ensure the regional and sub-regional targets are exceeded*."

As described in the previous paragraph, there is a clear direction of travel in both EU and UK climate change and energy policy which can be expected to lead to ever higher renewable electricity targets in the future.

The effect of the above policy statements and the consultation issued since the planning application was submitted is to reinforce the Planning Statement's conclusions regarding the importance of the Development. In the light of these statements the Development's contribution towards meeting sub-regional and regional renewable energy targets is now even more important and should be given even greater weight in determining the planning application.

1.4 STRUCTURE OF THIS REPORT

Chapter 2: *A6 Landscape and Visual Assessment* supplements the information provided in the original ES (Chapter 6: *Landscape and Visual Assessment*), and addresses landscape and visual issues and covers the first five requests made by BMBC summarised in paragraph 1.2 a) above. Results of the Residential Survey are provided as an annex to this chapter.

Chapter 3: *A10 Conservation Areas* supplements the information provided in the original ES (Chapter 10: *Cultural Heritage*), and addresses Sheffield City Council's concern about visual impact on its Conservation Areas.

Chapter 4 addresses the Peak District National Park Authority's concerns.

Chapter 5 addresses impact on the Green Belt.

Chapter 6 addresses the site specific issues raised by BMBC:

- Habitat enhancement;
- Post-construction bat monitoring;
- The use of borrow pits; and
- A Highways Management Plan to cover the construction period.

Chapter 7 addresses other representations, relating to:

- A visit to a modern windfarm;
- Ice fling;
- Construction traffic passing through Oxspring; and
- TV reception.

Chapter 8 puts forward what are considered to be the Key Planning Tests relevant to the Development and applies them to the evidence submitted in the Environmental and Planning Statements and this Supplementary Report.

Chapter 9 provides an overall conclusion which considers the balance between the residual impacts of the Development and its benefits.

Evelop UK Ltd requests that Barnsley Metropolitan District Council consider the contents of this report when determining the Sheephouse Heights Windfarm planning application.

3 A10. CONSERVATION AREAS

A10.1 INTRODUCTION

This supplementary information considers the potential effect of Sheephouse Heights Windfarm ("the Development") upon Conservation Areas within a 5km radius of the proposed turbines. These are listed in Table A10.1. As no part of the Conservation Areas will be directly affected by the Development, this section is concerned only with potential effects upon the settings of the Areas. The location of the Areas is shown on Figure A.10.1.

Table A10.1 Conservation Areas within 5km

Area Name	Local Authority
Bolsterstone	Sheffield City Council
Hoylandswaine	Barnsley Metropolitan Borough Council
Langsett	Sheffield City Council
Midhopestones	Sheffield City Council
Penistone	Barnsley Metropolitan Borough Council
Thurlstone	Barnsley Metropolitan Borough Council
Upper Midhope	Sheffield City Council

A10.2 METHODOLOGY

A10.2.1 Relevant Guidance

This assessment has been informed by the following legislation and guidance:

Planning Guidance

- *PPG15 Planning and the Historic Environment* (1994) and *PPG16 Archaeology and Planning* (1990) provide guidance on development and historic interests such as Listed Buildings and Conservation Areas, and on dealing with known and unknown archaeological remains through the planning system.

Legislation

- Statutory protection for archaeology is principally outlined in the Ancient Monuments and Archaeological Areas Act (1979) as amended by the National Heritage Act (1983) and nationally important sites are listed in a Schedule of Monuments. Scheduled Monument Consent (SMC) is required before any work affecting the fabric of a Scheduled Monument can be carried out.

- Listed Buildings and Conservation Areas receive protection under the Planning (Listed Buildings and Conservation Areas) Act 1990. Works that affect the character and appearance of such structures may require an approval from the Local Planning Authority via a procedure set out in the act.

Other

The following guidance and advice was also considered, although not all is specific to England:

- *Standards and Guidance for Archaeological Desk Based Assessments* (Institute of Field Archaeologists, 1999). This advises that the aim of a desk-based assessment is to gain information about the known and potential archaeological resource within the proposed development site boundary and that from this an appraisal can be made on the presence or absence of archaeology.

- *Planning Advice Note Archaeology - Planning Process and Scheduled Monument Procedures* (PAN 42, Scottish Executive) provides advice on the handling of archaeological matters within the planning process and on the separate control over *Scheduled Monuments under the Ancient Monuments and Archaeological Areas Act* (1979).

- *Planning Advice Note - Renewable Energy Technologies* (PAN 45, Revised 2002, Scottish Executive) provides useful advice and information for on-shore wind power, and contains guidance on the visual effects from wind turbines.

- *Landscape Appraisal for Onshore Wind Development*, University of Newcastle 2003.

- Guidelines on the Environmental Impacts of Wind Farms and Small Scale Hydroelectric Schemes, Scottish Natural Heritage, 2001.

- *Visual Assessment of Wind Farms – Best Practice*, University of Newcastle (for Scottish Natural Heritage), 2002.

- *Wind Energy and the Historic Environment,* English Heritage, 2005. This emphasises that potential effects on the historic environment be addressed at all levels of an EIA, and that the implications of development upon the resource be reflected at all levels of planning (regional, local etc.). Indirect effects upon settings are to be assessed, and physical damage to historic sites avoided. Consideration of the reversibility of schemes should be considered.

A10.2.2 Assessment Methodology

The methodology used for this assessment is detailed in Section 10.2.4 of Chapter 10: *Cultural Heritage* in the Environmental Statement (ES) submitted to Barnsley Metropolitan Borough Council (BMBC) in May 2008.

In summary it is noted here that Conservation Areas are considered to be regionally important and thus of Medium sensitivity for purposes of this assessment, although they are designated and controlled at the Local Planning Authority level.

The assessment considers the potential effect of the Development upon the character and appearance of the Conservation Areas, and this is understood to include their setting. Consideration has been given to the degree of intervisibility as predicted in the Zone of Theoretical Visibility (ZTV) used for the Landscape and Visual Assessment (see Chapter 6: *Landscape and Visual Assessment* of the ES), and the distance of the turbines from the Areas. Simple intervisibility is not considered of itself to be either harmful or beneficial. It is noted here that the ZTV was based on bare terrain modelling, and does not take into account any screening afforded by settlements or vegetation, nor the amount of each turbine that may be visible (it does not distinguish between the whole turbine or just the smallest part of the blade tip at full extension) and thus represents the absolute worst-case scenario.

Rather than using simple distance as a determining factor (although necessarily taken into account) Table A10.2 sets out the criteria used to establish the magnitude of any potential effect upon the settings of the Areas.

Table A10.2 Magnitude

Level of Magnitude	Definition
Very High	Total loss of or major alteration to a site, building or other feature. (*e.g.* blocking or severance of key visual or other relationship).
High	Major damage to or significant alteration to a site, building or other feature. Loss of one or more key attributes. Extensive change to the setting of a Scheduled Monument, Historic Park Grade I, II* Listed Building or other feature *e.g.* loss of dominance, intrusion on key view or sightline.
Medium	Damage or alteration to a site, building or other feature. Encroachment on an Area considered to have high archaeological potential. Change in setting to Monuments/buildings and other features *e.g.* intrusion on designed sight-lines and vistas.
Low	Minor damage or alteration to a site, building or other feature. Encroachment on an area where it is considered that low archaeological potential exists. Minor change in setting of Monuments, site and other features (*e.g.* above historic skylines or in designed vistas).
Negligible	No physical impact, no or imperceptible change in setting.

In determining the significance of any identified effect, the matrix in Table A10.3 has been used (Conservation Areas being assumed to be of Medium sensitivity for purposes of this assessment).

Table A10.3 Significance

	Sensitivity				
Magnitude	**Very High**	**High**	**Medium**	**Low**	**Negligible**
Very High	Major	Major	Moderate	Minor	Minor
High	Major	Major	Moderate	Minor	Not Significant
Medium	Moderate	Moderate	Moderate	Minor	Not Significant
Low	Minor	Minor	Minor	Not Significant	Not Significant
Negligible	Minor	Not Significant	Not Significant	Not Significant	Not Significant

Each Area is discussed in further detail in the following text, and a final assessed score of significance is stated for each. Effects of negligible or minor significance are not considered significant for purposes of the EIA regulations.

A10.3 ASSESSMENT OF EFFECTS

A10.3.1 Construction Effects

No direct effects will be experienced in any of the listed Conservation Areas, as no part of the Development site lies within any Area. Turbine deliveries will pass adjacent to Hoylandswaine Conservation Area along the A628, but this is not considered to have any effect upon the character setting and appearance of the Area. General construction traffic will be routed along the A616 Manchester Road, through Langsett and adjacent to Midhopestones. As noted in Chapter 11: *Traffic and Access* of the Environmental Statement, this route is heavily used

by large vehicles, and the additional traffic will not cause any significant additional effect to the Conservation Areas (and will be temporary only).

Although cranes and other construction plant and activity will be noticeable during construction, these are temporary and the indirect effects are considered in relation to the full operational form of the Development.

A10.3.2 Operational Effects

No direct effects on the character, appearance and setting of the Areas are anticipated.

The potential for indirect, visual, effects are considered below.

Bolsterstone

The Conservation Area covers the core of the village and some associated land surrounding it (especially to the north), situated at the crest of the ridge on the southern side of the Porter Valley, and north of the Ewden Beck. This ridge top position forms the essential element of its setting, permitting relatively extensive views from within the Area, particularly to the north. The Area is focussed on the historic village and its associations with St. Mary's Church and the former castle, this contributing to its character as a historic rural village. The majority of the Area is predicted to be intervisible with the proposed turbines, but these are not considered to affect its internal associations, character and appearance. There are views from within the Area overlooking Stocksbridge and Deepcar, which will include the ridge on the northern side of the Porter valley on which the turbines (as well as existing power and telecommunications infrastructure) will be visible. The nearest turbine is approximately 3.5km from the northern edge of the Area, and at this distance the turbines will be prominent as part of the wider landscape. A photomontage viewpoint showing a representation of the Development from within the Area (at approximately 6.7km from the nearest turbine) is provided within the LVIA supplementary information (Viewpoint A9). The turbines will constitute a new feature in views to the north out of the Area, but these views already include significant infrastructure as noted previously, and include the urban area of Stocksbridge, with the associated industrial elements of the steel works and reservoir. The addition of the proposed turbines is considered to constitute an effect of Low magnitude in that the turbines will be a new and strong element along the northern ridge on the opposite side of the Porter valley from the Area, but in which infrastructure is already present. The effect is considered to be of **Minor significance**, and applies to the wider setting of the Area, and specifically only to views from the north.

In its response to BMBC, Sheffield City Council[1] acknowledges that although the turbines will be clearly visible "*these will be on the horizon and sufficiently distant and small to have no adverse affect on the CA*".

The proposed extension to the Area (south of Head Lane), within the Dark Peak Authority Area and National Park, is not predicted to be intervisible with the Development.

Hoylandswaine

The Conservation Area lies to the north of, and downslope from, the A628 approximately 4km north of the nearest turbine. Its character is of a rural village, stretched along the former main road, with more dense settlement within its western and northern part. Its setting is limited by the A class road to the south, and the modern extended village to the north, but with some wider views linking it to the farmland to the north and east. The Area is not predicted to be intervisible with the Development (aside from a small section of the

[1] http://www.sheffield.gov.uk/your-city-council/council-meetings/planningboards/west-and-north/agendas-2008/agenda-23rd-september-2008/windfarm-sheephouse-heights

south-western corner, immediately adjacent to the A628), and this limited effect will not have any effect on the setting and character of the Area as defined above. This is negligible in magnitude and the potential effect of the Development on the Area's setting is considered to be **not significant**.

Langsett

The Conservation Area of Langsett lies on either side of the A616, approximately 3km to the west of the nearest turbine. Its setting is dominated by its association with the A class road. Vegetation cover will limit the presence of the turbines in views from within the Area. Trees also provide screening when approached from the west along the A616. The turbines will be visible along the ridge in views above the Area, but these views already include pylons and telecommunications mast, and as noted above, the approach is screened by trees. A photomontage showing a representation of the proposed turbines from north of Langsett (and outside of the Conservation Area) is presented as Viewpoint A4 in the Supplementary Information. The character and appearance of the Area is not considered to be affected by the Development. The setting of the Area is also not considered to be affected by the Development, given its location alongside the busy A616, the waterworks to the east, the degree of localised tree cover and the limited extent of the Area itself. This is considered to be an effect of negligible magnitude which is assessed as **not significant**.

Midhopestones

The Conservation Area of Midhopestones lies south of the A616 (and the majority of the Area lies further south beyond the Porter), and is approximately 1.2km from the nearest turbine at its northern edge. The majority of the Area includes the village, with farming buildings and interspersed fields, and has an open and rural character. The setting of the Area is defined by its location on a terrace on the southern side of the Porter Brook, with relatively open views along the valley in both directions. Views in to the Area are best obtained from the west (travelling east along the A616) and from the north, crossing the bridge over the Porter Brook. The Development will not significantly affect these views. Although the availability of views to the north and along the Porter Valley from within the Area is noted in the Conservation Area Appraisal (Midhopestones Conservation Area Appraisal, Final Draft, October 2007; Sheffield City Council) this is not listed among the features defining the special interest of the Conservation Area. The appraisal notes that the views to the north in any case already include pylons. It is not considered that the proposed turbines will affect the character and appearance of the Area itself. However, the turbines will constitute a prominent new feature along the ridge along the northern side of the Porter Valley. The photomontage showing a representative view of the turbines from Midhopestones (Viewpoint A4 of the LVIA Supplementary Information) indicates that although the turbines will be somewhat larger than the existing pylons (which are closer to the Area), they will not be out of scale with them, and will similarly serve to define, rather than obscure, the ridge as a topographic feature.

The effect upon this wider setting of the Area is considered to be of Medium magnitude, taking into account the proximity of the turbines, their scale and the movement that the turbines will bring to the ridgeline (in contrast to the static nature of the pylons and other infrastructure). The significance of this effect is assessed as being **Moderate**, but this is limited to the views to the north from within the Conservation Area itself. It is noted that the turbines will form only a small part of views in general from within Midhopestones.

In response to Barnsley MBC, Sheffield City Council[2] concedes that this effect on the Conservation Area itself is not considered sufficient grounds for a formal objection to the proposal.

[2] http://www.sheffield.gov.uk/your-city-council/council-meetings/planningboards/west-and-north/agendas-2008/agenda-23rd-september-2008/windfarm-sheephouse-heights

Penistone

The Conservation Area covers much of the central part of the small town of Penistone, and its southern end is approximately 2km north of the nearest turbine. Its setting is limited to the urban core of the town by surrounding (and non-designated) built-up areas. This setting will not be affected by the Development. The Area is essentially urban in character, and its appearance and character are not considered to be affected by the Development, even where turbines may be glimpsed in occasional views from within the Area. Views into the Area are limited by the presence of those parts of the town (and Cubley to the south) surrounding the designated area itself. The presence of the turbines is considered to constitute an effect of negligible magnitude upon the setting of the Area (defined as the historic core of the town as noted above), and the potential effect is, therefore, assessed as **not significant**.

Thurlstone

The southern edge of the Conservation Area lies approximately 2.7km north of the nearest turbine. The setting of the Area is considered to be its situation along the floor and sides of the Don Valley, forming a built-up link along the A628 between Millhouse Green to the west and Penistone to the east. This is not considered to be affected by the Development. It is essentially urban in character, and the ZTV indicates that less than 50% of the area will have theoretical visibility of the Development. Given the essentially urban character of the Area, it is considered that the Development will not affect its character and appearance. The turbines are likely to be limited in presence in some views to the south from the more elevated parts of the Area, and then only in part and limited numbers. This is not considered to affect its wider setting, and overall the potential effect of the Development upon the setting, character and appearance of the Area (as defined above) is considered to be of negligible magnitude, and is assessed as **not significant**.

Upper Midhope

The Area lies approximately 2.9km to the southwest of the nearest turbine, and south of Langsett. It is a small farming settlement, and its character is rural, and is closely surrounded by enclosed fields (this also forming the immediate setting of the Area). The wider setting of this relatively small Area is characterised by its close association with Langsett reservoir and its surrounding plantation to the immediate west, the farmland that surrounds the village as well as to the moorland to the south. The turbines are likely to be visible from the northern open edge of the Area, and at approximately 3km they will be relatively prominent in such views. However, it is noted that these views already incorporate power lines and telecommunications infrastructure. The Development is not considered to affect the character and appearance of the Area, nor its immediate setting. However, it may be considered to constitute an effect of low magnitude on its wider setting, in that the turbines will form a relatively prominent new feature along the northern ridge of the Porter valley in open views from within the northern section of the Area. The significance of this effect is assessed as **Minor**.

A10.4 CONCLUSION

The assessment has considered the potential of the Development to have any effect upon the settings of the 7 Conservation Areas within 5km. In no case is the character and appearance of any Area considered to be affected. In three cases effects of Minor or higher significance were identified upon the wider settings of the Areas (Bolsterstone, Midhopestones and Upper Midhope), and only one of these is considered to be significant in terms of the EIA regulations (this is the effect of Moderate significance upon the wider setting of Midhopestones Conservation Area). In each of these cases, the effect is limited to open views towards the Development from within the Area, such views noted as forming only a small part of the overall arc of views available. The significant effect at Midhopestones is due to the relatively close proximity of the Turbines (approximately 1.2km) in views specifically referred to in the Conservation Area Appraisal (notwithstanding the presence of existing infrastructures in such views).

4 IMPACT ON THE PEAK DISTRICT NATIONAL PARK

4.1 THE NATIONAL PARKS AND ACCESS TO THE COUNTRYSIDE ACT 1949

Reference is made within the responses made by the Peak District National Park Authority, the Campaign for National Parks (CfNP) and the Campaign for the Protection of Rural England (CPRE) to the duty placed upon National Park and other 'relevant' authorities to have regard to National Park "purposes."

The policy context regarding these "purposes" is set out within the Environment Act 1995 and specifically sections 61 & 62. The Act imposes a general duty on National Park Authority and neighbouring Local Authorities to have regard to National Park purposes in "*exercising or performing any functions in relation to, or so as to effect, land in a National Park*", those purposes being:

- Conservation and enhancement of natural beauty, wildlife and cultural heritage; and
- Promotion of opportunities for public understanding and enjoyment of the special qualities of the Park.

The Campaign for National Parks refers to a guidance document published by DEFRA in 2005 titled "Duties on relevant authorities to have regard to the purposes of National Parks, Areas of Outstanding Natural Beauty (AONB's) and the Norfolk and Suffolk Broads" which provides greater clarity on the duties of the 1995 Act and the way in which they apply.

Both the CPRE & CfNP raise objections on the grounds that the Development would have significant impacts upon the National Park landscape which CPRE claim would lead to BMBC breaching the requirements laid down within Section 11A of the National Parks and Access to the Countryside Act 1949 as amended by Section 62 of the 1995 Environment Act. CfNP highlight the above DEFRA report which states that National Park purposes are an 'essential' consideration in reaching decisions that may have an impact on National Parks.

The following two points are considered to be pertinent to BMBC's consideration of the impact of the Development on the Peak District National Park, and the Council's duty to consider National Park purposes when determining planning applications.

Firstly, it is factually incorrect for CPRE to state that BMBC would breach Section 11A of the National Parks and Access to the Countryside Act 1949 if planning permission for the Development is granted. Section 62 of the 1995 Act seeks to ensure that relevant authorities 'have regard' to National Park purposes when carrying out their functions, it does not impose rigid rules and regulations that have to be adhered to when reaching decisions on planning applications. Sheephouse Heights, in common with other windfarm projects, gives rise to numerous material planning considerations, potential impact on the National Park being one of them. It is incorrect for the CPRE to assume that impact on the National Park, regardless of its significance, should be the deciding factor in determining the application. Indeed, this very point is fully acknowledged by DEFRA in the document referred to by CfNP. In paragraph 8 it states that;

"*It is important for all to be aware that the duties do not override particular obligations or considerations which have to be taken into account by relevant authorities in carrying out any function. However, they are intended to ensure that the purposes for which these areas have been designated are recognised as an essential consideration in reaching decisions or undertaking activities that impact on those areas*."

The opening sentence of this paragraph recognises that local planning authorities have a wide range of duties and responsibilities to take into account when carrying out functions such as determining planning applications. Such considerations could include renewable energy targets, the wider environmental and economic benefits of renewable energy and Government guidance within PPS 22 which states that Local Planning Authorities should not create "buffer zones" around internationally or nationally designated areas.

CfNP's statement says that DEFRA has made it clear that National Park purposes are an 'essential' consideration. It is worth noting the purpose of this particular document, which seeks to provide guidance and clarification of the role of relevant authorities when decisions are being taken that may affect the purposes of a National Park. This document is not a statement of national planning policy and the wording within its paragraph 8, where the term 'essential' consideration is used, does not reflect the wording set out within Section 11(A) of the National Parks and Access to the Countryside Act 1949 as amended by Section 62 of the Environment Act which requires authorities only to 'have regard' to National Park purposes.

It is clear that BMBC must have regard to the potential impact of the Development on the National Park and its purposes, but this is one consideration amongst many and is not an overriding factor as argued by CPRE and CfNP.

4.2 PEAK DISTRICT NATIONAL PARK AUTHORITY PLANNING COMMITTEE REPORT, 19TH SEPTEMBER 2008

The following points made in the Peak District National Park Authority Planning Committee Report of 19th September require particular attention:

- The visual impact of the Development on the National Park is considered to be highly intrusive as it is located close to the boundary;
- The turbines would be prominent over a wide area prized for its remote "wilderness" feeling;
- The Development would cause significant harm to the Park's special characteristics;
- Cumulative impact with Royd Moor and other proposals would exacerbate harm; and
- Harm to the National Park and its setting is considered to be unacceptable.

The potential impact on the National Park of developments close to its boundary is a material consideration, PPS22 paragraph 14. For development taking place within the Park itself however a higher order test is applied – permission "*should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development,*" PPS22 paragraph 11.

The Environmental Statement and the further work undertaken on Landscape and Visual Assessment within this Supplementary Report demonstrate that:

a) The Development will only be seen from approximately 6% of the National Park area, the extent of impact on the Park and its setting is therefore very limited. The Environmental Statement in section 6.12 concludes that: "*There will be a minor and not significant effect on the Peak District National Park.*" It is, therefore, unreasonable to conclude, in the words of the National Park Authority, that the Development would be "highly intrusive."

b) The area from which the Development would be seen has relatively few footpaths and is less frequently visited than many parts of the National Park.

c) While the north-eastern corner of the National Park includes extensive areas of moorland, with some feeling of "wilderness," views out of this sector of the Park in the direction of Sheephouse Heights are towards a quite different landscape – one which is predominantly settled and includes small towns, villages, fields, woods and power lines. The views out of the Park are not towards wilderness. The Development when viewed from within the Park would be seen in the context of a settled, modified landscape.

d) Cumulative visual impact is considered in Chapter 2: *A6 Landscape and Visual Assessment* of this report. As it would only be possible to see the Development from 6% of the National Park it follows that cumulative impact would affect the same, or a lesser, proportion of its area. It is concluded in Chapter 2 (Section A6.7.4) of that the National Park would experience small, infrequent areas of cumulative visibility of the Development in conjunction with other windfarms. In addition, the cumulative impact in views out of the Park would be in the context of a settled, developed landscape.

In relation to the PPS22 paragraph 14 test – that the potential impact of a proposal close to the boundary of a National Park is a material consideration in determining a planning application the conclusions drawn in the Environmental Statement and this Supplementary Report are that visual impact will be **Minor and not significant**. Although not required by PPS22 it is interesting to consider the application of its more demanding test in paragraph 11 that the objectives of designation, which could be said to include the "purposes" of the Park – as considered in paragraph 4.1, should not be compromised by new development. It is self-evident in the light of the detailed analysis of landscape and visual impact submitted that the Development would not compromise the objectives and statutory purposes of the Park's designation.

A further concern regarding the Peak District National Park Authority Planning Committee Report of 19th September is that it does not present a properly balanced assessment of the proposal or present and appraise the full policy context. The section of the Committee Report titled 'Policy Considerations' merely highlights those planning policies that the proposal is considered to be contrary to. At no point were other planning policy considerations drawn to the attention of the Committee such as PPS22 paragraph 1(iv) which states that the wider environmental and economic benefits of renewable energy projects are material considerations that should be given significant weight in determining planning applications, or paragraph 14 of PPS22 relating to buffer zones around designated areas. While the Yorkshire and the Humber RSS is mentioned there is no reference to its policies regarding the need to meet and exceed renewable energy targets. The Committee report makes no reference whatsoever to the benefits of the Development as required by PPS22.

The National Park Authority in drawing its conclusions has not critiqued in any detail the Landscape and Visual Assessment included within the Environmental Statement, and has not presented any alternative evidence or analysis of its own to substantiate its conclusion that the Development would cause unacceptable harm to the Park and its setting.

It is very disappointing that the National Park's officers have not properly assessed the Development in the context of the Development Plan and the relevant policy context as a whole. Whilst it is accepted that the National Park Authority need not comment on all matters that are material to the application it is essential that all relevant strategic matters are highlighted so that members understand the full policy context and reach a decision based on a balanced understanding. In the context of information presented and omitted from the Committee Report its recommendations can be considered to be imbalanced and flawed.

5 IMPACT ON THE GREEN BELT

The site of the Development is located within the South Yorkshire Green Belt. National planning policy, PPG2, states that the most important attribute of Green Belts is their openness and sets out five purposes of including land in Green Belts:

- To check the unrestricted sprawl of large built up areas;
- To prevent neighbouring towns from merging into one another;
- To assist in safeguarding the countryside from encroachment;
- To preserve the setting and special character of historic towns; and
- To assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

PPS2 sets out a presumption against inappropriate development which would be harmful to a Green Belt. If development in the Green Belt is considered harmful then very special circumstances need to be demonstrated to justify development, and it has to be shown that harm is outweighed by other considerations.

PPS22 paragraph 13 deals with renewable energy developments within Green Belts. It recognises that elements of renewable energy projects will comprise inappropriate development which may impact on the openness of a Green Belt. It restates the need for certain projects to demonstrate very special circumstances which could include the wider environmental benefits associated with increased renewable energy production.

Barnsley's UDP contains relevant Policies GS7, GS8 and GS9 that mirror PPG2, namely that development will not be permitted unless it maintains the openness of the Green Belt and does not conflict with its purposes, and that development should not result in significant harm to the visual amenity of the Green Belt.

It should be noted that Green Belt is not a landscape designation. PPS2 paragraph 1.7 states "*the quality of the landscape is not relevant to the inclusion of land within a Green Belt or its continued protection.*" However, paragraph 1.6 recognises that one of the objectives of Green Belt designation is "*to retain attractive landscapes, and enhance landscape, near to where people live*." The impact of the Development on the landscape character areas which fall within the Green Belt has been assessed within the Environmental Statement. The Planning Statement refers to that assessment and concludes that the Development would not have a significant effect on the landscape quality of the Green Belt surrounding the Development site.

The Development has been carefully designed so as to minimise its impact on the openness of the Green Belt:

- The Development is small scale in terms of the number of turbines and compact in layout;
- The Development is separated from the nearest operational and consented wind farms by a gap of 5-6 km; and
- Wind turbines are slim, widely spaced structures. Existing views will continue to flow between and through the turbines.

(The Planning Statement refers to a relevant precedent set in relation to a Planning Inspector's report allowing a windfarm appeal in Green Belt at Scout Moor in the Boroughs of Rossendale and Rochdale. The Inspector concluded that the landscape would retain its sense of openness permeating through the slim and widely spaced turbines).

Although the Development will be visible from many parts of the Green Belt, its scale and compact layout means that the sense of openness that characterises the area will not be compromised.

The Development is isolated from the existing windfarm at Royd Moor (13 turbines), and the consented windfarm at Hazelhead (3 turbines) which are approximately 5-6 km distant The gap between the Development and Royd Moor plus Hazelhead is sufficiently wide for these schemes to be completely distinct and separate, so that together they do not impact on the openness of the Green Belt.

Two further windfarm proposals close to Royd Moor at Blackstone Edge and Spicer Hill would add five and three turbines to the 16 existing and three consented. If these two additional schemes are permitted then a significant cluster of turbines would exist within the wider Royd Moor area. Even in these circumstances the gap between this emerging cluster and Sheephouse Heights would be sufficiently wide to maintain visual separation and avoid the Development impacting the openness of the Green Belt.

It is concluded that the Development would not be in conflict with the five PPG2 purposes of the Green Belt referred to above:

- The Development would not contribute to unrestricted urban sprawl – turbines are slim tall structures with a very small footprint. They are also a reversible form of development with a 25 year lifespan, and in these respects are very different from normal urban development;

- The Development would not contribute to the merging of towns; it would maintain the current degree of separation between settlements in the area;

- The turbines have a very small footprint and would not encroach on the countryside; and

- The final two purposes – settings of historic towns and assisting urban regeneration are not relevant to the Development.

If it is considered that some harm may be caused to the Green Belt then it can be demonstrated in accordance with PPS22 paragraph 13 that there are very special circumstances including the wider environmental benefits associated with the generation of renewable energy which clearly outweigh that harm. The wider benefits of the Development are summarised in paragraph 8.7 of this report and include:

- A reduction of some 24,800 tonnes of CO_2 emissions associated with the generation of electricity (assuming the displacement of the average mix of fossil fuels serving the national grid); and

- A significant contribution towards the RSS renewable energy installed capacity targets for Barnsley District, South Yorkshire and Yorkshire and the Humber as a whole for 2021.

It has been demonstrated the Development would not have a significant effect on landscape within the Green Belt. The Development has been designed to minimise its impact on the openness of the Green Belt. If it is considered that the Development would cause harm to the Green Belt then that harm is outweighed by the wider benefits of the Development.

6 SITE SPECIFIC ISSUES

6.1 HABITAT ENHANCEMENT

6.1.1 Introduction

The purpose of this Chapter is to provide details of the broad principles of a plan which when implemented could result in the ecological enhancement of the Sheephouse Heights Windfarm ("the Development"), above the baseline value identified during the ecological surveys undertaken as part of the Environmental Impact Assessment (EIA) and included within the Ecology Chapter of the Environmental Statement (ES).

As part of the assessment for the Development EIA a full extended Phase 1 Habitat Survey was undertaken in order to identify the baseline ecological conditions. This Phase 1 survey revealed that the site was greatly dominated by poor grazing fields and arable fields. The only significant area of notable ecological interest within the Development boundary, was an area of acid and calcareous semi-improved grassland and a wet flush in a field located immediately south of the location of Turbine 4, which would not face any significant impact from the Development.

The site will continue to be largely managed as its current use and, therefore, loss of large areas of grazing or arable fields for ecological enhancement projects would likely have a significant adverse impact on the ongoing business concern of the farm.

The Phase 1 survey did, however, reveal that very little hedgerow was present anywhere within the survey area and what was present consisted of no more than remnant scattered scrub along long lost field boundaries to the south of the site.

Well managed species-rich hedgerows offer high potential for a variety of plant and animal species as food, shelter and possibly most importantly, commuting routes. Animal groups which may benefit from high value hedgerows include: badger, bats, small mammals, birds, butterflies, moths and other invertebrates.

This plan, therefore, proposes the creation and long-term management of high value hedgerows within the site resulting in a significant increase in the ecological value of the Development site from its baseline value identified during the EIA surveys.

The locations of the proposed hedgerows are shown in Figure A7.1

In order to produce hedgerows of a good ecological value the following guidelines and advice publications have been referenced along with the Hedgerow Regulations 1997.

- Natural England; October 2008; *Entry Level Stewardship Handbook* 2nd Edition; Natural England; PETERBOROUGH
- Natural England; 2008; *Leaflet NE69, Hedgerow Trees: answers to 18 common questions*; Natural England; PETERBOROUGH
- Natural England; 2008; *Leaflet NE70, Hedgerow Planting: answers to 18 common questions*; Natural England; PETERBOROUGH

The entire length of the proposed hedgerow runs for a total of approximately 1300m around existing and historical field boundaries to the north of (and ultimately connecting to) Sheephouse Wood.

New hedgerows will consist of brand new planting adjacent to stone walls, connecting remnant hedgelines of a few sporadic hawthorn bushes and gap filling amongst trees and existing gappy hedgerow sections to produce a fully connected network of hedgerows in the area.

The purpose of this habitat enhancement plan is to produce a permanent network of hedges of significant value to the ecology of the wider area. The quality of these hedgerows following their initial creation will be monitored over a long term period using a scoring survey method. If the hedgerow is not found to be increasing in value over time then management techniques may be reviewed to provide the required improvements.

6.1.2 Proposals

Planting Principles

The following planting principles will be implemented on the entire proposed length where ever any of these principles is practical, possible or relevant.

(i) Planting should be undertaken in a double staggered row with the rows separated by approximately 40cm.

(ii) Planting should occur at a density of approximately 4 to 6 plants per metre (m).

(iii) Plants should be of native species, preferably of local stock and of relevance to local hedgerows and woodland. Species to be considered should include (but not necessarily be restricted to):

- Hawthorn (Crataegus monogyna);
- Blackthorn (Prunus spinosa);
- Elder (Sambucus nigra);
- Oak (Quercus sp.);
- Holly (Ilex aquifolium);
- Ash (Fraxinus excelsior); and
- Hazel (Corylus avellana).

(iv) A minimum of 7 woody species should be present in every section.

(v) At least 1 standard tree should be present within every 50m of hedgerow once mature. Therefore, species with the potential to grow into such a tree must be present in an appropriate frequency (for example oak or ash).

(vi) All young plants will be suitably protected, as required, from grazing livestock and/or rabbits by appropriate fencing and/or tree protectors.

(vii) Any gaps within the hedgerows necessary for access, for instance, will form less than 10% of any section and where possible will be marked with a standard tree either side of the gap to allow canopy connectivity.

6.1.3 Management Principles

The following management principles will be implemented on the entire proposed length wherever any of these principles is practical, possible or relevant. Wherever possible, these principles should be extended to any remaining hedgerow sections within the Development area which would connect to the newly created hedge lines.

(i) A minimum of 2m either side of the centreline of the hedgerow will not be subject to any cultivation or the addition of any fertilisers, manures or pesticides.

(ii) Cut each hedgerow no more than once every 3 calendar years, cutting no more than a third of the hedgerow each year.

(iii) Maintain hedgerows to a height and width customary to the local landscape, but no less than 2m in height (except when laid or coppiced as part of a regular management cycle).

(iv) Do not cut hedgerows during the bird breeding season (1 March to 31 August).

(v) Hedge laying and coppicing are permitted in a style customary to the local landscape, but should be completed before 1 March. However, in exceptional circumstances, work may continue up to 1 April, provided you conduct a survey to ensure that there are no nesting birds present.

6.1.4 Monitoring

In order to ensure that the proposals within this plan result in an enhancement of the ecological value of the site it is proposed that the condition and value of the hedgerow is assessed on a five yearly basis for the first 30 years.

According to the Hedgerow Regulations (1997) a hedgerow must be a minimum of 30 years old to be considered as "important". After 30 years the intention is that the proposals within this plan will have created such a hedgerow.

In order to assess the progress of the hedgerow a survey and report, using a recognised and repeatable method, should be undertaken every five years. It is recommended that the Hedgerow Evaluation and Grading Systems (HEGS) or similar method is used and adapted to allow for the immaturity of the hedge, if required, in the earlier stages of development.

If no significant or discernible increase in the hedges value is noted or its value shows signs of decline during any survey visit, management techniques should be immediately revised and if required reparatory works undertaken to prevent deleterious impacts and return the enhancement process toward an upward trajectory.

6.1.5 Conclusions

The implementation of this report should result in the creation of approximately 1.3km of hedgerow which over time will be considered to be of no less than "important", in its value to the Development and surrounding area.

The creation of this hedgerow and the enhancement in the sites potential for animals and plants is considered likely to result in an overall increase in the nature conservation of the Development site and wider area following construction of the Development and its associated infrastructure.

6.1.6 References

Clements D.K & Tofts R.J; 1992; Hedgerow Evaluation and Grading Systems (HEGS); Waterman CPM Ltd; CIRENCESTER

Natural England; October 2008; Entry Level Stewardship Handbook 2nd Edition; Natural England; PETERBOROUGH

Natural England; 2008; Leaflet NE69, Hedgerow Trees: answers to 18 common questions; Natural England; PETERBOROUGH

Natural England; 2008; Leaflet NE70, Hedgerow Planting: answers to 18 common questions; Natural England; PETERBOROUGH

6.2 POST-CONSTRUCTION BAT MONITORING

Wind turbines are known to directly cause bat mortality[1,2]. Although collision has generally been considered to be the process through which direct mortality results to these mammals, recent studies have revealed that the majority of bat fatalities may result not from contact with blades, but through a process known as barotrauma (tissue damage to air-containing structures caused by a rapid or large change in pressure). As turbine blades rotate, they create vortices of low pressure, which are shed downwind and may affect a small area beyond the turbine before pressure normalises. These areas of low pressure can cause barotrauma in bats[3].

There is also a recognised risk of bat collisions with turbines. At present there is no accepted framework for quantifying collision risk to bats.

Particular species of bats are thought to be at greater risk than others, due to their ecology and behaviour. However, there is no information currently available on variation in mortality for different species or different points of their lifecycle. Furthermore, a report published in Europe concerning bat mortality and windfarms seems to contradict the assumptions made concerning susceptibility of bat species in the UK[4].

A mortality monitoring plan will be implemented at the Development. This plan will gather data which can be used to inform future windfarm bat impact assessments.

Mortality data will be collected at four points during the year, coinciding with different stages in bat lifecycles. These visits will be made during the following times:

- Spring – emergence from hibernation. Females in particular feed intensely in preparation for breeding;
- Early summer – active maternity roosts;
- Mid-late summer – mothers suckling; and

[1] Natural England. 2008. *Bats and onshore wind turbines: Interim guidance. Natural England, Sheffield.*

[2] Rodrigues, L., Bach, L.., Dubourg-Savage, M., Goodwin, J. and Harbusch, C. 2008. Guidelines for consideration of bats in wind farm projects. *EUROBATS Publication Series No. 3 (English Version).* UNEP/EUROBATS Secretariat, Bonn, Germany.

[3] Baerwald, E.F., D'Amours, G.H., Klug, B.J. and Barclay, R.M.R. 2008. Barotrauma is a significant cause of bat fatalities at wind turbines. *Current Biology* **18**(16). R695 – R696.

[4] Brinkmann, R., Schauer-Weisshahn, H. and Bontadina, F. 2006. *Survey of possible operational impacts on bats by wind facilities in Southern Germany. Final report submitted by the Administrative District of Freiburg, Department of Conservation and Landscape management and supported by the foundation Naturschatzfonds Baden-Württemberg.* Brinkmann Ecological Consultancy, Gundelfingen/Frielberg, Germany.

- Autumn – young fledge, and *Mytotis* sp. exhibit swarming behaviour.

Although noctule bats are known to migrate in Europe, this behaviour has not been recorded in the UK. However, should noctules migrate in the UK, the spring and autumn mortality searches would ensure that the migration periods are monitored.

Each visit will involve searching for dead bats under each of the five turbine locations. A 100m by 100m square search plot will be marked around the base of each turbine.

This plot will then be systematically searched for bat corpses by following defined transect routes or by using dogs trained to detect dead bats.

Dead bats will be collected and a post-mortem conducted to determine the cause of death.

6.3 THE USE OF BORROW PITS

At this stage, it has not been confirmed that an on-site borrow pit will be used. Neither has the method of extracting stone been confirmed, or a contractor appointed. Once a contractor has been appointed, the applicant will ensure that they will engage in early informal discussions with the local authority on construction methods (including working of the borrow pit), with a view to applying for consent to carry out the construction works under Section 61 of the Control of Pollution Act 1974. This would include prediction and assessment of the levels of construction noise and vibration in terms of BS5228:2009 and identification of suitable working, noise control and mitigation measures to ensure that the effects of construction noise and vibration on nearby noise-sensitive receptors are minimised.

Legislative Context:

The Control of Pollution Act 1974

CoPA 1974 provides Local Authorities in England, Scotland and Wales with powers to control noise and vibration from construction sites. Section 60 of the Act enables a Local Authority to serve a notice to persons carrying out construction work of its requirements for the control of site noise. This may specify plant or machinery that is or is not to be used; the hours during which construction work may be carried out; the level of noise or vibration that may be emitted; and provide for changes in circumstances. Appeal procedures are available.

Section 61 of the Act allows for those carrying out construction work to apply to the Local Authority in advance for consent to carry out the works. This is not mandatory, but is often in the advantage of the developer, as once consent is issued, the Local Authority is no longer able to take action under Section 60. It does not, however, prevent nuisance action under The Environmental Protect Act 1990. The application is expected to give as much detail as possible about the works to be carried out, the methods to be used and the measures that will be taken to minimise noise and vibration.

The Environmental Protection Act 1990

The EPA 1990 specifies mandatory powers available to Local Authorities in respect of any noise that either constitutes or is likely to cause a statutory nuisance, which is also defined in the Act. A duty is imposed on Local Authorities to carry out inspections to identify statutory nuisances, and to serve abatement notices against these. Procedures are also specified with regards to complaints from persons affected by a statutory nuisance.

6.4 HIGHWAYS MANAGEMENT PLAN TO COVER THE CONSTRUCTION PERIOD

Evelop UK Ltd are committed to working with Barnsley Metropolitan Borough Council to deliver the proposed windfarm at Sheephouse Heights whilst maintaining and improving the structural integrity of all delivery routes identified within the Environmental Statement.

In particular, Evelop UK Ltd are prepared to commit to a range of measures within a Section 106 agreement or through planning conditions, which may include:

A structural integrity survey of the highway prior to the construction phase of the development. A post-construction survey will be commissioned, with a commitment to pay for any remedial measures required as a result of adverse effects created through construction of the Development;

A Traffic Management Plan (TMP) to be agreed with Barnsley Metropolitan Borough Council – which could include the following measures;

- Wheel washing facilities to prevent mud on the road;
- Police escorts and timing of deliveries of abnormal loads;
- Specification of traffic routes and time periods to and from the development site; and
- Localised advertising and notification of when construction activities will take place to alert local road users.

The above list is indicative of the potential principles within a TMP and is therefore not exhaustive, other measures can be included at the request and in agreement with Barnsley Metropolitan Borough Council.

7 OTHER REPRESENTATIONS

7.1 SITE VISIT TO A MODERN WIND FARM

Representations made by Hunshelf Parish Council state that it is considered vital that officers and members visit a site with towers of the size proposed at Sheephouse Heights prior to any decision being taken to be able to appreciate the size of the towers. The Applicant is presently looking in to arranging a site visit to a modern windfarm for all interested parties which would satisfy this request and also enable a greater understanding of the appearance and operation of a modern windfarm development.

7.2 ICE FLING

A number of third party representations refer to a fear of ice fling from the turbines. The Applicant assures BMBC that the build-up of ice on turbines is unlikely to present problems on this site. For ice to build up on wind turbines particular weather conditions are required that in England occur for less than one day per year. Details are provided in Wind Energy Production in Cold Climates (WECO) (ETSU W/11/00452/00/REP). In those areas where icing of the blades does occur, fragments of ice might be released from the blades when the machine is started. However, modern wind turbines are fitted with vibration sensors which can detect any imbalance which might be caused by icing of the blades; in which case the operation of machines with iced blades can be inhibited.

7.3 ROUTE OF CONSTRUCTION TRAFFIC THROUGH OXSPRING

The Applicant wishes to clarify the position regarding construction traffic in response to Paragraph 1 of the consultee response from Oxspring Parish Council where concern is raised over the traffic route passing by a school entrance. Firstly, where construction traffic (specifically the traffic for concrete pours) passes a school entrance the Applicant will always seek to commit to a curfew during the morning drop off and afternoon pick up times. However, the proposals for Sheephouse Heights do not involve the routing of general construction traffic through Oxspring and more importantly, past the school, this is clearly demonstrated on Figure 11.1 'Proposed Access Routes' of the Environmental Statement. The only construction traffic to pass through Oxspring will be the Turbine Blade deliveries which amount to a very small number of vehicular movements, such that a curfew would not be required.

7.4 TELEVISION RECEPTION

A number of third party representations raised the issue that the proposal may lead to the weakening or loss of television reception. The Environmental Statement includes information gained from the study undertaken by Pager Power and the Applicant reiterates their commitment to all those concerned that they will adopt a range of mitigation and compensatory measures in liaison with BMBC to ensure that no third party experiences adverse effects on television reception as a result of our proposals.

This commitment can be enforced by means of a planning condition.

8 KEY PLANNING TESTS RELEVANT TO THE DEVELOPMENT

8.1 INTRODUCTION

This chapter considers the Development in relation to seven key planning policy tests. These tests have been drawn from the Planning Statement submitted with the planning application and national guidance documents such as PPS22 and its Companion Guide, PPS 1 Supplement, the Yorkshire and Humber Plan and the Barnsley UDP. The tests seek to encompass the full range of planning matters relevant to the determination of the planning application.

8.2 KEY PLANNING TEST 1: RESIDENTIAL AMENITY

Barnsley UDP Policy ES12 states that wind energy developments will be assessed (amongst other things) on their impact on residential amenity. Assessments have been made in the Environmental Statement and this Supplementary Report in respect of noise, shadow flicker and visual impact.

Noise

PPS22 paragraph 22 makes it clear that the ETSU-R-97 report should be used as the basis for assessing and rating noise from wind turbines.

The Environmental Statement in Chapter 9 describes the steps taken in accordance with ETSU-R-97 and concludes in section 9.10 that all predicted noise levels are lower than the required limits with one minor exception, which is unlikely to occur in practice, and is, therefore, considered to be **not significant**.

The Applicant is willing for a planning condition to be imposed requiring post construction noise monitoring and the imposition of specific noise limits.

Shadow Flicker

The Environmental Statement in Chapter 13 describes the steps taken in assessing the possible incidence of shadow flicker occurring within dwellings near to the Development. A total of 19 dwellings could be affected for short periods of time. Mitigation measures involving stopping specific turbines if conditions would give rise to a problem are described in the Environmental Statement.

If the turbine locations change as a result of micrositing then the Applicant will reassess the likely incidence of shadow flicker and report on this to BMBC.

The Applicant is willing to prepare a Shadow Flicker Mitigation Protocol to be agreed with BMBC and enforced by means of a planning condition. The operation of the turbines would take place in accordance with the Protocol unless BMBC gave written prior consent to any variation.

Visual Impact in relation to residential amenity

The Environmental Statement and this report, Chapter 2: *A6 Landscape and Visual Assessment*, identify the settlements where there is expected to be significant/high visual impact in "localised areas." These settlements are: Stocksbridge, Midhopestones, Oxspring,

Deepcar, Langsett, Penistone, and Greenmoor (first three are within 2 km of the Development site). In addition there are a number of individual dwellings within 1 km of the Development site where the significance of visual impact was not assessed during earlier work.

Chapter 2: *A6 Landscape and Visual Assessment* provides more detailed information on visual impact and amenity in all the settlements within 5 km of the Development site and in respect of all individual dwellings within 1 km of the proposed turbines. The overall findings are as follows:

- A total of 141 dwellings in the settlements of Stocksbridge, Penistone, Oxspring, Midhopestones, and Greenmoor are expected to experience significant visual impacts as a result of Development, out of a total of 11,300 dwellings in all the settlements within 5 km of the proposed turbines, (approximately 1.2% of the total).

- A total of 16 individual dwellings located within 1 km of the proposed turbines are expected to experience significant visual impacts as a result of the Development, out of a total of 42 properties, (approximately 38% of the total).

A full description of the nature of these impacts is provided in Chapter 2: *A6 Landscape and Visual Assessment*. There are a relatively small number of dwellings located within 1 km of the Development site. One of the factors taken into account in selecting the site was the need to ensure that there is adequate separation between the proposed turbines and the nearest dwellings.

While there are relatively few dwellings close to the proposed turbines the area as a whole is well settled with a number of small towns and villages nearby. Given the large numbers of properties within those settlements within 5km of the Development site it is noteworthy that only a very small proportion – 1.2% would experience significant visual impact.

In most cases these impacts are not capable of being mitigated and will, therefore, continue for the 25 year lifetime of the project. They must, therefore, be considered in relation to the overall balance between the benefits and impacts of the Development.

Residential Amenity – overview

In the case of the first two potential impacts on residential amenity considered above – noise and shadow flicker, steps can be taken and enforced through planning conditions to ensure that any problems are fully resolved. In the case of impact on visual amenity for the 157 dwellings that are expected to be significantly affected there are no equivalent steps that can be taken. Modern wind turbines are large structures that will have visual impacts, but this in itself is not a reason for refusing planning permission. The key policy test is set out in PPS22 1(viii) which recognises that there will be impacts and requires that development proposals demonstrate how such impacts have been minimised by careful location, scale and design. Section 8.8 considers this test further.

8.3 KEY PLANNING TEST 2: LANDSCAPE AND VISUAL IMPACT

The overall conclusions on Landscape and Visual Impact, set out in the Environmental Statement in section 6.12, identify the extent of impacts on designated landscapes, landscape character and visual amenity. Some impacts are expected but the overall Statement of Significance in paragraph 6.13 is that "Having carefully examined the potential effects on landscape and visual amenity associated with the proposed Sheephouse Heights Windfarm it is considered that the proposals are acceptable in this location in landscape and visual terms."

This report concludes that having carefully examined the potential effects on landscape and visual amenity associated with the Development is considered acceptable in this location in landscape and visual terms.

As stated in paragraph 8.2 in relation to Residential Amenity, it is recognised that turbines will have an impact, the Environmental Statement has assessed the extent of that impact and the key test set out in PPS22 1(viii) is the extent to which those impacts have been minimised.

8.4 KEY PLANNING TEST 3: GREEN BELT POLICY

It has been demonstrated that the Development:

- Would not have a significant effect on landscape within the Green Belt; and
- Has been designed to minimise its impact on the openness of the Green Belt.

If it were considered that the Development would cause harm to the Green Belt it has been demonstrated, in response to PPS22 paragraph 13, that harm is outweighed by the wider benefits of the Development, in particular:

- A reduction of some 24,800 tonnes of CO_2 emissions associated with the generation of electricity; and
- A significant contribution towards the RSS renewable energy installed capacity targets for Barnsley District, South Yorkshire and Yorkshire and the Humber as a whole for 2021.

8.5 KEY PLANNING TEST 4: IMPACT ON THE NATIONAL PARK

The potential impact on the National Park of developments close to its boundary is a material consideration, PPS22 paragraph 14. In addition, local planning authorities must have regard to the impact of proposals on the purposes of National Parks.

Because of the proximity of the Peak District National Park boundary careful consideration has been given to the potential landscape and visual impact of the Development. This is set out in the Environmental Statement and further information including consideration of cumulative impact in included in Chapter 2: *A6 Landscape and Visual Assessment* of this report.

Key findings are that:

- The Development, and others cumulatively, will only theoretically be seen from 6% of the Peak District National Park area;
- The area from which the Development will be seen has relatively few footpaths and is a less frequently visited part of the Park; and
- Views out of the Park are towards settled landscapes containing small towns, villages, fields, woods and power lines. The Development, when seen from the limited areas of the Park from which it would be visible, would be seen in this context and not in the context of large scale open areas of wilderness.

The report presented to the National Park Authority Planning Committee on 19th September 2008 did not include a detailed critique of the submitted Environmental Statement analysis of potential impact, nor did it present any alternative evidence or analysis of its own to substantiate its conclusion that the Development would cause unacceptable harm to the Park

and its setting. In addition, the Committee report in omitting any reference to key planning issues such as the wider benefits of the Development and the importance of achieving and exceeding renewable energy and CO_2 reduction targets, failed to provide a balanced picture of the policy context in which recommendations must be brought forward. In this context the Committee Report's recommendations could be considered to be imbalanced and flawed.

The detailed evidence presented in the Environmental Statement and this Supplementary Report clearly demonstrates that the landscape and visual impact of the Development on the National Park and its purposes would be **Minor and not significant**.

8.6 KEY PLANNING TEST 5: PUBLIC INVOLVEMENT

PPS22 paragraph 1(vii) requires renewable energy developers to engage in active consultation with local communities.

Prior to the submission of the planning application the Applicant engaged with the local communities by the following means:

- Public exhibitions were held in Penistone and Stocksbridge over a total of three days during March and April 2008;
- Leaflets were distributed to households within the local community informing people about the proposal and the exhibitions; and
- A Sheephouse Heights website was established in May 2008 both to provide information and an opportunity for the expression of opinion about the proposal.

The exhibitions held during March and April 2008 were attended by approximately 500 people. The Sheephouse Heights website has attracted 55 registrations since May 2008, 27 questionnaires have been submitted on line and 45 comments received.

Meetings have also been held with Hunshelf Parish Council.

Two further public consultations are planned for 12th and 13th March 2009 to present the latest photomontages (included with this Supplementary Report) and suggestions on Community Benefits. Day exhibitions will be held in Stocksbridge and Penistone.

The Applicant has properly engaged with the local community in preparing the planning application for the Development and is continuing to do so as more information becomes available.

8.7 KEY PLANNING TEST 6: WIDER BENEFITS

PPS22 paragraph 1 (viii) says that proposals should demonstrate "*any environmental, economic and social benefits*…" The principal benefits of the Development are as follows:

a) Carbon Dioxide savings

- The Development would give rise to a reduction of some 24,800 tonnes of CO_2 emissions associated with the generation of electricity;
- The Energy While Paper 2007 "Renewables Statement of Need" states that: "*New renewable projects may not always appear to convey any particular local benefit, but they provide crucial national benefits. Individual renewable projects are part of a growing proportion of low-carbon generation that provides benefits shared by all communities both through reduced emissions and more diverse supplies of energy which helps the reliability of our supplies. This factor is a material consideration to*

which all participants in the planning system should give significant weight when considering renewable proposals. These wider benefits are not always immediately visible to the specific locality in which the project is sited. However, the benefits to society and the wider economy as a whole are significant and must be reflected in the weight given to these considerations by decision makers in reaching their decision."; and

- As indicated in section 1.3 the Climate Change Act 2008 has further increased the UK's CO_2 reduction target.

b) Contribution to meeting RSS Renewable Energy Targets

- The Development would make a significant contribution towards the RSS renewable energy installed capacity targets for Barnsley District, South Yorkshire and Yorkshire and the Humber as a whole for 2021; and

- As indicated in section 1.3 EU Renewable Energy Policy and the emerging UK Renewable Energy Strategy strongly indicate that future targets for renewable electricity will be significantly increased.

c) Local construction employment

- The Applicant will seek to source as much of the construction activity as possible from local companies.

d) Habitat Enhancement

- The Applicant will plant between 1000 m to 1,300 m of local species-rich new hedgerows as part of the project.

e) Awareness Raising

Wind turbines are a very visual indicator that action is being taken to address the causes of climate change. The Applicant will seek to increase the level of such awareness within local communities by a variety of means which could include:

- Real time information displays in local libraries, schools, and on a Sheephouse Heights website, showing how much electricity is being produced both at that moment and cumulatively, and how much CO_2 has been saved since the turbines were commissioned;

- Input to local school educational programmes;

- Regular information supplied to Parish Councils and other groups to foster a sense of local "ownership" in the achievement of the windfarm; and

- Other actions to be agreed with the local community.

The Applicant will enter into a S106 Agreement to deliver an Awareness Raising Programme on the above lines.

f) Diversification for local farmers

- The Development has a very small physical footprint which enables farming activity to continue as previously while diversifying activity;

- The Development will add a new income stream in the form of rent to local farmers.

g) Community Benefits

- The Applicant will set up a Community Benefit Fund to be used to assist local projects and administered locally;
- The Fund could amongst many things support local energy saving projects and the installation of micro-renewables in local homes; and
- The Applicant is aware that the establishment of such a fund is not a planning matter and will not be taken into consideration in determining the planning application; however it would bring significant benefits to local communities.

8.8 KEY PLANNING TEST 7: MINIMISING IMPACT BY CAREFUL DESIGN

PPS22 paragraph 1 (viii) states that development proposals should demonstrate "how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures."

The Sheephouse Heights Windfarm site is eminently developable. This is a significant benefit as many windfarm sites are held back by significant constraints. If permission is to be granted, development could commence on site within 6 months and be completed in a further 9-12 months, making a contribution to meeting local and regional renewable energy targets and national CO_2 reduction targets.

The Environmental Statement and the Planning Statement make it clear that, in respect of a number of potential key constraints, where there are impacts they are not so significant that they raise a fundamental objection to the Development. These constraints include:

- Landscape and Visual Impact;
- Impact on the National Park;
- Impact on the Green Belt;
- Ecology and Ornithology;
- Hydrology and Hydrogeology;
- Archaeology and Cultural Heritage, including Registered Parks and Gardens and Conservation Areas;
- Access and traffic; and
- Aviation Radar Issues of concern to the MoD, CAA, and NATS.

In some cases a potential problem has a remedy which can be implemented as part of the project, and enforced by means of a planning condition:

- TV Reception – see section 7.6 above;
- Shadow Flicker – see section 8.2 above; and
- Noise – see section 8.2 above.

The fact that the site is eminently developable is a result of careful selection and design.

9 RESIDUAL IMPACTS AND WIDER BENEFITS – ASSESSING THE BALANCE

All windfarm projects have impacts – that is not a reason for refusal. The question is how significant the residual and post mitigation, impacts are in relation to the benefits.

In relation to the above key planning policy tests it has been demonstrated that:

- Impact has been minimised by careful site selection and layout design;
- Green Belt and National Park policies are not compromised;
- Landscape and Visual impact is not significant;
- There would be significant visual impact affecting 141 dwellings in five settlements within 5km of the site and 16 individual dwellings within 1km of the site – but no noise or shadow flicker impacts;
- The great majority of dwellings (nearly 99%) within settlements within 5kms of the site would not be significantly visually impacted; and
- The Development would result in significant wider benefits particularly in terms of CO_2 savings and contribution to meeting renewable energy targets, in line with local, regional and national policy.

The balance to be struck, therefore, is between the visual impact on the dwellings identified in this Supplementary Report and the wider benefits described. **The Applicant concludes that, on the basis of all the evidence submitted supporting the Development, any adverse impact arising from the Development would be significantly outweighed by its benefits.**