5 LANDSCAPE AND VISUAL EFFECTS

5.1 INTRODUCTION

This chapter of the Environmental Statement (ES) assesses the potential effects of the proposed Spicer Hill Wind Farm ('the Development') on the existing landscape and visual resource.

In assessing the landscape and visual effects of the Development, the study seeks to establish:

- The existing landscape features of the Development site and its surroundings, the role of the site in the wider landscape setting and in particular its visual role;
- The potential effects on those landscape features and on the wider visual role arising from the Development, whether direct or indirect, positive or negative, temporary or permanent;
- Those mitigation measures that could be incorporated into the Development proposals to avoid or reduce any undesirable effects;
- The significance of any residual effects remaining; and
- The overall acceptability of the Development in landscape and visual terms.

The assessment is based on the Development layout illustrated on Figure 1.2 of Volume II of this ES.

5.1.1 Consultation

Consultation has formed an important part of the assessment process. A Scoping report was submitted to Barnsley Metropolitan Borough Council (BMBC) at the beginning of the assessment process and a Scoping opinion requested in accordance with the Environmental Impact Assessment (England & Wales) Regulations 1999. The scoping document was also issued to a number of statutory and non-statutory consultees for informal comment. Responses relevant to the landscape and visual assessment were received from English Heritage, Garden History Society, Natural England, National Trust, Peak District National Park Authority and BMBC. A public exhibition was also held in March 2008 at which additional comments were received.

Key concerns raised by BMBC related to the potential relationship between the Development, the adjoining operational wind farm at Royd Moor and adjacent application site at Blackstone Edge in terms of turbine type, height and spacing in the original application. These concerns have been addressed through the subsequent assessment process and in the evolution of the turbine layout in this resubmission. During this process further consultation has been held with BMBC in respect of viewpoint selection, turbine numbers and layout. Key mitigation measures embedded into the final layout, as described later in this Chapter, include:

- Movement of turbines away from the highest and most visible southern edge of the site;
- Restriction of turbines numbers to three, each measuring a maximum of 95 m to blade tip; and
- Selection of turbine type and spacing to correspond with the Blackstone Edge proposals so that both schemes appear as a single cluster of turbines that will ultimately replace Royd Moor Wind Farm.

5.1.2 Chapter Structure

The chapter is arranged into seven sections:

- Section 5.2 (Assessment Methodology and Significance Criteria) describes the broad approach that has been followed in undertaking the assessment;
- Section 5.3 (Baseline Conditions) sets out the existing situation with regard to the landscape and visual resources of the Development site and surrounding area. Existing studies and other information of relevance are identified;
- Section 5.4 (Development Design Mitigation) describes the key features of the Development and identifies elements that could cause potential impacts on the landscape and visual resource. Measures included in the final proposals to mitigate negative effects are also described;
- Section 5.5 (Assessment of Potential Effects) assesses the potential effects of the Development on the landscape and visual resource during the construction, operational and decommissioning stages as appropriate;
- Section 5.6 (Cumulative Effects) considers the additional effects of the Development when seen in conjunction with other wind farms;
- Section 5.7 (Summary of Effects) summarises the key findings of the assessment; and
- Section 5.8 (Statement of Significance) considers the overall acceptability of the Development in landscape and visual terms.

A series of Figures have been prepared in support of the assessment and are included in Volume 2 of this ES. These illustrate: Landscape Study Area (Figure 5.1); Zones of Theoretical Visibility (ZTV) (Figures 5.2-5.3); Cumulative Study Area (Figure 5.4); Zones of Cumulative Theoretical Visibility (Figures 5.5-5.9); Settlements and Roads (Figure 5.10); Rights of Way and Attractions (Figure 5.11); Regional Landscape Character (Figure 5.12); Landscape Character Types (Figure 5.13); Landscape Planning Designations (Figure 5.14); ZTV with Landscape Character Types (Figure 5.15); ZTV with Landscape Planning Designations (Figure 5.16); ZTV with Settlements and Roads (Figure 5.17); ZTV with Rights of Way and Attractions (Figure 5.18). Additionally, a series of Photographic, Wireline and Photomontage Viewpoints have been prepared to illustrate the scheme (Figures 5.19-5.55).

5.1.3 Study Area

The area of study considered in this Chapter is identified on Figure 5.1 and extends for a radius of 15 km from the centre of the Development site. A 30 km radius was considered initially in accordance with recommendations made by Newcastle University[1], but, following a preliminary appraisal, it was concluded that whilst the Development might be visible in some views beyond the 15 km radius, significant effects, as defined in 5.2.3, were unlikely to occur. This was due to a number of factors including the nature of the landform and vegetation cover of the surrounding area, the small number of turbines proposed and proximity of the Development to Royd Moor Wind Farm. The assessment of landscape and visual effects presented here therefore concentrates on an area within a radius of 15 km of the Development, which has allowed a more detailed assessment to be carried out. This approach has been agreed with BMBC.

5.2 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

5.2.1 Information Sources

The assessment has been carried out utilising a methodology based upon current best practice as described in 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA), Second Edition, as prepared jointly by The Landscape Institute and The Institute of Environmental Management & Assessment (2002). Other documents referred to include:

- 'Landscape Character Assessment: Guidance for England and Scotland'. Prepared by The Countryside Agency and Scottish Natural Heritage (2002);

1 Visual Assessment of Windfarms: Best Practice.' Prepared by the University of Newcastle (2002) (Scottish Natural Heritage commissioned report F01AA303A).

- 'Visual Assessment of Windfarms: Best Practice'. Prepared by the University of Newcastle (2002) (SNH commissioned report F01AA303A);
- 'Guidelines on the Environmental Impacts of Windfarms and Small Hydroelectric Schemes'. Published by Scottish Natural Heritage (2001);
- 'Cumulative Effects of Windfarms'. Version 2 (revised 13 04 05). Published by Scottish Natural Heritage; and
- 'Visual Representation of Windfarms. Good Practice Guidance.' Prepared for Scottish Natural Heritage by horner+maclennan & Envision (2006).

5.2.2 Categories of Effects

Landscape is an important national resource. It is a product of the interaction between a range of physical and biological influences (including geology, topography, flora and fauna), human activity (land use, land management and settlement) and historical and cultural associations. These elements combine to produce distinctive local character, which people experience and attach values to. How the landscape is perceived is therefore an important sensory factor to be taken into account when carrying out landscape assessments.

The assessment consequently comprises two separate but interrelated studies:

i) An assessment of the effect on the landscape resource, in other words changes to existing landscape features of the Development site and to the character and quality of the wider landscape setting arising from the Development; and
ii) An assessment of the effect on the visual resource, in other words changes to views, viewers and visual amenity arising from the Development.

Landscape effects are a consequence of changes in the physical fabric of the landscape as a result of development that may affect the surrounding character and, in turn, the value placed on it (GLVIA paragraph 2.14). Assessment of landscape effects therefore needs to consider:

- Physical effects upon specific landscape elements and features within the Development site boundary, *e.g.*, removal of trees, walls, hedgerows, etc.;
- Effects upon the overall pattern or combination of landscape elements that contribute to the landscape character of an area, giving it a particular sense of place; and
- Effects upon areas of acknowledged special interest, *e.g.*, National Parks, Areas of Outstanding Natural Beauty (AONBs), etc.

Landscape assessments require a balance of objective and subjective techniques. Objective techniques involve the measurement and quantification of the various components that make up the environment, to establish the 'character' of an area. Subjective techniques rely more on judgment and responses on the part of the assessor to establish the aesthetic characteristics or 'quality' of the area and the effects on it by development.

Visual effects relate solely to changes in the composition of available views of the landscape and the effects of those changes on people (GLVIA paragraph 2.15). Assessment of visual effects therefore needs to consider:

Effects of the Development upon views of the landscape through intrusion or obstruction;
The reaction of viewers who may be affected, *e.g.*, residents, walkers etc.; and
The overall effect on visual amenity.

As with landscape assessments, visual assessments require a balance of objective description and subjective judgment on the part of the assessor when establishing the degree of visibility of an area and the effect on it by development.

The landscape and visual assessment described later in this Chapter is therefore divided into four key categories of effects:

- Effects on the landscape fabric of the Development site;
- Effects on the wider landscape character;
- Effects on areas designated for their particular landscape value or special interest; and
- Effects on views and viewers.

For some wind farm developments there is sometimes a fifth category of effect to consider, namely cumulative effects, which arise when a development may be seen in conjunction with other wind farms. This particular effect is considered further in 5.2.8.

5.2.3 Significance of Effects

The broad objective for identifying effects, as set out in the Environmental Impact Assessment (England & Wales) Regulations 1999, is to establish whether they are 'significant' or 'not significant'. Significance is described in the GLVIA (paragraph 7.39) as being a function of the:

Sensitivity of the affected landscape and visual receptor; and
Scale or *Magnitude* of effects that they will experience.

Definitions for the above are given in the GLVIA (paragraphs 7.16-7.23 and 7.31-7.37). In summary these are:

- *Sensitivity* – 'vulnerability of a sensitive receptor to change;'
- *Sensitive receptor* – 'physical or natural resource, special interest or viewer group that will experience an effect;' and
- *Magnitude* – 'size, extent and duration of an effect.'

These definitions recognise that landscapes vary in their capacity to accommodate different forms of development according to the nature of the receiving landscape and the type of change being proposed.

The criteria used for establishing the sensitivity of identified sensitive landscape and visual receptors and the magnitude of effect is described below, together with the criteria for establishing the overall significance. This is derived from an approach advocated in the GLVIA (paragraphs 7.1-7.51).

Landscape Receptors - Sensitivity and Magnitude of Effect

The effect of the Development on landscape receptors considers both the physical effects on individual landscape elements that make up the fabric of the Development site (trees, hedgerows, walls etc.) and on the landscape character of the wider surrounding area.

Sensitivity of Landscape Elements: The determination of sensitivity in respect of landscape elements of the Development site is dependent on the value attached to individual elements; the quality of individual elements; and the potential for mitigation of individual elements. These can be described as:

- Value – This reflects the importance that the individual element has in the pattern of landscape elements that contribute to the character of the Development site and surrounding area. For example, the value of a hedgerow or boundary wall is likely to be

increased if it forms an important component of the local landscape character. If a landscape element is particularly rare or unusual, its value is likely to be further increased. Conversely, if a landscape element is a common or widespread component of the area, its value may be reduced;

- Quality – This is a reflection of condition or state of repair of landscape elements. For instance, a hedgerow or woodland that is in a poor condition or neglected is likely to have a reduced quality; and
- Potential for mitigation – This reflects the degree to which elements can be restored, enhanced or substituted. For example, it may be possible to restore agricultural land following the construction and decommissioning phases of a development, in which case the sensitivity of the element will be reduced.

Sensitivity of Landscape Character Receptors: For landscape character receptors, the determination of sensitivity is a reflection of their ability to accommodate the Development, which is also dependent on value and quality, but also takes account of contribution to landscape character. These can be described as:

- Value – This is an expression of importance by general consensus and is usually defined by way of any designations that may apply. For example, a landscape character area that lies within a National Park or AONB will generally be of increased value due to the recognised importance attached to the landscape. The greater the value attached to a landscape the more sensitive it is likely to be;
- Quality – This reflects the presence of distinctive attributes that gives an area a sense of place and the extent to which these attributes remain intact. A landscape with consistent, intact and well-defined attributes will generally be of a higher quality and sensitivity than a landscape where the same attributes have been eroded or other inappropriate elements have been introduced; and
- Contribution to landscape character – The existing character of a landscape character receptor determines the degree to which it can accommodate a proposed development. For example, a landscape that is wild, remote and devoid of man-made influences may have a heightened sensitivity to a wind farm, whereas a landscape where man-made influences are already present may be less sensitive.

Magnitude of Effect on Landscape Elements: The determination of magnitude in respect of individual landscape elements of the Development site is a reflection of the degree to which the landscape element will be removed or altered by the Development, for example, whether completely removed, partially removed or largely retained intact.

Magnitude of Effect on Landscape Character Receptors: The determination of magnitude in respect of a landscape character receptor is an expression of the scale of change that will result from the Development. This is dependent on the extent to which the Development will be seen in the landscape; the extent of the landscape character receptor that will be affected by the Development; the degree to which the pattern of elements that make up the landscape character will be affected by the Development; the influences through which the landscape character receptor gains its character; distance from the Development; and the position of the Development in relation to the principal orientation of the landscape character receptor. These can be further described as:

- Extent to which the Development will be seen – Visibility may range from a single blade tip to all turbines at full height. Generally, the more of the Development that can be seen the higher the magnitude of change will be;
- Extent of the landscape character receptor that will be affected by the Development, either physically or visually – The magnitude of change will generally be smaller where only a small part of the receptor is affected;
- Degree to which the pattern of elements that makes up landscape character will be altered – The magnitude of change will be higher where key features that make up the innate character are removed or altered, and where many new components are added;

- Influences through which the landscape character receptor gains its character – If the receptor has a strong innate character that gains little influence from surrounding areas, then the addition of the Development is likely to result in a lower magnitude of change;
- Distance between the landscape character receptor and the Development – Generally, the greater the distance, the lower the magnitude of change as the Development will constitute a less apparent external influence; and
- Position of the Development in relation to the principal orientation of the landscape character receptor – If the receptor is orientated towards the Development with clear, directional visibility, then the magnitude of change is likely to be higher than if it is orientated away from it.

Definitions and levels of sensitivity and magnitude of effect for landscape receptors are set out in Table 5.1 below, in order that judgments made in the following assessment are clear.

Table 5.1 Classifications of Sensitive Landscape Receptors and Magnitude of Effect

Sensitivity Capacity of landscape elements or landscape character to accept the Development		**Magnitude** Degree of change to landscape elements or character arising from the Development	
Class	Typical Criteria	Class	Typical Criteria
Very High	Little or no capacity for change: Landscape elements or characteristics of exceptional value, quality and rarity with no or limited potential for restoration, substitution or enhancement. Includes designated landscapes of international or national scale.	**Very Large**	Loss, alteration or introduction of features that totally change key landscape elements of the Development site or wider characteristics of the baseline landscape and become the dominating influence.
High	Low capacity for change: Landscape elements or characteristics of high value, quality and rarity with limited potential for restoration, substitution or enhancement. Includes designated landscapes at a national, regional or local scale.	**Large**	Loss, alteration or introduction of features that significantly change key landscape elements of the Development site or wider characteristics of the baseline landscape and become the prevailing influence.
Medium	Some capacity for change: Landscape elements or characteristics of medium value, quality and rarity with some potential for restoration, substitution or enhancement. Includes undesignated landscapes at a regional or local scale but possessing valued features.	**Medium**	Loss, alteration or introduction of features that are readily apparent or noticeable, but the baseline landscape elements of the Development site or the wider landscape character generally continue to prevail
Low	Reasonably high capacity for change: Landscape elements or characteristics of low value, quality and rarity with scope for restoration, substitution or enhancement. Includes weak and degraded landscapes at a local scale but retaining some redeeming features.	**Small**	Loss, alteration or introduction of features that are apparent but result in a small change to key landscape elements of the Development site or have a small influence on the wider baseline character. May be missed by the casual observer.
Very Low	High capacity for change: Landscape elements or characteristics of low value, quality and rarity with considerable scope for restoration, substitution or enhancement. Includes weak and degraded landscapes at a local scale identified as having no redeeming features.	**Very Small**	Loss, alteration or introduction of features that are visible and result in a minor change to key landscape elements of the Development site or have a minor influence on the wider baseline character. Likely to be missed by the casual observer.

		Negligible	Loss, alteration or introduction of features that are barely discernible, resulting in a nil change to key landscape elements of the Development site or to the wider baseline character.

Visual Receptors – Sensitivity and Magnitude of Effect

Sensitivity of Visual Receptors: The determination of sensitivity in respect of a visual receptor and the view obtained from it is an expression of its ability to accommodate a development. This is a function of the importance attached to the viewpoint, the nature of the view available, and the nature of the viewer. These can be described as:

- Importance of the viewpoint – This is determined by any recognition attached to the viewpoint or visual receptor, for example, where marked on tourist maps, signposted or through general consensus. The greater the importance attached to the viewpoint or visual receptor, then the greater its sensitivity is likely to be;
- Nature of the view – An attractive view with particular scenic qualities will tend to have greater sensitivity whilst the presence of elements that detract from the view may lead to a reduced sensitivity. The sensitivity of a view may also be heightened if it lies within, or overlooks, a designated area, which implies greater value attached to the visible landscape. The greater the value attached to the view, the greater its sensitivity is likely to be; and
- Nature of the viewer – This reflects the occupation, or activity, of viewers. Those whose attention is focused on the landscape, for example, walkers or hikers, will tend to have a heightened sensitivity. Residents of properties that gain views of a development will also have a higher sensitivity. Conversely, viewers traveling in cars or on trains will tend to have a lower sensitivity, as the view is transient and moving. The least sensitive viewers are likely to be those people at their place of work whose attention is focused on their activity.

Magnitude of Effect on Visual Receptors: The determination of magnitude in respect of a visual receptor is an expression of the scale of change that will result from the Development. This is dependent on the extent of the Development that will be seen; the width of the available view and the proportion of the view that will be affected by the Development; the context in which the Development will be seen; distance between the visual receptor and the Development; and the position of the Development in relation to the principal orientation of the view. These can be further described as:

- Extent to which the Development will be seen - Visibility may range from a single blade tip to all turbines at full height. Generally, the more of the Development that can be seen the higher the magnitude of change will be;
- Width of available view and proportion of the view affected by the Development – Generally, the more of the view affected, the greater the magnitude of change;
- Context in which the Development will be seen – Medium to large scale landscapes that are open and with relatively simple patterns of landform and land cover are generally more accommodating of wind farms since they avoid awkward scale comparisons. Conversely, small-scale, intimate and enclosed landscapes are often less capable of accommodating wind farms as turbines may appear intrusively tall and dominate the surrounding area;
- Distance between the visual receptor and the Development – Generally, the greater the distance, the lower the magnitude of change as the Development will constitute a less apparent external influence; and

- Position of the Development in relation to the principal orientation of the view – If the visual receptor is orientated towards the Development with clear, directional visibility, then the magnitude of change is likely to be higher than if it is orientated away from it.

Definitions and levels of sensitivity and magnitude of effect for visual receptors are set out in Table 5.2 below in order that judgments made in the following assessment are clear.

Table 5.2: Classification of Sensitive Visual Receptors and Magnitude of Effect

Sensitivity Capacity of people at particular locations to accept change		**Magnitude** Degree of change to views arising from the Development	
Class	Typical Criteria	Class	Typical Criteria
High	Low capacity for change: Occupiers of residential properties with views likely to be affected by the Development. People engaged in outdoor activities whose attention is focussed on the landscape, *e.g.* walkers, hikers, users of country parks etc.	**Very Large**	Loss, alteration or introduction of features that dominate or command the baseline view and redefine its characteristics.
		Large	Loss, alteration or introduction of features that are prominent or stand out in the baseline view and redefine its characteristics.
Medium	Some capacity for change: People engaged in outdoor pursuits whose attention is focussed primarily on their activity, *e.g.* golf, water based activities etc.	**Medium**	Loss, alteration or introduction of features that are readily apparent or noticeable in the view, but the baseline characteristics of the view generally continue to prevail.
Low	Reasonably high capacity for change: People travelling at speed through an affected landscape, *e.g.* by car or train.	**Small**	Loss, alteration or introduction of features that are apparent, but form a small component of the baseline view. May be missed by the casual observer.
Very Low	High capacity for change: People at their place of work or users of commercial facilities whose attention is focussed on their activity, *e.g.* offices, factories, retail centres etc.	**Very Small**	Loss, alteration or introduction of features that are visible, but form a minor component of the baseline view. Likely to be missed by the casual observer.
		Negligible	Loss, alteration or introduction of features that are barely discernible, resulting in a nil change to the baseline view.

The significance of an effect on identified landscape and visual receptors is judged against those factors that combine to determine the sensitivity of each receptor and the magnitude of effect, as described above. A higher level of significance is usually attached to large-scale effects and effects on sensitive or high value receptors. This is set out in Table 5.3 below as a matrix so that judgments used in the following assessment are made clear. For example, a *medium* magnitude of change on a landscape or visual receptor of *high* sensitivity, is judged to be of *moderate* significance overall.

A significant effect will occur where the combination of variables results in the Development having a material effect on a landscape or visual receptor, so that the landscape character or view becomes defined by the presence of the Development. A not significant effect will occur where the effect of the Development is not definitive and the landscape or visual receptor will continue to be defined principally by its baseline characteristics. In this instance, the Development may have an influence on the receptor and may alter its characteristics, but this influence will not be definitive.

For the purposes of this Chapter of the ES, effects assessed as being of 'moderate,' 'moderate-substantial' or 'substantial' significance are considered to be equivalent to 'significant' effects that are required to be identified under the Environmental Impact Assessment Regulations. These are highlighted in a pale-grey tone in Table 5.3.

Table 5.3: Classification of Significance

Sensitivity (of the landscape or visual receptor to change)	**Magnitude of Effect** (positive or negative)					
	Very Large	Large	Medium	Small	Very Small	Negligible
Very High	Substantial	Substantial	Moderate - Substantial	Moderate	Slight - Moderate	Neutral
High	Substantial	Moderate - Substantial	Moderate	Slight - Moderate	Slight	Neutral
Medium	Moderate - Substantial	Moderate	Slight - Moderate	Slight	Neutral - Slight	Neutral
Low	Moderate	Slight - Moderate	Slight	Neutral - Slight	Neutral	Neutral
Very Low	Slight - Moderate	Slight	Neutral - Slight	Neutral	Neutral	Neutral

5.2.4 Nature of Effects

It is important to note that the magnitude of effect given in Tables 5.1 and 5.2 can be both positive and negative. Negative effects relate to the loss of existing features and/or the introduction of features that weaken or cause deterioration in the landscape character or view. Positive effects relate to the enhancement of existing features and/or the introduction of features that create a positive improvement in the landscape character or view.

The assessment of effects on the landscape fabric of the Development site, on the character of the surrounding area and on views has indicated that the effects of the Development are anticipated to be 'negative'. The 'negative' nature of the majority of effects is a direct result of the introduction of new and contrasting elements into the landscape and visual resource, in particular the proposed turbines. However, this does not necessarily indicate that the effects of the Development will be unacceptable.

5.2.5 Duration and Permanence of Effects

The duration of effects of the Development on the landscape and visual resource are variable. The operational life will be 25 years and, during this period, the turbines, meteorological mast, substation and access tracks will all be apparent. These effects are considered to be 'long-term'. Other infrastructure and operations such as the temporary contractors' compound and cranes will only be apparent during the construction and decommissioning phases, the duration of which will be 'short-term'.

The permanence of effects is also variable. The effects on the landscape and visual resource that result from the presence of the Development are 'reversible', as the turbines will be removed during the decommissioning phase. Whilst the underground cabling, turbine bases and access tracks will remain, these will have no residual landscape and visual effects. Thus, whilst the operational effects of the Development are 'long-term', as noted above, they are also 'reversible'. Similarly, effects arising from the construction and decommissioning phases will be 'reversible'.

In order to avoid unnecessary repetition, the construction and decommissioning phases can assumed to be 'short-term' and 'reversible' and thus are not considered further in the assessment of effects. Similarly, the duration and permanence of the operational effects is not reiterated and can be assumed to be 'long-term' and 'reversible' unless stated otherwise.

5.2.6 Zones of Theoretical Visibility (ZTVs)

To establish the likely visibility of the Development and assist with the assessment of potential landscape and visual effects, Zones of Theoretical Visibility (ZTVs) have been prepared to demonstrate the number of turbines that may theoretically be seen from within the 15 km radius study area. The ZTVs are illustrated on Figures 5.2 and 5.3 and are modeled on a hub height of 60 m (Figure 5.2) and a blade-tip height of 95 m (Figure 5.3) to represent the worst-case scenario.

ZTVs relate to the zone within which the Development is likely to be visible based on an observer height of 2 m. This corresponds with the height of a typical adult person on foot, rounded up to account for potential uncertainty in the mathematical calculations used to establish the ZTV (in accordance with guidance from Scottish Natural Heritage[1]). The ZTV is computer generated from a 1:50,000 scale Ordnance Survey digital terrain model of the study area, which represents the ground surface as a mesh based on a grid spacing of 50 m. A three-dimensional model of the individual wind turbines at the proposed heights is then incorporated. The final ZTV is then reproduced at a scale of 1:125,000 to fit the A3 page format of this ES.

ZTVs do have a number of limitations that require to be borne in mind when considering the theoretical visibility indicated. Firstly, ZTVs illustrate the effect of bare topography on limiting views of a development and do not take into account the screening effects of surface features including minor landform, built development and vegetation. As described in section 5.3, hedgerows, tree belts and wooded areas are characteristic features of parts of the study area and are important in terms of reducing the extent of visibility indicated by the ZTVs. Secondly, ZTVs are not distance sensitive, in that they do not take account of the effect that increasing distance has on reducing the visibility of a development. The nature of what can be seen at 1 km will differ markedly from what can be seen at 5 km or 10 km, but this will not be distinguished by a ZTV. Thirdly, whilst ZTVs may indicate the number of turbines visible at a particular location, they do not distinguish whether the turbines are seen at full height, from hub height or just the blade-tips. This can also have a considerable effect on the visual influence of a development.

Notwithstanding these limitations, ZTVs are a useful tool in representing the worst-case scenario when predicting the likely visibility of a development. They are particularly useful as a basis for selecting viewpoints, as identified below, from which a more detailed analysis of the effects of the Development can be made.

5.2.7 Representative Viewpoints

In addition to desk-based studies involving ZTVs, the landscape and visual assessment is further informed by assessing the effects of the Development on a number of representative viewpoints, the findings of which can then be applied to the wider study area. When used in conjunction with ZTVs, the assessment of viewpoints allows the potential pattern of turbine visibility to be considered in three dimensions.

A number of site visits were made between November 2007 and March 2008 to test the validity of the ZTVs, taking account of the additional screening effects afforded by buildings, vegetation and other surface features. At the same time, a number of key viewpoints were identified from where the Development is likely to be visible and with potential to bring about a significant change to the landscape and visual resource. The fieldwork was conducted from publicly accessible areas only and, as such, was constrained by the level of access afforded. The landscape and visual assessment is therefore a study of the Development's visibility from roads, public footpaths and other public open spaces.

[1] Visual Representation of Windfarms. Good Practice Guidance.' Prepared for Scottish Natural Heritage by horner+maclennan & Envision (2006).

The viewpoints were chosen to represent the appearance of the Development in views from varying distances and directions around the study area, covering a range of landscape and visual receptors. Additionally, a number of specific views were chosen for their importance as key viewpoints, for instance, settlements, scenic routes, visitor attractions and places with historical or cultural associations. A total of 25 viewpoints were subsequently selected in consultation with BMBC as being representative of the landscape and visual resources of the 15 km radius study area, which have some degree of turbine visibility that requires further consideration in the assessment of effects. The locations of these viewpoints are shown in conjunction with the ZTVs on Figures 5.2 and 5.3 and are numbered in order of distance from the Development site.

The selected viewpoints generally represent those views with a higher sensitivity to the Development, in order to establish the worst-case scenario. From each viewpoint a comprehensive 360^{o} photographic survey was taken using a digital SLR camera with the auto focus zoom lens set to give the same view as a 50 mm lens on a standard 35 mm film camera, as recommended in the GLVIA (Appendix 9). The photographs have been taken with a 50% overlap and then been stitched together using proprietary computer software to create a single panorama. From this panorama a single 75-degree vision splay has been chosen of the existing view from each viewpoint orientated in the direction of the Development site. The 75-degree view reflects the widest field of vision that can be obtained by a static person without moving their head and allows the Development to be seen in context with the surrounding view.

For each viewpoint a simple computer generated wireline has been produced of the Development set within the digital terrain model. Computer generated photomontages have also prepared for some of the viewpoints in close proximity to the Development site to provide a more representative image that illustrates the likely effect of the Development on the particular photographic view following construction.

A brief overview of the representative viewpoints is given in Table 5.4 below with reference to location, distance from the Development site and reason for selection. A detailed analysis of these viewpoints is given in Table 5.10 at the end of this Chapter. This analysis has been used to inform the assessment of effects described later in this Chapter.

Table 5.4 Representative Viewpoints (VPs)

VP Ref.	Location	Grid Ref.	Dist. to Nearest Turbine	Rationale for Selection
1	Barnsley Boundary Walk	E421090 N405269	400 m	Closest view towards the Development site from a popular walking route.
2	Spicer House Lane	E420519 N405609	400 m	Close range views from local roads that adjoin the Development site.
3	Royd Moor viewing area	E421549 N404180	1.0 km	Close range views from Royd Moor Wind Farm viewing platform.
4	B6106, Hollin Lane, Catshaw	E420264 N403610	1.0 km	Represents close range views from some houses within the small hamlet.
5	Whitley Common	E419095 N405494	1.5 km	Represents close range views of the Development site from some houses within the small hamlet.
6	A616, Crow Edge	E418961 N404143	1.5 km	Represents close range views of the Development site from some houses in the village.
7	A629, Ingbirchworth	E422311 N405966	2.0 km	Represents close range views of the Development site from some houses in the village.
8	Barnsley Boundary Walk	E419607 N407103	2.5 km	Representative of close range views of the Development site from the north.
9	Trans Pennine Trail	E421506 N402703	2.5 km	Closest views towards the Development site from the long distance footpath.
10	Brook Hill Lane,	E417752	3.0 km	Represents views of the Development site from

	Carlecotes	N403486		some houses in the village.
11	A628, Daisy Hill Farm, Fulshaw	E420429 N401606	3.5 km	Represents close views towards the Development site from the south.
12	Penistone	E424400 N403194	4.0 km	Represents views from the recreation ground and from some houses on the northern edge of the town.
13	A628/A629 roundabout	E425852 N404293	5.0 km	First available views towards the Development site when travelling west along the A628.
14	A628, Fidler's Green	E415630 N400345	6.5 km	First available views towards the Development site when travelling east along the A628, as well as from a section of Barnsley Boundary Walk. Also adjacent eastern boundary of the Peak District National Park.
15	Pike Lowe, Midhope Moors	E420910 N397380	7.5 km	Popular walking hill adjacent to the eastern boundary of the Peak District National Park.
16	Emley Moor Mast	E422063 N412896	8.0 km	Represents mid-range views towards the Development site from the north.
17	Swains Head, Howden Moor	E416141 N398277	8.0 km	Popular walking hill adjacent to the eastern boundary of the Peak District National Park.
18	A629, Thurgoland	E428586 N401287	8.5 km	First available views towards the Development when travelling north along the A629 on edge of village.
19	A6024, Holme Moss viewing area	E409800 N403910	10.5 km	Popular viewing area beside the A6024 and representative of views towards the Development site from the eastern edge of the Peak District National Park.
20	M1, Kexborough	E430741 N409287	10.5 km	Provides a rare long-range view towards the Development site from the motorway travelling southbound.
21	Bretton Country Park	E428736 N413076	11.5 km	Represents long-range views from the historic Country Park and Sculpture Park. Also coincides with a section of the Barnsley Boundary Walk.
22	B6118, Kirkheaton	E418963 N418066	13.0 km	Represents long-range views towards the Development site from the north.
23	West Nab, Meltham Moor	E407643 N408796	13.5 km	Popular walking hill adjacent to the eastern boundary of the Peak District National Park.
24	Wain Stones, Pennine Way	E409333 N396272	14.0 km	Provides a rare long-range view towards the Development site from the long distance footpath.
25	A6195, Blacker Hill, Hoyland	E436986 N401733	16.5 km	Represents long-range views towards the Development site from the east.

5.2.8 Cumulative Effects

In addition to assessing the effects of the Development on the landscape and visual resource of the study area, it is also important to consider any cumulative effects that might arise from the addition of the Development to other wind farm developments. Individually the effects of these may be not significant, but, when considered together, they may create an unacceptable effect on the landscape and visual resource of the study area (GLVIA paragraphs 7.12-7.13).

Cumulative effects occur when the study areas of two or more wind farms overlap with visibility indicated for each so that they are experienced together at a proximity where they might have an incremental effect. In order that sufficient consideration is given to important receptors on the limit of the 15 km radius study area that might have visibility of one or more wind farms beyond the boundary, the study area for cumulative effects is increased to 30 km radius from the Development site. Experience shows that significant cumulative effects are unlikely to occur where there is more than 30 km between wind farm sites and this extended area allows for an important receptor to be located midway between two wind farms, at the limit of each 15 km radius study area.

The cumulative study area is identified on Figure 5.4. All wind farm sites within this extended area that comprise of three or more turbines and, are operational, have the benefit of planning permission or which are awaiting the determination of a planning application as of a cut-off date of 31 January 2009 are identified, in accordance with SNH guidance[3]. These sites are also listed in Table 5.5 below together with their current status.

Table 5.5: Wind Farm Sites with Overlapping ZTVs within 15 km Radius of the Development as on 31 January 2009

Wind Farm Site	Planning Authority	Status	No of Turbines	Blade Tip Height	Distance (approx)
Blackstone Edge	BMBC	Undetermined	3	101 m	500 m
Hazlehead	BMBC	Consented	3	100 m	2.5 km
Royd Moor	BMBC	Operational	13	54 m	100 m
Sheephouse Heights	BMBC	Undetermined	5	125 m	5.5 km

Wind farm details obtained from developer applications and from BMBC.
Distance is calculated from the edge of the wind farm site to the nearest turbine on an adjacent site.

For each wind farm identified on Figure 5.4 a 15 km radius circle is drawn around it to illustrate the extent of individual ZTVs and potential overlapping, or cumulative visibility, with the Development ZTV. From this base information a series of cumulative ZTVs have been prepared to show the Development ZTV added, firstly to the ZTVs of those operational and consented sites, secondly, to the ZTVs of those undetermined sites and, thirdly, to the ZTVs of all wind farm sites together. These are illustrated on Figures 5.5 to 5.9. Each ZTV covers a radius of 15 km from the centre of the Development and is calculated to blade-tip, based on information made available at the time of the assessment.

The ZTVs have then been analysed to ascertain the extent of potential overlapping, firstly with the Development added to those operational and consented sites as the future of these is certain, and, secondly, with the Development added to those undetermined sites, the future of which is less certain.

A series of wirelines have also been prepared to illustrate the potential cumulative effects of the Development when added to those operational, consented and undetermined wind farms as seen from a number of viewpoints. A total of 12 viewpoints have been agreed with BMBC as best representing cumulative effects from a range of viewing orientations and distances. These have been selected from the viewpoints assessed in the main assessment and are listed below, together with their approximate distance from the Development. An analysis of these cumulative viewpoints is given in Table 5.11 at the end of this Chapter.

- Viewpoint 1: Barnsley Boundary Walk (400 m to closest wind turbine);
- Viewpoint 3: Royd Moor Wind Farm viewing platform (1.0 km to closest wind turbine);
- Viewpoint 5: Whitley Common (1.5 km to closest wind turbine);
- Viewpoint 6: Crow Edge/A616 (1.5 km to closest turbine);
- Viewpoint 7: Ingbirchworth/A629 (2.0 km to closest turbine);
- Viewpoint 10: Carlescotes (3.0 km to closest turbine);
- Viewpoint 11: A628, Fulshaw (3.5 km to closest turbine);
- Viewpoint 13: A628/A629 roundabout, Hoylandswaine (5.25 km to closest wind turbine);
- Viewpoint 15: Pike Lowe, Midhope Moors (7.5 km to closest wind turbine);
- Viewpoint 16: Emley Moor Mast, Kirkburton (8.0 km to closest turbine);
- Viewpoint 19: A6024/Holme Moss viewing area (10.5 km to closest turbine); and
- Viewpoint 20: M1, Kexborough (10.5 km to closest turbine).

For each viewpoint two wirelines have been prepared in accordance with SNH guidance[23]. The first wireline represents the theoretical view an observer would have of two or more wind

[2] Cumulative Effects of Windfarms.' Version 2. Prepared by Scottish Natural Heritage (13.04.05).

farms without turning his or her head, illustrated as a 90° arc of view centred on the Development (simultaneous visibility). The second wireline represents the theoretical view an observer would have of two or more wind farms from the same viewpoint but having to turn his or her head to do so, illustrated as a 180° arc of view (successive visibility).

The significance of a cumulative effect arising from the addition of the Development is dependent on the sensitivity of the affected landscape or view and the magnitude of effect they will experience, as described in 5.2.3. A significant cumulative effect will occur where the addition of the Development will result in the impression of a landscape or view that is defined by the presence of more than one wind farm and is characterised primarily by wind farms so that other patterns and components are no longer definitive. This varies from the definition of a significant effect in the main assessment, where the effect of the Development by itself may result in a material change to the landscape and visual resource of the study area. If the Development by itself is judged to have a significant effect, it does not necessarily follow that there will also be a significant cumulative effect. This is because it is the addition of the Development to the cumulative situation of other existing and proposed wind farm developments that is assessed here, and not the overall cumulative situation with the Development included.

The effects of the Development on identified landscape and visual receptors are considered further in sections 5.5 (Assessment of Potential Effects) and 5.6 (Cumulative Effects).

5.3 BASELINE CONDITIONS

5.3.1 Introduction

The baseline study aims to record, classify and evaluate the existing landscape and visual resources of the Development site and surrounding area. This process helps gain an understanding of the key components or characteristics of the study area and is instrumental in identifying valued and potentially sensitive landscape and visual receptors, against which the predicted landscape and visual effects of the Development can be assessed.

The baseline assessment has involved:

A desk-based study of current Ordnance Survey mapping (1:50,000 scale), planning designations and landscape character assessments undertaken by others to define the broad character of the study area and to identify any valued landscape and visual receptors;
Site visits to verify the theoretical visibility of the Development as indicated by the ZTVs; and
A field survey of the set of representative viewpoints to inform the later assessment.

The baseline conditions section sets out:

- A brief description of the Development site (section 5.3.2);
- A summary description of the principal settlements, routes, features and visitor attractions within the wider study area (section 5.3.3);
- A classification of the study area into areas of distinct and recognisable landscape character (section 5.3.4);
- An overview of relevant landscape-related planning designations and other special interests that apply to the study area (section 5.3.5); and
- An overview of the baseline visibility of the Development site (section 5.3.6).

5.3.2 Development Site

The Development site occupies a locally prominent ridge of high ground on the eastern foothills of the more extensive Pennine uplands. Immediately to the south and west the land drops away steeply into the Upper Don valley, before rising up again equally as steeply to form the eastern edge of the Pennines. To the north and east, the land dips more gently as a

series of stepped terraces as the landform progressively descends towards the edge of the study area.

The site initially comprised two land parcels, effectively divided into two by Whitley Road, an unclassified road that follows the ridgeline. The smaller parcel of land, which no longer forms part of the site, occupies the crest of the ridgeline and part of the steeper scarp slope below. Whitley Road defines the boundary to the north with walled field enclosures defining the remaining boundaries. Here the landform reaches a maximum height of around 360 m AOD adjoining Whitley Road where a number of rocky outcrops occur. It then descends steeply to around 320 m AOD at the southern most extent of the site where several springs emerge to form small streams further down the hillside.

The larger of the two parcels of land sits on the more gentle and less exposed dip slope with its boundaries defined by Spicer House Lane to the east, by Royd Moor Wind Farm and Whitley Road to the south and by walled field enclosures to the west and north. Within these boundaries the landform steps down from a high of about 360 m AOD on Whitley Road to around 300 m AOD adjoining Spicer House Lane.

This larger parcel of land is devoted to agricultural use as rough grassland and improved pastures grazed by sheep, cattle and horses. The typically small-scale and strongly rectangular pattern of fields are generally delineated by dry stonewalls, however, most have fallen into disrepair and are reinforced by post and wire fencing. A number of stunted trees are also dotted across this part of the site whilst a small belt of broadleaved trees follows the course of a minor stream where they form a strong linear feature.

Immediately north of this tree belt and lying just within the wind farm site boundary is Spicer House, an isolated farmstead, but there are no direct views across the site or of Royd Moor Wind Farm from here. Other man made influences in the immediate vicinity of the Development site include a coal depot and small nursery with several polythene tunnels, both adjacent to Whitley Road. Power lines on poles also follow the ridgeline and many of the minor roads.

Royd Moor Wind Farm itself comprises of 13 three-bladed turbines some 54 m to blade tip (35 m to hub). These are arranged in two staggered rows of six and seven turbines that are aligned parallel with Whitley Road and generally in keeping with the rectilinear field pattern.

5.3.3 Settlements, Routes, Features and Attractions

Within the wider study area there are a number of settlements, routes, features and visitors attractions that might have views affected by the introduction of the Development. These are described briefly below and are identified on Figures 5.10 and 5.11.

Settlements

Settlements of various sizes occur across the 15 km radius study area. The largest include the major urban conurbations of Barnsley and Huddersfield, which straddle the study area boundary in the east and north respectively. The outskirts of Sheffield also encroach into the far south-east of the study area.

In addition to these large urban areas there are a number of 'Gritstone' towns, villages and smaller hamlets scattered across the study area. Those closest to the Development site include, Crow Edge, High Flatts, Ingbirchworth, Millhouse Green, Penistone and Thurlstone.

Several scattered farmsteads and residential properties are also located in close proximity to the Development site. These include Brown's Edge Farm, Annat Royd Farm and Royd Moor Farm, all leading off Spicer House Lane, whilst Whitley House and Eagle Nest adjoin Whitley

Road. Immediately below the ridgeline, south of the Development site, Small Shaw, Flash House Farm, Illiona Cottage and Middle Cliff all have partial views of Royd Moor Wind Farm.

These all require to be considered in the assessment since residential occupiers are normally considered to have a high sensitivity to development. Those settlements included in the assessment are shown on Figure 5.10.

Roads

Major lines of communication are mostly confined to the valleys. Strategic roads include the A628, which links the M1 at Barnsley with the Manchester conurbation via Penistone; the A629 and A616, which both link Huddersfield with Sheffield passing to the east and west of Penistone respectively; and the A635, which links Barnsley with the Manchester conurbation via Holmfirth. Views of Royd Moor Windfarm are possible from sections of all of these routes. The M1 motorway just encroaches into the eastern part of the study area from which some glimpsed views of Royd Moor Wind Farm are possible for southbound travellers between junctions 39 and 37.

Beyond the valleys, an informal network of unclassified roads connects the many small communities and isolated properties that are scattered across the lower lying eastern parts of the study area.

Road travellers are generally considered to have limited sensitivity to development in view of their moving nature, but are nevertheless considered in the assessment. The density of local roads, however, is such that it is impractical to consider all routes. The assessment therefore focuses on the main roads that run through the 15 km radius study area for a prolonged distance, as identified on Figure 5.10. Conclusions as to the effects of the Development on local roads are drawn from the overall conclusions.

Public Rights of Way

Five long-distance and sign-posted footpaths pass through the 15 km radius study area: the Barnsley Boundary Walk, the Dearne Way, the Kirklees Way, the Pennine Way and the Trans Pennine Trail. These are included in the assessment as users of walking routes are generally considered to have a high sensitivity to development.

The Barnsley Boundary Walk follows a broadly circular route that closely follows the Borough boundary. At its closest point, the walk passes to within 0.4 km of the Development site and Royd Moor Wind Farm with clear directional visibility.

The Dearne Way closely follows the course of the River Dearne from its source near Upper Cumberworth to Barnsley on the eastern edge of the study area and beyond. The Kirklees Way follows a north-east to south-west direction across less elevated parts of the study area north of the Development site, eventually joining the Pennine Way west of Holmfirth. Views towards the Development site and Royd Moor Wind Farm are possible from sections of both routes.

The Pennine Way just encroaches into the far west of the study area where it follows a broadly north-west to south-east direction along the highest parts of The Pennines. Panoramic views are possible from along the route and these include some long distance views of Royd Moor Wind Farm in the vicinity of Wassenden Head Moor and Bleaklow.

The Trans Pennine Trail follows a broadly east-west direction across central parts of the study area, from Barnsley to Penistone and on to the A628 where it crosses the Pennines. Between Barnsley and Penistone long views are mostly curtailed by low-lying landform and vegetation. West of Penistone, however, visibility improves where the route follows a more elevated and

less vegetated section at the head of the Don valley in the vicinity of Thurlston Moor. Royd Moor Wind Farm is clearly visible in some of these views.

These routes are identified on Figure 5.11. Many other shorter public footpaths and bridleways are found within the study area, however, these are too numerous to assess individually. Conclusions as to the effects of the Development on these routes can be drawn from the overall conclusions.

Country Parks

Country Parks are designated areas within a rural setting, which people can visit and enjoy informal recreational activities. Many Parks also occupy former country estates and retain important historic features such as the main house and mature parkland. Within the 15 km radius study area there are two former country estates that have been turned into Country Parks. These are Bretton Country Park, which lies some 10.5 km north-east of the Development site and is also home to Yorkshire Sculpture Park, and Cannon Hall Park, which lies about 7 km north-east of the Development site. Both parks are shown on Figure 5.11.

Visitor Attractions

The study area also includes a number of popular visitor attractions and these are included in the assessment as they are also considered to have a high sensitivity to development. These are shown on Figure 5.11 and summarized below.

Wentworth Castle is one of the most important visitor attractions in the area, situated next to the M1 motorway some 11 km east of the Development site. The recently restored 200-hectare historic parkland and formal gardens are open to the public and include many architectural monuments, including Stainborough Castle from which panoramic views can be obtained.

Wortley Hall lies about 11.5 km south-east of the Development site on the edge of Wortley village. The Hall is now a hotel and conference centre, however, the 10-hectares of formal gardens and parkland are open to the public.

5.3.4 Landscape Character

This section considers the way in which the landscape of the study area has been categorised into distinct and recognisable patterns of landscape character, the perception of which might be altered by the visible presence of the Development. For the purposes of the landscape and visual assessment, information relating to landscape character is based upon the following source documents:

- The Character of England Map produced by the Countryside Commission (now Natural England) 1996;
- Landscape character assessment carried out by BMBC in 'Barnsley Borough Landscape Character Assessment' 2002;
- Landscape character assessment carried out by Wakefield Metropolitan District Council in 'Landscape Character Assessment of Wakefield District' 2004; and
- Landscape character assessment carried out by the Standing Conference of South Pennine Authorities (SCOSPA) in 'South Pennines Landscape Character Assessment' 1999.

The Character of England Map has identified, mapped and described the broad landscape character for the whole of England in a national/regional context. Areas of landscape have been classified into 159 Joint Character Areas (JCAs), of which three are found within the 15 km radius study area.

Within this broad-scale picture more detailed character assessments have been carried out at a county/district level, as described in the documents produced by BMBC, Wakefield MDC and SCOSPA. These documents have subdivided the JCAs into a series of Landscape Character 'Types', which is a generic term used to describe broadly similar and recognisable patterns of landform, vegetation, land use and settlement that can occur in different places in different parts of the country. Each of these character types is described in detail in the relevant document, along with guidelines for future development. In some instances the Landscape Character Types are further subdivided into Landscape Character 'Areas' or 'Units'. These relate to specific geographical locations, which although sharing the same generic characteristics as a Landscape Character Type, have their own individual or unique character. The distinction is reflected in the naming of character types and areas, the former having generic names such as 'High Plateaux' with the latter having specific names such as 'High Peak'.

A brief description is given below of the characteristics of each of the three JCAs identified on The Character of England Map and found within the study area, to demonstrate how the landscape and visual assessment relates to the larger scale. The descriptions provided draw upon descriptions contained in the Countryside Commission document for each JCA. This is followed by a listing of those county/district Landscape Character Types found within each JCA, as identified by BMBC, Wakefield MDC and SCOSPA. The JCAs and Landscape Character Types that are found within the study area are shown on Figures 5.12 and 5.13.

Yorkshire Southern Pennine Fringe (JCA 37)

The Yorkshire Southern Pennine Fringe JCA forms a relatively narrow spine running north-west to south-east through the centre of the study area and includes the Development site.

This 'foothills' landscape marks the transition from the Pennine uplands in the west to the lower, undulating landscapes of the Nottinghamshire, Derbyshire and Yorkshire Coalfield to the east. The underlying geology is predominately Millstone Grit, a hard wearing sandstone that dips progressively from west to east often as a series of stepped plateaux. This distinctive landform has been deeply dissected by a number of rivers that have created narrow, steep-sided valleys, of which The Don River Valley is a typical example that flows through the study area.

Settlement patterns have been strongly influenced by this dominant landform with towns and transport corridors largely confined to the lower valley sides and bottoms. The valleys also possess a strong industrial heritage associated with the former textile industry and other local industries. Chimneys associated with mills and factories often form focal points, whilst terraces of stone-built houses are packed into the valley bottoms and spread up the sides. On the steeper slopes broadleaved woodlands often form a visual backdrop to the towns.

In contrast, the surrounding hills are mostly treeless and characterised by rough grazing and moor on the higher ground with extensive areas of enclosed pastures around the less elevated fringes. Here the industrial towns give way to small hamlets and scattered farmsteads built from the local gritstone. The landscape of the elevated pastures and moor possesses a more remote quality even though the towns are never far away and are generally visible in views.

Within the Yorkshire Southern Pennine Fringe strong contrast is provided between the settled valleys and the pastoral landscapes of the surrounding hills and this is reflected in the Landscape Character Types found within the study area:

- Settled Valleys;
- Settled Wooded Farmland;
- Unenclosed Moorland;

- Upland Farmland, within which the Development site is located; and
- Upland River Valley.

Nottinghamshire, Derbyshire and Yorkshire Coalfield (JCA 38)

Adjoining the Yorkshire Southern Pennine Fringe JCA in the east of the study area is the lower lying Nottinghamshire, Derbyshire and Yorkshire JCA. This is a landscape of rolling hills, escarpments and broad valleys underlain by shallow coal measures. Land use is a complex mix of built-up areas, industrial land, dereliction and farmed open countryside crossed by major transport routes, including the M1 motorway. Evidence of heavy industrial activity is widespread and includes mine buildings, spoil heaps and iron and steel plants. Many areas are also affected by urban fringe pressures that have created fragmented and downgraded landscapes. Nevertheless, substantial areas of intact, farmed landscape remain in both pastoral and arable use, including much of the study area west of Barnsley.

Within the Nottinghamshire, Derbyshire and Yorkshire Coalfield JCA the following Landscape Character Types are found within the study area:

- Coalfield Estates;
- Lower Valley Floor; and
- Settled Wooded Farmland.

Dark Peak (JCA 51)

To the west of the Yorkshire Southern Pennine Fringe JCA and covering much of the western and southern parts of the study area, is the Dark Peak JCA. This is a large-scale landscape of dramatic character created by sharply defined, elevated and vast upland plateaux from which panoramic views can be obtained. Land use is a mixture of blanket bog, dwarf shrub heath, heather moorland and rough grazing that combine to create a wild and semi-natural character. Man-made influences are mostly confined to the less elevated edges where dispersed farmsteads, gritstone wall boundaries and small-scale enclosures can be found. A number of major valleys dissect the plateaux and these have generally been dammed to create reservoirs and planted with coniferous woodland.

Within the Dark Peak JCA contrast and variety are limited and this is reflected in the small number of Landscape Character Types found within the study area:

- Reservoir Valleys;
- Unenclosed Moorland; and
- Upland Farmland.

Detailed descriptions of those Landscape Character Types affected by the Development are given in Section 5.5 (Assessment of Potential Effects) of this Chapter.

5.3.5 Landscape Planning Designations

A detailed discussion on the planning context relevant to the Development site and surrounding area, including a summary of national, regional and local planning policy, is given in Chapter 4: *Planning Policy Context* of this ES.

This section considers the significance of any landscape-related planning designations (National Parks, AONBs etc.) and other special interests (Historic Parks and Gardens, Conservation Areas etc.) that apply to the study area. These are relevant to the assessment of landscape character since they are generally associated with landscapes perceived to be important, or high value, with increased sensitivity to change, whether at a national or local level. For this reason they are normally included in the representative viewpoint selection

and considered as separate landscape receptors so that the effects of the Development can be specifically assessed and, if necessary, avoided or reduced.

For the purposes of the landscape and visual assessment the following Structure Plan and Local Plan information was reviewed to identify any landscape-related planning designations and other special interests within the 15 km radius study area. Additionally, English Heritage was consulted for any registered historic parks and gardens:

- BMBC Unitary Development Plan (adopted December 2000);
- Kirklees MC Unitary Development Plan (adopted March 1999);
- Wakefield MC Unitary Development Plan First Alteration (adopted January 2003);
- Peak National Park Structure Plan (adopted 1994); and
- Peak District National Park Local Plan (adopted March 2001).

A review of this information has identified that the Development site is not covered by any international or national landscape-related planning designations. Within the wider study area a number of designations and other special interests do exist and these are shown on Figure 5.14 and summarised below.

National Park

At a national level, the eastern edge of the Peak District National Park falls within the 15 km radius study area.

National Parks are determined on the basis of their unique landscape character and opportunities for public enjoyment. They represent the finest landscapes in England and Wales and have been granted special legal status to conserve and enhance their natural beauty. Development within the National Park is covered by General Strategic Policy 1 of the Peak National Park Structure Plan 1994, which states: '*All development will be controlled so that the valued characteristics of the Peak National Park can be conserved and enhanced, now and for future generations. To achieve this, development will normally be permitted where:*

(i) It is incompatible with the policies in the development plan; or

(ii) It is incompatible with the twin statutory National Park purposes of conserving and enhancing the natural beauty of the National park and promoting its public enjoyment, or with the Board's further statutory duty to have regard to the well-being of local communities. Where there is an irreconcilable conflict between these aims, the conservation of the National Park will normally take precedence.'

The Peak District National Park lies approximately 1.5 km to the south-west of the Development site, at its closest point, where it is separated by the incised valley of the River Don. At this distance significant effects can be anticipated, however, Royd Moor Wind Farm, various telecommunications masts and other man-made influences are visible from the eastern edge of the Park and these influence views.

Local Landscape Designations

At a local level, an Area of Borough Landscape Value covers much of the remaining open countryside to the west of Barnsley, and includes both the Development site and Royd Moor Wind Farm. In neighbouring Kirklees Metropolitan Council, significant areas of open countryside beyond the settled valleys and major urban areas are similarly designated as Areas of High Landscape Value.

Policy GS13 of the adopted Barnsley Unitary Developments Plan states: '*In areas designated as being of Borough Landscape Value on the proposals map, conservation and enhancement*

of the landscape will be extremely important considerations. Subject to Policy GS8, development will only be allowed if:

A) There is no loss of valuable landscape features;

B) *The nature, form and design of the development is sympathetic to the area; and*

C) *The overall character and appearance of the area is conserved and wherever possible enhanced.'*

Green Belt

In addition to these landscape-related designations there is also extensive Green Belt land on the outskirts of the urban areas and major settlements within the 15 km radius study area. The primary purpose of the Green Belt is to protect open land between settlements and the character and quality of protected land is often variable. The site is within the green belt. As such no particular significance is attached to this designation in the following assessment, other than to note here that much of it coincides with Areas of Borough Landscape Value or High Landscape Value identified above.

Historic Parks and Gardens

The Register of Parks and Gardens of Special Historic Interest in England records those parks and gardens that English Heritage considers to be of special historic interest. Entries in the national Register are graded into three bands to give added significance of their importance. The highest band is Grade I, which is granted to sites considered to be of international importance. The second highest band is Grade II*, which applies to sites considered to be of exceptional historic value. The third band, Grade II, relates to sites that are of sufficiently high interest to merit inclusion in the Register.

Although inclusion in the Register brings no additional statutory protection, local authorities are required to make provision for the protection of the historic environment when preparing development plans and determining planning applications (Planning Policy Guidance Note 15, September 1994). To ensure this is given due consideration, local authorities are required to consult English Heritage on all planning applications that might affect a Grade I or Grade II* registered site or its setting, and to consult with the Garden History Society on all applications affecting a registered site.

Seven registered parks and gardens have been identified within the 15 km radius study area and are included in the assessment. Of these, one is Grade I (Wentworth Castle) and the remaining six are Grade II (Beaumont Park, Bretton Hall, Cannon Hall, Greenhead Park, Locke Park and Wortley Hall).

Conservation Areas

Conservation Area status applies to parts of the built environment considered by local authorities to be of special historic or architectural value by virtue of a particular building vernacular, street pattern or setting. Planning permission will not normally be granted for any development proposals within or outwith of a Conservation Area that adversely affects its character, quality and setting, including views into or out of a designated area.

Within the study area some 48 Conservation Areas have been identified. These all relate to historic towns, villages and hamlets, many of which have been identified as visual receptors. Therefore, in order to avoid unnecessary repetition, effects on Conservation Areas can be drawn from the effects on principal settlements and local views in the following assessment.

Chapter 9: *Cultural Heritage* of this ES discusses the potential effects of the Development in relation to Conservation Areas.

5.3.6 Baseline Visibility of the Development Site

Views From the Development Site

In general terms, visibility across the 15 km radius study area contrasts strongly between the upland plateaux, where expansive views are possible, and the valleys where views are channelled by the enclosed sides and further restricted by the built-up nature of the valley floors and often high incidence of broadleaved woodland on the steeper slopes.

From within the Development site 360^{o} views are possible across much of the surrounding area. To the north and east visibility extends across the lower lying but undulating landform as far as the distant horizon. The view is one of a predominately farmed landscape of mixed pasture and arable land, with the small to medium-sized fields enclosed by stone walls and hedgerows. Hedgerow trees and small woodland areas are also relatively widespread and convey the impression of a well-wooded landscape. Farmsteads, isolated houses, hamlets and larger urban areas on the outskirts of Barnsley are conspicuous features of the higher ground but, overall, the area retains a strong rural character. Intrusive features include the 330 m high Emley Moor mast, which lies some 8 km north of the Development site and dominates local views, as well as the steam plumes of more distant coal-fired power stations in the east beyond the study area.

To the west and south views extend across the Upper Don valley as far as the ridgeline that defines the eastern valley sides and the Pennine uplands. This roughly coincides with a north-west to south-east line that includes West Nab (500 m AOD), Black Hill (582 m AOD), Upper Dead Edge (499 m AOD), Round Hill (496 m AOD), Margery Hill (546 m AOD) and Edge Mount (395 m AOD). Beyond this ridgeline some glimpsed views are possible of more distant isolated hilltops associated with the high Pennine plateaux.

The view is a contrasting one of small-scale enclosed pastures on the valley floor and lower slopes with sizeable blocks of mixed deciduous and coniferous woodland on the steeper sides. These give way to the open moors of the high plateaux beyond. Settlement and communication routes are confined to the valley floor, although traffic on the A628 is particularly noticeable where the route rises up the head of the valley. Other intrusive features include telecommunications masts around the fringes of the upland plateaux and pylons following the valley floor.

Views Towards the Development Site

Available views towards the Development site and Royd Moor Wind Farm are mainly obtained from high ground on the edge of the Pennine uplands to the west and south, from the ridgelines of lower lying areas to the north and east, and in the immediate vicinity of the site.

From the ridge of high ground that extends from West Nab to Edge Mount on the eastern edge of the Pennine plateau, west and south of the Development site, the existing Royd Moor turbines are visible features of the skyline at distances up to about 15 km. From these vantage points the turbines are distinguishable as a compact group within a wider panorama. This includes views from a short section of the Pennine Way, which encroaches into the far west of the study area. In most of the views the turbines appear evenly spaced with some blade movement evident. Emley Moor mast is also prominent in these views.

From the north and east, the undulating nature of the landform in conjunction with deeply incised valleys and relatively dense woodland cover is such that visibility is more limited and largely confined to the minor ridgelines where breaks in vegetation occur. From Flockton around to West Bretton and the western edge of Barnsley, Royd Moor Wind Farm is visible in

glimpsed views. However, they are generally seen in context with Emley Moor mast, which dominates views from these directions. Within the more densely populated valleys, views are completely curtailed by a combination of the steeply sloping sides, dense built-up nature of the valley floors and the relatively dense woodland cover on the upper slopes.

In the more immediate vicinity of the Development site views are particularly constrained by landform. West of the site, within the Upper Don valley, Royd Moor Wind Farm is a conspicuous feature on the ridgeline, with individual tower detail and blade movement clearly evident. This includes views from Carlecotes, Crow Edge and individual properties immediately below Royd Moor in the vicinity of Catshaw, albeit turbine visibility from these latter properties is limited to the hubs and blade tips. From more enclosed parts of the valley to the immediate south turbine visibility is virtually curtailed. This includes views from the larger settlements of Penistone, Thurlstone and Millhouse Green. On the more gentle dip slopes to the north and east of the Development site where vegetation is sparse, Royd Moor turbines are conspicuous features of views from the scattering of houses and hamlets, including from Ingbirchworth and High Flatts. From Spicer House, on the edge of the Development site, views of Royd Moor turbines are screened by the orientation of the farmhouse, outbuildings and existing tree belt at the northern end of the site.

5.3.7 Summary of Landscape and Visual Receptors within the 15 km Radius Study Area

Valued landscape resources within the Development site boundaries are limited to the strong rectilinear pattern of drystone walls, plus the broadleaved tree belt and stream beside Spicer House.

Three Joint Character Areas (JCAs) are found within the study area and, within these, eight Landscape Character Types have been identified. The landscape character of the Development site and its immediate setting falls within the 'Yorkshire Southern Pennine Fringe' JCA at a regional level and within the 'Upland Farmland' Landscape Character Type at a local level.

One national landscape-related planning designation exists within the study area, although it excludes the Development site. The Peak District National Park covers much of western and southern parts of the study area, extending to within about 1.5 km of the Development site. Beyond the National Park boundaries much of the remaining study area has been designated an Area of Borough Landscape Value or High Landscape Value by BMBC and neighbouring Kirklees MC. Both Royd Moor Wind Farm and the Development site fall within the Area of Borough Landscape Value.

Seven historic parks and gardens are found within the study area, of which one is Grade I listed and the other six are Grade II listed. Additionally, some 48 Conservation Areas are located within the study area.

Principal visual receptors identified within the study area include some 40 settlements, nine roads, five long distance footpaths, two Country Parks and two other major visitor attractions.

5.4 DEVELOPMENT DESIGN MITIGATION

5.4.1 Principal Elements

The Development consists of three wind turbines each measuring up to 60 m to hub height and 95 m to the blade tip in the vertical position, based on a 70 m rotor diameter. These are maximum heights and sizes and have been selected for the purposes of establishing a worst-case scenario in relation to landscape and visual effects. A meteorological mast (maximum 60 m high) will also be required together with a control building (substation) and compound. Other ancillary works will include providing access tracks within the site to reach the turbines.

A detailed description of the Development, including site selection, technical siting requirements and construction details, is given in Chapter 3: *Project Description* of this ES. Those key elements of the scheme that are likely to give rise to landscape and visual effects are summarised below under construction, operational and decommissioning phases. This is followed by a description of those measures that have been incorporated into the final scheme to avoid or minimise these effects.

5.4.2 Construction Phase

The principal activities that may give rise to potential effects during the construction phase are:

- Possible upgrading of existing unclassified roads leading to the site;
- Limited loss of improved pastures within the site;
- Provision of permanent access tracks and cable runs within the site;
- Provision of a temporary contractors compound and site cabins;
- Erection of temporary site cranes, including concrete pads;
- Erection of the wind turbines, including concrete bases;
- Construction of the control building/substation and compound; and
- Erection of the meteorological mast.

The Development will be connected to the electricity grid, however, this will be subject of a separate application and is excluded from this assessment.

It is anticipated that construction activities will be carried out over a 10-month period. Disturbance of the landscape fabric will be small scale, essentially limited to the footprint occupied by the wind turbines, substation and access tracks. Effects on the wider landscape character and on visual amenity will be mostly limited to views of the temporary cranes and turbines under construction.

5.4.3 Operational Phase

Potential effects during the operation of the Development may arise from the presence of the following features:

- Site access tracks;
- Wind turbines and, to a lesser extent, the meteorological mast; and
- Control building.

The operational life of the Development will be a maximum of 25 years under this application. During this period the turbines, meteorological mast, substation and access tracks will all be apparent.

5.4.4 Decommissioning Phase

Potential effects arising from the decommissioning of the Development at the end of its operational life will be limited to the temporary presence of cranes and other equipment required to dismantle the turbines, mast, substation and other above-ground features. The turbine bases will be cut out to below ground level and covered with topsoil, whilst the access tracks will either be left in-situ for subsequent use or be covered with topsoil, subject to agreement with the landowner.

The decommissioning phase will be limited to a few months and at the end of the process no visible surface features will remain, apart from the access tracks where these are retained.

5.4.5 Mitigation

The design of the Development has sought to incorporate mitigation measures from the outset to avoid or minimise any significant negative effects on the surrounding landscape and on visual amenity. This has been conducted through a range of turbine layouts using ZTVs and wirelines to assess the likely effects. The design evolution of the Development is outlined in Chapter 3: *Project Description* of this ES.

A range of measures have been considered, which are either an intrinsic part of the final scheme (defined in paragraph 5.3 of the GLVIA as Primary Mitigation) or have been specifically included in order to offset the impact of any residual negative effects of the final Development (defined by the GLVIA as Secondary Mitigation). Examples of primary mitigation in relation to wind farm developments include changes to the means of access; turbine layout; number, type, height and colour of turbines; design and location of ancillary facilities. Secondary mitigation in relation to this wind farm development might involve additional on-site measures such as restoration of field boundaries. Additionally, off-site measures by way of screen planting might also be provided where requested by occupiers of residential properties with turbine visibility.

Mitigation measures embedded in the Development are described further below.

Site Access

The turbine components will be delivered to the Development site using the existing road network. Access is expected to be via the A628, followed by the local road network, *i.e.* Royd Lane through Millhouse Green or Thurlstone to the site entrance on Whitley Road.

Access to the turbines, control building and meteorological mast from the public highway will be provided by new access tracks. These will follow the existing pattern of walled field enclosures as far as practicable to ensure the continued agricultural use of the site is maximised. The location of the access tracks is shown of Figure 1.2. The tracks will be typically 5 m wide and constructed from graded stone using materials sourced from a local quarry rather than from borrow pits excavated on site. On completion of the works, the tracks will be partially recovered with topsoil to leave a width of about 3 m for occasional maintenance access.

Wind Turbine Layout

The siting of the turbines has been derived through a number of iterations using computer-generated ZTVs and wirelines to assess differing arrangements, numbers and heights of turbines, whilst taking account of baseline conditions and other technical considerations. The various layout options considered are illustrated on Figure 3.1 (Layouts 1-4).

The initial layout prepared at scoping stage utilised both parcels of land on either side of Whitley Road. However, following a preliminary appraisal and consultation with BMBC turbines were omitted from the southern and most visible parcel. This was partly to avoid additional impacts on properties immediately below the Development site but also to avoid elongating turbines along the ridgeline when seen in conjunction with Royd Moor Wind Farm. This was particularly apparent with the initial layout with potentially significant effects on the Upper Don valley and Peak District National Park.

Subsequent design iterations have therefore concentrated on the larger triangular parcel of land beyond the ridge where the proposed turbines generally appear behind those of Royd Moor Wind Farm in more sensitive views from the south and west. Here the emphasis was placed on achieving a layout that complements the specification of Royd Moor turbines (35 m hub height and 54 m blade tip height) and their spacing.

As part of this exercise careful consideration was given to turbine height and layout to ensure an acceptable balance was achieved between existing and proposed turbines. Layouts

involving three, four and five turbines were considered in both single and staggered rows to reflect the regimented layout of Royd Moor Wind Farm. At the same time a range of turbine sizes was assessed from the smallest commercially available (40 m hub with 52 m rotor diameter) up to largest considered to be acceptable in relation to Royd Moor turbines (56 m hub with 56 m rotor diameter).

Each layout was examined from a number of viewpoints around the Development site and adjusted to reduce visibility and enhance the composition of what remained visible. Overall, five turbines was considered to be the optimum number arranged as a double staggered row. Little appreciable difference was noted in the range of turbine heights examined with all five turbines visible. However, the larger size appeared to give a better balance with Royd Moor turbines particularly in more sensitive views to the south and west where the proposed turbines sit at a slightly lower elevation compared to Royd Moor turbines but appear at a similar height.

Further consultations were held with BMBC on the five-turbine option based on a 56 m hub height and 84 m blade tip height, with a 56 m rotor diameter (Layout 2). Whilst acknowledging that this layout achieved a certain visual integration with Royd Moor, relative to site and technical constraints, BMBC felt it did not sufficiently address the adjacent Blackstone Edge application site. This comprises of three turbines, each measuring up to 101 m to blade tip based on a 60 m hub height and 82 m rotor diameter. Should both Spicer Hill and Blackstone Edge applications be approved then, together with Royd Moor, which remains operational until 2018, there would be three abutting wind farms each operating with significantly different sized turbines and operating specifications.

Two further layout options (Layouts 3 and 4) have therefore been prepared, which reflect more closely the Blackstone Edge turbine specification and the longer term potential for fewer, but taller, turbines to replace Royd Moor Wind Farm. For both options the number of turbines has been reduced to three to take account of the wider spacing requirements relative to the physical constraints of the site. Both layouts have been examined from a number of viewpoints around the Development site in conjunction with Blackstone Edge turbines and, on balance, Layout 4 (95 m blade tip height) was judged to give a better visual integration between the two wind farm sites. This layout forms the basis of this ES and is illustrated on Figure 1.2.

Wind Turbine Form and Colour

The candidate turbine is the Enercon E70, but the final choice will be dependent on the technology available at the time of construction, project economics, desired output from the development and any requirements to integrate with Blackstone Edge Wind Farm. However, the turbines will be three-bladed and with a horizontal-axis mounted on a tapering or cylindrical, tubular steel or steel/concrete tower. A typical turbine is illustrated on Figure 3.2. Each turbine will be painted in an off-white or light-grey colour to reduce visibility, particularly in dull weather conditions or low light levels. Additionally, the turbines and will have a non-reflective, semi-matt finish to reduce 'glinting' of the blades during sunny periods.

Each turbine transformer will either be housed in the turbine nacelle, to which the blades are attached, in the base of the turbine tower or in a small enclosure positioned beside the base of each tower. The concrete foundations required to support each turbine will be set below the finished soil level in order that vegetation can be restored right up to the base of each tower.

Ancillary Features

The temporary construction compound and storage area will be located immediately adjacent to the site entrance on Whitley Road.

The control building will positioned towards the centre of the site with access gained from Whitley Road. The building will comprise a single storey structure with a pitched roof, as illustrated on Figure 3.5. Construction materials will be agreed with BMBC, but it is anticipated they will be similar to the Royd Moor control building and reflect the local building vernacular. All cable runs leading from the turbines to the control building will be below ground.

The meteorological mast will be a free-standing lattice tower structure, as illustrated on Figure 3.7. The mast will be positioned adjacent to the control building facing the prevailing wind.

The mitigation measures described above have been incorporated into the final design that forms the basis of this ES. The potential effects described in the following section take account of these measures and thus represent residual effects arising from the Development that would remain for the duration of its operational life.

5.5 ASSESSMENT OF POTENTIAL EFFECTS

5.5.1 Introduction

Having identified the baseline landscape and visual resources of the Development site and surrounding area in section 5.3, this section describes and evaluates the changes in the character and quality of the landscape and views that are expected to result from the Development during its operational stage. This section of the assessment aims to:

- Identify those potential landscape and visual effects that would result directly or indirectly from the Development on a range of sensitive receptors;
- Estimate the likely scale or magnitude of effect; and
- Assess their significance.

As stated in section 5.2.2, the assessment of landscape and visual effects is divided into four categories. Each of these categories is assessed separately and therefore this section of the assessment comprises of four main parts: the assessment of effects on landscape fabric (section 5.5.2); assessment of effects on landscape character (section 5.5.3); assessment of effects on designated areas and special interests (section 5.5.4); and assessment of effects on views (section 5.5.5).

5.5.2 Effects on Landscape Fabric

This section considers the physical changes to the baseline landscape fabric of the Development site that will arise from the Development. Landscape fabric is the physical pattern of elements such as vegetation, landform, land use and other features that combine to create landscape character. The effects of a development on landscape fabric are those that alter the physical pattern of elements. These effects are restricted to the landscape within which a development is located as it is within this area that the physical pattern of elements will alter, for instance, through loss of vegetation, re-contouring and/or changes to land use.

Within the Development site there is just one landscape element that will undergo physical change as a result of the Development, namely the agricultural land that covers the whole of the Development site.

For each landscape element, or receptor, where an effect is predicted an assessment is made below of its sensitivity to the Development. This is followed by a description of the changes to each landscape element arising from the Development and an assessment of the magnitude of effect. Both the sensitivity and magnitude of effect are assessed against

criteria given in Table 5.1, in section 5.2.3, from which a judgment is made of the level of significance, based on criteria given in Table 5.3, also in section 5.2.3.

Indirect effects arising from the visible presence of the Development in the wider landscape are considered in the following section with respect to landscape character.

Agricultural Land

The Development site comprises both rough grazing and improved pastures that are characteristic of the 'Upland Farmland' Landscape Character Type within which the Development is located.

Sensitivity

Agricultural land of the type that covers the Development site is a characteristic component of this landscape. As a resource, it is neither rare nor unusual either locally or nationally. Whilst the quality, or condition, of the agricultural land is generally good in that it is well managed, its overall value is considered to be low. Furthermore, it can be easily replaced following operations on site, both during the construction and decommissioning phases, as it does not require a lengthy regeneration period. This combination of factors results in a *low* sensitivity.

Magnitude of Effect

The introduction of the wind turbines, access tracks and substation will result in the loss of approximately 1.42 hectares of agricultural land, the effects of which will last until the end of its operational life. However, the amount of land lost will be relatively small in relation to the total site area (approximately 29 hectares) and it will be possible to mitigate these effects through the restoration of the agricultural land immediately following completion of the construction and decommissioning phases. The magnitude of effect is therefore assessed as *very small*.

Significance of Effect

The physical effect of the Development on the agricultural land of the Development site is assessed as being *neutral* and will be *not significant*. This is due to the widespread nature of the resource, the relatively small amount lost to the Development and the high potential for restoration.

Summary of Effects on Landscape Fabric

The principal effect that the Development will have on the physical fabric of the Development site will be the localised loss of existing agricultural land. This will have a negative effect, but it will be not significant due to the low value of the landscape element, the limited proportion of the landscape element that will be lost and the high potential for restoration.

5.5.3 Effects on Landscape Character

Through the landscape characterisation process, areas of landscape can be identified that exhibit distinct and recognisable patterns of elements, which are perceived in a particular way. Although the character of these areas is largely defined by what occurs within them, the perception of them is also influenced by the context of their setting. Hence the perception of a landscape can alter by the visible presence of an uncharacteristic feature in the wider view, even though the affected landscape may not be physically altered. The influence that views of a development will have on the perception of a particular area will be dependent on those factors listed in section 5.2.3, notably the inherent characteristics of the

area, the nature of the development, the extent that it will be visible and the intervening distance.

This section considers the mainly indirect effects of the Development on the perception of those landscape character types and areas, or receptors, identified in the baseline conditions section of this Chapter. Only those character types that will gain visibility of some, or all, of the Development have been assessed and, of these, those where the effect on perception is judged likely to be significant have been assessed in more detail here. Character types with no available views of the Development and whose perception will remain unaltered have been excluded from the assessment process.

This has been determined by an initial sieving exercise with reference to Figure 5.15, which shows the landscape character types in conjunction with the ZTV for the 15 km radius study area. Taking into account limitations associated with the ZTVs, as described in section 5.2.6, an analysis of the visibility indicated has identified a short-list of character areas with potential for significant effects for which further assessment is required. Analysis of the representative viewpoints and computer generated wirelines in conjunction with site visits has then been carried out for the short-listed receptors to identify the presence of screening features that might limit visibility and so determine likely levels of impact and significance.

The findings of the initial assessment from which receptors have been short-listed are recorded in Table 5.6 below. Where relevant, the representative viewpoint that best illustrates the potential effect on a receptor is referred to.

Many of the landscape character types included in the assessment are extensive and the effects of the Development can vary widely across a single character type. The distinction between areas where effects may be significant and where effects will be not significant within the same character type is of particular importance in the assessment. Where this is likely to be the case, the initial assessment has sub-divided the character type into separate areas, or units. The extent and naming of these units generally reflects those units identified in the county/district Landscape Character Assessments. Where information is lacking, units have been determined by reference to physical features and/or administrative boundaries.

Table 5.6 Predicted Effects on Landscape Character Types within 15 km Radius

Landscape Receptor	Description of Predicted Effect	Further Assessment Required?
Landscape Character Types		
A. Unenclosed Moorland 'Unenclosed Moorland' is found across extensive areas in the west and south of the study area where it corresponds with the Pennine uplands. It is characterized by high rolling plateaux that are covered by rough grazing and moor, and is largely devoid of trees. Man-made influences are largely absent. This character type also falls wholly within the Peak District National Park, which implies increased sensitivity. The ZTV shows patchy theoretical visibility across the more elevated parts of this character type so it has been divided into units, which are appraised separately below.		
A1: Heyden Unit	This unit mostly lies at distances beyond 10 km and the ZTV shows almost no visibility.	No, due to lack of visibility.
A2: Meltham & Wessenden Unit	The ZTV shows patchy theoretical visibility from east facing slopes at distances of 10-15 km. In reality the Development will have limited influence due to distance, the large-scale nature of the receiving landscape and the expansive nature of views obtained. Royd Moor Wind Farm and Emley Moor mast will also influence views. Vps 19 and 23 represent views from this unit.	No, there may be some effect, but this will not be significant due to: • Large-scale and relatively simple patterns of landform and land cover in which the turbines will be seen; • Small part of available views occupied by the three turbines; • Distance (min. 10 km from the site); • Other built influences on the landscape.

A3: Midhope & Howden Unit	This unit lies at distances beyond 5 km with patchy theoretical visibility indicated on the ZTV at distances up to 10 km. The Development will have some influence, but this will be limited due to increasing distance, the large-scale nature of the receiving landscape and the expansive nature of views obtained. Royd Moor Wind Farm also influences views from the northern edge of this unit. Vps 15 and 17 represent views from this unit.	No, there is likely to be some effect, but this will not be significant due to: • Large-scale and relatively simple patterns of landform and land cover in which the turbines will be seen; • Small part of available views occupied by the three turbines; • Distance (over 5 km from the site); • Other built influences on the landscape.
A4: Shining Clough & Bleaklow Unit	This unit mostly lies at distances beyond 10 km. The ZTV shows one area with theoretical visibility. Vp 24 represents the view from here.	No, there may be some effect, but this will not be significant due to: • Large-scale and relatively simple patterns of landform and land cover in which the turbines will be seen; • Small part of available views occupied by the three turbines; • Distance (min. 10 km from site).
A5: Thurlston & Langsett Unit	This unit mostly lies at distances of 5-10 km, although a small area does encroach to within 2 km of the wind farm site. The ZTV indicates fairly continuous theoretical visibility from east facing slopes. In reality, the Development's influence will be limited due to increasing distance, the more noticeably settled characteristics of the landscape and the expansive nature of views obtained. Additionally, Royd Moor Wind Farm influences views from the eastern edge of this unit. Vp14 represents views from this unit.	No, there is likely to be some effect, but this will not be significant due to: • Increasingly settled characteristics of the landscape in which the turbines will be seen; • Small part of available views occupied by the three turbines; • Distance (mostly over 5 km); • Other built influences on the landscape.
A6: Wharncliffe Unit	This small unit lies on the south-eastern limit of the study area. The ZTV indicates some theoretical visibility, but in reality the Development's influence will be limited by distance and localized screening vegetation.	No, there may be some effect, but this will not be significant due to: • Limited visibility shown on the ZTV; • Screening by intervening woodland; • Distance (min. 12 km from the site).
B. Upland River Valley 'Upland River Valley' occurs as a narrow, incised band that follows the course of the River Don south of the Development towards the south-eastern boundary of the study area. The ZTV shows theoretical visibility across parts of this character type, so it has been divided into two units and appraised separately. The division between these two units occurs at Thurgoland.		
B1: Upland Don Unit	This unit extends from Dunford Bridge to Thurgoland, a distance of 13 km. At its closest point it extends to within 2 km of the Development. The ZTV indicates near continuous theoretical visibility along much of this narrow corridor, but in reality visibility is very limited due to screening afforded by local landform, vegetation and buildings. Visibility towards the site is gained from a 6 km section west of Millhouse Green. However, Royd Moor Wind Farm provides a strong influence on views from within this section of the valley together with overhead pylons that follow the valley floor. Vps 9, 11 and 18 represent views from this unit.	No, there is likely to be some effect, but this will not be significant due to: • Screening by local landform, vegetation and buildings; • Proximity to existing operational windfarm; • Other built influences on the landscape.

B2: Wooded Don Unit	This unit lies at distances beyond 9 km and the ZTV shows almost no visibility.	No, due to lack of visibility.
C. Lowland River Floor 'Lowland River Floor' occurs as a narrow band that follows the flat valley floor and gently sloping sides of the River Dearne north-east of the Development on the edge of the study area.		
C1: Upper Dearne Unit	The ZTV shows patchy theoretical visibility, but in reality there is almost no visibility due to the low-lying valley landform, screening by intervening vegetation and distance, which is over 8 km.	No, there is unlikely to be any effect due to: • Limited visibility shown on the ZTV; • Low-lying nature of the landform; • Screening effect by intervening woodland and hedgerows; • Distance (min. 8 km from the site).
D. Coalfield Estates 'Coalfield Estates' covers one small area towards the north-eastern limit of the study area.		
D1: Bretton & Woolley Unit	The ZTV shows patchy theoretical visibility, which is gained from about 10 km. Vp 21 represents views from here.	No, there is unlikely to be any effect due to: • Limited visibility shown on the ZTV; • Intervening vegetation, which provides further screening; • Distance (min. 10 km from site).
E. Settled Wooded Farmland 'Settled Wooded Farmland' occurs across much of the eastern parts of the study area where it corresponds with a more gently rolling landform and much higher incidence of woodland, tree belts and hedgerows that combine to limit visibility. The ZTV shows widespread but patchy theoretical visibility across this character type so it has been divided into two units and appraised separately.		
E1: West Barnsley Unit	The ZTV shows patchy theoretical visibility, mostly at distances beyond 5 km. In reality visibility is quite limited due to the relatively low-lying landform and network of wooded areas and hedgerows that characterize the unit. Where views are obtained, the proposed turbines will be seen in close association with Royd Moor Wind Farm. Overhead pylons also cross this unit and influence views. Vp 13 represents some of the closest views of the site from the western edge of this unit.	No, there may be some effect, but this will not be significant due to: • Patchy visibility shown on the ZTV; • Further screening by local landform, woodland and hedgerows; • Distance (mostly over 5 km); • Proximity to existing operational windfarm; • Other built influences on the landscape.
E2: East Huddersfield Unit	The ZTV shows patchy theoretical visibility at distances beyond 5 km. In reality visibility is limited due to the relatively low-lying landform and network of wooded areas and hedgerows that characterize the unit. Where views are obtained, the proposed turbines will be seen in close association with Royd Moor Wind Farm. Emley Moor mast also has a strong influence on views. Vps 16 and 22 represent views from this unit.	No, there may be some effect, but this will not be significant due to: • Patchy visibility shown on the ZTV; • Further screening by local landform, woodland and hedgerows; • Distance (mostly over 5 km); • Proximity to existing operational windfarm; • Other built influences on the landscape.
F. Upland Farmland 'Upland Farmland' occurs as a narrow band that crosses the central part of the study area where it corresponds with the lower slopes on the eastern edge of the Pennine uplands. It is characterized by a more pastoral landscape with walled enclosures, scattered farmsteads and sparse tree cover. Part of this landscape type also falls within the Peak District National Park, which implies increased sensitivity. The ZTV shows patchy theoretical visibility across the more elevated parts, so it has been divided into units, which are appraised separately below.		
F1: Ingbirchworth Unit	**The Development lies within this unit, which extends all the way around the site for a distance of between 1.5 -3 km. The ZTV show continuous theoretical visibility.**	**Yes, due to close proximity and high visibility.**

	Vps 1-8 and 10 represent views from this unit.	
F2: Holmfirth and Meltham Unit	The ZTV shows patchy theoretical visibility from south-east facing slopes at distances mostly beyond 5 km. In reality the Development will have limited influence due to increasing distance, the expansive nature of views obtained and presence of Royd Moor Wind Farm in views. The densely populated valleys that adjoin this unit will also influence views.	No, there may be some effect but this will not be significant due to: • Limited visibility shown on the ZTV; • Small part of available views occupied by the three turbines; • Distance (mostly over 5 km); • Proximity to existing operational windfarm; • Other built influences on the landscape.
F3: Penistone and Stocksbridge Unit	The ZTV shows almost continuous theoretical visibility over elevated areas south of Penistone and to the west. In reality the Development will have limited influence due to increasing distance, the expansive nature of views obtained and presence of Royd Moor Wind Farm in views. Overhead pylons also cross this unit. Vp 11 represents views from the northern edge of this unit.	No, there is likely to be some effect but this will not be significant due to: • Small part of available views occupied by the three turbines; • Increasing distance from the site; • Proximity to existing operational windfarm; • Other built influences on the landscape.
F4: Wharncliffe Unit.	This unit covers the remainder of the landscape type, extending to the south-east, where it falls within the Peak District National Park. The ZTV shows patchy theoretical visibility at distances exceeding 7 km where the landform is orientated away from the Development. This reduces influence despite the theoretical visibility indicated.	No, there is unlikely to be any effect due to: • Limited visibility shown on the ZTV; • Orientation of landform away from the site; • Distance (min. 7 km from the site).
G. Settled Valleys 'Settled Valleys' represent a number of deeply incised valleys in the north of the study area that are crowded with towns whose origins date from the early industrial age and which retain a distinctive local architecture based on the textile industry.		
Settled Valleys	The ZTV shows almost no visibility.	No, due to lack of visibility.
H. Reservoir Valleys 'Reservoir Valleys' represent several deeply incised valleys in the far south and west of the study area that are dominated by large artificial water bodies with extensive forestry plantations on the valley sides. They also fall within the Peak District National Park, which implies increased sensitivity.		
Reservoir Valleys	The ZTV shows no visibility.	No, due to lack of visibility.

The initial assessment identified one unit of one landscape character type to have the potential to undergo a significant effect on landscape character arising from the Development. This is the 'Ingbirchworth' unit of the 'Upland Farmland' landscape character type.

The initial assessment found that the other units of this character type and all of the other landscape character types do not have potential to undergo significant effects on landscape character. This is for a number of reasons, including lack of visibility, orientation of landform, large-scale nature of certain character types, screening by intervening vegetation, distance and the presence of Royd Moor Wind Farm in available views.

For each receptor where a significant effect is predicted an assessment is made below of its sensitivity to the Development. This is followed by a description of the changes to the landscape arising from the Development and an assessment of the magnitude of effect. Both the sensitivity of the baseline landscape and the magnitude of effect are assessed against the

criteria given in Table 5.1, in section 5.2.3. From this, an assessment of the level of significance has been determined with reference to Table 5.3, also in section 5.2.3.

The location of each receptor is shown on Figure 5.13 and is shown in relation to the ZTV on Figure 5.15.

Upland farmland: Ingbirchworth Unit

'Upland Farmland' is a relatively narrow landscape character type that adjoins the eastern, lower slopes of the Pennine Uplands. For the purposes of this assessment it has been divided into four units as the influence of the Development varies widely. This assessment focuses on the 'Ingbirchworth' unit, which covers the Development site and a discrete area surrounding it. Viewpoints 1-8 and 10 are all located within this unit. The other units lie further away with more limited visibility, and the initial assessment considered them not to have potential for significant effects.

This is an elevated pastoral landscape of moderate to steep slopes with pronounced ridgelines that are often stepped or terraced. The landscape is characterised by a strong, rectilinear pattern of fields enclosed by gritstone walls and lanes. Tree cover is largely absent and settlement is limited to small groups of houses and a scattering of stone farmsteads. Many of the farms have modern agricultural buildings that stand out in the open landscape. Other unfamiliar and large-scale features that occur within this character type include communications masts, overhead pylons and wind farm developments, of which Royd Moor Wind Farm falls within the study area.

Sensitivity

This unit of landscape has a higher local value due to its inclusion within the Area of Borough Landscape Value, as this implies increased sensitivity. However, features that were once characteristic of this landscape, most notably the walled field enclosures, have been allowed to fall into disrepair and this has eroded some of the quality. The erosion of character has been further exacerbated by the introduction of incongruous features such as modern agricultural buildings and, in particular, by Royd Moor Wind Farm, which has substantially altered the character of the area surrounding it. These factors result in a lower sensitivity even though the existing character remains predominately agricultural. The sensitivity of the unit to the Development is therefore judged to be *medium.*

Magnitude of Effect

The magnitude of effect across this unit will vary depending upon a number of factors, of which the degree of visibility obtained and distance from which views are obtained are the most important. Analysis of the ZTVs and viewpoints together with site visits suggests that where clear and unobstructed views are obtained from up to around 3 km from the Development, then the magnitude of effect would normally be large or very large. This is because the scale, colour, vertical form and movement of the turbines would provide a notable change to the baseline characteristics that would have an immediately apparent and prevailing influence on the landscape character.

However, the nature of the landform within this radius is such that it has a limiting effect on views of the Development. In particular, the steep slopes of the Don Valley curtail views from the south and west and this ensures that the proposed turbines will not be seen at full height. In addition, the small number of turbines proposed is such that they will only occupy a relatively small proportion of the ridgeline that defines the valley sides. Furthermore, the presence of Royd Moor Wind Farm has a considerable mitigating effect, with the proposed turbines generally seen behind Royd Moor where they will tend to read as part of a slightly larger group (See viewpoints 4, 6 and 10 for representative views). As such, where clear,

direct and open views are possible from the south and west, within a radius of about 3 km, the magnitude of effect is judged to be no more than *small*.

In views from the north and east, the proposed turbines stand in front of Royd Moor Wind Farm at a similar elevation to the immediate surrounding area with limited vegetation to screen or filter views. Here the presence and larger size of the proposed turbines will be more apparent (See viewpoints 1-3, 7 and 8 for representative views). However, even in these views the proposed turbines will tend to read as part of a larger group rather than a completely separate site. Thus, where clear and unobstructed views are possible from the north and east, within a radius of about 3 km, the magnitude of effect is judged to be *medium* to *large*.

Significance of Effect

The variation in magnitude of effect ensures that the significance of the effect will also vary across the landscape character unit. Where the magnitude of effect is judged to *large*, as described above, there will be a *significant* effect on the landscape character of the Ingbirchworth unit of the Upland Farmland character type, with the proposed turbines resulting in a material change to the way in which the landscape character is perceived. This is due to the combination of factors that results in a large magnitude of change on a landscape of medium sensitivity.

Elsewhere within this unit the effect will be not significant, as the Development will not have a material and definitive effect on landscape character. Some effect on the landscape character may be apparent, depending on local conditions, but the defining characteristics of the landscape character unit will continue to prevail.

Summary of Effects on Landscape Character

Of the eight landscape character types initially assessed in Table 5.6, just one unit of landscape character was judged likely to undergo significant effects as a result of the Development. This is the 'Ingbirchworth' unit of the 'Upland Farmland' character type, within which the Development lies.

This unit was then assessed in greater detail and more specific conclusions were drawn regarding the extent of significant effects. As a general rule, it was found that significant effects were most likely to occur within a radius of approximately 3 km from the nearest turbine, with the vertical scale, form, colour and movement of the turbines having an immediately apparent influence on the character of the landscape. However, the landform of the study area is such that many areas within this radius will gain limited or no turbine visibility and, as such, will not undergo any influence. The presence of Royd Moor Wind Farm has a further mitigating effect. The extent of significant effects on landscape character will therefore be sporadic and will mostly occur to the north and east of the Development, within 3 km radius, where clear and unobstructed views of the turbines are obtained.

Beyond this radius, effects on this unit will generally not be significant due to the nature of the landscape, extent of the landscape affected, orientation of the landscape, distance and the extent of the Development that will be seen.

The other landscape character types were found in the initial assessment to have no potential for significant effects. This is due to a variety of reasons including lack of visibility, orientation of the landform, screening by vegetation, distance and presence of Royd Moor Wind Farm in available views.

5.5.4 Effects on Designated Areas and Special Interests

This section considers the additional effects of the Development on a specific group of landscape-related planning designations such National Parks, AONBs and other designated features including Historic Parks and Gardens. These landscape receptors have a particular character or setting that distinguishes them from surrounding areas and has contributed to their designation. They are generally perceived as having heightened sensitivity to change. As with the landscape character areas described above, any change in this perception will be dependent on available views of the Development from all, or part, of the designated area. Thus only those designations and special interests with some visibility of the Development have been assessed and, of these, only those where the effect on perception is considered to be significant are considered in more detail here.

This has been determined by an initial sieving exercise with reference to Figure 5.16, which shows landscape designations and other special interests in conjunction with the ZTV for the 15 km radius study area**.** Taking into account limitations associated with the ZTV, as described in section 5.2.6, an analysis of the visibility indicated has identified a short-list of designations and special interests with potential for significant effects for which further assessment is required. Analysis of the representative viewpoints and computer generated wirelines in conjunction with site visits has then been carried out for the short-listed receptors to identify the presence of screening features that might limit visibility and so determine likely levels of impact and significance.

The findings of the initial assessment from which receptors have been short-listed are recorded in Table 5.7 below. Where relevant, the representative viewpoint that best illustrates the potential effect on a receptor is referred to.

Table 5.7 Predicted Effects on Designations & Special Interests within 15 km Radius

Landscape Receptor	Description of Predicted Effect	Further Assessment Required?
Landscape Designations		
Peak District National Park	At its closest point, the Park extends to within 1.5 km of the Development, but for the most part it lies at distances of 5-15 km. The ZTV shows patchy theoretical visibility from east and north facing slopes on the edges of the designation, mostly at distances of between 5-10 km. In reality the Development will have limited influence due to distance, the large-scale nature of the receiving landscape, the expansive nature of views and the more settled characteristics exhibited in views from the edge of the Park. Royd Moor Wind Farm also has an influence on views. Vps 14, 15, 17, 19, 23 and 24 represents views from the Park	No, there is likely to be some effect, but this will not be significant due to: • Patchy nature of visibility indicated on the ZTV; • Large-scale and relatively simple patterns of landform and land cover in which the turbines will be seen; • Small part of available views occupied by the three turbines; • Settled characteristics evident in views from the edge of the Park; • Distance (mostly beyond 5 km); • Other built influences on the landscape.
Area of Borough Landscape Value	**The Development lies within this local designation, which extends around the site and across much of the eastern part of the study area. The ZTV show continuous theoretical visibility extending for a distance of about 4 km around the site. Vps 1-11, 13 and 18 represent views from this designation.**	**Yes, due to close proximity and high visibility.**
Area of High	This local designation has more patchy	No, there may be some effect, but this will

Landscape Value	coverage over higher ground that separates the settled valleys in the north of the study area. At its closest, it extends to within 2.5 km of the Development. The ZTV shows very patchy theoretical visibility at distances beyond 5 km. In reality the Development will have little influence due to distance and screening afforded by the greater incidence of woodland and hedgerows. Emley Moor mast also has a strong influence on views from the north. Vp 16 is representative of views from this designation.	not be significant due to: • Patchy nature of visibility indicated on the ZTV; • Woodland and hedgerows that provide further screening; • Small part of available views occupied by the three turbines; • Distance (minimum 5 km from site); • Other built influences on the landscape.
Historic Parks and Gardens		
Beaumont Park	Beaumont Park lies about 12 km north-west of the Development as a small municipal park close to Huddersfield town centre. The 4-hectare linear park is laid out on the site of Dungeon Wood, of which only the northern part survives, on land that slopes steeply to the east. It comprises of formal gardens in the south, where the land is relatively level, with informal woodland walks on steeper parts in the north. The ZTV shows no visibility due to the incised valley landform in which the park is located.	No, due to lack of visibility.
Bretton Hall	Bretton Hall lies around 9 km north-east of the Development at its closest point. The 240-hectare site is bisected by the River Dearne, which runs through it in a shallow west-east running valley and has been dammed to create a number of ornamental lakes. South of the river the estate is now in agricultural use, but to the north much of the parkland remains intact as does the Hall, although it is now used as a college. Part of the grounds has also been given over to the Yorkshire Sculpture Park. The ZTV shows theoretical visibility north of the river, but in reality long views are precluded by a combination of landform and screening vegetation both within the grounds and beyond. Some glimpsed views of Royd Moor Wind Farm are possible where gaps in the vegetation occur. Vp 21 represents views from here.	No, there may be some effect, but this will not be significant due to: • Low-lying landform, which limits long views; • Woodland and tree belts within and beyond the grounds, which provide further screening; • Distance (min. 9 km from the site); • Other built influences on the landscape.
Cannon Hall	Cannon Hall lies some 7 km north-east of the Development at its closest point. The 40-hectare site includes pleasure grounds, ornamental lakes and mature parkland surrounding the hall, now used as a museum. The ZTV shows	No, there is unlikely to be any effect due to: • Low-lying landform, which limits long views; • Woodland and tree belts within and beyond the grounds, which provide

	continuous theoretical visibility, but in reality the site cannot be seen from here due to a combination of low-lying landform and screening vegetation within the grounds and beyond.	further screening; • Distance (min. 7 km from the site);
Greenhead Park	Greenhead Park is another small municipal park that lies to the north-west of Huddersfield town centre, with formal gardens and other more open areas used for ball games The ZTV shows no visibility due to the valley landform in which the park is located.	No, due to lack of visibility.
Locke Park	Locke Park lies about 12.5 km due east of the Development as a small municipal park on the built-up edge of Barnsley, with formal gardens and pleasure grounds. The ZTV shows theoretical visibility, but in reality the influence is limited due to distance and screening by intervening buildings and vegetation.	No, there is unlikely to be any effect due to: • Screening provided by intervening buildings and vegetation; • Distance (minimum 12.5 km from site).
Wentworth Castle, inc Stainborough Castle	Wentworth Castle lies around 11 km due east of the Development at its closest point, with formal gardens, pleasure grounds, restored parkland and Grade I listed castle, now used as a college. The ZTV shows theoretical visibility extending up to the western boundary, however, dense shelterbelts along this boundary curtail all views towards the site. Views of Royd Moor Wind Farm from Stainborough Castle tower, situated within the grounds, are also curtailed by vegetation.	No, there is unlikely to be any effect due to: • Very limited visibility shown on the ZTV; • Woodland and tree belts within and beyond the grounds, which provide further screening; • Distance (minimum 11 km from site).
Wortley Hall	Wortley Hall lies some 11.5 km south-east of the Development at its closest point, with formal gardens, pleasure grounds, parkland and hall, now used as a hotel. The ZTV shows theoretical visibility extending up to the western boundary of the estate and across the more elevated eastern edge. In reality the Development will have little, if any, influence due to distance and intervening vegetation, which limits views.	No, there is unlikely to be any effect due to: • Very limited visibility shown on the ZTV; • Woodland and tree belts within and beyond the grounds, which provide further screening; • Distance (minimum 11.5 km from site).

The initial assessment identified one local landscape-related planning designation to have the potential to undergo a significant effect arising from the Development. This is the 'Area of Borough Landscape Value' as designated by BMBC.

The initial assessment found that the Peak District National Park has no potential to undergo significant effects from the presence of the Development. This is for a number of reasons including: the patchy nature of visibility indicated on the ZTV; the large-scale and relatively simple patterns of landform and land cover from which the Park gains its character and from where the Development will be seen; the expansive nature of views and the small part of available views that will be occupied by the three turbines; distance, which is mostly beyond 5 km and more settled characteristics evident in views from the edge of the Park, including the presence of Royd Moor Wind Farm. Similarly, none of the special interests have potential for a significant effect. This is for a number of reasons including lack of visibility due to landform, vegetation, and distance.

For each receptor where a significant effect is predicted an assessment is made below of its sensitivity to the Development. This is followed by a description of the changes to the receptor arising from the Development and an assessment of the magnitude of effect. Both the sensitivity of the baseline landscape and the magnitude of effect are assessed against the criteria given in Table 5.1, in section 5.2.3. From this, an assessment of the level of significance has been determined with reference to Table 5.3, in section 5.2.3.

The location of each receptor is shown on Figure 5.14 and is shown in relation to the ZTV on Figure 5.16.

Area of Borough Landscape Value

The 'Area of Borough Landscape Value' extends across most parts of the study area that lie within BMBC to the west of the M1 motorway, and includes the Development site. The designation encompasses three landscape character types: 'Settled Wooded Farmland', which covers about two thirds of the designation; 'Upland Farmland', which covers most of the remaining third; and a narrow swathe of 'Upland River Valley.' Viewpoints 1-11, 13 and 18 are all located in this designation.

This is a predominately low, rolling, rural landscape of irregular fields and narrow lanes bounded by hedgerows, hedgerow trees and small wooded areas. These combine to limit visibility and give the designation a more enclosed character. On more elevated and exposed areas to the west, hedgerows give way to gritstone walls and more open characteristics. The settlement pattern is based around small traditional towns and villages surrounded by scattered farms and hamlets, although larger urban areas exert an increasing influence around the eastern edge of the designation. Other detracting features include Royd Moor Wind Farm, modern farm buildings and overhead pylons, which follow a broadly east-west direction across the designation.

Sensitivity

The value of this local designation is attributed to the substantial areas of farmed countryside that remain intact and are generally free from the effects of urban encroachment. Some incongruous features do exist such as modern farm buildings, overhead pylons and Royd Moor Wind Farm, but the screening value afforded by vegetation limits their influence. As such, the sensitivity of the designation is judged to be *medium-high*.

Magnitude of Change

As noted in section 5.3.5, development within this designation will normally only be permitted where: '*There is no loss of valuable landscape features; the nature, form and design of the development is sympathetic to the area; and the overall character and appearance of the area is conserved and wherever possible enhanced.'*

The physical effects of the Development on the landscape fabric of the Development site have been identified in section 5.5.2. In summary, the effects are limited to the localised loss of agricultural land to accommodate the turbine bases, control building and access tracks. Further detailed assessment of the effects on landscape fabric has established this to be not significant.

The magnitude of change on the wider character of the designation will vary depending upon a number of factors, of which the degree of visibility obtained is the most important. The nature of the landform and relatively high woodland cover across parts of the designation ensures that many areas will gain no visibility of the Development and these areas will undergo a negligible change in character. Conversely, other areas will gain open and direct views of the Development and the magnitude of change here will be higher, with the Development having the potential for an immediately apparent influence on the landscape

character. Other areas will gain some visibility, but not sufficient to undergo a readily apparent alteration to the landscape and so the baseline characteristics of the designation will continue to prevail. This variety of influence can be seen in viewpoints 6 and 7. In viewpoint 7 the magnitude of change is assessed as being medium, as all turbines can be clearly seen at full height. However, at viewpoint 6, which is slightly closer to the Development, the magnitude of change is assessed as small as the turbines are less visible due to the intervening landform.

Where turbine visibility is obtained, the magnitude of change will depend on a number of other variables, of which distance is perhaps the most quantifiable. This can be seen particularly clearly in viewpoints 7 and 13 where a similar view of the turbines is obtained, however, because viewpoint 13 is more than twice the distance as viewpoint 7 the magnitude of change is assessed as small. A further factor that will have an influence on the magnitude of change is the presence of Royd Moor Wind Farm in available views, which will result in a lower magnitude of change than would otherwise be the case had the Development be seen in isolation.

Analysis of the ZTV and wirelines in conjunction with site visits indicates that where clear an unobstructed views of the turbines is obtained at distances up to about 3 km from the Development, the magnitude of change on landscape character is likely to be *medium* or *large* and will bring about an immediate change that will have a prevailing influence on its character. Beyond this radius, the magnitude of change will start to decrease as the distance increases and the turbines become increasingly smaller components in views of the landscape.

It is important to note that the 3 km radius is not a rigid boundary that divides levels of impact magnitude, but is an approximate distance at which the influence of the turbines on landscape character will begin to reduce. This assumes a clear and unobstructed view is obtained of the Development and there will be instances where this does not occur and a lower magnitude of change will result. Similarly there will be locations beyond this radius where local conditions result in a large magnitude of change. This makes it difficult to apply a single magnitude of change to the landscape designation, however, some general assumptions can be made:

Where clear, direct and unobstructed views of turbines are available at distances up to around 3 km radius, the magnitude of change is likely to be *large*, with the Development providing an immediately apparent effect on landscape character;
Where clear, direct and unobstructed views are not available within this radius the magnitude of change will vary between *medium* and *negligible* with the baseline landscape characteristics generally continuing to prevail; and
Beyond approximately 3 km radius, the magnitude of change will vary from *medium* where clear, direct and unobstructed views are available, to *negligible* where visibility is very limited.

Significance of Effect

The variation in magnitude of change ensures that the significance of the effect will also vary across the landscape designation. Where the magnitude of effect is *large* (within a 3 km radius) there will be a *significant* effect on the 'Area of Borough Landscape Value', with the Development resulting in a material change to the way in which the landscape character of the designation is perceived. This is due to a combination of factors that contribute to a large magnitude of change and the medium-high sensitivity of the landscape.

Elsewhere within this designation the effect will be not significant, as the Development will not have a material and definitive effect on landscape character. Some effect on the landscape character may be apparent, depending on local conditions, but the defining characteristics of the landscape designation will continue to prevail.

Summary of Operational Effects on Designated Areas and Special Interests

Of the three landscape-related planning designations initially assessed, significant effects were predicted for the BMBC 'Area of Borough Landscape Value', which covers the Development site. Further detailed assessment of the designation concluded that significant effects are likely to be similar to those identified for the 'Ingbirchworth' landscape character unit and limited to the north and east of the Development for a distance of about 3 km. Elsewhere within this designation the effects will generally be not significant due to a combination of lack of visibility, orientation of landform, screening vegetation, distance and the presence of Royd Moor Wind Farm in available views.

The other designations and special interests were found in the initial assessment to have no potential for significant effects. This is due to a variety of reasons including lack of visibility, orientation of the landform, screening by vegetation, distance and the presence of Royd Moor Wind Farm in available views.

5.5.5 Effects on Views

The assessment of visual effects considers changes that will arise to the composition and character of views within the study area and the effect this has on people. This includes residents, those experiencing the landscape (for example, walkers and hikers) and those simply passing through it as part of a journey.

The assessment of effects on views is divided into two parts. The first of these identifies the effects that the Development will have on the principal visual receptors within the 15 km radius study area. These are the main settlements, major roads, important rights of way and popular open spaces where people gather. Each of the principal receptors has been included in the assessment as a specific receptor.

The second part of the assessment broadly identifies effects on local views. The settlement pattern of the study area has resulted in a low-density but fairly continuous development of individual houses, small groups of houses, scattered farmsteads and local roads in the general vicinity of the Development. These visual receptors are too numerous to be included as specific receptors, but are nonetheless important to the overall assessment. Effects on these local views are drawn from the assessment of the principal receptors.

Effects on Principal Visual Receptors

The assessment of effects on the principal visual receptors has been determined by an initial sieving exercise with reference to Figures 5.17 and 5.18. These show the principal visual receptors identified in relation to the ZTV for the 15 km radius study area**.** Taking into account limitations associated with the ZTV, as described in section 5.2.6, an analysis of the visibility indicated has identified a short-list of settlements, routes, rights of way and visitor attractions with potential for significant effects for which further assessment is required. Analysis of the representative viewpoints and computer generated wirelines in conjunction with site visits has then been carried out for the short-listed receptors to identify the presence of screening features that might limit visibility and so determine likely levels of impact and significance.

The initial impression gained by the ZTV is one of sporadic visibility that is limited to the highest parts of the study area in the north, west and south and more generally across lower lying areas in the east. In contrast, the more densely populated valleys are shown to have little or no visibility. A more detailed assessment generally supports this impression, except that actual visibility across lower lying areas in the east is more limited than that indicated on the ZTV. This is due to a number of factors, of which screening by vegetation is the most important. Hedgerows, hedgerow trees and wooded areas are characteristic features of the eastern part of the study area and these combine to filter and screen views of the

Development along with screening by buildings and local landform. The orientation of buildings and landform on which they sit is also a limiting factor on visibility.

The full list of receptors considered and findings of the initial assessment are recorded in Table 5.8 below. Where relevant, the representative viewpoint that best illustrates the potential effect on a receptor is referred to. Settlements designated as Conservation Areas are abbreviated by the initials 'CA.'

Table 5.8 Predicted Effects on Principal Visual Receptors within 15 km Radius

Visual Receptor	Description of Predicted Effect	Further Assessment Required?
Main Settlements		
Barnsley CA	Barnsley lies about 11 km east of the site at its closest point. The ZTV indicates patchy theoretical visibility, but in reality this is will be limited to the built-up edges. Visibility will be further reduced by intervening landform and vegetation, as well as distance. The visible presence of Royd Moor Wind Farm will also have an influence on views. VP 20 is representative of views from here.	No, there may be some effect, but this will not be significant. Refer to VP 20 assessment for full description.
Carlecotes	Carlecotes lies some 3 km due west of the site and occupies rising ground that is orientated towards the site. Much of the settlement is screened by broadleaved woodland, however, Royd Moor Wind Farm is visible from a small number of properties on the edge of the village. The ZTV indicates theoretical visibility across the hamlet, but in reality this will be limited to those properties that presently have views of Royd Moor. The proposed turbines will be seen to the left of the existing wind farm and from slightly closer range. VP 10 shows representative view from here.	No, there is likely to be some effect, but this will not be significant. Refer to VP 10 assessment for full description.
Cawthorne CA	The village lies 7.5 km to the east of the site and is shown on the ZTV to have theoretical visibility. In reality views are precluded by landform and vegetation.	No, due to lack of visibility.
Catshaw	One of the closest hamlets to the site, lying 1.2 km to the west, but with visibility largely curtailed by steeply rising landform. Royd Moor Wind Farm is just visible from some properties, albeit mostly from hub height. The ZTV indicates theoretical visibility, but this will be limited to the hubs and blades, which will be seen behind those of Royd Moor and appear as part of the same group. VP 4 represents the view.	No, there may be some effect, but this will not be significant. Refer to VP 4 assessment for full description.
Clayton West	Clayton West lies 7 km north-east of the site within the Dearne valley. The ZTV indicates theoretical visibility along its western edge, but in reality views will be limited by distance, the low-	No, there may be some effect, but this will not be significant due to: • Low-lying valley landform, which limits long views; • Intervening buildings and vegetation,

	lying valley landform and by intervening buildings and vegetation.	which further limit views; • Distance (min. 7 km from the site).
Crow Edge	One of the closest hamlets to the site lying 1.5 km to the west, but with visibility largely curtailed by steeply rising landform. Royd Moor Wind Farm is visible from some properties where they are orientated towards the site with unobstructed views, but the turbines are mostly seen from hub height. The ZTV indicates theoretical visibility across the hamlet, but in reality this will be limited to those properties that presently have views of Royd Moor. The proposed turbines will be seen from hub height, slightly to the left of the existing wind farm and from slightly closer range. VP 6 shows representative view from here.	No, there is likely be some effect, but this will not be significant. Refer to VP 6 assessment for full description.
Denby Dale	Denby Dale lies 2 km to the north-east of the site. The ZTV shows almost no visibility from the valley settlement.	No, due to lack of visibility.
Dodworth	Dodworth lies 10 km due east of the site. The ZTV shows almost no visibility from the town.	No, due to lack of visibility.
Emley	Emley lies 5 km north-east of the site on a local ridgeline where houses on the southern edge may gain some visibility. VP 16 is representative of views from this location.	No, there may be some effect, but this will not be significant. Refer to VP 16 assessment for full description.
Flockton	Flockton lies 10.5 km north-east of the site. The ZTV shows almost no visibility from the village.	No, due to lack of visibility.
Grange Moor	Grange Moor occupies a local ridgeline 10.5 km north of the site and is shown on the ZTV to have continuous theoretical visibility. In reality, views will be restricted to the southern built-up edge and further limited by intervening vegetation and distance. In addition, Emley Moor mast dominates views in the general direction of the site. The presence of Royd Moor Wind Farm in available views will also reduce the visual influence of the proposed turbines.	No, there may be some effect, but this will not be significant due to: • Screening by buildings, which prevents visibility from within the settlement; • Intervening vegetation, which further limits views; • Distance (min. 10.5 km from the site); • Other built influences on views.
High Burton	High Burton occupies an elevated position 8 km north of the site and is shown on the ZTV to have continuous theoretical visibility. In reality, views will be restricted to the southern built-up edge and further limited by intervening vegetation and distance. In addition, Emley Moor mast dominates views in the general direction of the site. The visible presence of Royd Moor Wind Farm in available views will also reduce the visual influence of the proposed turbines.	No, there may be some effect, but this will not be significant due to: • Screening by buildings, which prevents visibility from within the settlement; • Intervening vegetation, which further limits views; • Distance (min. 8 km from the site); • Other built influences on views.
High Flatts CA	One of the closest hamlets to the site, lying 2 km due north, but mostly occupying sloping landform orientated	No, there may be some effect but this will not be significant due to: • Limited visibility as shown on the ZTV;

	away from the site. A small number of properties on the southern edge have clear and unobstructed views of Royd Moor Wind Farm. The ZTV shows some theoretical visibility on the southern fringe where the proposed turbines will be seen in front to Royd Moor at slightly closer distance.	• Small number of turbines proposed; • Presence of existing operational wind farm in available views.
Holmfirth CA	Holmfirth lies about 6.5 km north-west of the site. The ZTV shows no visibility from the valley settlement. This includes the outlying valley settlements of Hepworth (CA), Holmbridge, Netherthong (CA), Thongsbridge, Upperthong and Wooldale (CA).	No, due to lack of visibility.
Honley CA	Honley lies 9.5 km north-west of the site. The ZTV shows no visibility from the valley settlement.	No, due to lack of visibility.
Hoylandswaine CA	Hoylandswaine lies 5 km due east of the site where it occupies an east-facing slope that is orientated away from the site. The ZTV indicates limited theoretical visibility along the western edge of the village, but there is in fact no visibility from here.	No, due to lack of visibility.
Huddersfield	The centre of Huddersfield lies some 12 km north-west of the site. The ZTV shows virtually no visibility from the valley settlement.	No, due to lack of visibility.
Ingbirchworth CA	**The village occupies a minor valley below the Development site that has been dammed to create a small reservoir. The western edge of the village is just 1.5 km from the nearest turbine but sits below the dam in well-wooded surroundings. The ZTV shows theoretical visibility, but in reality views will only be obtained from properties adjoining the A629 and to the north of the reservoir where the landform is more elevated with less screening vegetation. The visible presence of Royd Moor Wind Farm will also have an influence on views. VP 7 shows representative views from here.**	**Yes, parts of the village with visibility may be significantly affected by views of the additional turbines.**
Kexborough	Kexborough occupies locally high ground beside the M1, 10.5 km east of the site. The ZTV shows theoretical visibility, but in reality views will be largely curtailed by local landform and woodland immediately to the west associated with Cawthorne Park. Some properties on the southern built-up edge are likely to gain some oblique views, but visibility in general will be dominated by proximity to the motorway. VP 20 shows representative views from here.	No, there may be some effect, but this will not be significant. Refer to VP 20 assessment for full description.
Kirkheaton	Kirkheaton lies 13 km north of the site. The ZTV shows continuous visibility, but in reality visibility will be limited to	No, there may be some effect, but this will not be significant due to: • Screening by buildings, which prevents

	the southern built-up edge and further restricted by distance and intervening vegetation. Emley Moor mast and Royd Moor Wind Farm will also influence views. Vp 22 represents the view from here.	visibility from within the settlement; • Intervening vegetation, which further limits views; • Distance (min. 13 km from the site); • Other built influences on views.
Langsett CA	Langsett lies 4.5 km south of the site. The ZTV shows no visibility from the valley settlement.	No, due to lack of visibility.
Maythorn	One of the closest hamlets to the site occupying the crest of a local ridgeline 1.5 km north-west of the site with properties orientated towards the windfarm. The ZTV shows theoretical visibility, but in reality this is limited to hub height with the proposed turbines seen alongside those of Royd Moor. VP 5 shows representative views from here.	No, there may be some effect, but this will not be significant. Refer to VP 5 assessment for full description.
Meltham CA	Meltham lies 11.5 km to the north-west of the site. The ZTV shows no visibility from the valley settlement.	No, due to lack of visibility.
Middlestown	Midlestown lies 12.5 km north-east of the site. The ZTV shows virtually no visibility from here.	No, due to lack of visibility.
Millhouse Green	Millhouse Green lies about 1.5 km due south of the site within a section of the Don valley that is slightly more open. The ZTV shows some theoretical visibility, but in reality views are largely curtailed by the valley sides. Royd Moor Wind Farm is visible from the northern built-up edge, but only from hub height. The proposed turbines will be seen behind those of Royd Moor.	No, there may be some effect, but this will not be significant due to: • Low-lying valley landform, which limits long views; • Screening by buildings, which further limits visibility from within the settlement; • Other built influences on views.
Netherton CA	Netherton lies 12.5 km north-east of the site. The ZTV shows almost no visibility from the village.	No, due to lack of visibility.
Penistone CA	Penistone sits within a deeply incised section of the Don river valley, 4 km south-east of the site. The ZTV shows some theoretical visibility from north facing slopes, but in reality the majority of views are curtailed by buildings and vegetation. The visible presence of Royd Moor Wind Farm also influences views. VP 12 shows representative views from here.	No, there may be some effect, but this will not be significant. Refer to VP 12 assessment for detail description.
Shelley	Shelley occupies rising ground 6 km north of the site and is shown on the ZTV to have continuous theoretical visibility. In reality, views will be mostly restricted to the southern built-up edge and further limited by intervening vegetation and distance.	No, there may be some effect, but this will not be significant due to: • Screening by buildings, which prevents visibility from within the settlement; • Intervening vegetation, which further limits views; • Distance (min. 6 km from the site).
Shepley CA	Shepley lies 5 km to the north at the base of the scarp slope on which the site sits. The ZTV shows no visibility from the village.	No, due to lack of visibility.
Silkstone	Silkstone lies 8 km due east of the site. The ZTV shows almost no visibility from the village.	No, due to lack of visibility.
Silkstone	Silkstone Common lies 8.5 km east of	No, due to lack of visibility.

Common	the site. The ZTV shows almost no visibility from the village.	
Skelmanthorpe CA	Skelmanthorpe lies 5.5 km north-east of the site where it occupies a north-facing slope and is mostly orientated away from the site. The ZTV indicates some visibility along the southern edge, but in reality most views will be limited by intervening vegetation and landform. The visible presence of Royd Moor Wind Farm also influences views.	No, there may be some effect, but this will not be significant due to: • Screening by buildings, which prevents visibility from within the settlement; • Intervening vegetation and landform, which further limits visibility; • Other built influences on views.
Stocksbridge	Stocksbridge lies 7.5 km south-east of the site. The ZTV shows virtually no visibility from the valley settlement.	No, due to lack of visibility.
Thornhill Edge	Thornhill Edge lies 13.5 km north-east of the site. The ZTV shows almost no visibility from the village.	No, due to lack of visibility.
Thurgoland	Thurgoland lies 8.5 km south-east of the site. The ZTV shows virtually no visibility from within the village. VP 18 shows representative views from the edge of the village.	No, there may be some effect, but this will not be significant. Refer to VP 18 assessment for detail description.
Thurlstone CA	Thurlstone lies 2.5 km south of the site, within a section of the Don valley where the valley sides are orientated away from the site. The ZTV shows some theoretical visibility, but in reality views are all but curtailed by the orientation of the settlement and the wooded nature of the steeper slopes. For a small number of properties on the northern built-up edge, Royd Moor Wind Farm is visible from hub height and influences views.	No, there may be some effect, but this will not be significant due to: • Orientation of the landform on which the settlement is built; • Screening by intervening landform, buildings and vegetation; • Other built influences on views.
Upper Denby CA	Upper Denby occupies a local ridgeline 2.5 km north-east of the site, with most of the settlement positioned over the ridgeline and orientated away from the site. A small handful of properties on the southern edge do have some visibility of Royd Moor Wind Farm. The ZTV shows continuous theoretical visibility, but in reality this will be limited to those properties on the southern edge that already have views of the existing wind farm.	No, there may be some effect, but this will not be significant due to: • Orientation of the landform on which the settlement is built; • Screening by buildings, which prevents visibility from within the settlement; • Other built influences on views.
Victoria	Victoria lies 2.5 km north-west of the site, just below the crest of a local ridgeline on which the site sits. A number of properties are orientated towards the site and presently have views of Royd Moor Wind Farm, albeit from hug height. The ZTV shows continuous theoretical visibility, but in reality this will be limited to those properties that already have views of the existing wind farm.	No, there may be some effect, but this will not be significant, due to: • Screening by intervening landform and buildings; • Other built influences on views.
West Bretton CA	West Bretton lies 11.5 km north-east of the site. The ZTV shows theoretical visibility, but there is in fact no visibility from here due to intervening landform and woodland associated with Bretton Country Park, which adjoins the village.	No, due to lack of visibility.

Wortley CA	Wortley lies 11 km south-east of the site. The ZTV shows some theoretical visibility, but in reality views are precluded by local landform and screening vegetation.	No, due to lack of visibility.
Major Roads		
M1 Motorway 17 km section in study area	The motorway just encroaches into the far east of the study area between junctions 36 and 39. The ZTV shows patchy theoretical visibility along much of this section, but for northbound travellers views are curtailed by vegetation, local landform and where the route passes in cutting. For southbound travellers some views are available between J39 J38, but these tend to be glimpsed and fleeting. Between J38 and J37 greater visibility is possible from a 1-2 km section where the motorway crosses the River Dearne on a low embankment, however, the site is 10 km distant and the view is at an oblique angle to the viewer. The presence of Royd Moor Wind Farm will also have an influence on views. VP 20 represents views from here.	No, there may be some effect, but this will not be significant due to: • Short sections of visibility; • Further screening by vegetation, landform and engineering earthworks; • Acute angle of views; • Moving nature of the viewer; • Distance (minimum 10 km from site); • Other built influences on views.
A616 32 km section in study area	The A616 runs through the central part of the study area in a NW to SE direction, passing to the west of the site. The ZTV shows continuous theoretical visibility for a short 5 km section between Victoria and the roundabout junction with the A628. Here the route emerges from Holme valley in the north and crosses a ridge of high ground, passing within 1.5-4 km of the site, before continuing south within another valley corridor. This section of road is largely devoid of vegetation and the site is clearly visible as part of a higher ridgeline that runs parallel with it. Royd Moor Wind Farm occupies part of this ridgeline and dominates views from the road, albeit views are generally angled. The proposed turbines will generally be seen behind those of Royd Moor. VP 6 represents views from here.	No, there is likely to be some effect, but this will not be significant due to: • Limited visibility as shown on the ZTV; • Further screening by landform; • Acute angle of views; • Moving nature of the viewer; • Other built influences on views.
A628 30 km section in study area	The A628 runs east to west through the study area from J37 of the M1, passing through Penistone to the south of the site. The ZTV indicates patchy visibility from the motorway to Penistone, but in reality local landform and vegetation curtails all views until just east of the town at the roundabout junction with the A629 (See VP 13). Here the proposed turbines are seen briefly directly in front of Royd Moor Wind Farm before the traveller descends quickly into the Don valley and leaves the site behind. The road continues through a deeply incised	No, there may be some effect, but this will not be significant due to: • Short sections of visibility; • Further screening by landform; • Angled nature of views; • Moving nature of the viewer; • Other built influences on views.

	section of the valley and it is not until it reaches Fulshaw, a kilometre or so west Penistone, that the site becomes visible again. However, at this point, the traveller has largely passed the site and the effect ceases. For eastbound travellers, the site comes into view at Fidler's Green and remains in views until reaching Millhouse Green, a distance of about 7 km (See VPs 14 and 11). Royd Moor Wind Farm is also visible from along this section and has a strong influence on views. The proposed turbines will generally be seen behind those of Royd Moor.	
A629 27 km section in study area	The A629 runs through the central part of the study area in a NW to SE direction, broadly parallel with the A616, but passing to the east of the site. The ZTV shows near continuous theoretical visibility from High Flatts to Wortley, a distance of about 13 km, although in reality there is no visibility beyond Thurgoland (10 km max). Visibility commences at High Flatts where the route emerges from Holme valley on to a gently dipping scarp slope and passes to within 1.5 km of the site at Ingbirchworth (see Vp 7) as it heads south towards the roundabout junction with the A628 (5 km). This section of road is largely devoid of vegetation and the site is clearly visible on the right at a slightly higher elevation. Royd Moor Wind Farm is particularly noticeable in views from along this section and will have a mitigating effect on the proposed turbines, which will generally be seen directly in front of the existing wind farm. Beyond the roundabout the site passes behind the traveller and out of site. From Thurgoland, travelling in the opposite direction, the site comes in and out of view as the road dips and rises with the undulating landform until reaching the roundabout junction with the A628. Beyond the roundabout the proposed turbines remain visible as far as High Flatts.	No, there is likely be some effect, but this will not be significant due to: • Short sections of visibility; • Further intermittent screening by landform; • Angled nature of much of the visibility; • Moving nature of the viewer; • Other built influences on views.
A635 31 km section in study area	The A635 runs east to west across the study area broadly following a route parallel with the A628, but passing to the north of the site through Holmfirth. The ZTV shows patchy visibility for westbound travellers between the eastern edge of the study area and the junction with the A629, a distance of about 15 km. In reality this is even more limited due to screening vegetation and the low-lying nature of the landform. Beyond the A629, there is no visibility as the traveller quickly	No, there may be some effect, but this will not be significant due to: • Shorts sections of visibility; • Further screening by landform, vegetation and buildings; • Angled nature of views; • Moving nature of the viewer; • Other built influences on views.

	descends into Holme valley to Holmfirth and leaves the site behind. For eastbound travellers, the site comes into view at Wessenden Head (see Vp 23), some 13 km to the north-west, from where the route descends more gradually into Holme valley over a distance of about 5 km. From this section of route Royd Moor Wind Farm has a visible presence and will influence views. From Holmfirth, the route rises back out of the valley but views remain curtailed by landform until the traveller has passed the site.	
A636 11 km section in study area	The A636 links the A635 at Denby Dale with the M1 motorway at J39. The ZTV shows near continuous theoretical visibility from just north of Denby Dale as far as the roundabout junction with the A637, a distance of about 7 km. This section of route follows a narrowly incised, well-wooded and heavily populated valley. In reality, visibility is limited to a 1-2 km section in the vicinity of the A637 junction and only then as brief views for traveller's heading south towards Denby where the site lies directly ahead. The closest views are gained from around 10km away. The presence of Royd Moor Wind Farm in these views will reduce the influence of the proposed turbines.	No, there may be some very limited effect, but this will not be significant due to: • Shorts sections of visibility; • Further screening by local landform, buildings and vegetation; • Moving nature of the viewer; • Distance (minimum 10 km from site); • Other built influences on views.
A637 14 km section in study area	The A637 crosses the north-eastern part of the study area and links the A642 at Grange Moor with Barnsley. The ZTV shows near continuous theoretical visibility for the section between the A642 junction and J38 of the M1, a distance of about 8 km. However, local landform and intervening vegetation will have a limiting effect on views. In addition, the closest views gained are at a distance of 11 km and the views are at an oblique angle to the viewer. The presence of Emley Moor mast and Royd Moor Wind Farm in available views will also reduce the influence of the proposed turbines. Beyond J38, the ZTV shows patchy visibility and in reality this is even more limited by local landform and vegetation. There will be little, if any visibility, between the motorway junction and Barnsley.	No, there may be some effect, but this will not be significant due to: • Shorts sections of visibility; • Further screening by local landform and vegetation; • Angled nature of views; • Moving nature of the viewer • Distance (minimum 11 km from site); • Other built influences on views.
A642 14 km section in study area	The A642 crosses the northern part of the study area where it links Huddersfield with Wakefield. The ZTV shows some patchy theoretical visibility between Grange Moor and the built-up edge of Huddersfield, a distance of about 5 km. However, local landform, buildings and intervening vegetation will have a limiting effect on views	No, there may be some effect, but this will not be significant due to: • Shorts sections of visibility; • Further screening and filtering by local landform and vegetation; • Angled nature of views; • Moving nature of the viewer; • Distance (minimum 10 km from site); • Other built influences on views.

	generally. In addition, the closest views gained are at a distance of 10 km and the views are at an oblique angle to the viewer. The presence of Emley Moor mast and Royd Moor Wind Farm will also and influence on views.	
A6024 15 km section in study area	The A6024 crosses the western part of the study area where it links the A628 with Holmfirth. The ZTV indicates one short section of theoretical visibility in the vicinity of Holme Moss viewing area, extending to no more than 1km distance (See VP 19). This is some 11 km from the site where the view is also at an oblique angle to the traveller. Royd Moor Wind Farm is also visible from here and will reduce the influence of the proposed turbines.	No, there may be some effect, but this will not be significant due to: • Very limited visibility shown on ZTV; • Angled nature of views; • Moving nature of the viewer; • Distance (min. 11 km from the site); • Other built influences on views.
Long Distance Footpaths		
Barnsley Boundary Walk **50 km section in study area**	**This route closely follows the boundaries of BMBC and passes to within 400 m of the Development at its closest point west of Ingbirchworth. Vps 1 and 8 represent close views from this route.**	**Yes, due to high visibility and proximity to the site.**
Dearne Way 20 km section in study area	This route closely follows the course of the River Dearne, from its source near Upper Cumberworth, 5 km north of the site, to Barnsley on the eastern edge of the study area via Bretton Country Park. The ZTV shows patchy visibility between Upper Cumberworth and the Country Park and, in reality, visibility is further limited by screening vegetation and the low-lying valley landform. Beyond the Park, the ZTV indicates no visibility until reaching the built-up edge of Barnsley 12 km away. However, the combination of distance, low-lying valley landform and intervening vegetation curtails most views. The presence of Royd Moor Wind Farm also influences views.	No, there may be some effect, but this will not be significant due to: • Patchy visibility as shown on the ZTV; • Low-lying valley landform and vegetation along the route, which provides further screening; • Distance (min. 5 km from the site). • Other built influences on views.
Kirklees Way 35 km section in study area	This route runs broadly north-east to south-west across the study area, passing to the north of the site where it comes to within 3.5 km at its closest point at Hepworth. The ZTV shows patchy visibility at distances beyond 5 km and in reality this is further limited by local screening vegetation along the route. Emley Moor mast also has a strong influence on views from the north.	No, there may be some effect, but this will not be significant due to: • Limited visibility as shown on ZTV; • Further screening by vegetation along the route; • Distance (min. 5 km from the site). • Other built influences on views.
Pennine Way 19 km section in study area	This route just encroaches into the far west of the study area, passing to within 12.5 km of the site at its closest point in the vicinity of Black Hill. The ZTV shows theoretical visibility from this location for a distance of 1-2 km. Royd Moor Wind Farm is also visible from here and, together with distance	No, there may be some effect, but this will not be significant due to: • Very limited visibility shown on ZTV; • Large-scale and simple patterns of landform and land cover in which the proposed turbines will be seen; • Small part of the available view occupied by the three turbines;

	and the expansive nature of views obtained, this will reduce the influence of the proposed turbines. Some additional visibility is indicated in the vicinity of Wain Stones, about 14 km south-west of the site, but this is of a very limited nature (See VP 24).	• Distance (min. 12.5 km from the site); • Other built influences on views.
Trans Pennine Way 40 km section in study area	This route runs east to west across the study area, passing to the south of the site where it comes to within 2 km at its closest point west of Penistone. The ZTV shows patchy visibility from the eastern edge of the study area as far as Penistone, where the route mostly follows a disused railway line across low-lying terrain. This, in combination with screening vegetation, means that very few long views are obtained of the site. At Penistone the route continues along the dismantled railway through the Don valley where all views are curtailed. West of the town, the ZTV indicates continuous visibility as far as the crossing of the A628 near Fidler's Green, a distance of about 7 km. However, much of this section continues to follow a dismantled railway line where tall vegetation lines the route and limits views to occasional breaks (See VP 9). Only where the route departs from the railway line on to the moors are views possible where the proposed turbines are seen in close association with Royd Moor Wind Farm. The closest views are gained at a distance of about 3 km.	No, there may be some effect, but this will not be significant due to: • Short sections with visibility; • Mostly low lying and enclosed landform through which the route passes, which limits long views; • Further screening by trackside vegetation; • Other built influences on views.
Major Visitor Attractions		
Bretton Country Park and Sculpture Park	Bretton Country Park lies 10.5 km north-east of the site within a shallow east-west orientated valley. The ZTV shows theoretical visibility across most of the Park and adjacent Sculpture Park. In reality long views are precluded by a combination of landform and screening vegetation both within the Park and beyond. Some glimpsed views of Royd Moor Wind Farm are possible where gaps in the vegetation occur. Vp 21 represents views from the Park.	No, there may be some effect but this will not be significant due to: • Low-lying landform, which limits long views; • Woodland and tree belts within and beyond the Park, which provide further screening; • Distance (min. 10.5 km from the site); • Other built influences on the landscape.
Cannon Hall Country Park	Cannon Hall Country Park lies 7 km north-east of the site. The ZTV shows continuous theoretical visibility, but in reality there are no views from the Park due to a combination of the low-lying landform and screening vegetation both within the Park and beyond.	No, there is unlikely to be any effect due to: • Low-lying landform, which limits long views; • Woodland and tree belts within and beyond the Park, which provide further screening; • Distance (min. 7 km from the site).
Wentworth Castle	Wentworth Castle lies 11 km east of the site. Principal visitor attractions include the restored formal gardens and park, with tea rooms and shop in converted outbuildings. Stainborough	No, there is unlikely to be any effect due to: • Very limited visibility shown on ZTV; • Woodland and tree belts within the grounds and beyond, which provide

	Castle is also located within the grounds from which panoramic views are possible from the restored tower. The ZTV shows limited theoretical visibility extending up to the western boundary of the estate, however, dense shelterbelts along this boundary curtail all views towards the site. This includes views from Stainborough Castle in the direction of the site.	further screening; • Distance (min. 11 km from the site).
Wortley Hall	Wortley Hall lies 11.5 km south-east of the site. Principal visitor attractions are the formal gardens and park. The ZTV shows limited theoretical visibility extending up to the western boundary of the estate and across the more elevated eastern edge. In reality, the site will have little, if any, influence due to distance and intervening vegetation, which limits views.	No, there is unlikely to be any effect, due to: • Very limited visibility shown on ZTV; • Woodland and tree belts within and beyond the grounds, which provide further screening; • Distance (min 11.5 km from the site).

A total of 40 settlements are included as principal receptors in the initial assessment, ranging from extensive urban areas of Barnsley and Huddersfield to rural villages and hamlets. Of these, just one settlement is predicted to undergo significant effects on views, namely Ingbirchworth. The initial assessment found that none of the other settlements have potential to undergo significant effects. This is for a number of reasons including: limited theoretical visibility; screening by vegetation, landform and buildings; orientation of landform and settlements; distance and presence of Royd Moor Wind Farm in views. It is of particular relevance that many of the settlements are historically located in low-lying areas or enclosed valleys from where outward views towards the wind farm site are restricted.

Nine roads are included as principal receptors: the A616, A628, A629, A635, A636, A637, A642, A6024 and M1 motorway. Effects are predicted for most of these roads, in particular the A616 and A629, but these are not judged to be significant due to a combination of factors including: short sections with visibility, screening vegetation, distance, angle of view, moving nature of the viewer and presence of Royd Moor Wind Farm in available views.

Five long distance footpaths are also included as principal receptors: the Barnsley Boundary Walk, Dearne Way, Kirklees Way, Pennine Way and the Trans Pennine Trail. Of these, a section of the Barnsley Boundary Walk has the potential to undergo significant effects where it passes in close proximity to the Development in the vicinity of Ingbirchworth. Effects on the other routes are not predicted to be significant due to limited theoretical visibility, expansive nature of certain views, screening vegetation, landform, distance and presence of Royd Moor Wind Farm in available views.

Four visitor attractions are included as principal receptors: Bretton Country Park and Sculpture Park, Cannon Hall Country Park, Wentworth Castle and Wortley Hall. Effects on these attractions are predicted to be non existent or not significant due to a combination of factors that restrict visibility, primarily distance in conjunction with intervening landform and screening vegetation.

For each receptor where a potentially significant effect is predicted an assessment is made below of its sensitivity to the Development. This is followed by a description of the changes to the views arising from the Development and an assessment of the magnitude of effect. Both the sensitivity of the baseline view and the magnitude of effect are assessed against the criteria given in Table 5.2, in section 5.2.3. From this, an assessment of the level of significance has been determined with reference to Table 5.3, in section 5.2.3.

The location of each receptor is shown on Figures 5.10 and 5.11 and is shown in relation to the ZTV on Figures 5.17 and 5.18.

Ingbirchworth

This village lies approximately 1.5 km to the east of the Development at its closest point. The view gained from here is represented in viewpoint 7.

Sensitivity

The village has a *high* sensitivity to change due to its residential nature. Ingbirchworth is also a designated Conservation Area, which implies a heightened sensitivity to change.

Magnitude of Effect

The magnitude of effect will vary throughout the village depending on visibility gained of the Development. Many properties have very limited or no visibility of the proposed turbines due to the screening effects of a local landform, vegetation and intervening buildings. Thus for these properties there will either be *no change* or a *negligible* to *small* magnitude of effect.

The village has, however, extended along the A629 and northwards onto a local crest of higher ground where properties do have clear and unobstructed views of the Development on rising ground. From these locations, houses on the built-up edge will gain visibility of all three turbines, mostly at full height, as indicated in the viewpoint. This would normally result in a large magnitude of effect due to the proximity of the Development, direct nature of the outlook, orientation of the views and relatively large proportion of the available view occupied by the proposed turbines. The scale, colour, vertical form and movement of the turbines would provide a notable change to the baseline view that would have an immediately apparent and prevailing influence.

However, the established presence of Royd Moor Wind Farm in many of these views will have a mitigating effect. The proposed turbines will be seen in close proximity to Royd Moor where they will read as part of a slightly larger group, albeit the proposed turbines will be seen in front of the existing wind farm. As such the magnitude of effect for these properties is judged to be *medium.*

Significance of Effect

The effect will vary according to the magnitude of effect. Many properties will undergo no effect due to a lack of visibility. Some properties may undergo some change but the effect will be not significant due to limited visibility. For those properties on the built-up edge of the village that do gain clear and unobstructed views of the proposed turbines in conjunction with Royd Moor Wind Farm the effect will be *moderate,* and thus *significant*. This is due to the high sensitivity of the receptor and the medium magnitude of effect.

Barnsley Boundary Walk

Barnsley Boundary Walk roughly follows the boundary of BMBC where it passes through a variety of landscapes ranging from open moorland in the far west, the historic woods of Wharncliffe in the south, the landscaped parklands on Bretton, Cannon Hall and Wortley, and the wetlands of the Lower Dearne in the north of the Borough. Overall, the route covers a distance of 117 km of which approximately 50 km falls within the study area. At its closest point, west of Ingbirchworth, the route passes to within 400 m of the nearest turbine. Viewpoints 1, 2, 7, 8, 14 and 21 represent views from this route.

Sensitivity

Barnsley Boundary Walk has a high importance due to its recognition as a long distance walking route. It also has a high value due to the designated areas through which it passes. Furthermore, people using this route will have an awareness of their surroundings and will be focussed on the landscape through which they are passing. These factors give it a *high* sensitivity.

Magnitude of Effect

The magnitude of effect will vary along the route depending on visibility gained of the proposed turbines. The magnitude of effect will also vary depending on the direction of travel, so the two principal directions of travel (southbound and westbound) are assessed separately.

Southbound

Starting at the northern edge of the study area, in the vicinity of Bretton Country Park, and heading south towards Cannon Hall Country Park, the ZTV indicates patchy visibility at around 11 km from the Development. The view from here is shown on viewpoint 21, which is assessed to have a *very small* magnitude of effect due to the limited effect that the Development will have.

From Cannon Hall Country Park the route turns westward and heads towards Upper Denby. The ZTV continues to show patchy theoretical visibility and although some views will be possible orientated in the direction of the Development, visibility will continue to be limited by vegetation and landform. The presence of Royd Moor Wind Farm in available views will also have a mitigating effect. The magnitude of effect for this section is judged to be *very small* to *small.*

Beyond Upper Denby a higher magnitude of effect will become apparent as the route heads south-west towards Ingbirchworth from a distance of about 3 km. Vegetation along this section is generally absent so affording greater visibility, whilst Royd Moor Wind Farm presently provides one of the defining influences in views from this direction. Although viewpoint 7 is not located on the Barnsley Boundary Way, the view gained from the route as it reaches Ingbirchworth, 1.5 km east of the wind farm site, is similar. The magnitude of effect here is judged to be *medium,* which is lower than would otherwise be the case but for the presence of Royd Moor Wind Farm. However, the magnitude of effect will increase to a higher level as the footpath draws closer to the Development. Viewpoint 1 shows a *large* magnitude of effect from the footpath, where it passes to within 400 m of the nearest turbine at its closest to point. The route then turns northwards to follow the western edge of Ingbirchworth reservoir, at which point the Development is behind the walker and the effect ceases.

Further intermittent views are possible as the footpath turns westward again for a short distance in the vicinity of Low Common, before descending into Holme Valley (refer viewpoint 8). The footpath re-emerges from the valley south of Hepworth and continues southwards across Thurlstone Moor. Here it generally follows the local road network to Dunford within an enclosed valley from which views are curtailed. The route then rises up the head of the valley to one of the highest points on the moor at Fidler's Green (460 m AOD). The view obtained from here is shown on viewpoint 14, which is 6.5 km south-west of the Development, and is assessed to have a *small* magnitude of effect at most.

From Fidler's Green the footpath continues north-east for a short distance, closely following the route of the A628, before turning eastwards and descending towards Langsett where upon the Development is behind the walker and the effect ceases.

Westbound

For walkers heading west, there is a short stretch of visibility indicated on the ZTV close to the edge of the study area in the vicinity of Wharncliffe Crags, around 11 km from the Development. There is likely to be some visibility from here due to the elevation of the route (226 m AOD), but the magnitude of effect is assessed to be *negligible* to *very small* due to the distance. There is then a long section with no visibility, as shown on the ZTV, between Wharncliffe Crags and Langsett where the footpath follows the route of the A616 within an enclosed valley.

West of Langsett the route rises up Langsett Moor to join the A628, some 4.5 km south of the Development at its closest point, and visibility commences again, albeit briefly, with views obtained that are similar to viewpoint 14. The route continues south-west for a short distance following the A628 before heading north at Fidler's Green. From here visibility is once again curtailed as the route descends towards Dunford and into the Holme valley.

The route re-emerges from Holme valley to the east of Hepworth in the vicinity of Low Common, some 2.5 km north-west of the Development. Views from here are similar to that seen in viewpoint 8, which is assessed to have a *medium* magnitude of effect. Visibility will continue as the route heads south-east towards the Development, with the magnitude of effect increasing to *large*. This effect will continue until the route reaches the Development, at which point it turns east towards Ingbirchworth and the effect ceases.

Significance of Effect

The effect on the Barnsley Boundary Walk will vary according to the magnitude of effect, which varies along the route.

The majority of the route will undergo a not significant effect due to limited visibility and the resultant limited magnitude of effect. For sections of the route that lie closer to the Development the effect will be significant due to the increased magnitude of effect and the high sensitivity of the route. For walkers approaching the Development from the north, the significant effect will start as the path emerges from Upper Denby, about 3 km from the site, and finish as it turns north to follow the edge of Ingbirchworth reservoir, a distance of about 5 km. For walkers approaching the Development from the west, the significant effect will start where the route rises out of Holme valley in the vicinity of Low Common, about 2.5 km north-west of the Development, and finish where it turns abruptly east and heads towards Ingbirchworth, a distance of about 4 km. This is due to the high sensitivity of the receptor and the medium to large magnitude of effect.

Effects on Local Views

As well as identifying significant effects on principal visual receptors, the assessment of visual effects also identifies effects on local views. This part of the assessment focuses on the area in close proximity to the Development where significant visual effects are most likely to occur. The assessment of effects on local views does not assess effects on specific properties, but draws conclusions as to the likely effects that the Development will have on views from within this area.

Effects on local views have been identified through an analysis of the ZTVs and representative viewpoints (Table 5.10), along with site survey of the area where significant effects are most likely to occur. The ZTVs, viewpoint assessment and site survey indicate this area to be contained within a radius of approximately 3 km from the Development. Within this radius, the proximity of the proposed turbines to the viewer and the contrast of their scale, form, colour and movement with the visual setting mean they will generally have a material effect where clear, open and direct visibility is obtained.

There will, however, be instances within the 3 km radius where effects are not significant. In particular the sensitivity of the receptor will be a determining factor. In terms of visual amenity, occupiers of residential properties and users of public rights of way are considered to be high sensitivity receptors, whilst road users are judged to be low sensitivity as the nature of views obtained is a transient one. So whilst a view from a road may be similar to that obtained from a nearby house, the effect on the road user may be not significant due to its lower sensitivity, whereas for the residential occupier the effect may be significant due to its higher sensitivity.

In addition to the sensitivity of the receptor, the limited magnitude of effect that it undergoes can also result in effects within the 3 km radius being judged as not significant. Within the study area, the most frequent factor that limits magnitude of effect is screening by local landform, vegetation and buildings, none of which register on the ZTV. In particular, hedgerows, trees and woodland are key characteristic features of parts of the study area and help to filter and screen potential views towards the Development.

Viewpoints that reflect a reduction in magnitude due to the screening effects of local land form or vegetation are not normally included in the assessment, as they do not represent the full potential visibility of the Development. However, the site survey has identified many locations within and beyond the 3 km radius where landform or vegetation has reduced visibility of the Development leading to a reduction in magnitude and an overall judgment of not significant.

Magnitude of effect within the 3 km radius may also be reduced by the orientation of the receptor relative to the Development. If the principal outlook from a house is orientated away from the Development then the magnitude of effect will usually be less than if the outlook is directly towards the Development. Similarly the orientation of landform is also important. If a house or footpath is located on ground that sits below the Development and faces away from it then the magnitude of effect is likely to be less than if the ground slopes down from the house or footpath towards the Development and draws the eye towards it.

Beyond 3 km radius, the effects of the Development are reduced and are unlikely to be significant. The most important and predictable factor in this reduction in effect is the increased distance of the Development from the viewer, which ensures that the turbines are seen as smaller components that occupy a smaller proportion of available views. This is particularly the case in views to the south and west of the Development. Additionally, the small number of turbines proposed and the presence of Royd Moor Wind Farm in available views combine to ensure the effects of the Development are limited beyond this distance.

Distribution of Significant Effects on Local Views

Other than the settlements of Crow Edge, High Flatts, Ingbirchworth, Millhouse Green, Thurlston, Upper Denby and Victoria, the area within an approximate radius of 3 km of the Development is not heavily populated, but has a fairly continuous, low-density pattern of individual houses, small groups of houses and scattered farmsteads. It also contains a comprehensive network of minor roads, tracks and footpaths. Vegetation cover is limited and sporadic, whilst the landform varies from moderate to steep slopes and narrowly incised valleys that curtail views.

To the north of the site, between Victoria and High Flatts, settlement consists of scattered farms and houses, including a small group of houses at Maythorn. Many of these properties occupy the same ridge of high ground on which the Development sits and gain long views towards the site due to the general lack of screening vegetation. Royd Moor Wind Farm is a dominant feature of many of these views and will have a strong influence. Nevertheless, in views from this direction the increased size and spacing of the proposed turbines sits less comfortably with the existing wind farm than when seen from other parts of the surrounding area and appear somewhat at variance to it. This is seen in viewpoint 8. Consequently,

some of the houses in this area are likely to undergo significant effects arising from the Development. For Spicer House, however, on the edge of the Development site, views will remain unchanged due to the orientation of the property and presence of screening vegetation.

To the east of the site, between High Flatts and Thurlstone, the landform dips away more gently as a series of undulating ridges and valleys. With the exception of Ingbirchworth and Upper Denby, on the limit of the 3 km radius, development is sporadic. Visibility of the Development is similar to that obtained from northern parts, although vegetation is slightly more widespread and has some limiting effect. Royd Moor Wind Farm is also a dominant feature of views generally. Viewpoint 7 is located in this part of the study area and illustrates the type of effect the Development will have when clearly seen in views. Some houses in this area are likely to undergo significant effects arising from the Development, particularly those occupying rising ground along the minor road that links High Flatts with Upper Denby. Some properties in the vicinity of Royd Moor and South Dyke reservoirs also have the potential to experience significant effects. However, in most instances views from these properties are orientated away from the Development or are restricted by local landform so very few, if any, will undergo significant effects.

The area to the south of the site, between Thurlstone and Millhouse Green, is the most densely populated part. Here, the landform descends steeply from the ridgeline occupied by the Development into the narrowly incised valley corridor of the River Don. This section of the upland valley is almost entirely built-up, however, the steep valley sides and wooded slopes effectively curtail views towards the Development.

Visibility of the Development from the west, between Millhouse Green and Victoria, continues to be restricted by the prominent ridgeline that defines the Don valley. Development is sporadic and mostly limited to occasional farmsteads and small groups of houses on the lower slopes above the valley floor. Whilst views are possible across the valley towards the Development, the proposed turbines will not be seen at full height. This can be seen in viewpoints 9, 10 and 11. At closer range, the steep valley sides have a further limiting effect on views, as seen in viewpoints 4 and 6 where the turbines are only visible from hub height. Additionally, the proposed turbines will be seen in close association with Royd Moor Wind Farm and appear as part of a slightly larger group. Thus, whilst the few houses and farmsteads in this area are likely to be affected to some degree, the effects are unlikely to be significant.

Summary of Operational Effects on Views

The initial assessment (Table 5.8) identified two principal visual receptors, one settlement and one walking route, to have the potential to undergo significant effects as a result of the Development. These are the village of Ingbirchworth and the Barnsley Boundary Walk.

Further assessment of these receptors concluded that, for Ingbirchworth, those parts of the settlement that gain direct views of the Development, the effects were likely to be significant, even allowing for the presence of Royd Moor Wind Farm. For other parts of this settlement where there is no visibility, or limited visibility, the effects will not be significant. There will be a significant effect on the Barnsley Boundary Walk as it passes the Development for a distance of about 7 km. For the rest of this long distance footpath the effects are assessed to be not significant due to a combination of limited visibility, distance, screening by landform and vegetation and presence of Royd Moor Wind Farm in available views.

The other principal visual receptors included in the initial assessment were found to have no potential to undergo significant effects. This is due to a variety of reasons including lack of visibility, orientation of the landform, screening by vegetation, distance and the presence of Royd Moor Wind Farm in available views.

There are likely to be significant effects on local views within approximately 3 km radius of the Development. However, these will mostly be limited to the north and east where the landform and lack of screening vegetation allows longer views towards the Development and the proposed turbines are seen at full height in front of Royd Moor Wind Farm. To the south and west of the Development, the steep nature of the landform limits or curtails views and the proposed turbines are mostly seen behind Royd Moor Wind Farm. As such, significant effects on local views from the south and west are unlikely to occur within this distance.

5.6 CUMULATIVE EFFECTS

The previous section considered the predicted effects on the landscape and visual resource of the study area arising from the Development by itself. This section considers any additional cumulative effects that might arise from the addition of the Development to other wind farm developments in the surrounding area. Cumulative effects arise when the ZTVs of two or more wind farms overlap so that both wind farms are experienced at a proximity where they might have an incremental effect.

As described in section 5.2.8, the study area for cumulative effects is increased to 30 km radius in order that any potential cumulative effects towards the edge of the 15 km radius study area for the Development can be identified. Within this enlarged area a number of wind farms have been identified with study areas that overlap the Development study area. These are identified on Figure 5.4 and are listed in Table 5.5, in section 5.2.8. A cumulative appraisal has therefore been carried out in order that the potential for any additional effects is identified.

This has been determined by reference to Figures 5.5 to 5.9, which show the 15 km radius ZTV for the Development in conjunction with the ZTVs for all of these wind farm sites. Taking into account limitations associated with the ZTV, as described in section 5.2.6, an analysis of the visibility indicated has identified areas of overlapping ZTV with potential for additional cumulative effects for which further assessment is required. Analysis of cumulative viewpoints and computer generated wirelines in conjunction with site visits has then been carried out to identify the presence of screening features that might limit visibility and so determine likely levels of cumulative effects.

The ZTVs and wirelines have been analysed, firstly with the Development added to those operational and consented wind farms as the future of these is certain, and, secondly, with the Development added to those undetermined sites. The undetermined sites are considered separately in view of uncertainties surrounding their progress through the planning process, which may result in changes to a layout, a refusal or even the withdrawal of an application.

5.6.1 Cumulative Effects: the Development with Operational and Consented Wind Farm Sites

This section considers the potential effects that the addition of the Development will have on those operational wind farm sites that form the baseline cumulative visibility, as identified in the main assessment. Wind farm sites with the benefit of a planning consent, but not yet constructed, are also included here in view of their likely imminent construction. These sites are:

- Royd Moor (operational) – 13 turbines adjoining the Development; and
- Hazlehead (consented) – 3 turbines approximately 2.5 km west of the Development

The cumulative ZTVs (Figures 5.5 and 5.6) indicate the visibility for the Development added to these sites. Analysis of the overlapping visibility indicates that the individual ZTVs for both Royd Moor and Hazlehead virtually coincide with the Development ZTV across the 15 km radius study area, as would be expected given their close proximity to each other. The essential differences lie in eastern parts of the study area where intervisibility is mostly

limited to Royd Moor and the Development, at close range, due to intervening landform that limits views towards Hazlehead from this direction.

Additional Cumulative Effects on Landscape Character

All three-wind farms are located within the 'Ingbirchworth' unit of the 'Upland Farmland' landscape character type, which, in the main assessment, has been assessed to have a *medium* sensitivity. This unit of landscape character has also been judged by BMBC to be capable of accommodating Royd Moor and Hazlehead wind farms without causing an unacceptable cumulative effect on the landscape.

The ZTVs suggest that the addition of the Development to Royd Moor and Hazlehead has the capacity to produce a cumulative effect on the landscape, as the degree of overlapping ZTVs is widespread. In reality, the location of the Development relative to Royd Moor ensures that it will appear as part of a slightly larger cluster of turbines in views of the landscape from within this unit, which reduces cumulative effects. The differences in turbine sizes between these two sites will, however, be apparent until such time as Royd Moor is decommissioned in 2018. This can be seen in cumulative viewpoints 7 and 13 to the east of the Development. Nevertheless, the cumulative magnitude of effect arising from the addition of the Development to Royd Moor and Hazlehead is assessed to be *small*. Cumulative visibility within the 'Ingbirchworth' unit of the 'Upland Farmland' character type will, until 2018, continue to be affected by Royd Moor in combination with Hazlehead and the addition of the Development will be *not significant.* This is due to the medium sensitivity of the landscape receptor and the small cumulative magnitude of effect. Following decommissioning of Royd Moor in 2018, cumulative visibility will be affected by Hazlehead in combination with the Development and will be largely unchanged from the current operational and consented situation.

Of the other landscape character types identified within the study area that have visibility of the Development in combination with Royd Moor and Hazlehead, the capacity for additional cumulative effects is judged to be very limited. This is due to increasing distance and the location of the Development, which ensures it is almost indistinguishable from Royd Moor and cannot be discerned as a separate wind farm site in wider views from around the study area. This is borne out by the main assessment, where Royd Moor forms part of the baseline conditions, and can be seen in cumulative viewpoints 15, 19 and 20 in particular. As such, the cumulative magnitude of effect on the wider landscape character arising from the addition of the Development to Royd Moor and Hazlehead is assessed to be *very small* to *small* and will be *not significant*, even allowing for the higher sensitivity of some of the character types.

Additional Cumulative Effects on Landscape Designations and Special Interests

All three-wind farms are located in the BMBC 'Area of Borough Landscape Value', which has been assessed in the main assessment as having a *medium-high* sensitivity. This local landscape designation has also been judged by BMBC to be capable of accommodating Royd Moor and Hazlehead wind farms without causing an unacceptable cumulative effect on the designation. Additional cumulative effects arising from the addition of the Development to Royd Moor and Hazlehead are likely to be similar to those of the local landscape character described above, amounting to a *small* cumulative magnitude of effect. This will be *not significant* due to the medium-high sensitivity of the landscape receptor and the small cumulative magnitude of effect.

Additional cumulative effects on the Peak District National Park are likely to be limited to the transitional landscapes along its eastern edge and are also likely to be similar to those of the wider local landscape described above, with the Development having a minor role amounting to a *very small* to *small* cumulative magnitude of effect.

Additional cumulative effects on identified historic parks and gardens will be *non-existent* or *negligible* due largely to the lack of visibility of the Development, as identified in the main assessment, and distance.

Additional Cumulative Effects on Fixed Views (Settlements)

All three-wind farms are located in an area that has a fairly low but continuous density of settlement, comprising of isolated farmsteads, individual houses, small groups of houses and larger villages, all of which have a *high* sensitivity. Royd Moor and Hazlehead exist within the locality as operational and consented wind farms, and, whilst cumulative effects on residential receptors arise, they have not been judged unacceptable by BMBC.

The ZTVs suggest the addition of the Development to Royd Moor and Hazlehead has the capacity to produce a cumulative effect on local views, as the degree of overlap shown is widespread. However, the location of the Development relative to Royd Moor ensures that it will appear as part of a slightly larger cluster of turbines in views, which reduces cumulative effects. The differences in turbine sizes between these two sites will, however, be apparent until such time as Royd Moor is decommissioned in 2018. This can be seen in the cumulative viewpoints. Nevertheless the cumulative magnitude of effect is assessed to be *small*. Until 2018, cumulative visibility will continue to be affected by Royd Moor in combination with Hazlehead and the addition of the Development will be *not significant.* Beyond 2018, cumulative visibility will be influenced by Hazlehead in combination with the Development and will be largely unchanged from the current operational and consented situation.

Within the wider study area, many of the properties and settlements identified in the main assessment gain little or no views of the Development and, as such, the potential for additional cumulative effects is *non-existent* or *negligible*. Where properties and settlements do gain visibility of the Development in association with Royd Moor and Hazlehead, the location of the Development ensures it is almost indistinguishable from Royd Moor and cannot be discerned as a separate wind farm site in views from around the study area. This is borne out by the main assessment, where Royd Moor forms part of the baseline conditions, and can be seen in the cumulative viewpoints. As such, the cumulative magnitude of effect on wider views arising from the addition of the Development to Royd Moor and Hazlehead is assessed to be *very small* to *small* and will be *not significant*.

Additional Cumulative Effects on Sequential Views (Routes)

The proximity of Royd Moor to Hazlehead is such that sequential effects on visibility do not presently occur, since in most views from major roads and rights of way around the study area both wind farm sites will generally be seen together. From the A616 in particular, which passes between both sites with clear directional visibility over a 5 km section, the effects quickly cease in either direction of travel and, thereafter, there are no other wind farms visible from this route that might have a sequential effect. Furthermore, the location of the Development will not create sequential effects since it is almost indistinguishable from Royd Moor in views from around the study area, as borne out from the main assessment, and will appear as part of a slightly larger group of turbines rather than a distinctly separate site.

5.6.2 Cumulative Effects: the Development with Operational, Consented and Undetermined Wind Farm Sites

This section considers the potential effects that the addition of the Development will have on those operational and consented wind farms, as described in the previous section, in association with those submitted but as yet undetermined wind farms. The undetermined sites are:

- Blackstone Edge – three turbines approximately 500 m north-west of the Development; and

- Sheephouse Heights – five turbines approximately 5.5 km south-east of the Development.

The cumulative ZTVs (Figures 5.7 and 5.8) indicate the visibility for the Development added to Royd Moor, Hazlehead and these undetermined sites. Analysis of the Development ZTV added, firstly, to the ZTVs for Royd Moor, Hazlehead and Blackstone Edge (Figure 5.7) shows a close similarity across the 15 km radius study area, as would be expected given the proximity of Royd Moor, Blackstone Edge and the Development with each other and, to a slightly lesser extent, with Hazlehead. Analysis of the Development ZTV added, secondly, to Royd Moor, Hazlehead and Sheephouse Heights (Figure 5.8) also shows much similarity, with the only appreciable difference being increased visibility of Sheephouse Heights in the south-east of the study area. Analysis of the Development ZTV added, thirdly, to the ZTVs for all operational, consented and undetermined sites (Figure 5.9) again shows much similarity across the study between these sites and the Development visibility.

Additional Cumulative Effects on Landscape Character

With the exception of Sheephouse Heights, which is located in the 'Penistone and Stocksbridge' unit of the 'Upland Farmland' landscape type, all of the other wind farm sites are located within the 'Ingbirchworth' unit of the 'Upland Farmland' landscape character type. The 'Ingbirchworth' unit has been assessed to have a *medium* sensitivity and has also been judged capable of accommodating Royd Moor and Hazlehead wind farms without causing an unacceptable cumulative effect on the landscape.

The ZTVs suggest that the addition of the Development to Royd Moor, Hazlehead and Blackstone Edge has the capacity to produce a cumulative effect on the landscape, as the degree of overlapping ZTVs is widespread. In reality, the location of the Development relative to Royd Moor and Blackstone Edge ensures that it appears as part of a larger cluster of turbines in views from within this unit, which reduces the potential for cumulative effects. Whilst the differences in turbine size and spacing between the Development and Royd Moor will be noticeable until such time as Royd Moor is decommissioned in 2018, thereafter, the close specification between the Development and Blackstone Edge in terms of turbine numbers, size, spacing and rotor diameter ensures that these two sites will be almost indistinguishable in views. This has a further limiting effect on potential cumulative effects. This can be seen in the cumulative viewpoints, in particular Vps 3, 5, 6, 10 and 11. The cumulative magnitude of effect arising from the addition of the Development to Royd Moor, Hazlehead and Blackstone Edge is therefore assessed to be *small*. Cumulative visibility within the 'Ingbirchworth' unit of the 'Upland Farmland' character type will, until 2018, continue to be affected by Royd Moor in combination with Hazlehead and Blackstone Edge, and the addition of the Development will be *not significant.* This is due to the medium sensitivity of the landscape receptor and the small cumulative magnitude of effect. Following the decommissioning of Royd Moor in 2018, cumulative visibility will be influenced by Hazlehead in combination with Blackstone Edge, with the addition of the Development again being *not significant*.

The ZTVs also suggest that the addition of the Development to Royd Moor, Hazlehead and Sheephouse Heights has the capacity to produce a cumulative effect on the landscape, as the degree of overlapping ZTVs is similarly widespread. However, for reasons described above, the Development will have a minor capacity to produce a cumulative effect. In comparison, the greater separation between Sheephouse Heights and the other three sites is such that it will appear as a distinctly separate wind farm in local views of the landscape and from within the wider study area. Sheephouse Heights will, therefore, have the greater capacity to produce an additional cumulative effect on the local landscape character.

Of the other landscape character types identified within the study area that have visibility of the Development in combination with Royd Moor, Hazlehead, Blackstone Edge and Sheephouse heights, there is potential to undergo a cumulative effect due to the evident

increase in the frequency of vertical elements in the landscape. However, the location of the Development in relation to Royd Moor and Blackstone Edge ensures that it cannot be discerned as a separate wind farm site in views from around the study area and, thus, will have a very minor role in adding to cumulative effects. This can be seen in cumulative viewpoints 15, 16, 19 and 20 in particular.

Additional Cumulative Effects on Landscape Designations and Special Interests

All five-wind farms are located in the BMBC 'Area of Borough Landscape Value', which has been assessed in the main assessment as having a *medium-high* sensitivity. This local landscape designation has also been judged capable of accommodating Royd Moor and Hazlehead windfarms without causing an unacceptable cumulative effect.

Additional cumulative effects on this designation arising from the addition of the Development to Royd Moor, Hazlehead, Blackstone Edge and Sheephouse Heights are likely to be similar to those of the local landscape character described above, with the more detached location of Sheephouse Heights having the greater capacity for a cumulative effect. The addition of the Development will have a minor role in any such cumulative effects due to its location in relation to Royd Moor and Blackstone edge, amounting to a *small* cumulative magnitude of effect. This will be *not significant* due to the medium-high sensitivity of the landscape receptor and the small cumulative magnitude of effect.

Additional cumulative effects on the Peak District National Park are likely to be limited to the transitional landscapes along its eastern edge. These are also likely to be similar to those of the wider local landscape, with the addition of the Development having a minor role amounting to a *very small* to *small* cumulative magnitude of effect that will be *not significant*.

Additional cumulative effects on identified historic parks and gardens will be *non-existent* or *negligible* due to the lack of the Development visibility, as identified in the main assessment, and distance.

Additional Cumulative Effects on Fixed Views (Settlements)

All five-wind farms are located in an area that has a fairly low but continuous density of settlement, comprising of isolated farmsteads, individual houses, small groups of houses and larger villages, all of which have a *high* sensitivity. Royd Moor and Hazlehead exist within the locality as operational and consented wind farms, and, whilst cumulative effects on local residential receptors arise, they have not been judged to be unacceptable.

The ZTVs suggest that the addition of the Development to Royd Moor, Hazlehead and Blackstone Edge has the capacity to produce a cumulative effect on views, as the degree of overlapping ZTVs is widespread. In reality, the location of the Development relative to Royd Moor and Blackstone Edge, ensures that it appears as part of a larger cluster of turbines in local views, which limits the potential for a cumulative effect. Whilst the difference in turbine size and spacing between the Development and Royd Moor will be noticeable until such time as Royd Moor is decommissioned in 2018, the close specification between the Development and Blackstone Edge turbines ensures that, thereafter, these two sites will be almost indistinguishable in views, which further reduces the potential for a cumulative effect. This can be seen in the cumulative viewpoints. The cumulative magnitude of effect arising from the addition of the Development to Royd Moor, Hazlehead and Blackstone Edge is therefore assessed as *small*. Until 2018, cumulative visibility will continue to be affected by Royd Moor in combination with Hazlehead and Blackstone Edge, and the addition of the Development will be *not significant.* This is due to the small cumulative magnitude of effect in spite of the high sensitivity of the receptors. Beyond 2018, cumulative visibility will be influenced by Hazlehead in combination with Blackstone Edge and the Development and will be broadly similar to the current operational and consented situation.

The ZTVs for the Development in combination with Royd Moor, Hazlehead and Sheephouse Heights suggest there is further capacity to produce a cumulative effect, given the widespread nature of the overlapping visibility indicated. However, for reasons set out above, the Development will have a minor role in producing a cumulative effect on local views, whereas the greater separation of Sheephouse Heights ensures it has an increased capacity to do so.

Within the wider study area, many of the properties and settlements identified in the main assessment gain little or no views of the Development and, as such, the potential for a cumulative effect is *non-existent* or *negligible*. Where properties and settlements do gain visibility of the Development in association with Royd Moor, Hazlehead, Blackstone Edge and Sheephouse Heights, there is potential to undergo a cumulative effect due to the increase of vertical elements in views. However, the location of the development ensures it is almost indistinguishable from Royd Moor and Blackstone Edge and cannot be discerned as a separate wind farm site in views. This is borne out by the main assessment, where Royd Moor forms part of the baseline conditions, and can be seen on the cumulative viewpoints. Thus, the addition of the Development will have a very minor role in adding to cumulative effects.

Additional Cumulative Effects on Sequential Views (Routes)

The addition of the Development to Royd Moor, Hazlehead and Blackstone Edge suggests there is very limited potential to create a sequential effect on views for travellers, since in most views from major roads and rights of way around the study area these sites appear as a compact cluster of turbines.

The addition of the Development to Royd Moor, Hazlehead and Sheephouse Heights has greater potential for a sequential effect on views by virtue of the more detached location of Sheephouse Heights. For users of the A616 in particular, sequential effects will occur over a 15 km section, between Victoria and the roundabout junction with the A629, where southbound travellers will gain close range views of Royd Moor, Hazlehead and the Development, as a compact group, followed by more distant views of Sheephouse Heights as they continue south, eventually passing to within 1.5 km of the site. For northbound travellers, Sheephouse Heights will initially be seen in views, followed by increasing visibility of Royd Moor, Hazlehead and the Development as they head north. In both instances, the Development will make a minor contribution to sequential effects due to its proximity to Royd Moor and Hazlehead.

There are also likely to be sequential effects along a 14 km section of the A629, between High Flatts and the roundabout junction with the A616; for a 35 km section of the Barnsley Boundary Walk, between Upper Denby and the south-eastern limit of the study area; and for a 15 km section of the Trans Pennine Trail heading west between Barnsley and Millhouse Green.

Summary of Additional Cumulative Effects

The assessment has shown that the addition of the Development to the operational and consented sites of Royd Moor and Hazlehead will not result in any significant cumulative effects. This is due to the location of the Development, which ensures that it cannot be easily discerned as a separate wind farm site. In this context, the Development will have limited capacity for additional cumulative effects as the addition of the site will not result in the impression of a landscape or view that is defined by the presence of more than one wind farm and is characterised primarily by wind farms to the extent that other patterns or components are no longer definitive. This is because Royd Moor and Hazlehead already affect the landscape and views of the study area, and the addition of the three turbines proposed by the Development will not significantly increase the wind farm influence.

The assessment has also found that there is no potential for additional cumulative effects arising from the addition of the Development to Royd Moor, Hazlehead and the undetermined site at Blackstone Edge. This is again due to the location of the Development, which ensures that it is almost indistinguishable from Blackstone Edge and cannot be discerned as a separate wind farm site. In this context, the Development will have no additional cumulative effects as the addition of the site will not result in the impression of a landscape or view that is defined by the presence of more than one wind farm and is characterised primarily by wind farms to the extent that other patterns or components are no longer definitive. This is because Royd Moor, Hazlehead and Blackstone Edge will primarily affect the landscape and views of the study area, and the addition of the three turbines proposed by the Development will not significantly increase the wind farm influence.

The assessment has found some potential for additional cumulative effects arising from the addition of the Development to Royd Moor, Hazlehead and the undetermined site at Sheephouse Heights. However, this is due to the more detached location of Sheephouse Heights rather than the Development, which will have a minor influence on cumulative effects.

5.7 SUMMARY OF EFFECTS

The landscape and visual assessment has considered the potential effects that the Development may have on the physical pattern of landscape elements within the Development site, on the landscape character of the wider study area, on landscape-related planning designations within the study area and on key visual receptors within the study area. The assessment has also considered the additional cumulative effects of the Development when added to other existing and proposed wind farm developments within an extended study area. *Significant* effects have been identified in respect of the following:

- 'Ingbirchworth unit' of the 'Upland Farmland' landscape character type, extending for a distance of about 3 km north and east of the Development;
- Area of Borough Landscape Value, extending for a distance of about 3 km north and east of the Development;
- Some houses on the western edge of Ingbirchworth village and adjoining the A629;
- Section of the Barnsley Boundary Walk, between Upper Denby and Low Common, covering a distance of about 7 km; and
- Local views from individual houses, farmsteads and roads, primarily to the north and east of the Development, extending for a distance of about 3 km.

These effects arise from the addition of the turbines rather than other components of the Development and are considered to be adverse since they will not result in specific benefits to the affected landscape or views.

Beyond those significant adverse effects identified above, the Development is likely to have an effect on some of the other landscape character areas or views but these are judged to be not significant.

5.8 STATEMENT OF SIGNIFICANCE

The assessment of effects on the landscape and visual resource of the study area has demonstrated that the Development will have localised *significant* effects on landscape character and views within close proximity of the Development site. Whilst these local effects are considered to be significant, in the wider context the Development is judged capable of being accommodated without bringing about an unacceptable change to the landscape and visual resource of the study area. This acceptability is due in part to the design of the Development and the landscape and visual context in which it will be seen.

There are two design aspects of the Development that are of particular importance, firstly, the number and layout of turbines proposed and, secondly, the way in which they will be seen in views from around the study area. The Development is a small wind farm development in terms of turbines and, in general terms, the fewer the turbines the lower the landscape and visual impact. This is because the turbines will be seen from fewer locations and will only occupy a small proportion of views, leaving more of the view unaffected.

The layout and appearance of wind farm developments is equally important, since well designed wind farms that avoid gaps, clusters, overlapping and notable scale differences are generally less prominent and more acceptable that those that do not. These factors have been taken into account in the design of the Development, as has its proximity to Royd Moor Wind Farm. The original design objective had been to create an even and regular grouping that responded to the regimented layout of Royd Moor, with turbine type and height selected to match Royd Moor turbines as far as was practicable. However, following consultations with BMBC greater emphasis has been placed on achieving a layout that is visually integrated with the adjacent Blackstone Edge application site so that, when Royd Moor Wind Farm is decommissioned in 2018, there will potentially be fewer, but taller, turbines in its place that appear as a single, visually coordinated cluster.

The context in which the Development will be seen is fundamental to its acceptability for several reasons. Landscapes that are large in scale, open with relatively uniform land cover generally have a greater capacity to accommodate wind farms since they avoid awkward scale comparisons that can arise with landscapes that are small scale, intimate or enclosed. This is generally the case in views towards the Development where the turbines are seen against the backdrop of a large scale and elevated plateau landform where they appear as relatively small features.

The presence of screening features, particularly vegetation, can also play an important role in reducing wind farm visibility. The level of vegetation found across southern and western parts of the study area is relatively sparse, but in northern and eastern parts the higher incidence of wooded areas and hedgerows does afford greater screening and filtering of views that might otherwise be significant.

In planning designation terms, the Development is considered acceptable as it will not have *significant* effects on any nationally designated areas, including the Peak District National Park and those Registered Parks and Gardens identified within the study area. At a local level, localised significant effects on the Barnsley Area of Borough Landscape Value have been identified but are considered to be acceptable.

The absence of significant cumulative effects is another important consideration in the acceptability of the Development since it increases the ability of the landscape and visual resource to accommodate the Development. In this respect the proximity of the Development to Royd Moor and Hazlehead operational and consented sites and the undetermined site at Blackstone Edge, ensures that the Development plays only a minor role in extending the wind farm influence within the study area and will be not significant

The above aspects of the Development in combination with the landscape and visual attributes of the study area combine to make the Development acceptable in landscape and visual terms. This is despite the presence of localised significant effects that will occur in close proximity to the Development site.