7. Landscape & Visual Assessment

7.1 Introduction

7.1.1 This chapter has been produced by chartered landscape architects at Entec UK Limited, The primary author is Clare Horner. Clare is a Member of the Landscape Institute and holds an MLA in Landscape Architecture.

7.1.2 This chapter assesses the landscape and visual impact of the proposed Blackstone Edge Wind Farm and associated infrastructure, situated north west of Penistone and Barnsley, and north of the Peak District National Park.

7.1.3 Landscape and Visual Impact Assessment (LVIA) for wind farms forms one of the key components of the EIA process to comply with the relevant environmental assessment regulations and local and structure plan policies, for the protection of the landscape resource.

7.1.4 The main objectives of this assessment have been to determine the potential landscape and visual effects of the proposed turbines at the Blackstone Edge Wind Farm on the existing landscape resource, landscape character and visual amenity of people.

7.1.5 The chapter presents the results of the LVIA of the proposed development as it would affect the existing landscape resource. The structure of the chapter is outlined as follows:

- Section 7.2 Methodology: This section describes the methodology that has been followed to complete the assessment. The full methodology can be found in Appendix D1. It identifies the sequence of data collection and interpretation and the basis on which particular assessment decisions are made;
- Section 7.3 Scope: This section defines the parameters within which the methodology has been applied to perform the assessment of the Blackstone Edge Wind Farm including the viewpoints that have been used;
- Section 7.4: Planning Policy Context gives a brief overview of the relevant landscape planning policies gained from the development plans from the local planning authorities within the study area, and summarised in Appendix D3 and D4. A complete review of the Planning Policies can be found in Chapter 5;
- Section 7.5: Project Description and Mitigation Incorporated in the Proposed Development: this section provides a brief description of the site, with a full site description to be found in Chapter 4. The assessment is completed on the basis of the residual effects of the proposed wind farm i.e. after the effects of these mitigation measures are taken into account;
- Section 7.6: Description of Baseline Conditions: this comprises a description of the existing landscape resources within the LVIA Study Area;

© Entec UK Limited

- Section 7.7 Assessment of Potential Landscape Effects: This section defines the predicted effects of the proposed development on the inherent landscape character of the LVIA study area and considers predicted cumulative landscape effects of the Blackstone Edge Wind Farm with built and proposed wind farm developments. This includes the evaluation of level and significance of landscape effects. The predicted effects are evaluated and their significance in EIA terms assessed;

- Section 7.8: Assessment of Potential Visual Effects: This presents the findings of the viewpoint analysis which considers the effects of the proposed development (including incorporated mitigation) on the visual amenity of people (termed 'receptors'). This includes the evaluation of level and significance of visual effects. The predicted visual effects are evaluated and their significance in EIA terms assessed for different receptor groups (e.g. residents, tourists, and those on transport routes);

- Section 7.9: Cumulative Visual Effects and Assessment: This considers the potential effect of the proposed development in combination with other wind farm developments on the visual amenity of people whether from a single location as well as sequential views along travel routes; and

- Section 7.10: provides a summary of the assessment findings and conclusions.

7.2 Methodology & General Approach

7.2.1 A full landscape and visual impact assessment methodology can be found in Appendix D1.

7.2.2 The methodology for the LVIA adopts the guidelines set out in the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment, Second Edition, published jointly by the Landscape Institute and Institute of Environmental Management and Assessment, 2002. Further guidance has been obtained from the following documents:

- The Countryside Agency Landscape Character Initiative;

- The Countryside Agency "Planning Principles for Landscape, Access and Recreation – Moving on from 'Planning Tomorrow's Countryside", June 2005;

- Scottish Natural Heritage, 13/04/05 'Guidance: Cumulative Effects of Wind Farms, Version 2';

- Scottish Natural Heritage, 22/07/05 'Visual Representation of Wind Farms - Good Practice Guidance' 29. March 2006, Printed March 2007, Horner & Maclennan and Envision;

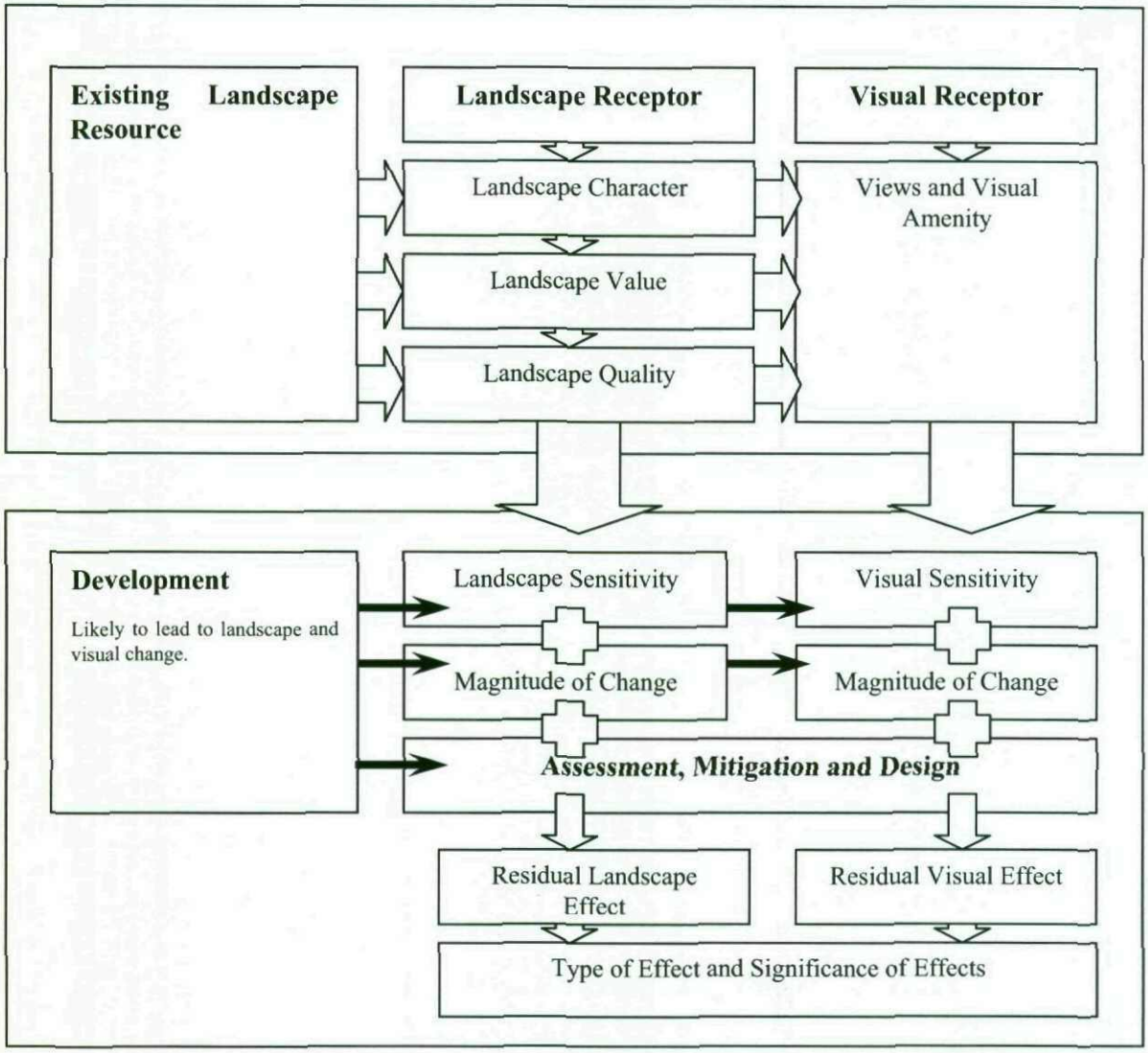
- Scottish Natural Heritage, 2001, Guidelines on Environmental Impacts of Wind farms and Small Scale Hydro Electric Schemes; and

- Landscape Character Assessment: Guidance for England and Scotland (Countryside Agency and SNH publication), April 2002.

© Entec UK Limited

7.2.3 The LVIA process begins with a study of the existing or baseline landscape resource. A flow chart illustrating the landscape and visual assessment process has been provided in Table 7.1. A Glossary of Terms has been provided in Appendix D2.

Table 7.1 Flow Chart Illustrating the LVIA Process



Landscape Assessment

7.2.4 Landscape effects are defined by the Landscape Institute as "changes to landscape elements, characteristics, character, and qualities of the landscape as a result of development". The potential or predicted landscape effects, occurring during the construction and operation period, may therefore include, but are not restricted to, the following:

- Changes to landscape elements;

© Entec UK Limited

- Changes to landscape quality: and
- Changes to landscape character.

7.2.5 Landscape effects are assessed by considering four criteria: type of effect, probability of effect and most importantly, the sensitivity of the landscape resource against the proposed magnitude of change. The sensitivity categories and the magnitude of change descriptions are to be found in Table 1 Appendix D1. The evaluation of landscape sensitivity and magnitude and the significant effects in terms of EIA regulations are described in Box 7.1 and repeated in Table 3 of Appendix D1.

Box 7.1 Evaluation of landscape and visual effects

Magnitude of Change	Landscapes and Visual Sensitivity			
	High	**Medium**	**Low**	**Negligible***
High	**Substantial**	**Moderate / Substantial**	**Moderate**	Slight/ Moderate
Medium	**Moderate/Substantial**	**Moderate**	**Slight / Moderate**	Slight
Low	**Moderate**	**Slight / Moderate**	**Slight**	Negligible
Negligible	**Slight**	**Slight / Negligible**	**Negligible**	Negligible
Key:	Significant in terms of the EIA Regulations		Not significant	
	* Note: The negligible sensitivity column does not apply to this project.			

Visual Assessment

7.2.6 Visual effects are a sub set of landscape effects and are defined by the Landscape Institute as "Changes in the character of available views and changes in the visual amenity of visual receptors resulting from development".

7.2.7 Visual effects are also assessed by considering four criteria: type of effect, probability of effect and most importantly the sensitivity of the visual receptor and the proposed magnitude of change. Site visits and a computer model of the landscape and the proposed development, illustrated by photomontages and wireframes are used to assist this assessment process.

7.2.8 Other factors affecting visual sensitivity include the visual context and setting of features within the view such as villages and local landmarks, and landscape value, quality, and capacity of the area within the view, within which the wind farm would be positioned. The evaluation of visual sensitivity and magnitude are described further in Tables 2 and 3 in Appendix D1. Table 3 is repeated above in Box 7.1.

Cumulative Assessment

7.2.9 The cumulative landscape and visual impact assessment (CLVIA) for the proposed site considers the effects of other existing, consented and proposed wind farms within a 30km radius of the site.

© Entec UK Limited

7.2.10 These assessment findings should not however, be regarded as a substitute for individual wind farm landscape and visual impact assessments.

7.2.11 Existing wind farm developments already present in the landscape (i.e. the existing Royd Moor Wind Farm), as well as those approved but not yet built (i.e. the Hazelhead Wind Farm), have been included in the cumulative assessment. The single turbines at Ecklands Farm and Longley Farm have been included as part of the existing baseline landscape and assessed as part of the LVIA. Longley Farm is considered in the CLVIA assessment. Bullhouse, Ecklands is excluded from CLVIA on the basis of information received from the local authority that the single wind turbine, which gained planning permission in 1992, has not been operational for approximately one year and enforcement action is currently being undertaken to decommission and remove the turbine. Other wind farms in the planning process at the scoping stage, or which may have been withdrawn, have also been considered as part of the baseline in the LVIA although the probability of these schemes coming into existence is less certain.

7.2.12 The probability of cumulative effects is variable; those effects related to existing wind farms and those under construction are considered as certain, those developments with planning consent are considered as likely. Wind farm sites for which there is a submitted planning application are considered as uncertain and other wind farms for which no planning application has been made are considered as uncertain/unknown.

7.2.13 This cumulative assessment considers the cumulative effects of the proposed turbines at Blackstone Edge Wind Farm with the existing Royd Moor wind farm, the consented Hazelhead wind farms and the single turbine at Longley Farm.

Consultation

7.2.14 Consultation was undertaken with Statutory Consultees during the LVIA. The broad methodology and scope of the assessment was discussed with:

- Barnsley Metropolitan Borough Council (BMBC);
- The Peak District National Park Authority (PDNPA);
- Council to Protect Rural England (CPRE);
- Kirklees Council (KC);
- Sheffield City Council; and
- High Peak Borough Council.

7.2.15 Consultation included the discussion of the study area, landscape character areas, viewpoints, and receptors to be included in the visual assessment. Consultation letters were circulated in February/March 2007, and a meeting to finalise the scope of the LVIA was held with BMBC on 13 March 2007 in which the LVIA study area and cumulative sites were finalised. Further to this meeting a number of additional viewpoints were included within the assessment. Written and verbal consultation responses from the PDNPA, Natural England and CPRE (March 2007) also provided additional viewpoints to be considered within the LVIA. There was no

© Entec UK Limited

response from Kirklees Council/Sheffield City Council and the High Peak Borough Council.

7.2.16 A public exhibition was held during 27/28 March 2007 where additional comments were received from local residents.

7.2.17 Local planning authorities within the 30km radius cumulative study area were contacted in March 2007 in order to confirm the status of the known wind farm applications/approved wind farms in the study area.

7.3 Scope of the Assessment

7.3.1 The LVIA study area was agreed, as 10km radius from the turbines and the cumulative study area as 30km radius from the turbines, with Barnsley MBC at the meeting on 13th March 2007 . These study area radii concur with Entec experience. *This study area is illustrated in Figure 7.1.*

7.3.2 These criteria are in line with the ES undertaken for the recently approved Hazelhead Wind Farm, which is located ~1.7km south west of the proposed Blackstone Edge site, see Figure 7.40.

7.3.3 The scope is further defined for each part of the assessment process as follows:

- Landscape and Visual Impact Assessment (LVIA) – the study area was restricted to the application site, access routes, and the potential zone of theoretical visibility (ZTV) from where there may be a view of the wind farm up to 10km distance from the turbines with potential significant landscape and visual effects; and
- Cumulative Landscape and Visual Assessment (CLVIA) – considered existing wind farms, proposals that have permission, and those that are currently the subject of undetermined applications within a 30km radius of the site centre (Figure 7.40). Other known pre-application wind farm proposals have been identified as part of the assessment process and considered in outline only, given the limited available information on these projects.

Visibility Map

7.3.4 Two Visibility Maps have been prepared to assess the visibility of the proposed development:

- to upper blade tip (Figure 7.2); and
- to hub height (Figure 7.3).

7.3.5 In addition, cumulative visibility maps, ZTVs, have been prepared to upper blade tip (for sites with more than one turbine) for Royd Moor wind farm (Figure 7.41) and Hazelhead wind farm (Figure 7.42) in combination with the proposed site at Blackstone Edge, and also for Royd Moor and Hazelhead wind farms together (Figure 7.43), and finally for all three wind farms (Figure 7.44). Cumulative ZTVs have not been prepared for the single turbines at Bullhouse and Longley Farm.

7.3.6 Visibility of the site is not extensively constrained by woodland or forestry, though localised tree cover effects do occur. It should be noted however that the theoretical

© Entec UK Limited

area of visibility of the wind farm (ZTV) does not take account of built development and vegetation, which can significantly reduce the area and extent of actual visibility in the field and as such provides the limits of the visual assessment study area.

Mitigation

7.3.7 The landscape design and mitigation process has examined the following aspects of the wind farm:

- turbine location, layout, design and appearance of wind farm;
- route and design of proposed access roads and existing site entrance;
- land use integration;
- location, design and appearance of substation, masts and transformers;
- location of temporary construction compound, access points and other construction activity that may have a landscape or visual effect.

7.3.8 The mitigation identified is described in Section 7.4.

Grid Connection

7.3.9 The grid connection is expected to be at the Hazlehead substation (see Figure 4.7). An underground power line will connect the wind farm to the local distribution grid network. The grid connection has been considered within this landscape and visual assessment. However, it is considered that there are unlikely to be any significant landscape and visual effects associated with the grid connection as construction works will be temporary and involve operations that would be mobile and hence only in a fixed location for a short period. During the operational phase of the development the cable will be underground and hence no landscape and visual effects will arise. As such the grid connection works have been scoped-out of this assessment.

External kiosks

7.3.10 External kiosks may be included at the base of the turbines to house the transformers. These have been scoped-out of the landscape and visual assessment since they are small (typically measuring up to 2m x 3m and 2m in height) compared to the larger turbines.

Landscape Assessment

7.3.11 In determining landscape quality, reference has been made to The Countryside Agency Landscape Character Assessments[13] for the following areas:

- Character Area 37 – Yorkshire Southern Pennine Fringe;
- Character Area 38 – Nottinghamshire, Derbyshire & Yorkshire Coalfield; and

[13] Countryside Agency Character Area Study, Countryside Character Volume 3: Yorkshire & The Humber Regional Landscape Character Assessment www.countrysideagency.org.uk, 2005.

© Entec UK Limited

- Character Area 51 – Dark Peak.

7.3.12 The proposed site lies within the 'Yorkshire Southern Pennine Fringe' Landscape Character Area (refer to Figure 7.4).

7.3.13 Reference has also been made to the Barnsley Borough Landscape Character Assessment[14].

Landscape and Visual Issues Addressed

7.3.14 The landscape and visual issues which have been addressed as part of this assessment are listed in Table 7.2. These were established based on the experience and professional judgement of the landscape architect who has completed this assessment and through consultation with Barnsley MBC and CPRE. Detailed assessment and identification of sensitive receptors follows in later sections of this chapter.

Table 7.2 Key Landscape and Visual Issues

Landscape Issues	Description
Landscape Character	Landscape effects of the proposed development on sensitive landscape character types identified during the assessment.
Landscape Elements	Direct or physical effects on landscape elements which may include agricultural pasture/crops and existing road access to the site area.
Local Community	Views from the nearest residential properties at Spicer House/Lower Maythorn Cottage/Lower Maythorn/Upper Maythorn/Maythorn/Brown's Edge Farm. Views from *the local communities particularly Maythorn/Crow Edge/Carlecoates/Millhouse* Green/Ingbirchworth/High Flatts. Views from roads and tourist destinations within the vicinity of the site, i.e. Ingbirchworth Reservoir and from the National Park to the south and west.
National Park (NP)	Views from the Peak District National Park.
Area of Borough Landscape Value (ABLV)	Views from Areas of Borough Landscape Value (ABLV) as well as views from other areas of landscape character perceived by people (Barnsley MBC)
Area of High Landscape Value (AHLV)	Area of High Landscape Value (Kirklees Council).
Hilltops	*Views from popular hilltops within the study area, for example Tinker* Hill and the hill tops of the northern shoulders of the Peak District National Park. Attention has been given to the views from local and promoted walking routes, especially Trans Pennine Trail, Barnsley Boundary Walk, Dearne Way, Kirklees Walk and other locally promoted routes.
Gardens and Designed Landscapes/Country Park	These landscapes are well screened by perimeter estate woodland, however the assessment examines potential visual effects on vistas and views from Cannon Hill Country Park and its environs.
Recreational and Tourist Destinations	Views from outdoor tourist destinations; their setting and visitor experience will be examined as part of the assessment.

[14] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002

© Entec UK Limited

Table 7.2 (continued) Key Landscape and Visual Issues

Landscape Issues	Description
Major Transport and Tourist Routes	Transport routes including tourist routes. Specific routes considered in the assessment were the A628/A629/A616/A635.
Cumulative Assessment	The cumulative assessment includes viewpoint analysis within the study area where simultaneous and/or successive views of more than one wind farm may be achieved, and sequential cumulative assessment, where more than one wind farm may be viewed along transport routes (simultaneous or successive).

Viewpoint Selection

7.3.15 Many of the key issues noted above were considered through the viewpoint assessment in the field and were selected by analysis of the visibility maps and through consultation. The viewpoints were chosen based on the following criteria as agreed through consultation with Barnsley MBC, Peak District National Park Authority, CPRE and Natural England:

- Viewpoints should be representative of the likely impacts;
- Viewpoints should show a range of different types of views;
- Viewpoints should be representative of a range of different receptor groups;
- Viewpoints should be representative of a range of distances; and
- Viewpoints should be representative of the varying image of the wind farm in the landscape.

7.3.16 Table 7.3 provides a summary of the illustrated viewpoints agreed through consultation. A summary of the findings of each viewpoint assessment is provided in Appendix D5. The location of the viewpoints is illustrated in Figure 7.9. All the viewpoints included within the LVIA illustrate a potential cumulative situation with the existing Royd Moor Wind Farm and the consented Hazelhead Wind Farm.

Table 7.3 Summary of Viewpoints included in the Visual Assessment

Viewpoint	Reason for Initial Selection	Distance to the nearest turbine (m)
1. Whitley Common	Minor road to the west of the site, at junction with public footpath and bridleway	557m
2. Spicer House Lane	Minor road to the north east of the site, near two residential properties	799m
3. Barnsley Boundary Walk (E)	Recreational route east of the site	1223m

© Entec UK Limited

Table 7.3 (continued) Summary of Viewpoints included in the Visual Assessment

Viewpoint	Reason for Initial Selection	Distance to the nearest turbine (m)
4. Crow Edge	Residential properties near site to the south west	1240m
5. Victoria	Residential properties in small settlement near site to the west	1692m
6. Windmill Lane, Low Common	Local road and residential properties north of the site	1719m
7. Royd Moor Wind Farm Viewing Point	Dedicated roadside viewpoint for the turbines at Royd Moor	1961m
8. *High Flats on A629*	*Road users & residential properties north east of the site*	2303m
9. Trans Pennine Trail at Hazelhead near A616(T) (PDNP)	Long distance recreational route and road users south of the site on edge of Peak District National Park (this viewpoint is representative of the closest views within the National Park to the site)	2350m
10. Carlecotes	Residential properties near site to the south west	2522m
11. *Millhouse Green & B6106*	*Road users & residential properties on western edge* of the settlement south east of the site	2624m
12. Tinker Hill	Open access recreation land to the west of the site	3595m
13. Barnsley Boundary Walk (SW)/A628 (T) (PDNP)	Long distance recreational route within the Peak District National Park, south of the site	4444m
14. A628, roundabout south west of Hoylandswaine	Road users, first views when approaching the site from the east	5937m
15. Trans Pennine Trail at A628 (PDNP)	Long distance recreational route within the Peak District National Park south west	7175m
16. Roydhouse	Road users within an area of high ground north east of the site	7752m
17. Cut Gate (PDNP)	Recreational users of footpath on north facing slopes of the northern fringe of the Peak District National Park	8091m
18. *Ewan Heights (PDNP)*	*Road users within the Peak District National Park*	8171m
19. Holme Viewing Location (PDNP)	Receptors at a public viewing location and road users within the Peak District National Park	9853m

Visualisations

7.3.17 In this assessment a photograph of the existing view, a wireframe of the proposed development (alongside the existing Royd Moor Wind Farm and consented Hazelhead Wind Farm) and a photomontage have been produced to assist the reader for Viewpoints 1 – 11. The remaining viewpoints (they are more distant and a photomontage is less useful at this range) are illustrated with a photograph of the existing view and a wireframe of the proposed development at Blackstone Edge (alongside the existing Royd Moor Wind Farm and consented Hazelhead Wind Farm). More detail on the methodology used for the production of the photomontage images is included within Appendix D5.

© Entec UK Limited

Cumulative Landscape and Visual Assessment

7.3.18 The cumulative landscape and visual assessment study area requires a base plan to be produced to show all proposals which are in the public domain and are located within 30km from the wind farm under consideration (refer to Figure 7.40.). Through consultation with Barnsley Metropolitan Borough Council the CLVIA study area was agreed as a 30km radius. Cumulative ZTVs will be produced for all existing or consented wind farms with more than one turbine or planning applications within a 30km radius from the centre point of the current proposal.

7.3.19 The cumulative assessment has considered all known wind farms agreed through consultation with the following local planning authorities for which sufficient information was publicly available at the date of this assessment (such as a planning application, containing details of size, location, and number of turbines):

- Leeds City Council;
- Wakefield Metropolitan District Council;
- Sheffield City Council;
- Calderdale Council;
- Doncaster Metropolitan Borough Council;
- Bradford Metropolitan Borough Council;
- Rotherham Metropolitan Borough Council;
- Kirklees Council; and
- High Peak Borough Council.

7.3.20 This situation was confirmed at 22nd March 2007. These assessment findings, however, are not a substitute for individual wind farm landscape and visual assessment and are based on an outline assessment of the information available. Other potential sites may have been confirmed or proposed since the date of this assessment.

Wind farms included within the landscape and visual assessment

7.3.21 Wind farms included or referred to in this assessment are listed in Table 7.4 and illustrated on a plan in Figure 7.40.

© Entec UK Limited

Table 7.4 Wind farms Included in the Cumulative Assessment within a 30km Radius

Wind farm Site	Details					Layout Comments and Landscape Character
	HH	RD	BT	No	Distance	
Existing Wind farms						
Royd Moor Wind Farm	35	37	53	13	0.7km	This existing wind farm comprises of two lines of turbines, situated ~1.8km north west of Penistone
Longley Farm	~15-20		~30	1	~5km	A single turbine situated north west of the site, in Kirklees district (Height details are approximate based on information supplied verbally by Kirklees Council)
Proposed Wind farms with Planning Consent						
Hazelhead Wind Farm	60	80	100	3	1.7km	This consented wind farm comprises of 3 turbines, situated at an industrial works ~0.8km north east of the village of Carlecoates.

Key:		**HH**	Hub Height
No.	Number of turbines proposed.	**RD**	Rotor Diameter
BT	Blade Tip	**Distance**	Distance from the wind farm site centre.

Note 1: This information has been collected from Local Planning Authority and Wind Farm Developer sources and as such may be subject to change.

Wind farms excluded from the landscape and visual assessment

7.3.22 Wind farms excluded from the assessment include any site over 30km from Blackstone Edge, those proposals which are currently at scoping stage and the single turbine at Bullhouse. There are sites where there is limited inter-visibility within the study area, or where there is no submitted planning/scoping applications detailing the proposals at the time of the assessment up to 22 March 2007.

7.3.23 The wind farms excluded from this assessment are listed in Table 7.5 below.

© Entec UK Limited

Table 7.5 Wind Farms excluded from the Cumulative Assessment

Wind farm Site	Details					Layout Comments and Landscape
	No.	BT	HH	RD	Distance	
Denby Dale	2	100	-	-	~7km	Application withdrawn
Crook Hill	12	120			~31km	Scoping stage on the 30km boundary north west of the proposed site.
Bullhouse, Ecklands Farm	1	~35	-	-	~3km	A single turbine currently not operational and subject to enforcement action regarding decommissioning and removal, situated south east of Blackstone Edge, south of Thurlstone
Spicer Hill	6	Up to 80m	-	-	400m	Site at scoping stage and therefore no details of final site design are available.

Key:

No. Number of turbines proposed.

HH Hub Height

RD Rotor Diameter

7.4 Planning Policy Context

7.4.1 The Local Development Plans contain a number of polices which seek to protect the landscape resource across the study area, and includes designated landscapes that are relevant to this assessment. The context of these planning policies should be interpreted in reference to Chapter 5 of this ES and specific national, regional, and local policy on renewable energy development. The landscape planning designations are illustrated in Figure 7.6.

7.4.2 The LVIA Study area covers administrative areas for a number of local authorities. The ZTV illustrates those areas which have the potential to be affected by the proposed wind farm development. These are represented by the following Councils:

- Barnsley Metropolitan Borough Council;
- Kirklees Council;
- High Peak Borough Council;
- Sheffield City Council; and
- The Peak District National Park Authority

7.4.3 Those planning policy areas and designated landscapes that are within the visual envelope, calculated to upper blade tip (and may potentially have views of the proposed wind farm) have been considered in this assessment and are summarised in Appendix D3 and D4. Other planning policies and designated landscapes out with the visual envelope, calculated to upper blade tip, have been excluded from this assessment.

© Entec UK Limited

7.5 Project Description & Mitigation, Incorporated in the Proposed Development

7.5.1 A full project description is provided in Chapter 4 of this environmental report and the main points relevant to the LVIA are as follows:

- The proposed Blackstone Edge Wind Farm consists of three proposed wind turbines located in direct response to the technical, and environmental constraints of the site area;
- The LVIA has been based on a candidate three blade horizontal axis machine with a rotor diameter of up to 82m, a hub height of up to 60m and a blade tip height of no more than 101m;
- Transformers would be located within turbine towers or at the base of each turbine tower.
- One permanent lattice meteorological mast, 60m high would be required;
- The construction compound will be situated adjacent to the proposed access road and within this compound the control building will be sited in the south west corner adjacent to the wall adjacent to the public road and the site access road;
- Each turbine would be connected via underground cable, using new cable trenches, to the site substation and control room;
- The route and location of the new access tracks were designed in response to technical requirements and landscape design criteria to reduce landscape and visual effects; and
- Decommissioning would be carried out at the end of the 24 year operational life of the wind farm, with all the above ground structures removed.

Design Statement

7.5.2 The 'design/layout' of the wind farm has been largely determined by the technical constraints on the site (refer to the Design and Access Statement). However, the principal landscape design objectives of the Blackstone Edge Wind Farm remain, as assessed as within the LVIA, as follows:

- Develop the wind farm and associated infrastructure designed to respond to the local landscape character and provide an acceptable design solution in terms of scale, layout and visual composition;
- The aim of the design process is to achieve a simple, balanced, rational, and coherent image that may be viewed as an acceptable or positive component of the visual composition;
- Minimise landscape and visual effects on views from local residents and communities;
- Minimise landscape and visual effects from recreational areas/routes and popular hilltops; and

© Entec UK Limited

- *Minimise landscape and visual effects from main transport routes.*

Design Guidance: Natural England

7.5.3 There has been no specific design guidance or comments from Natural England in relation to the proposed site layout or height of the proposed turbines during the scoping process for the LVIA.

Design Guidance: Barnsley Metropolitan Borough Council

7.5.4 The design guidelines used for the Blackstone Edge wind farm have been discussed with Barnsley MBC during meetings held in March and May 2007. Barnsley MBC noted their requirement for the design of wind developments in this area to carefully consider the potential for cumulative effects with the existing wind turbines at Royd Moor. Chapter 2 (section 2.3) of this ES provides further information in response to these comments from Barnsley MBC; it sets out further information about the re-powering of Royd Moor and the layout of any future proposals for wind turbines in the vicinity of the Blackstone Edge site. Later sections in this chapter present an assessment of findings in respect of potential cumulative effects.

Landscape design constraints and opportunities

7.5.5 Analysis of the site area, landscape character, and early wind farm design has led to the identification of a number of landscape and visual design opportunities and constraints, which are listed in Table 7.6.

Table 7.6 Landscape Design Constraints and Opportunities

Item	Design Constraint	Design Opportunity
Yorkshire Southern Pennine Fringe LCA **(See Figure 7.4)**	Potential visibility from higher ground and adjacent local landscapes. The receiving landscape is identified as medium sensitivity being locally designated as Area of Borough Landscape Value (ABLV).	Actual site area in an open, upland farmland location within a medium – large scale landscape with a demonstrated capacity to accommodate turbines, with the existing Royd Moor Wind Farm located directly east of the Blackstone Edge Wind Farm site.
Ingbirchworth Upland Farming LLCA **(See Figure 7.5)**	Potential visibility from surrounding high ground within the Upland Farming Area. The receiving landscape is identified as medium sensitivity being locally designated as Area of Borough Landscape Value (ABLV).	Actual site area in an open, upland farmland location within a medium – large scale landscape with a demonstrated capacity to accommodate turbines, with the existing Royd Moor Wind Farm located directly east of the Blackstone Edge Wind Farm site. Design to retain and enhance existing hedgerows, mature trees and stone walls in wind farm site and access road layouts to conserve and enhance the local landscape character.
Blackstone Edge Site	Location of turbines to relate to the environmental constraints plan and technical criteria. Open, hill top location reduces possibility to screen turbine bases, tracks and ancillary development from some views.	Design to retain and enhance existing hedgerows, mature trees and stone walls in wind farm site and access road layouts to conserve and enhance the local landscape character.

© Entec UK Limited

Table 7.6 (continued) Landscape Design Constraints and Opportunities

Item	Design Constraint	Design Opportunity
Visual Amenity	Views and amenity of local settlements and communities, local walks and viewpoints. Particularly important are the long distance views from the Peak District National Park to the south and west.	Design to protect visual amenity and where visible, aspire to provide a positive contribution to the landscape in terms of scale, and simplicity of image or visual composition.

Wind Farm Design

7.5.6 Initial technical analysis of the site indicated capacity for 3 turbines. The heights and numbers of the turbines were initially assessed in terms of landscape and visual composition.

7.5.7 This process considered the medium - large scale landscape and the scale indicators of the existing turbines at Royd Moor using assessment during site visits, ZTV, wireframe and photomontage analysis. It was concluded that in this particular site, the height of the turbines were a crucial design factor and of more importance than the locations of the turbines.

7.5.8 The landscape and visual assessment has been completed on the agreed turbine specification of 3-bladed turbines with a maximum height to blade tip of 101m. These are based on a model which is up to 60m to hub height and 82m rotor diameter which creates a balanced, slender form. This height is in line with current turbine manufacturer's specifications and is comparable in height to other existing and approved wind farms within the UK, and the now consented development at Hazelhead.

7.5.9 The 'Guidelines on the Environmental Impacts of Wind farms and Small Scale Hydroelectric Schemes' published by Scottish Natural Heritage advise on the following design criteria which would be appropriate to this site location:

- Retention of 'simplicity of image', by relating the layout design to the underlying landscape character;
- Relating scale of wind farm and turbine size to the existing landscape scale and character aiming to achieve a 'sensitive, sculptural and simple' effect that appears rational to the landscape setting;
- In the case of cumulative effects, a simple image may be retained by 'all being of a similar image and relationship in the landscape'; and
- Further guidance is provided on the design and layout of roads and ancillary development.

7.5.10 Early wind farm layouts were run on computer software to look at the sizes of turbines which could be placed comfortably into the landscape, and the positioning of them. This was to identify the best wind farm 'fit' within the scale and character of the site, and to ensure that the proposed wind farm would present no

© Entec UK Limited

unacceptable cumulative effects alongside the existing Royd Moor Wind Farm to the east of the site, and the consented Hazelhead Wind Farm to the south west of the site. Turbine heights were considered at 125m/115m/100/80m to blade tip. It was concluded that a turbine of a similar height to the proposed turbines at Hazelhead Wind Farm presented a best fit visually within the landscape, and the elevated upland landscape could accommodate the scale of the turbines at ~100m blade tip without potential adverse scale effects with the neighbouring Royd Moor Wind Farm at 54m height to blade tip.

Visual context

7.5.11 Viewpoint analysis of the layout design options considered the following factors:

- the main axis of view or direction from where most visual receptors would view the wind farm;
- the landscape grain, scale, enclosure and presence of scale indicators[15];
- apparent extent and depth of the development when viewed from the viewpoints;
- overall composition and simplicity of image (avoidance of outlying or overlapping turbines, gaps);
- proportion of background/skyline against which the turbines would be viewed and consideration of colour selection;
- appearance of the wind farm from moving receptors on the road network, and in particular recreational receptors on the local footpath/bridleway network to the north and south.

7.5.12 Areas of potential visibility within the study area have been examined from approximately 45 viewpoints within the Resoft © Wind Farm model and the design developed to reduce visual affects and enhance the composition of what remained visible from these viewpoints.

Turbine selection

7.5.13 The landscape and visual assessment has been completed on the proposed turbine specification of 3 bladed turbines with a maximum height to blade tip of 101m.

Turbine colour

7.5.14 From most viewpoints the turbines would be viewed against the background sky. For these reasons the turbines are proposed to be coloured pale grey with a semi-matt finish to reduce their contrast with the background sky. The turbines would be uniform in colour and would not support company logos or similar. Transformers would be located within turbine towers or externally in a small kiosk at the base of each turbine tower. This detail is dependent on procurement and final turbine selection for construction.

[15] Scale indicators are familiar objects in the landscape such as trees and buildings that appear in close proximity to the wind farm and provide an indication of the true scale and height of the turbines.

© Entec UK Limited

Turbine movement

7.5.15 The turbines will introduce movement to the landscape, however, the movement will be slow and regular with each machine turning at the same speed and in the same direction. The rotation speed will range 6 to 20rpm. These turbines and those consented at Hazelhead both have a rotation speed slower than the rotation speed of the smaller turbines at Royd Moor, indicative of evolution in technology of these devices.

7.5.16 The final proposed location of the turbines, access tracks and other site infrastructure, in relation to the identified environmental constraints, is shown in Figure 2.2.

Associated Infrastructure and Works

7.5.17 The site will include the following construction activities and infrastructure described more fully in Chapter 4 Project Description of the Environmental Report.

Site Substation, Contractor's Compound & Grid Connection

7.5.18 It is proposed that both the sub station and the temporary construction compound are located to the south west of Turbine 1 running parallel with Whitley Road.

7.5.19 The substation would be closest to the access road, with a temporary construction hard standing established first to facilitate construction activities. Then the construction compound would be constructed inside a fenced off construction area segregated from the temporary construction compound.

7.5.20 Each turbine would be connected via underground cable to a grid connection point and site control building. The route of the underground electrical cables will follow the existing and proposed access tracks to limit disturbance to ground vegetation. Following excavation of the trenches required for the laying of the cables, excavated materials will, where practicable be replaced and vegetation allowed to re-establish.

7.5.21 The control building would be of a pitched roof design and constructed in a traditional local style and local materials, to be agreed with Barnsley MBC prior to commencement of construction.

7.5.22 There would be consultation with Barnsley MBC Highways staff on the road layout and site access to the compound before plans are finalised.

Soft and Hard Landscape Works

7.5.23 There are no defined hedgerows in the site, but tree lines exist which may formerly have been hedges. The land within the proposed development area will continue to be managed for intensive agricultural production with new species-rich hedgerows planted along the field boundaries within the site that are presently marked by post-and-wire fences (see Figure 8.6). Species-rich hedgerows will also be instigated along appropriate lengths of the new access tracks field boundaries within the site, once construction has been completed. This will add a total length of about 800m of new species-rich hedgerows. When the wind farm is decommissioned there is potential for damage to some sections of species-rich hedgerow, for which appropriate mitigation or compensation could be developed easily at that point in time. Reinstatement of existing dilapidated stone walls within the site will take place.

© Entec UK Limited

Site Tracks within the Site Boundary

7.5.24 Within the site boundary, access tracks will be created to a width of up to 5m with passing places and increased in width on corners to allow adequate space for passing vehicles. These features would not be generally visible from the wider area due to intervening vegetation and the slightly undulating topography of the upland location.

7.5.25 The new access tracks would relate closely to the local topography and existing stone wall/hedgerows/field boundaries where possible.

Operation

7.5.26 The operational period of the wind farm will cover a period of 25 years and will include ongoing site management to ensure the adequate maintenance of site facilities such as roads, boundaries, gates, and signage. Additional enhancement works which may benefit the local community could include:

- educational awareness programmes with local schools/community groups by Eon; and
- new signage/information boards in close proximity to inform local people/recreational receptors of the details of the scheme.

Decommissioning

7.5.27 Decommissioning will include the removal and restoration of remaining, above ground structures. The decommissioning process would be similar to that of the construction process, representing a temporary increase in site activity at the end of the wind farm's life. Where possible, all materials which can be recycled will be dismantled and recycled appropriately.

© Entec UK Limited

Table 7.7 Mitigation and Enhancement Measures Summary

Effect	Incorporated mitigation/enhancement measure	Extent to which effect mitigated	Monitoring requirements (if any)	Means by which mitigation, or enhancement measure may be secured
Construction				
Design of site access roads/entry points	Existing agricultural tracks/access points will be used and will closely relate to existing landscape patterns and contours	Substantially	None	Planning conditions/approval of proposed site access plan
Temporary Site Construction Compound	Fully restored to agricultural use	Substantially	None	
Grid Connection	Each turbine would be connected via underground cable to grid connection point and to site sub station to avoid visual clutter within the surrounding arable landscape	Fully	None	Planning conditions/approval of proposed site access plan
Site Sub Station	Use of local materials and designed in a vernacular buildings style for the Pennine/Peak District area	Substantially	None	Planning conditions/approval of proposed site access plan
Operation				
Turbine selection	101m to blade tip in order for the Blackstone Edge and the consented Hazelhead Wind Farm to be viewed comparably in the surrounding landscape	Partially	None	Comparison of turbine dimensions
Turbine colour	Turbines coloured pale grey with a semi matt finish to reduce contrast with background sky	Partially - dependant on weather conditions	None	

Landscape & Visual Analysis

7.5.28 The wind farm design has been considered in three dimensions and with reference to known landscape change that may occur over the life of the development. The proposed technical layout has been examined from site survey observations and desk-based analysis of plans and the Resoft © Wind farm computer model, which allows the design to be viewed (as wireframes) from numerous locations within the study area on screen. This has been further backed up by the comparison of printed wireframes with observations on site, photographs and preliminary photomontages.

7.5.29 The wind farm design has been considered against the landscape and visual criteria, identified in Table 7.8, which have been drawn from the methodology, references and Entec's collective landscape experience of assessing wind farm development.

© Entec UK Limited

Table 7.8 Landscape and Visual Design Considerations

Design Consideration	Description
Landscape Capacity	Consideration of the wind farm location and design in terms of the broad landscape character, taking account of the sensitivity of the landscape and the capacity of the landscape to accommodate or absorb wind farm development. Leading to a broad statement on the landscape suitability of the site.
Visual Context	Consideration of the wind farm location and design in terms of the broad visual context, location of main visual receptors (including whether these are static or mobile) and the principal axis of directions of view from which the wind farm is most likely to be experienced. Leading to a broad statement on the visual context and likely characteristics of views of the wind farm.
Viewpoint by Viewpoint Analysis of the Wind Farm Design	
Landscape Fit or Visual Rationale	Consideration of the visual composition and 'ideal' landscape fit and scale for a wind farm, should one be visible in this view. The grouping of turbines should aim for a simple and balanced group, which is well related to the receiving landscape capacity and visual context. This is closely related to visual rational where the presence of the wind farm development may be considered rational in terms of its location within a man-modified landscape and juxtaposition or proximity to electricity users. For example, development might reasonably be accommodated or 'nestled' or 'within surrounding topography or occupy a part of a skyline or landform, such that the scale and extent is not overwhelming. Alternatively some views may be less able to accommodate wind farm development due to complexity, scale and sensitivity of the existing landscape.
Visual Rational	This is closely related to Landscape Fit, the presence of the wind farm development may be considered rational in terms of its location within a man-modified landscape and juxtaposition or proximity to electricity users.
Extent and depth of development	Consideration of the extent of the total development, visible within the landscape and whether or not this is judged to be overwhelming when compared to the scale of the receiving landscape character. A wind farm may appear extensive from one angle (viewing along the widest extent of the development) or 'deep' (viewing along the narrowest extent which may lead to higher levels of overlap).
Pattern of layout	Consideration of the pattern of the layout and how this relates to the existing landscape grain and patterns within the receiving landscape character and visual composition. For example lines of turbines, grids, or organic patterns.
Scale and proximity	Consideration of the scale and size of the turbines compared to the scale of other elements and characteristics of the receiving landscape often referred to as scale indicators. The apparent proximity or distance of the turbines to the viewer is closely related to the scale of the development as viewed in the landscape. The proportion of the turbines in terms of blade length and hub height may also be considered.

© Entec UK Limited

Table 7.8 (continued) Landscape and Visual Design Considerations

Design Consideration	Description
Composition	Consideration of the overall composition and aesthetic appearance of the wind farm as viewed from that viewpoint or general direction. Several key characteristics of wind farm developments may be visible with either positive or negative effect on the design composition as follows: • Simplicity of image – The design composition should aim for a simple and balanced image that can be easily comprehended within its landscape setting. • Gaps – Unplanned or random gaps within the layout such that the wind farm appears, as a less coherent or simple group should be avoided. • Overlap – Excessive overlap of turbine blades and hubs, often combined with a 'deep' layout can lead to visual complexity and movement in the landscape and a reduction in the semi-transparent nature of wind farm development. • Visual permeability – Common characteristic of wind farm development. Larger wind farms however, often combined with a 'deep' layout can lead to reduced transparency, effectively blocking from view the landscape beyond the wind farm. • Blade tips – Appearance of blade-tips without visual reference to hubs and towers, particularly at closer distances can lead to visual complexity. • Outlier – Single turbine(s) appearing separate from the main group, sometimes also appearing to occupy a different component part of the landscape and increasing the apparent visual extent of the development. • Juxtaposition – Location of development relative to key visual components and landscape elements, features or landmarks within the view. For example a wind farms location relative to built development or prominent and characteristic hilltops. *Colour/contrast – Consideration of the proportion of background/skyline against which the* turbines would be viewed and consideration of colour selection.
Cumulative Aspects	Consideration of the existing Royd Moor wind turbines, the consented Hazelhead scheme and the anticipated change in cumulative aspects over time (i.e. that Royd Moor will be decommissioned in 2018 at the latest and that the Hazelhead scheme has been consented in Spring 2007). Hence there will be a maximum 8 year overlap (assuming 2010 operational start for Blackstone Edge) between Royd Moor, Blackstone Edge and Hazelhead.

7.6 Description of Baseline Conditions

Overall Landscape Context

7.6.1 The baseline assessment for the proposed Blackstone Edge Wind Farm includes the existing turbines at Royd Moor Wind Farm and the consented turbines at Hazelhead Wind Farm. The study area for Blackstone Edge Wind Farm is illustrated in Figure 7.7 and includes parts of Sheffield, Barnsley, Kirklees and High Peak Districts.

7.6.2 The study area includes the southern edge of the settlement of Huddersfield and Holmfirth in the north west, Denby Dale in the north east, Penistone and Thurlestone centrally within the study area and Stocksbridge to the south east. The Peak District National Park is located to the south and west within the study area.

7.6.3 The general landscape context of the site location is illustrated in Figure 7.1. At a regional scale the landscape character of the area is described in the Countryside

© Entec UK Limited

Agency Landscape Character Areas (LCAs), which are illustrated in Figure 7.4, and at a local scale the Local Landscape Character Areas (LLCAs) of the Barnsley Metropolitan Borough Council Landscape Character Assessment are illustrated in Figure 7.5. Sheffield City Council do not have a Landscape Character Area Assessment covering the study area, Kirklees Council have produced a draft version, but this has yet to be adopted and was therefore not included in this study. High Peak Borough Council within their Local Development Framework have produced an award winning Supplementary Planning Document: Landscape Character SPD5. *Adopted March 2006.* This document does not include areas of the borough within a 10km radius of the study area as these are within the Peak District National Park.

7.6.4 The Blackstone Edge site lies within upland farmland, within the Yorkshire Southern Pennine Fringe, between the moorland of the Peak District and the settlement/urban fringe areas of Barnsley and Huddersfield and the former coalfield areas to the north east and south east. Generally the landscape can be described as transitional between the strong valleys and the pastoral Pennine and High Peak foothills and hill plateaux. The landscape appears to be remote in character, with scattered farmsteads and hamlets, but the towns are also in close proximity, with long views to the urban areas across the plateaux. The impact of development is nearly always evident in the landscape, where the network of roads, railways and canals is prominent and skylines are often topped with pylon lines and communications masts[16].

General Landscape Grain & Scale

7.6.5 The grain of the landscape is largely dominated by the combination of the Millstone Grit and Coal Measures which are the two main geological formations within the Barnsley area. Millstone Grit is found in the far west of district, and the Coal Measures extend over much of the district to the east. The different weathering of the seams of the coal measures has resulted in a characteristic 'stepped' landform, from an elevation of ~200m AOD, with a series of platforms exhibiting scarp and dip slopes some 300 – 400m above sea level[17].

7.6.6 The River Don flows through the study area, ~ 2km south of the proposed site, with the upper reaches of the river leading from Winscar Reservoir south west of the site, easterly towards Thurlestone and Penistone south east of the site and on towards Thurgoland on the south eastern perimeter of the study area. The river has carved a broad, open valley within this area. The River Holme leads from Brownhill Reservoir ~8km west of the site, northwards, through the valley settlement of Holmfirth and north to Huddersfield.

7.6.7 There are a number of hills/plateau areas within 10km radius of the site from which panoramic medium – long distance views can be obtained:

[16] Countryside Agency Character Area Study, Countryside Character Volume 3: Yorkshire & The Humber Regional Landscape Character Assessment www.countrysideagency.org.uk, 2005, page 90

[17] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002, page 182

© Entec UK Limited

- Howden Moors (~526m AOD)/Pike Low, Upper Common (~478m AOD)/Margery Hill (~546m AOD) are located to the south of the study area the hill tops/plateaux within the Peak District National Park;
- Britland Edge Hill (~523m AOD) & Withens Moor (~400 – 450m AOD) are located in the west of the study area within the Peak District National Park;
- Moor Head, near Roydhouse (~264m AOD) north east of the proposed site; and
- Open upland farming areas south of Penistone in the south east of the study area.

7.6.8 The landscape scale within the study area varies between medium to large in scale, further emphasised by the lack of development on the open plateau with panoramic views, and a small – medium landscape within more enclosed river valleys with scattered settlements centrally within the study area along the River Don, and to the north on the River Holme, with more enclosed views in low-lying areas.

General Land Use

7.6.9 The landscape of the study area is predominantly rural/rural fringe, but is also characterised by contrast between the transport routes and former mill towns and villages within the valley bottoms and sides and the treeless hill plateaux used for rough grazing.

7.6.10 The agricultural land is used for predominantly pastoral farming, with distinctive walled enclosures forming linear patterns within the landscape. This is especially evident in the area around Penistone where the small – medium sized rectangular fields are delineated by dry stone walls. To the west this pattern gives way to un-enclosed rough grazing on the high land, and hedgerow field boundaries to the east. There is also rough grazing on un-improved pasture on scrub and slopes on higher ground to the west of the study area.

7.6.11 There are scattered farmsteads in the open plateau areas, which tend to be built with local sandstone (gritstone). There is a network of roads within the landscape linking the settlements, and whilst there is a feeling of remoteness, the towns/villages are not too far away.

7.6.12 Man's influence is also evident in the siting of pylons and communications masts on prominent skylines in the study area. The existing Royd Moor Wind Farm is a prominent landscape element, visible from a large proportion of the study area. There are a number of reservoirs within the study area at Broadstone/Ingbirchworth/Royd Moor/Scout Dike.

7.6.13 Tree cover is sparse within the study area, limited to the slopes of the valley sides to the south and south east of the site, and more evident in the 'Settled Wooded Farmland of the east and north east of the study area. There is scattered woodland cover on the incised valleys of the streams draining into the River Don south of the site between Carlecoates and Penistone[18].

[18] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002, page 182

© Entec UK Limited

7.6.14 The nearest settlement to the proposed site is Crow Edge (~1km south west of the site) with Victoria ~1.5km west, Maythorn ~1.5km north west, Millhouse Green ~2.5km south east and Ingbirchworth ~2km east. Penistone is located ~3.5km south east of Blackstone Edge and Denby Dale ~3.5km north east. The nearest town is Holmfirth ~7 km north west of the site, and Barnsley ~15km east.

Landscape Change

7.6.15 The traditional wool and textile industries have declined, however there is continued pressure for new types of development within the study area, including new housing, industry and transport routes. This also includes the demands of renewable energy resources,

"The higher land provides opportunities for wind turbines and communications masts. These, along with pylon lines and other tall structures, can add to the visual clutter which tends to be characteristic of much of the [Pennine Fringe] area.[19]*"*

7.6.16 Modern structures such as pylons are prominent in the open landscape and there is an increasing demand for installing telecommunications infrastructure and renewable energy features such as wind turbines.

7.6.17 In addition, some of the more 'fringe' landscapes suffer from degradation of the land, with the dry stone wall field boundaries falling into disrepair, with farm buildings becoming unused. This in turn causes a decline in the strength of character of the landscape[20].

"The structure of the landscape would be aided by the repair and maintenance of field walls"[21]

Landscape Character Areas (LCAs)

7.6.18 The landscape within the study area has been classified by the Countryside Agency Landscape Character Initiative (now known as Natural England), and divided into distinct Landscape Character Areas (LCAs). The host LCA is the Yorkshire Southern Pennines Fringe (Character Area 37), and the proposed wind farm would be entirely contained within this LCA.

Local Landscape Character Areas (LLCAs)

7.6.19 The various Local Landscape Character Areas (LLCAs) within the LVIA Study Area are documented by the Barnsley Borough Landscape Character Assessment[22]

---

[19] Countryside Agency Character Area Study, Countryside Character Volume 3: Yorkshire & The Humber Regional Landscape Character Assessment www.countrysideagency.org.uk, 2005, page 93

[20] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002, page 182

[21] Countryside Agency Character Area Study, Countryside Character Volume 3: Yorkshire & The Humber Regional Landscape Character Assessment www.countrysideagency.org.uk, 2005, page 94

[22] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002, page 182

© Entec UK Limited

which is illustrated in Figure 7.5 and described in Appendix D3 and D4. The site is located within the Ingbirchworth Upland Farmland LLCA. The text in the tables is drawn heavily from the original source. For a full description please refer to the original document.

7.6.20 The site is closely neighboured by:

- the West Barnsley Settled Wooded Farmland LLCA to the east;
- the Thurlstone and Langsett Unenclosed Moorland LLCA to the west; and
- the Upland River Don Valley and Penistone Upland Farmland to the south.

7.6.21 The Wooded Don River Valley LLCA (B2) and the Upper Dearne Lowland River Floor (C3) lie within the study area, but outwith the ZTV, therefore there are no predicted views of the turbines from within the LLCAs and as a result they have not been included within this assessment.

7.6.22 A landscape character assessment process has begun for Kirklees Council which is currently at a descriptive stage only, with no conclusions drawn as yet to the sensitivity of the landscape resource see paragraph 7.6.3. Therefore, we have not referred to this study in this LVIA.

Blackstone Edge Site Area

7.6.23 The proposed wind farm is located at Whitley Common, north of Whitley Road, ~700m north west of the existing turbines at Royd Moor, north of the Upper River Don Valley.

7.6.24 The site comprises of:

- improved/semi-improved grassland used for cattle grazing;
- stone walls along road sides and forming field boundaries, with gaps in places;
- post and wire fencing;
- thinning wind swept hedgerows/ scattered hedgerow trees (Hawthorn sp.) atop this moorland location.

7.6.25 The landscape character of the surrounding is typified by the improved/semi-improved pasture used for sheep and cattle grazing within an open, moorland landscape setting with scattered farmsteads/hamlets, linear single lane roads with stone wall boundaries and intermittent mature hedgerows. The northern hill tops of the Peak District National Park form the horizon to the south of the site, and the rolling topography of the Denby Dale area visible to the north east. There are varying landscape elements within the surrounding landscape which include:

- Plastic bags covering rolls of feed/hay;
- Old caravans in fields used for horse grazing;
- Timber pylons;
- More fragmented stone walls and field boundaries to the west; and

© Entec UK Limited

- Smaller field units, with preserved stone wall boundaries, to the north east and east.

7.6.26 The landscape is very much influenced by humans. The traditional landscape pattern in this area is in decline, with evidence of poorly maintained stone walls and hedgerows. The existing turbines at Royd Moor are very visible and prominent landscape features. The nearest clusters of properties are situated at Lower Maythorn (~750m west) and Upper Maythorn (~1km west), Spicer House (~700m north east) and Brown's Edge Farm (~820m north west), Ingbirchworth ~2.2km east, Millhouse Green (~2.2km south east), scattered individual properties to the south, and Crow Edge (~1km south west). There are several country lanes within proximity of the site, with Whitley Road bounding the site to the south, Browns Edge Road north west of the site, Spicer House Lane east of the site.

7.6.27 The stone walls bounding geometric pasture fields are characteristic of the local landscape character.

Recreational/Tourist Destinations

7.6.28 Recreational and tourist destinations in this assessment include those features, outwith towns and settlement boundaries, which appear as prominent landmarks or landscape features within the landscape and locations associated with passive recreation such as walking and cycling.

7.6.29 The intention is to assess those recreational and tourist destinations where there is a clear relationship between the feature/destination and the landscape. The assessment, for example, excludes sports such as quad biking, team sports and tourist destinations where the main focus of the activity is indoors.

7.6.30 A short list of recreational and tourist destinations that are overlapped by the ZTV, where people/tourists visiting these locations could potentially view the proposed site have been selected through desk-based and site survey analysis. The recreational and tourist destinations, included in this assessment are listed in Table 7.9.

Table 7.9 Recreational and Tourist Destinations

Name	Description	Viewpoint No. if used
<10km from Blackstone Edge Wind Farm		
Local public footpath network/Locally promoted walks	Within the vicinity of the Blackstone Edge site, and the existing Royd Moor Wind Farm, there are a number of public footpath and bridleways with potential views of the existing and proposed turbines	VP 1 / 3
Long Distance Footpaths	There are a number of locally and nationally promoted long	

© Entec UK Limited

Name	Description	Viewpoint No. if used
	distance recreational routes within the study area with potential views of the wind farm and existing views of the Royd Moor Wind Farm.	
	- The Trans Pennine Trail is a nationally promoted route which runs west – east within the study area south of the site. - The Barnsley Boundary Walk is a locally promoted route which runs west – east within the study area north and of the site. In addition, the Kirklees Way and Dearne Way are two locally promoted routes north of the site.	VP 9 / 15 VP 3 / 13
Open Access Land	Within the Barnsley MBC district there are a number of open access areas within the vicinity of the site which allow access to the public.	VP 12
Local Attractions	The Royd Moor Viewpoint Location, located to the south east of the proposed turbines, is a local heritage imitative comprising of an enclosed viewing platform with historic local information and pointers to features in the local landscape.	VP 7
Peak District National Park	The Peak District was Britain's first national park, established in April 1951. Around 38,000 people live in the Park. The Park is also used for adventure activities, including climbing, caving, walking and cycling. The National Park covers 1,438 km^2 (555 sq. miles) with over 2,500 km of public rights of way	VP 9 / 13 / 15 / 17 / 18 / 19
National Cycle Route	National Cycle Network Route (off road) follows the Trans Pennine Trail south of the site. A second on-road cycle route is located west of the site and passes through Victoria	VP 5 / 9
Historic Parks & Gardens/Country Parks	There are no listed properties within the English Heritage Register of Parks and Gardens (March 2004) within the study area. There is a locally Registered Park & Garden (BMBC) at Cannon Hall Country Park. This 70 acre landscaped parkland and formal gardens is located ~8km east of the site, but has not been included within the assessment due to the screening by its surrounding woodland which would screen views of the proposed turbines. The three proposed turbines would not affect the landscape setting of the parkland.	

Overall Visual Context

7.6.31 The Zone of Theoretical Visibility (ZTV) for the proposed Blackstone Edge Wind Farm is illustrated in Figures 7.2 – 7.3. These figures have been calculated to allow for the blade tip height (101m) of each wind turbine and therefore illustrates the maximum theoretical extent of visibility (50% of the study area to blade tip height), although no allowance has been made of existing built development and vegetation which would in practice screen or limit visibility. Potential visibility of the proposed wind farm at Blackstone Edge would be viewed within the study area alongside the existing turbines at Royd Moor Wind Farm.

7.6.32 Potential visibility of the wind farm would largely cover the adjacent upland farmland/grazing areas to the north/east/west of the site up to 2.5km, with more limited visibility directly south of the site due to the local topography and the south facing slopes of Upper Whitley Edge and Shiner Hill.

© Entec UK Limited

7.6.33 Potential visibility would extend across the elevated positions to the east of the site within the West Barnsley area, however, the undulating topography and scattered woodland have the potential to screen any potential medium – long distance views of the site, therefore the potential visibility becomes more fragmented.

7.6.34 To the north and north west, the gradually falling topography, and river valleys, with isolated higher ground reduces potential visibility of the turbines to those south facing slopes at Highburton, High Green, Shelly and Roydhouse between ~2.5 – 10km radius of the site. However, built development in these areas also has the potential to screen views of the proposed turbines.

7.6.35 There is potential visibility of the proposed turbines alongside the existing Royd Moor turbines from the Peak District National Park between 5- 10km to the west and south of the site. To the west potential visibility is largely on higher, east facing ground at Holme, Twizel Head Moss, and Snailsden. To the south the potential visibility is more extensive due to the open, moorland landscape of the Peak District, and extensive on the north facing slopes of Thurlestone Moors, Harden Moor, Midhope Moor between 2.5 – 10km of the site. Restricted visibility occurs in the lower river valley near Stocksbridge and the smaller river tributaries near the Langsett Moors.

7.6.36 The existing Royd Moor Wind Farm is largely visible within the same 10km study area (refer to Figure 7.40). It is described in the Barnsley Landscape Character Assessment[23] as

"A large wind farm..... It's graceful turbines are visible from many miles around.....providing a prominent landmark in this large scale landscape".

7.7 Assessment of Potential Landscape Effects

Introduction

7.7.1 The assessment of landscape effects has included the existing thirteen turbines at Royd Moor Wind Farm and the three consented turbines at Hazelhead within the baseline description of the landscape resource.

7.7.2 Landscape effects include the effect on landscape receptors such as landscape elements and features, as well as the effects upon the general landscape character and its quality or condition and value. The effects of the proposed turbines may be negative or positive and may vary in their duration from temporary to permanent.

7.7.3 For the purposes of this assessment construction has been assessed as all of the ground based activity, including the construction site roads, substation, temporary construction compound, turbine foundations, presence of turbine constituent parts, and the gradual erection of turbines on site. For these reasons, the construction effects will range in magnitude, over the construction period, from zero to the final level on completion, but would not exceed the operational levels except in the case of localised temporary development such as the temporary construction compound.

[23] Barnsley Borough Landscape Character Assessment – Final Report, Environmental Consultancy of University of Sheffield and Land Use Consultants, May 2002, page 182

© Entec UK Limited

Construction effects are by their nature usually adverse including stages of work in progress, movement of coloured machinery, excavation and signage, but can also be features of interest when, for example, the turbines are erected by large cranes.

7.7.4 The operational period considers the assessment of the wind farm including the turbines and post construction and restoration of the temporary construction compound, would resume a settled and co-ordinated character.

Predicted Landscape Effects on the Yorkshire Southern Pennine Fringe LCA

Landscape Sensitivity

7.7.5 Within the Yorkshire Southern Pennine Fringe LCA there are variations within the local characteristics and landscape quality. There are substantial areas of settlement and prominent transport corridors within the LCA, however, within the LVIA study area the settlements are villages associated with the former milling industries and situated within the river valley corridors at Holmfirth/Penistone/Stocksbridge. These smaller settlements are traditionally constructed out of Millstone Grit/dark gritstone, re-enforcing the 'Pennine' character of the area. The city of Huddersfield lies north of the study area. The southern suburbs of city are ~8-10km north of the site.

7.7.6 The local site area is typical of contrast between the urban development confined to the valleys and the open surrounding hillsides with pastoral farming and strong linear patterns of walled enclosures on plateaux within the Pennine Fringe area. The main transport routes have been confined to the valley bottoms and slopes and form linear features through the landscape, as does the A628(T) road south of the site, and the disused railway line which now forms the Trans Pennine Trail. The impact of the development,

"..... is nearly always evident in the landscape, where the network of roads, railways and canals is prominent and skylines are often topped with pylon lines and communications masts"[24]

7.7.7 The existing Royd Moor Wind Farm and consented Hazelhead turbines and the proposed Blackstone Edge Wind Farm are located within the Area of Borough Landscape Value (ABLV), a local designation by Barnsley Metropolitan Borough Council.

7.7.8 Considering all these factors, and the presence of the existing turbines, the landscape has a demonstrated capacity to accommodate wind turbines, therefore the Yorkshire Southern Pennine Fringe LCA is of a ***medium*** sensitivity to wind farm development.

Landscape Qualities

7.7.9 Aesthetic characteristics are influenced by the elevated open farmland location, and the elevated location of the proposed site on the plateau, which together contribute to the sense of 'openness'. There are a number of wind swept, mature hedgerows

[24] Countryside Agency Character Area Study, Countryside Character Volume 3: Yorkshire & The Humber Regional Landscape Character Assessment www.countrysideagency.org.uk, 2005, page 90

© Entec UK Limited

and hawthorn trees grouped along the roadsides and a limited number as field boundaries alongside the stone walls. The occasional hedgerow trees and stone wall field boundaries contribute to the quality of the rural fringe local landscape.

7.7.10 This landscape character type is not particularly rare although the ABLV indicates medium local value. The quality and condition of the landscape is considered to be ***low – medium*** as a result of the unmanaged hedgerows, stone wall boundaries in poor repair, disused and operating quarries, grazing land, and the presence of communications masts and pylons.

Magnitude of Change

Predicted Landscape Effects on the Yorkshire Southern Pennine Fringe LCA

7.7.11 During construction the magnitude of effect on the Yorkshire Southern Pennine Fringe LCA, as a whole, would be ***zero - low*** and the effect of the proposed construction activities would be slight and short term and cumulative considering the overall LCA. Therefore the predicted landscape effects on the Yorkshire Southern Pennine Fringe LCA during construction would be ***slight - moderate, short term (temporary)*** and ***adverse***.

7.7.12 During operation, the effects of the proposed new turbines at the Blackstone Edge Wind Farm on the landscape character will be localised within the regional landscape character area. In effect, the three proposed new turbines would result in a ***negligible*** magnitude of change on the physical landscape within the LCA, leading to a slight negligible, long term and temporary effect. However, visually there would be a greater magnitude of change locally, and this is discussed in Section 7.8 of this report.

7.7.13 During operation the Blackstone Edge Wind Farm would extend the occurrence of wind farms within the LCA. Whilst there is a predicted cumulative effect with the existing wind farm site at Royd Moor, and predicted cumulative landscape effect with the consented turbines at Hazelhead, it is not considered that the new turbines at Blackstone Edge would register as a new, defining landscape characteristic element within the wider Yorkshire Southern Pennine Fringe LCA.

7.7.14 The predicted landscape effects on the Yorkshire Southern Pennine Fringe LCA during operation would result in a ***negligible*** magnitude of change generally on the landscape of ***medium*** sensitivity, resulting in a ***slight – negligible*** effect overall. The effect would be a ***long term (reversible), and cumulative*** landscape effect.

Predicted Landscape Effects on the Ingbirchworth Upland Farmland LLCA

7.7.15 The Yorkshire Southern Pennine Fringe LCA within the Barnsley area is divided in to Local Landscape Character Areas identified by the Barnsley Borough Landscape Character Assessment Figure 7.5. These local landscape character areas (LLCAs) have been used to assess the landscape of the LVIA study area in more detail:

- Thurlestone & Langsett Unenclosed Moorland (A1);
- Upland Don River Valley (B1);
- Wooded Don River Valley (B2);

© Entec UK Limited

- Upper Dearne Lowland River Floor (C3);
- West Barnsley Settled Wooded Farmland (E1);
- Ingbirchworth Upland Farmland (F1); and
- Penistone Upland Farmland (F2).

7.7.16 The host LLCA is the Ingbirchworth Upland Farmland (refer to Figure 7.5).

Landscape Sensitivity

7.7.17 The proposed wind farm is set within a landscape which has the typical characteristics of the. Ingbirchworth Upland Farmland LLCA.

7.7.18 Scenically, the landscape contains views of a variety of existing development/settlements and diverse land use, leading in parts to an active scenery with movement A628(T) and A629 roads, minor roads surrounding the turbines at Royd Moor, communications masts, pylons, and scattered residential settlements and farmstead within a predominantly passive grazed agricultural landscape.

7.7.19 The site is located within the locally designated Area of Borough Landscape Value (ABLV).

7.7.20 Overall, the landscape quality of the localised area is considered to be of a medium quality (within the ABLV designated area), with a higher capacity to accommodate change. This would result in a ***medium*** sensitivity to wind farm development overall.

Magnitude of Change

Construction phase

7.7.21 The existing turbines at Royd Moor and consented turbines at Hazelhead are located on the upland farmland above Millhouse Green/Thurlestone/Crow Edge/Victoria/Carelcoates/Hazelhead. The new turbine bases, new access tracks, construction compound and associated infrastructure of the proposed wind farm would have a limited footprint, physically affecting only a small part of the site area.

7.7.22 Much of the construction works would be visible within the wider landscape due to the elevated location of the site but ground level activities would be contained from view by local undulating topography, roadside boundaries and trees in the surrounding landscape. Access roads have been designed to utilise the existing site access route. The magnitude of change would range from ***zero to high*** as the construction progressed towards completion.

7.7.23 The predicted landscape effects on the local landscape character at Blackstone Edge would be ***moderate*** and not significant. The type of landscape effect would be short term and ***adverse***. Construction activity by its nature of disturbance is considered to be adverse at this scale and relates to the higher magnitude of change.

Operational phase

7.7.24 The scattered hedgerows and hedgerow trees, and gentle undulations in the upland farmland landscape, provide some containment of the wind farm at ground level,

© Entec UK Limited

although screening effects are limited and the turbines would be large elements within a relatively open landscape. The magnitude of change, during operation, within the localised part of the LLCA would be ***medium***.

7.7.25 Overall, the effects on landscape character are not considered to be adverse as the wind farm would not lead to the loss of landscape character or elements, nor would it add new features or element to the landscape composition, and it is located within an area that is already modified by human development. The scale of the wind farm is such that it would be reasonably accommodated within the wider landscape, such that it would not adversely alter the overriding rural character of the Ingbirchworth Upland Farmland LLCA and the local area.

7.7.26 This would result in a ***moderate, landscape effect***, which would not be significant. The type of effect would be ***long term (reversible)***.

Predicted Landscape Effects on Landscape Elements

7.7.27 The proposed Blackstone Edge Wind Farm will retain as much of the local hedgerow trees, stone wall field boundaries, and the improved grazing land as possible. The temporary construction compound and site access roads will be carefully located in order to minimise effects on existing hedgerows, walls and trees on site.

7.7.28 Physical loss of grazing land, hedgerow trees /stone walls on the site by construction of access roads would be minimised, by using existing gaps or field gate access points, and the existing agricultural land use will be retained throughout the life of the wind farm. The sensitivity of the landscape elements is ***low - medium***, with much of the land use of the site being grazing land, which is common land cover within the LLCA and easy to replicate. The magnitude of effect would be ***low***, leading to a ***slight – moderate and adverse*** level of effect on landscape elements during construction.

7.7.29 During operation, the effects of the development on existing landscape elements would be fairly static assuming periodic site management to allow for the maintenance of site access tracks, resulting in a ***negligible*** magnitude of change. Mitigation proposals for the site will include reinstatement of poorly managed hedgerows/hedgerow trees/stone wall field boundaries, which would bring about a positive landscape effect on the proposed site. Mitigation and reinstatement works will gradually re-vegetate the tracks over the initial 2 – 3 years after construction. The level of change and the type of effect would be ***slight - negligible, long term (reversible),*** and ***positive***.

Predicted Landscape Effects on the Area of Borough Landscape Value (ABLV) Overlapping the Site

7.7.30 The proposed site lies within the Barnsley ABLV. The ABLV is a local landscape designation identified on the basis of landscape quality, and is considered to be of a ***medium*** landscape sensitivity and value overall.

© Entec UK Limited

"The designated areas of Borough Landscape Value are recognised as being of higher landscape quality than other countryside areas."[25]

7.7.31 Policy GS13 in the Barnsley UDP states that development will be permitted provided that,

"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."

7.7.32 During construction the magnitude of change would be ***zero - high*** and there would be a temporary, ***moderate- substantial*** and ***adverse*** effect locally to the site, reducing to a ***low*** magnitude of change across the ABLV as a whole.

7.7.33 During operation, the magnitude of change would be ***low*** overall and would not affect the integrity of the ABLV. There will be no direct effects on landscape elements within the wider landscape of the ABLV over 2.5km, and local topography and tree cover within the upland farmland reducing visibility within the wider landscape over 2.5km.

7.7.34 Therefore, localised effects of the turbines would lead to a ***low*** magnitude of change, within a designated area of ***medium*** sensitivity, resulting in ***slight - moderate, long term (reversible) landscape effects*** within the ABLV as a whole. Views of the proposed site from within this designated area will be assessed under visual effects.

Predicted Landscape Effects on the Area of High Landscape Value (AHLV)

7.7.35 The Kirklees AHLV is located to the north, north west and north east of the site. It is a fragmented area as shown in Figure 7.6. The AHLV is a local landscape designation identified on the basis of landscape quality, and is considered to be of a ***medium*** landscape sensitivity and value overall.

7.7.36 The landscape character of the AHLV is unlikely to be affected with the exception of the small area nearest to the site (within 2.5km of Blackstone Edge). However, the predicted magnitude of change arising from the proposed turbines in this area is considered to be ***negligible*** in landscape terms due to the presence of the existing turbines at Royd Moor and the consented turbines at Hazelhead. The resulting landscape effects in this small area are considered to be ***slight to negligible*** and not significant.

7.7.37 The effects on landscape character are not considered to be adverse as the wind farm would not lead to the loss of landscape character or elements within the AHLV, and would neither add a new feature or element to the landscape composition. The AHLV ***would not be significantly or adversely affected by the proposed wind farm at Blackstone Edge.***

[25] Barnsley Metropolitan Borough Council Unitary Development Plan – Adopted 2000, Policy GS13

© Entec UK Limited

Predicted Landscape Effects on the Neighbouring Peak District National Park

7.7.38 The Peak District National Park (PDNP) is located ~2.5km south of the proposed site at its nearest point at Hazelhead. The site lies outwith the PDNP boundary therefore there are no predicted direct landscape effects on the designated area.

7.7.39 The nationally designated landscape of the PDNP is considered to be of a high aesthetic quality, high landscape condition and of a high landscape value, with an overall ***high*** landscape sensitivity rating.

7.7.40 The distinct landscape character of the PDNP is unlikely to be affected in terms of 'borrowed landscape characteristics'[26], with the exception of the small area nearest the site (within 2.5 – 5km of Blackstone Edge) where there are shared landscape characteristics between the PDNP and the Ingbirchworth LLCA, which is of a medium sensitivity. However, the predicted magnitude of change arising from the proposed turbines in this area is considered to be ***negligible*** in landscape terms due to the presence of the existing turbines at Royd Moor and the consented turbines at Hazelhead. The resulting landscape effects in this small area are considered to be ***slight***, and not significant.

7.7.41 The effects on landscape character are not considered to be adverse as the wind farm would not lead to the loss of landscape character or elements within the PDNP, and would neither add a new feature or element to the landscape composition, located on the boundary of the PDNP within an area that is already settled. The Peak District National Park ***would not be significantly or adversely affected by the proposed wind farm at Blackstone Edge.***

Predicted Cumulative Landscape Effects *on the* Yorkshire Southern Pennine Fringe LCA

7.7.42 The existing wind farm within the Southern Yorkshire Pennine Fringe LCA is located at Royd Moor (thirteen turbines) ~0.7km south east of Blackstone Edge. In additional, there is a three turbine consented wind farm at Hazelhead located ~1.7km south west of Blackstone Edge.

7.7.43 Collectively these developments in addition to Blackstone Edge Wind Farm would increase the overall coverage of wind farm development within this LCA. Considering the effects this level of development would amount to a ***low*** magnitude of change and a ***slight - moderate*** effect within the LCA overall.

Predicted Cumulative Landscape Effects on the Ingbirchworth Upland Farming LLCA

7.7.44 Collectively these developments in addition to Blackstone Edge Wind Farm would increase the overall coverage of wind farm development within this LLCA. Considering the presence of the existing turbines within the LLCA, the predicted cumulative landscape effects in terms of site area this level of development would amount to a ***medium*** magnitude of change and a ***moderate*** effect within the LLCA overall.

[26] Landscape characteristics (elements or patterns) that due to their similarities with adjacent areas of landscape character may appear as part of either landscape character area, and new development may appear to physically effect adjacent area of landscape character.

© Entec UK Limited

7.7.45 There are potential cumulative landscape effects with Royd Moor Wind Farm and Hazelhead Wind Farm and the proposed turbines at Blackstone Edge, there is the potential for a sub-landscape character type/area to emerge - Ingbirchworth Upland Farming and Wind Farms

Summary of Significance Evaluation

7.7.46 Table 7.10 summarises the conclusion of the assessment of predicted landscape effects of the proposed development on the landscape character of the site and surrounding area within the 10km radius study area.

Table 7.10 Evaluation of Significant Landscape Effects

Landscape Receptor	Effect			Significance	
	Sensitivity	Magnitude	Level of effect	Level	Type of Effect/Rationale
Yorkshire Southern Pennine Fringe LCA					
Construction	Medium	Zero – Low	Slight – Moderate	Not Sig	The effects would be direct, short term (reversible) and adverse
Operation	Medium	Negligible	Slight – Negligible	Not Sig	The effects would be direct, long term (reversible), and cumulative.
Ingbirchworth Upland Farmland LLCA					
Construction	Medium	Zero – High	Moderate	Not Sig	The effects would be direct, short term (reversible) and adverse
Operation	Medium	Medium	Moderate	Not Sig	The effects would be direct, long term (reversible), and cumulative.
Landscape Elements					
Construction	Low (grassland)/ Medium (walls & hedgerows)	Low	Slight/Slight - Moderate	Not Sig	The effects would be direct, short term (reversible) and adverse
Operation	Low (grassland)/ Medium (walls & hedgerows)	Negligible	Slight/Slight – Moderate	Not Sig	The effects would be direct, long term (reversible), and positive through enhanced mitigation measures.
Designated Landscapes – Area of Borough Landscape Value					
Construction	Medium	Zero – High	Moderate - Substantial	Sig	The effects would be direct, short term (reversible) and adverse

© Entec UK Limited

Table 7.10 (continued) Evaluation of Significant Landscape Effects

Landscape Receptor	Effect			Significance	
	Sensitivity	Magnitude	Level of effect	Level	Type of Effect/Rationale
Operation	Medium	Low	Slight – Moderate)	Not Sig overall/	The effects would be direct, long term (reversible), and adverse
Cumulative Landscape Effects on Yorkshire Southern Pennine Fringe LCA					
Operation	Medium	Low	Slight – Moderate	Not Sig	The effects would be direct, long term (reversible), and cumulative.
Cumulative Landscape Effects on Ingbirchworth Upland Farmland LLCA					
Operation	Medium	Medium	Moderate	Not Sig	The effects would be direct, long term (reversible), and cumulative.

7.8 Assessment of Potential Visual Effects

Introduction

7.8.1 Visual effects are recognised by the Landscape Institute as a subset of landscape effects and are concerned wholly with the effect of the development on views, and the general visual amenity. A summary of the visual assessment and an evaluation of significance are provided in Table 7.19.

7.8.2 Opinions as to the visual effects of wind farms vary widely, resulting in subjective opinions as to whether a wind farm is a positive or adverse feature within the landscape. However it is not the assumption of this assessment that all change, including high levels of change is a negative experience. Rather this assessment has considered factors such as the visual composition of the landscape in the view together with the wind farm design, which may or may not be reasonably accommodated within the scale and character of the landscape as perceived from the receptor location.

Influence of Weather and Aspect

7.8.3 Changing weather patterns and local climatic conditions will influence the visibility of the wind farm in terms of the extent of view, the colour and contrast of the turbines and the number of turbines visible and thus the perceived visual effect. There will be periods of low visibility (fog, low cloud, and bright sunny conditions that are accompanied by haze of temperature inversions) as well as periods of high visibility in clear weather. In some instances and from some locations the wind farm may be 'back-lit' (e.g. appearing darker in colour during sun-set/sun-rise and periods of pale or white blanket cloud) and in other circumstances may appear to be 'up-lit' (e.g. during stormy periods that combine dark clouds and bright sunshine).

© Entec UK Limited

This assessment is based on a 'worst case scenario', which would mean a clear day with good visibility.

Viewpoint Assessment

7.8.4 The purpose of the viewpoint assessment is to assess both the level of visual impact at particular receptors, and to help guide the assessment of the overall effect on visual amenity and areas of particular landscape character or designation within the study area. The assessment is conducted in periods of fine weather and assumes good visibility and takes account of seasonal leaf cover.

7.8.5 The viewpoint assessment and field surveys indicate that significant visual effects could potentially occur at distances of up to ~2.5km within the ZTV (refer to Table 7.11 below), due in part to the sensitivity of receptors along recreation routes, residential properties/settlement pattern, and the open undulating topography of the lowland agricultural landscape.

7.8.6 A viewpoint analysis was conducted from 19 no. viewpoints identified by analysis of the visibility maps and agreed through consultation. The location of the assessment viewpoints is illustrated in Figure 7.9. A summary of the viewpoint analysis is provided in Table 7.11 below with each viewpoint described and assessed in detail in Appendix D5. The level of effect in bold text highlights potential significant visual effect at the viewpoints included within the LVIA, and indicates that there are potential significant effects within ~2.5km radius of the site. Each of the views is illustrated with a photograph, a wireframe indicating the proposed development and two photomontages. These have been produced at both 45° and 90° viewing angles with corresponding viewing distances of 24.4cm and 49.6 cms.. The methodology for the photography and photomontages is explained in more detail in Appendix D1.

Table 7.11 Summary of Viewpoint Analysis

	Location	Assessment			Comments
		Sensitivity	Magnitude	Level of effect	
1	Whitley Common	Medium	High	**Moderate – Substantial**	Viewpoint is located at 557m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
2	Spicer House Lane	Medium	High	**Moderate – Substantial**	Viewpoint is located at 799m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
3	Barnsley Boundary Walk (E)	Medium	High	**Moderate – Substantial**	Viewpoint is located at 1223m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
4	Crow Edge	Medium	High	**Moderate – Substantial**	Viewpoint is located at 1240m distance within the Yorkshire Southern Pennine Fringe LCA and Upper Don River Valley LLCA

© Entec UK Limited

Table 7.11 (continued) Summary of Viewpoint Analysis

	Location	Assessment			Comments
		Sensitivity	Magnitude	Level of effect	
5	Victoria	Medium	High	**Moderate – Substantial**	Viewpoint is located at 1692m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
6	Windmill Lane, Low Common	Medium	High	**Moderate – Substantial**	Viewpoint is located at 1719m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
7	Royd Moor Wind Farm Viewing Point	Medium	Low	Slight - Moderate	Viewpoint is located at 1961m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
8	High Flats on A629	Low	Medium	Slight - Moderate	Viewpoint is located at 2303m distance within the Yorkshire Southern Pennine Fringe LCA (no LLCA identified within Kirklees district)
9	Trans Pennine Trail at Hazelhead near A616(T) (PDNP)	High	Medium	**Moderate – Substantial**	Viewpoint is located at 2350m distance within the Yorkshire Southern Pennine Fringe LCA and Thurlestone and Langsett Unenclosed Moorland LLCA and Peak District National Park
10	Carlecotes	High	Medium	**Moderate – Substantial**	Viewpoint is located at 2522m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
11	Millhouse Green & B6106	Medium	Negligible	Slight - Negligible	Viewpoint is located at 2624m distance within the Yorkshire Southern Pennine Fringe LCA and Ingbirchworth Upland Farmland LLCA
12	Tinker Hill	High	Low	Moderate	Viewpoint is located at 3595m distance within the Yorkshire Southern Pennine Fringe LCA and Thurlestone and Langsett Unenclosed Moorland LLCA
13	Barnsley Boundary Walk (SW)/A628 (T) (PDNP)	High	Low	Moderate	Viewpoint is located at 4444m distance within the Dark Peak LCA and Thurlestone and Langsett Unenclosed Moorland LLCA and Peak District National Park
14	A628, roundabout south west of Hoylandswaine	Medium	Low	Slight - Moderate	Viewpoint is located at 5937m distance within the Notts Derbs & Yorks Coalfield LCA and West Barnsley Settled Wooded Farmland LLCA
15	Trans Pennine Trail at A628 (PDNP)	High	Low	Moderate	Viewpoint is located at 7175m distance within the Dark Peak LCA and Thurlestone and Langsett Unenclosed Moorland LLCA and Peak District National Park
16	Roydhouse	Medium	Negligible	Slight – Negligible	Viewpoint is located at 7750m distance within the Notts Derbs & Yorks Coalfield LCA (no LLCA identified within Kirklees district)

© Entec UK Limited

Table 7.11 (continued) Summary of Viewpoint Analysis

	Location	Assessment			Comments
		Sensitivity	Magnitude	Level of effect	
17	Cut Gate (PDNP)	High	Negligible	Slight	Viewpoint is located at 8091m distance within the Dark Peak LCA and Peak District National Park
18	Ewan Heights (PDNP)	High	Negligible	Slight	Viewpoint is located at 8171m distance within the Dark Peak LCA and Peak District National Park
19	Holme Viewing Location/Car Park (PDNP)	High	Negligible	Slight	Viewpoint is located at 9853m distance within the Dark Peak LCA and Peak District National Park

* Note: the level of effects in bold type are significant visual effects.

Visual Effects during Construction

7.8.7 It is anticipated that the construction period will last up to 9 months. This would begin with the establishment of a contractor's compound and increase incrementally over the construction period which would include:

- site signage and minor road improvements;
- movement of construction vehicles travelling to the site;
- Movement of construction vehicles within the site and the construction of the substation, tracks and foundations; and
- the most visible effects being associated with the erection of turbines.

7.8.8 In the wider landscape, views of the construction activity would be limited due to the distance of the receptors from the site. Those receptors within open upland farmland areas to the north east, north and north west, would have a view of ground level construction activity where local vegetation and tree cover does not screen views, with closer views of construction activity within ~2-3km of the site. Visual receptors viewing the construction activity from particular locations would include road users, with a low visual sensitivity, and local residents and walkers with a high visual sensitivity.

7.8.9 It is likely to take between 1 – 3 days to erect each turbine. The magnitude of visual change over the course of construction would be variable and would progressively increase from ***zero*** to ***high*** with active construction to completion. For these reasons, the upper limit of visual effects likely to be experienced towards the end of the construction period has been assessed under the operational effects. With local receptors being local public footpath users of a ***medium*** sensitivity, road users of a ***low*** sensitivity and occupants of residential properties of a ***high*** sensitivity, this would result in a moderate – ***substantial, significant, short term, temporary visual effect*** during the construction process within ~2.5km of the site.

© Entec UK Limited

Visual Effects during Operation

Visual Effects on Receptors within Landscape Character Areas

7.8.10 The visual effects on views and visual amenity, experienced by people within different areas of landscape character are assessed in Table 7.12, for example those people within the landscape for general recreational purposes and travelling within the landscape. The assessment provides an overview of the general magnitude, sensitivity, and level of effect, as the assessment does not relate to specific receptors, such as walkers, which is provided later.

Table 7.12 Visual Assessment of the effect on Receptors within Landscape Character Areas

Local Landscape Character Areas within 10km of Blackstone Edge Wind Farm

Ingbirchworth Upland Farming (F1) **Refer to VPs 1 / 2 / 3 / 5 / 6 / 7 / 10 / 11**	The site area is located within the Ingbirchworth Upland Farming LLCA, which is part of the Barnsley MBC Landscape Character Assessment area. The area would experience effects on character, which have been assessed in Section 7.6. Considering the whole of the LLCA within the study area the visual effect would not be significant overall, although there would be variable instances of visual effects from particular locations and receptors within the wider landscape. The existing wind farm at Royd Moor is already visible from within the LLCA. Those receptor areas (residential properties/the local footpath network) have been assessed in more detail later in the chapter. The sensitivity of those visual receptors within this landscape range from medium (local footpath network) and high (scattered residential properties and farmsteads) within a 2.5km radius of the site. Visibility is extensive across the upland farmland area, with localised screened from scattered hedgerows/hedgerow trees/undulating topography. The magnitude of change is likely to be medium – high and significant effects likely within 2.5km of the site. The visual effects would be moderate to moderate - substantial, long term (reversible), and cumulative with Royd Moor Wind Farm and the consented Hazelhead Wind Farm.
Thurlstone & Langsett Unenclosed Moorland (A1) **Refer to VPs 9 / 12 / 13 /**	Considering the whole of the LLCA within the study area the visual effect would not be significant overall, although there would be variable instances of visual effects from particular locations and receptors within the wider landscape within 2.5 – 7.5km of the proposed site. The existing wind farm at Royd Moor is already visible from within the LLCA. The sensitivity of those visual receptors (both residential and recreational) within this LLCA is considered to be high due to the location of the LLCA within the Peak District National Park boundary. Visibility is extensive across moorland areas of this LLCA, especially those east and north east facing slopes towards the proposed site. The magnitude of change is likely to be low, and significant effects unlikely. The visual effects would be moderate, long term (reversible), and cumulative with Royd Moor Wind Farm and the consented Hazelhead Wind Farm.
West Barnsley Settled Wooded Farmland (E1) **Refer to VP 14**	The sensitivity of those visual receptors within this landscape range from medium (local footpath network) and high (scattered residential properties and farmsteads) within a 2.5 - 10km radius of the site. Potential visibility of the proposed turbines at Blackstone Edge is scattered within this LLCA due to the undulating topography and tree cover of the settled wooded farmland. The existing wind farm at Royd Moor is already visible from within the LLCA. Where potential visibility does occur it is limited to those areas on higher, west facing and open *ground east of the A629 road near Upper Denby and Hoylandswaine. The magnitude of* change is likely to be low, and significant effects unlikely for the LLCA overall.

© Entec UK Limited

Table 7.12 (continued) Visual Assessment of the effect on Receptors within Landscape Character Areas

Local Landscape Character Areas within 10km of Blackstone Edge Wind Farm

	The visual effects would be slight – moderate to moderate, (reversible), and cumulative with Royd Moor Wind Farm and the consented Hazelhead Wind Farm.
Penistone Upland Farmland (F2)	The sensitivity of those visual receptors within this landscape range from medium (local footpath network) and high (scattered residential properties and farmsteads) within a 2.5 - 10km radius of the site. Potential visibility of the proposed turbines at Blackstone Edge is largely constrained to the north and north west facing slopes of the upland/moorland fringe areas of the LLCA where there is the potential for clear views of the turbines across the Upper Don River Valley. The existing wind farm at Royd Moor is already visible from within the LLCA. The magnitude of change is likely to be low, and significant effects unlikely for the LLCA overall. *The visual effects* would be slight- moderate to moderate, (reversible), and cumulative with Royd Moor Wind Farm and the consented Hazelhead Wind Farm.
Upland Don River Valley (B1)	The sensitivity of those visual receptors within this landscape range from medium (local footpath network) and high (recreational users of the Trans Pennine Trail and scattered residential properties and farmsteads) within a ~2.5km distance of the site. The existing wind farm at Royd Moor is already visible from within the LLCA. Potential visibility of the proposed turbines at Blackstone Edge is restricted within this LLCA due to the river valley topography, tree cover and built development within the river valley. Where views are available they are along the Trans Pennine Trail, a former rail line. The ZTV indicates fragmented visibility of the proposed turbines, and partial visibility of the turbines/blades on the horizon to the north. The magnitude of change, where visibility occurs, is likely to be medium or low, with localised significant effects occurring where there are high sensitive receptors, but with significant visual effects unlikely for the LLCA overall. The visual effects would be moderate to moderate substantial, (reversible), and cumulative with Royd Moor Wind Farm and the consented Hazelhead Wind Farm.

Wooded Don River Valley (B2) - Visibility within this area is likely to lead to low to negligible magnitudes of visual change and significant visual effects would be unlikely to occur.

Visual Effects on Views from Residential Properties (within 2km of the Proposed development) During Operation

7.8.11 Local residents will be the main visual receptors most likely to experience views of the development. The following residential assessment (Tables 7.13 - 7.15 and Figure 7.39) has been undertaken of those properties within a 2km of the turbine locations most likely to be affected and provides an indication of the likely level of visual effects experienced from locations close to the wind farm. Those properties less likely to experience significant visual effects due to screening and topography are listed at the end of Table 7.15.

7.8.12 Residential amenity can be defined as a collective term describing the views and general amenity of a residential property, relating to the garden area and main drive, views to and from the house and the relationship of the outdoor garden space to the house. Visual effects may not necessarily be adverse, with consideration in the residential assessment of the potential for shadow casting, view proximity and the percentage of the view occupied by the proposed turbines from the residential property.

© Entec UK Limited

7.8.13 The residents of 12 No. properties set within the surrounding upland plateau, out of approximately 40 No. properties assessed, would experience significant effects on the views of the wind farm from the properties, local access roads and tracks leading to these properties as a result of a high magnitude of change. Local residents are considered to be of a ***high*** sensitivity.

7.8.14 This judgement relates to the high sensitivity of properties and the levels of magnitude of change. It is also subject to limitations of access to the properties, which have been assessed from the adjacent farm tracks and public road network, and therefore the assessment has been precautionary in this case. The vast majority of properties have mature garden vegetation or screening from adjacent trees/hedgerows, local landform as well as out buildings/farm buildings and stone walls. Many others are orientated so that the principal views from what would appear to be the main living rooms would face away from the wind farm. These views would be unaffected by the proposed Blackstone Edge Wind Farm. Many properties have views of the existing turbines at Royd Moor Wind Farm and/or those consented at Hazelhead.

7.8.15 The visual assessment of the construction activity, considers ground based activity and excludes turbine construction, which would progressively increase over the construction period to a level of magnitude equal to that experienced during operation. Please refer to Figure 7.39 for the numbering and location of each property.

Table 7.13 Visual Assessment of Views from Residential Properties with a Direct Main View of the Wind Farm

Properties with a Potentially Direct Main View of the Wind Farm (6 properties)

Property	Description
33 Pottersgate House & 34 Potters House **(2 No. Properties)**	There are two 2 storey stone residential properties situated ~1.2km north west of the wind farm at 329m AOD, and west of Broadstone Reservoir and north of Maythorn. The properties are orientated south with a garden area situated to the south and south east of the properties. A small hedgerow and garden shrubs may filter ground level views from the properties. The properties are situated within the upland farming landscape, with limited tree cover, scattered wind blown hedgerow trees. There are views of the existing turbines at Royd Moor, and proposed views of the blade tips of the consented Hazelhead Wind Farm on the horizon to the south. Construction: There are views of the ground level of the turbines and ground level construction activity would be visible across the slightly undulating upland landscape, resulting in a medium magnitude of change. Views of the cranes during the construction of the turbines would be clear for all of the turbines, resulting in a high magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a close - medium range at a similar level to the property. The proposed turbines would appear as a small group in the middle distance extending the presence of turbines as a linear feature on the horizon further west from Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be high alongside the existing turbines at Royd Moor Wind Farm.
	*The level of effect on the view from the properties facing towards the wind farm would be substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*

© Entec UK Limited

Table 7.13 (continued) Visual Assessment of Views from Residential Properties with a Direct Main View of the Wind Farm

Properties with a Potentially Direct Main View of the Wind Farm (6 properties)

Property	Description
31 Heystack Farm **(Estimated 2 properties)**	There are an estimated two properties situated ~1.6km north west of the wind farm at 341m AOD, north of Maythorn. There are two 2 storey residential properties, one white rendered property orientated south east towards the existing Royd Moor Wind Farm, and the second, a stone house orientated to the south west, with garden areas to the south. The properties are situated within the open upland farming landscape, with views south towards Maythorn and low levels of screening within the open landscape. There are views of the existing turbines at Royd Moor. Construction: There are views of the ground level of the turbines and ground level construction activity would be visible across the slightly undulating upland landscape, resulting in a medium magnitude of change. Views of the cranes during the construction of the turbines would be clear for all of the turbines, resulting in a high magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a close - medium range at a similar level to the property. The proposed turbines would appear as a small cluster directly in front of the existing Royd Moor Wind Farm when viewed from the west. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be high alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*
14 Fair View	This two storey Victorian stone residential property situated ~1.6km south west of the wind farm at 340m AOD, on the eastern boundary of Victoria on the A616 road. The property is orientated to the north east, with a garden on the north eastern side of the property, situated within the open upland farming landscape with low levels of screening within the open landscape. There are views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low – high magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a close - medium range at a similar level to the property. The proposed turbines would appear as a small to the west of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be high alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*

© Entec UK Limited

Table 7.13 (continued) Visual Assessment of Views from Residential Properties with a Direct Main View of the Wind Farm

Properties with a Potentially Direct Main View of the Wind Farm (6 properties)

Property	Description
40 New Maythorn Farm	This one storey stone built property is situated ~0.6km west of the wind farm at 329m AOD, on Calf Hey Lane south of the junction between Lower Maythorne Lane and Whitley Road. The property is orientated to the east, situated within the open upland farming landscape with low levels of screening. There are no views of the existing turbines at Royd Moor, and the landscape slopes up towards the east where the proposed turbines would be located. Construction: Ground level construction would not be visible from the property due to the base of the turbines being situated behind the landform in the east. There would be views of the cranes during the construction of the turbines, resulting in a low – high magnitude of change for a restricted period of time. Operation: The new wind farm would be at a close range when viewed from this property, and situated at a higher elevation than the property. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be high. *The level of effect on the view from the property facing towards the wind farm would be substantial and **significant** due to the limited screening levels and close proximity of the turbines to the property.*

© Entec UK Limited

Table 7.14 *Visual* Assessment of Views from Residential Properties with a Potentially Oblique/Partly Screened View of the Wind Farm

Properties with a Potentially Oblique/Partly Screened View of the Wind Farm (10 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below.

Property	Description
12 Lower Wood Royd Farmhouse	This is a Grade 2 listed residential property situated ~1.5km west of the site at 339m AOD. It is on the west of a minor road leading north out of Victoria. The property comprises of a 2 storey stone house, with a larger part of the house, possibly a bard conversion, to the rear. The front of the house, and access to the property faces east, towards the existing Royd Moor Wind Farm and the proposed turbines at Blackstone Edge. There are views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low - medium magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar level to the property. The proposed turbines would appear as a small cluster west of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the property facing towards the wind farm would be moderate - substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*
13 Set Stones House	This residential property is located ~1.6km west of the site at 331m AOD. It is situated on a minor road, north of Victoria. The property comprises of a 2 storey stone house, orientated north east and south west, with extensive outbuildings to the east and yard to the north east which contains tractors/caravans/cars, with vegetation filtering views at the boundary between the yard and the caravans. Ground level views are unlikely from this property due to the level of screening, however, there is the potential for views of the existing turbines at Royd Moor from upper floors of the property. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low - medium magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a slightly elevated location above the property. The proposed turbines would appear as a small cluster west of the existing Royd Moor Wind Farm, with one outlying turbine to the west. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the property facing towards the wind farm would be moderate - substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*

© Entec UK Limited

Table 7.14 (continued) Visual Assessment of Views from Residential Properties with a Potentially Oblique/Partly Screened View of the Wind Farm

Properties with a Potentially Oblique/Partly Screened View of the Wind Farm (10 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below.

Property	Description
3 Broadstone Lodge **(Estimated 2 properties)**	These two (estimated) residential properties are located ~1.3km north east of the site at 273m AOD, and west of Ingbirchworth Reservoir and the settlement of Ingbirchworth. The cluster of buildings comprise of a two storey stone residential property with entrance and porch on southern façade, and a second three storey stone property with entrance also facing south. There are a number of outbuildings situated between the two properties and to the north. There are open views to the south. The property is situated within the undulating upland farmland, with open views to the west and east, and the gently rising in the foreground, directly towards the wind farm to the south west. There are views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at an elevated location above the property. The proposed turbines would appear as a short row west of the existing Royd Moor Wind Farm, extending the linear formation of turbines on the horizon. There would be views of the wind farm when travelling to and from the property. The situation of Brown's Edge Farm and Spicer House in the middle distance may also partially screen views of the turbines on the horizon. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate - substantial and **significant** due to the limited screening levels and the proximity of the turbines to the property.*
30 Birds Nest Farm	This residential property is located ~1.4km north west of the site at 334m AOD, and north of Maythorn. The property is a two storey stone farmhouse adjoining farm buildings located to the south and south east (single storey). The property is situated in open, undulating farmland, with oblique and partially restricted views to the south and south east, with the landform gently rising in the foreground, directly towards the wind farm to the south west. There are predicted first floor views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster directly in front of the existing Royd Moor Wind Farm when viewed from the upper floors of the property. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be low alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate and not significant due to the predicted screening levels by the out buildings south east of the property despite the proximity of the turbines to the property.*

© Entec UK Limited

Table 7.14 (continued) Visual Assessment of Views from Residential Properties with a Potentially Oblique/Partly Screened View of the Wind Farm

Properties with a Potentially Oblique/Partly Screened View of the Wind Farm (10 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below.

Property	Description
32 Pottersgate Farm	This residential property is located ~1.2km north west of the site at 329m AOD, and north of Maythorn. The property is a single storey stone house orientated east with attached outbuildings to the south and south east of the property. An un-maintained garden is situated east of the property with a number of over grown shrubs. The property is situated within the open, undulating farmland, with heavily screened views of the turbines. There are predicted screened views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster due west of the existing Royd Moor Wind Farm, appearing almost as a single wind farm from this location. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be low alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate and not significant due to the predicted screening levels by the out buildings south east of the property despite the proximity of the turbines to the property.*
37 Green Lane Head	This residential property is located ~1.9km north west of the site at 297m AOD, and west of High Flatts. The property is a two storey stone house orientated south with attached outbuildings to the south west and west of the property. The property is situated within the open, undulating farmland. There are views of the existing turbines at Royd Moor and predicted views of blade tips of the consented Hazelhead turbines on the horizon behind Blackstone Edge turbines. Construction: Ground level construction could be visible from the property. There is the potential for views of the cranes during construction of the turbines, resulting in a low - medium magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster due west of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate - substantial and* ***significant.***

© Entec UK Limited

Table 7.14 (continued) Visual Assessment of Views from Residential Properties with a Potentially Oblique/Partly Screened View of the Wind Farm

Properties with a Potentially Oblique/Partly Screened View of the Wind Farm (10 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below.

Property	Description
9 Martin's Nest	This residential property is located ~1.2km north west of the site a 337m AOD, and north of Maythorn. The property is a two storey stone built farmhouse, with the main entrance orientated to the north west and a garden area to the south east. There are predicted partially screened views of the existing turbines at Royd Moor by the garden vegetation. Construction: Ground level construction could be visible from the property, filtered by the garden vegetation. There is the potential for views of the cranes during construction of the turbines, resulting in a low - medium magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster directly in front of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate - substantial and* ***significant.***
29 Martins Nest Farm	This residential property is located ~1.3km north west of the site a 335m AOD, and north of Maythorn. The property is a modern two storey stone built farmhouse, orientated to the north – south with a garden area and low outbuilding to the south east. There are predicted partially screened views of the existing turbines at Royd Moor by the garden vegetation along the southern boundary to the property. Construction: There is the potential for views of the cranes during construction of the turbines, resulting in a medium magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster directly in front of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be medium alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate - substantial and* ***significant.***

© Entec UK Limited

Table 7.14 (continued) Visual Assessment of Views from Residential Properties with a Potentially Oblique/Partly Screened View of the Wind Farm

Properties with a Potentially Oblique/Partly Screened View of the Wind Farm (10 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below.

Property	Description
28 Hepshaw Farm	The farm property includes a Grade 2 listed barn. The property was assessed from a distance due to restricted access, and appears to be orientated south east, located ~1.9km south west of the site at 351m AOD, south of Victoria. The property is a two storey stone built farmhouse, there are no obvious garden features, and the property is enclosed by stone walls, with stone outbuildings to the south. There are predicted views of the existing turbines at Royd Moor. Construction: There is the potential for views of the cranes during construction of the turbines, resulting in a low magnitude of change for a restricted period of time. Operation: The new wind farm viewed from this property would be at a medium range at a similar elevation to the property. The proposed turbines would appear as a small cluster west of the existing Royd Moor Wind Farm. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be low alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be moderate and not significant.*

© Entec UK Limited

Table 7.15 Visual Assessment of Views from Residential Properties with Mostly Screened View of the Wind Farm

Properties with a Mostly Screened View of the Wind Farm (11 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below. Views are likely to be limited to upper floor windows in most cases, and include properties with out buildings, working farms, with mature trees or dense hedging, and main views away from the wind farm.

Property	Description
25 Whitley House	This residential property is located ~1.7km south east of the proposed turbines at Blackstone Edge and ~300m south east of the existing turbines at Royd Moor, at 300m AOD. The property is a two storey stone farmhouse orientated south east, with vegetation and outbuildings to the rear of the property at a slightly elevated location to the west. The property is situated within the open, undulating farmland. There are predicted views of the existing turbines at Royd Moor. Construction: Ground level construction is not likely to be visible from the property. Operation: The outbuildings to the west of the property are likely to screen views of the proposed turbines. *The level of effect on the view from the property facing towards the wind farm would be slight and not significant due to the predicted screening levels by the out buildings south east of the property despite the proximity of the existing and proposed turbines to the property.*
7 Lower Maythorn Cottage **8 Lower Maythorn**	These residential properties are both Grade 2 listed buildings. They are located ~0.75km west of the proposed turbines, at 341m AOD. Lower Maythorn Cottage is a 2 storey stone building, orientated south, with a garden to the south and a yard to the north (rear of the property). Lower Maythorn is possibly a converted barn, orientated east. The properties are situated in open farmland, but located on a south facing slope, orientated away from the proposed turbines and existing turbines at Royd Moor. There are limited windows on the eastern elevation of these properties, with possible views from roof top velux windows. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the properties and lack of windows on the eastern elevations are likely to screen views of the proposed turbines. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be slight and not significant due to orientation of the buildings despite the proximity of the turbines to the properties.*

© Entec UK Limited

Table 7.15 (continued) Visual Assessment of Views from Residential Properties with Mostly Screened View of the Wind Farm

Properties with a Mostly Screened View of the Wind Farm (11 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below. Views are likely to be limited to upper floor windows in most cases, and include properties with out buildings, working farms, with mature trees or dense hedging, and main views away from the wind farm.

Property	Description
2 Browns Edge Farm	This residential property is situated east of Spicer Hill Lane, ~0.8km north east of the proposed turbines, at 296m AOD. The property is accessed from the west, with a tall leylandii hedge running along the western boundary with the road, which screens potential views from the house. The front elevation of the house is orientated to the south east away from the wind farm, with the drive access to the south west. It is unlikely that there are any views of the existing turbines at Royd Moor due to the screening of the hedgerow on the perimeter of the property. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the property and lack of windows on the western elevation are likely to screen views of the proposed turbines. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible. *The level of effect on the view from the property facing towards the wind farm would be slight and not significant due to screening property of the hedgerow despite the proximity of the turbines to the property.*
35 Lower Drake Hill Farm **36 Lower Drake Hill** **(2 properties)**	These residential properties are situated north east of the junction of Potters Lane and Windmill Lane, ~1.6km north west of the proposed turbines, at ~344m AOD. Lower Drake Hill Farm is a two storey stone farmhouse, orientated east. Lower Drake Hill is also a two storey farmhouse, with larger windows on the eastern elevation. There are large outbuildings situated to the south and east of Lower Drake Hill Farm, with drive access to the property from the north. A small beech plantation to the south and east of the properties provides potential screening of the proposed turbines. Both houses are situated within the open, undulating upland farmland landscape. There are views of the existing Royd Moor Wind Farm in the open landscape. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the properties and the potential screening by the outbuildings and small beech woodland are likely to screen views of the proposed turbines. There would be views of the wind farm when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible alongside the existing turbines at Royd Moor Wind Farm. *The level of effect on the view from the properties facing towards the wind farm would be slight and not significant due to orientation of the buildings despite the proximity of the turbines to the properties.*

© Entec UK Limited

Table 7.15 (continued) Visual Assessment of Views from Residential Properties with Mostly Screened View of the Wind Farm

Properties with a Mostly Screened View of the Wind Farm (11 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below. Views are likely to be limited to upper floor windows in most cases, and include properties with out buildings, working farms, with mature trees or dense hedging, and main views away from the wind farm.

Property	Description
4 Spicer House	This residential property is situated west of Spicer Hill Lane, ~0.7km north east of the proposed turbines, at 302m AOD. The stone built farmhouse is accessed from the east, and is orientated north east, with a garden area to the north east. There are a number of outbuildings to the north west and south west, with a large farm yard to the south west. There is a small area of conifer trees to the south west of the property. The outbuildings, orientation of the property, the gentle rise in the land towards the wind farm and potential screening by conifers reduce the potential for views of the turbines from the property. In addition, views of the existing turbines at Royd Moor to the south of the property are also likely to be screened. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the property and potential screening of the outbuildings and trees are likely to screen views of the proposed turbines. There would be views of the wind farm, on the horizon to the west, when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible. *The level of effect on the view from the property facing towards the wind farm would be slight and not significant due to screening property of the hedgerow despite the proximity of the turbines to the property.*
38 Un named Residential Property	This residential property at the end of a private access track, has been assessed from a distance. The two storey stone property, orientated south east, located ~1.6km north east of the site at 286m AOD, and west of High Flatts. The property is situated within the open, undulating farmland. There are views of the existing turbines at Royd Moor and predicted views of blade tips of the consented Hazelhead turbines on the horizon behind Blackstone Edge turbines. Small trees and vegetation are likely to screen views of the proposed turbines. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the property and potential screening of the vegetation are likely to screen views of the proposed turbines. There would be views of the wind farm, on the horizon to the south west, when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible. *The level of effect on the view from the property facing towards the wind farm would be slight and not significant due to screening property of the hedgerow despite the proximity of the turbines to the property.*

© Entec UK Limited

Table 7.15 (continued) Visual Assessment of Views from Residential Properties with Mostly Screened View of the Wind Farm

Properties with a Mostly Screened View of the Wind Farm (11 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below. Views are likely to be limited to upper floor windows in most cases, and include properties with out buildings, working farms, with mature trees or dense hedging, and main views away from the wind farm.

Property	Description
5 Upper Maythorn	This residential farm property is located ~0.9km west of the proposed turbines at 350m AOD. The property is situated within the open, undulating farmland. There are views of the existing turbines at Royd Moor but largely screened by extensive farm buildings to the south west, south and east of the residential building. Potential views of the turbines are screened by the outbuildings, with possible first floor views from the property. Construction: Ground level construction is likely to be visible from the first floor of the property. Operation: The orientation of the property and potential screening of the outbuildings are likely to screen views of the proposed turbines. There would be views of the wind farm, on the horizon to the east, directly in front of Royd Moor, when travelling to and from the property. *The magnitude of change on the views from the property facing towards the* wind farm would be low. *The level of effect on the view from the property facing towards the wind farm would be moderate and not significant due to screening property despite the proximity of the turbines to the property.*
6 Maythorn	This single storey modern stone built house is situated to the west of Upper Maythorn, orientated south east, located ~1km west of the proposed turbines at 350m AOD. Views east are screened by the Upper Maythorn property. Construction: Ground level construction is not likely to be visible from the property. Operation: The orientation of the property and potential screening of the vegetation are likely to screen views of the proposed turbines. There would be views of the wind farm, on the horizon to the south west, when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be negligible. *The level of effect on the view from the property facing towards the wind farm would be slight and not significant due to screening property of the hedgerow despite the proximity of the turbines to the property.*
1 Greengate, Horn Lane	This two storey stone built farmhouse is situated ~1.2km north east of Blackstone Edge, at 273m AOD. The property is situated within the open, undulating farmland. There are potential views of the existing turbines at Royd Moor on the horizon the south and potential views of the Blackstone Edge turbines on the horizon to the south east. These views are likely to be oblique and rear views from the property. Operation: The orientation of the property is likely to screen views of the proposed turbines. There would be views of the wind farm, on the horizon to the south west, when travelling to and from the property. The magnitude of change on the views from the property facing towards the wind farm would be low. *The level of effect on the view from the property facing towards the wind farm would be slight – moderate and not significant due to orientation of the property.*

© Entec UK Limited

Table 7.15 (continued) Visual Assessment of Views from Residential Properties with Mostly Screened View of the Wind Farm

Properties with a Mostly Screened View of the Wind Farm (11 properties)

These properties are less likely to experience significant visual effects on views and visual amenity and the properties included in the assessment have been listed below. Views are likely to be limited to upper floor windows in most cases, and include properties with out buildings, working farms, with mature trees or dense hedging, and main views away from the wind farm.

Property	Description
The remaining properties or groups of properties are judged to have good levels of enclosure likely to screen out or partially screen out views of the wind farm. Otherwise the views of the wind farm would be screened by landform. The visual effects on the views and visual amenity of these properties are unlikely to be significant and the magnitude of change is likely to range from low to negligible, increasing slightly due to changes in vegetation. The properties are listed as follows: (15)Sled Brook Farm/(16)Lower Whitley Farm (derelict)/(17)Bents Farm/Moorland View/(27)Savile House/(21)Flash House Farm/(22)Small Shaw Farm/(18)Middle Cliff/(19)The Lanes/(20)Illions Cottage/(23)Hall Gates/(39)Annat Royd Farm (Grade 2 listed property)/(11)Property No. 11/(10)Upper Royd Wood. Sufficient access to assess property (24) Eagles Nest could not be gained, and the property has therefore not been included in the assessment.	

Visual Effects on Views from Settlements

7.8.16 The views from settlements within 3km of the development have been considered, and visual effects are assessed in detail in Table 7.16 which takes into account the following parameters:

- Settlements that may experience a significant effect on views;
- Settlements that may experience a significant effect on setting; and
- All settlements have been judged to be of high sensitivity.

7.8.17 The nearest settlements are Crow Edge (~1km) and Victoria (~1.7km). In addition the following settlements are located within 2-3km radius from the site; Millhouse Green/Carlecoates/Hazelhead/Birds Edge/High Flatts/Ingbirchworth. The wind farm would be visible from these settlements on the horizon. There would be no significant visual effects on the views and visual amenity experienced by the receptors at the settlements.

7.8.18 The viewpoint assessment indicates that significant visual effects could potentially occur at distances of up to ~2.5km within the ZTV, due in part to the open topography and upland hill top location of the turbines.

7.8.19 There would be no significant adverse effects on the character and appearance of Conservation Area at High Flatts.

7.8.20 Note that all settlements are judged to be of a high sensitivity.

© Entec UK Limited

Table 7.16 Visual Assessment of Views from Settlements

Settlement	Assessment of Visual Effects on Settlements
Crow Edge **Refer to VP 4**	This is a small linear settlement along the A616 road, is situated ~1km south west of the proposed turbines. The village is predominantly residential properties on the west side of the road, with the steeply rising topography of Upper Whitley Edge to the east constraining built development. Residential properties on the south western edge of the village are orientated to the north east towards the existing turbines at Royd Moor which are visible on the horizon. The topography of the hillside would provide some screening of the turbines. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: Two of the proposed turbines would be visible on the horizon north east of the settlement. This would result in a medium magnitude of change for those properties with views, but a negligible magnitude of change for the settlement as a whole. Properties with views would experience a moderate/substantial and significant level of effect. The level of effect on the Crow Edge as a whole would be slight and not significant due to the screening by the steeply rising topography forming the horizon to the north east, the low level of the settlement and potential screening of vegetation and buildings along the A616 road. This effect would not be adverse due to the presence of the existing turbines in the landscape.
Victoria **Refer to VP 5**	This is a small settlement, situated at the cross roads of the A616 road and a minor road. Residential properties are situated along the roadside at a slightly lower elevation that the existing turbines at Royd Moor (~2.6km east) and ~1.7km east of the proposed turbines at Blackstone Edge. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: The proposed turbines would be visible on the horizon east of the settlement. This would result in a high magnitude of change for those properties with views, but a medium magnitude of change for the settlement as a whole. The level of effect on the overall visual amenity of the village would be moderate - substantial, and significant due to the proximity of the turbines to Victoria and the slightly elevated position of the turbines above the village. This effect would not be adverse due to the presence of the existing turbines in the landscape.
Millhouse Green **Refer to VP 11**	This small settlement which adjoins Penistone to the west and is situated ~3km south east of the proposed site. The village is predominantly residential properties, but those properties on the western boundary are orientated south and away from the wind farm. The minor B6106 road which leads through Millhouse Green to the A616 offers views from the western edge of the settlement to the existing turbines at Royd Moor, horizon views of the consented Hazelhead turbines and potential blade tip views of the proposed turbines at Blackstone Edge. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: The blade tips of two turbines would be visible on the horizon north west of the settlement. This would result in a negligible magnitude of change for those properties with views, and a negligible magnitude of change for the settlement as a whole. The level of effect on the overall visual amenity of Millhouse Green settlement would be slight, and not significant due to the screening by the rising topography forming the horizon to the north west, the orientation of the buildings to the south on the western edge of the settlement, the low level of the settlement and potential screening of vegetation and buildings along the A616 road. This effect would not be adverse due to the presence of the existing turbines in the landscape.

© Entec UK Limited

Table 7.16 Visual Assessment of Views from Settlements

Settlement	Assessment of Visual Effects on Settlements
Carlecoates **Refer to VP 10**	This small settlement comprises of a number of semi-detached properties along a minor road situated ~2.5km south west of the existing wind farm at Royd Moor and the proposed turbines at Blackstone Edge. The consented Hazelhead Wind Farm is located ~800m north west of the village. There are three listed buildings within the village, but these are screened by surrounding tree cover/woodland. There are potential views of the turbines on the horizon north east of the village directly west of the existing turbines at Royd Moor. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: Three turbines would be visible on the horizon north east of the settlement. This would result in a medium magnitude of change for those properties with views resulting in a moderate – substantial visual effect, and a low magnitude of change for the settlement as a whole. Properties with views would experience a moderate/substantial and significant level of effect. The level of effect on the overall visual amenity of Carlecoates settlement would be slight-moderate, and not significant due to the horizon views of the turbines to the north east, the views of the existing turbines at Royd Moor and consented turbines at Hazelhead in close proximity to the settlement. This effect would not be adverse due to the presence of the existing turbines in the landscape.
Hazelhead	This small cluster of properties, nestled within the Upper River Don Valley are situated at a lower elevation to the proposed turbines, located ~2.2km north of the settlement. The properties are located on both sides of the busy A616 road orientated to the road. There are potential oblique views from the properties on the northern edge of the settlement of the blade tips of the turbines on the horizon. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: The blade tips of the turbines would be visible on the horizon north of the settlement. This would result in a negligible magnitude of change for those properties with views. The level of effect on the overall visual amenity of Hazelhead settlement would be slight, and not significant due to the horizon views of the turbines to the north, with views of the existing turbines at Royd Moor to the north east. This effect would not be adverse due to the presence of the existing turbines in the landscape.
Birds Edge	The ZTV indicates no visibility of the proposed turbines from Birds Edge. A site investigation confirmed this due to the rolling upland topography and the slightly lower elevation of the settlement, and therefore this settlement has not been considered further in this LVIA.
High Flatts **Refer to VP 8**	This small settlement is situated on the A629 road ~2.3km north east of Blackstone Edge and the existing Royd Moor Wind Farm. Part of the settlement is designated a Conservation Area. The properties within the settlement are orientated towards the road and inward, with potential views of the turbines from the south western and western edge of the settlement only. There are potential views of the turbines on the horizon to the south west of the village, alongside the Royd Moor turbines. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: The turbines would be visible on the horizon south west of the settlement. This would result in a medium magnitude of change for those properties, and a negligible magnitude of change for the settlement as a whole. The level of effect on the overall visual amenity of Hazelhead settlement would be slight, and not significant due to the inward orientation of most of the buildings, however there would be a

© Entec UK Limited

Table 7.16 (continued) Visual Assessment of Views from Settlements

Settlement	Assessment of Visual Effects on Settlements
	moderate – substantial, and significant, visual effect on those properties with views of the proposed turbines on the south and western edge of the settlement. This effect would not be *adverse due to the presence of the existing turbines in the landscape.*
Ingbirchworth	This settlement is situated between 2 – 3km east of the proposed site and the existing Royd Moor Wind Farm. Many of the properties are orientated towards the A629 road which passes through the settlement, but there are a number of residential properties on the western side of the settlement, at varying heights within the undulating topography of the upland farmland. There are potential views of the turbines on the horizon to the south west of the village, alongside the Royd Moor turbines. Construction: There is potential for views of the cranes during the construction of the turbines, resulting in a negligible magnitude of change for a restricted period of time. Operation: The turbines would be visible on the horizon south west of the settlement. This would result in a medium magnitude of change for those properties with views, and a negligible magnitude of change for the settlement as a whole. The level of effect on the overall visual amenity of Ingbirchworth settlement would be slight, and not significant due to the inward orientation of most of the buildings, however there would be a moderate – substantial, and significant, visual effect on those properties with views of the proposed turbines on the western edge of the settlement. This effect would not be adverse due to the presence of the existing turbines in the landscape.

Visual Effects on Views from Road Routes

7.8.21 Viewpoints 4,8,9,13,14,15,and 19 illustrate views on or adjacent to major transport routes. The A628(T), A629, A616 roads were driven in both directions to assess the potential effects on receptors on these routes with the assistance of sequential wireframes calculated to upper blade tip from regular intervals along the route within the ZTV From these roads there are current views of the existing turbines at Royd Moor Wind Farm.

7.8.22 Viewpoints 1,2,3,5,6,7,10,11,16 and 18 illustrate views from minor routes. There is a network of minor roads in the area and sequential views have not been assessed.

7.8.23 The assessment and the assessment conclusions for receptors using routes are provided in Table 7.17.

© Entec UK Limited

Table 7.17 Visual Assessment of Views from Road Routes

Route.	Extent of Visibility
A629 Refer to Viewpoint 8	The A629 road runs from High Green in the north of the study area to Thurgoland in the south east of the study area for a length of ~19kms, of which ~11km of the roads lies within the ZTV. There are views of the existing turbines at Royd Moor Wind Farm from this road. Southbound: Potential visibility of the proposed turbines is staggered along this road between High Green and High Flatts. Generally, roadside properties, or buildings within small settlements screen views to the south west. After travelling through High Flatts there are open views of the turbines at Royd Moor and potential views of the turbines at Blackstone Edge on the horizon to the south west ~2.5km distance for ~1km along the road. After which the road drops into the valley towards Ingbirchworth and the turbines are behind the viewer. Northbound: The A616 road follows the west facing slopes of the Upper River Don Valley from Thurgoland for ~3.5km up to the roundabout junction with the A628 road, along which there are potential elevated views of the proposed turbines to the north west where road side vegetation does not filter the views. After the roundabout junction the road drops towards Scout Dike and there is minimal screening west of the road with open views towards the site. At the junction with the B6462 road to Penistone there is an open stretch of road which affords views to the west, which are reduced by the settlement buildings within Ingbirchworth. Continuing north on the A616 road, and climbing out of the valley there are potential oblique views of the turbines to the west, after which the turbines would be behind the viewer on reaching High Flatts. Road users along this road are considered to be of a medium sensitivity when travelling and appreciating the landscape within the Area of Borough Landscape Value. Outwith this area in Barnsley (to the north of Ingbirchworth) road users are of a low sensitivity within an undesignated landscape. The magnitude of change arising from the proposed turbines from this road varies from negligible to medium, resulting in a moderate visual effect on road users, which reduces to slight-negligible with increased distance from the turbines. This is a long term (reversible), direct and not significant visual effect.
A628 (T) Refer to VP 15 & VP 13	The A628 road runs west – to east through the study area for a distance of ~20km, and lies ~3.5km south of the proposed site at its nearest point, of which ~11km lies within the ZTV. There are views of the existing turbines at Royd Moor from this road. Westbound: Visibility occurs from the roundabout at Hoylandswaine with the A629 road. This elevated location offers clear and open views across the Upper River Don Valley towards the site and Royd Moor. Potential visibility occurs for ~1.5km until the road drops in elevation into Penistone. There is no visibility in Penistone due to the built development, and the road bears south near Ecklands where the turbines are behind the viewer. There are oblique views towards the turbines on the horizon to the north of the road at Fullshaw Cross for ~1km until the junction with the A616 road, after which the turbines are behind the viewer. Eastbound: Initial potential visibility occurs within the unenclosed moorland near Gallows Moss. The proposed turbines would be visible on the horizon north west of the road alongside the existing Royd Moor turbines. The turbines would be visible for ~5km when travelling east, until the roundabout junction with A616 where tree cover screens views north. There are potential oblique views of the turbines between the roundabout and Ecklands after which built development and the low lying topography at Penistone screens views and the turbines are behind the viewer. Road users along this road are considered to be of a medium sensitivity when travelling and appreciating the landscape within the Area of Borough Landscape Value. The magnitude of change arising from the proposed turbines from this road varies from negligible to low, resulting in a slight - moderate visual effect on road users, which reduces to slight- negligible with increased distance from the turbines. This is a long term (reversible), direct and not significant visual effect.

© Entec UK Limited

Table 7.17 (continued) Visual Assessment of Views from Road Routes

Route.	Extent of Visibility
A616	The A616 road runs from the southern suburbs of Huddersfield in the north west of the study area, to Stocksbridge in the south east of the study area, over a distance of ~21km, of which ~15km of the road lies within the ZTV. There are views of the existing turbines at Royd Moor Wind Farm from this road. Southbound: from Victoria in the north west, there are likely views of the turbines ~1.5-2km east and north east of the road within the upland farmland landscape alongside the existing Royd Moor Wind Farm. This potential visibility would occur for ~2km when travelling southbound, with Birch woodland filtering views north of the road. Half a kilometre east of Victoria the road orientates south and the turbines would be behind the viewer. Northbound: Potential visibility occurs ~4.5km south of the site when the A616 road orientates north at Langsett Reservoir and the roundabout with the A628. Tree cover filters views at the Flouch Hotel, then as the road orientates north there are direct views of the site ahead as the road falls into the Upper Don River Valley. Views are restricted within the valley, and continue to be limited due to the stepped topography at Crow Edge, where there is the potential for blade tip views. After which the turbines are behind the viewer. Road users along this road are considered to be of a medium sensitivity when travelling and appreciating the landscape within the Area of Borough Landscape Value. The magnitude of change arising from the proposed turbines from this road varies from negligible to low, resulting in a slight - moderate visual effect on road users, which reduces to slight- negligible with increased distance from the turbines. This is a long term (reversible), direct and not significant visual effect.

Visual Effects on Views of Visitors to Listed Buildings and Cultural Heritage

7.8.24 Chapter 9, Cultural Heritage, discusses the potential impacts of the proposed wind farm on scheduled ancient monuments (SAMs) and listed buildings etc within 5km of the site.

7.8.25 This LVIA section considers the potential significant impacts of the proposed development on the setting of the SAMs/listed buildings identified within the Cultural Heritage chapter to a radius of 2.5km of Blackstone Edge Wind Farm, in line with previous sections of the LVIA report, within which it is predicted that there may be the potential for substantial, and therefore significant visual effects on views from the landscape setting of the SAMs/listed buildings within this radius.

7.8.26 The visual effects on the views from those listed buildings which are currently residential properties are assessed in Tables 7.13 - 7.15. Please refer to Chapter 9, Archaeology and Cultural Heritage, and Figure 9.2 identifying the listed buildings, for a full assessment of the effects on listed buildings.

7.8.27 There are two other SAMs within the study area, which are roadside crosses, however the visual effects on views from these features and their settings are not considered to be significant due to the proposed setting of the feature being confined to the roadside itself and is therefore not affected, and therefore they have not been included within this report. A full assessment of SAMs is to be found in Chapter 9, Archaeology and Listed Buildings.

7.8.28 After a site investigation and discussion with the archaeologist who completed the Cultural Heritage assessment, it was confirmed that there was the potential for an effect upon the setting of one feature of cultural heritage importance which is located within ~2.5km radius of the proposed site; the earthworks of a late pre-

© Entec UK Limited

historic settlement in an open area on Castle Hill, ~550m north of Broadstone Lodge and ~1.6km north of the Blackstone Edge site (SAM Ref: 31503). There would be no physical effects on these feature, however an assessment has been undertaken to examine the indirect visual effects on the setting of the feature.

7.8.29 An assessment of the visual effects, likely to be experienced by people visiting cultural heritage features may differ from an assessment made by archaeologists because the focus of the assessment is the visual receptors in these locations and their ability to enjoy and appreciate landscape features which may be of cultural heritage value within the landscape.

7.8.30 The assessment of sensitivity follows the methodology for visual assessment and particular consideration should be given to whether the feature is publicly accessible, the location, and context of the view (in terms of landscape value, quality, and capacity), the visitor experience, and the importance or popularity of the view. When considering the location and context of the view, consideration is also given to the type of feature (such as a SAM, Historic Parks and Gardens, and architectural and/or artistic features), its condition, prominence in the landscape, and its relationship to the surroundings or 'setting'.

7.8.31 There is no definitive definition of the term 'setting', but the concept is generally regarded as a combination of the views from and towards a particular feature. Setting may also be regarded in terms of historical and architectural appreciation, land use (the site boundary), group setting (visual connection to other features of cultural heritage), design (feature was designed to be 'set' within such a landscape) and general landscape setting. In order to have a setting a feature must be upstanding and recognisable above ground.

7.8.32 The SAM comprises of a series of earthworks, only limited 'above ground features' are evident. There is no public access to the SAM via public footpaths/bridleways.

7.8.33 The immediate landscape setting of the monument is an open agricultural field. In the wider sense the setting could be taken to extend over the upland farmland with its stone wall field boundaries and pasture land. The wider landscape comprises of the existing Royd Moor Wind Farm, a network of country lanes, bound by hedgerows and stone walls, linking isolated farm properties and small villages within the Ingbirchworth Upland Farmland landscape, overhead power lines, and scattered communications masts.

7.8.34 There are direct views of the existing turbines at Royd Moor on the horizon to the south of the SAM (~1.6km). The existing turbines occupy a small proportion of the view from this location, forming a linear feature on the horizon. The consented turbines of the Hazelhead Wind Farm are also visible to the west of the Blackstone Edge site.

7.8.35 The proposed turbines of the Blackstone Edge Wind Farm would also be visible from the same location, visible on the horizon, following the line of the Royd Moor turbines to the west. The views from the SAM are across the upland farmland landscape, with its stone wall boundaries and medium sized field units and scattered hedgerow trees, with wider views to the settlements and Peak District National Park on the horizon to the south from Castle Hill. The proposed turbines would occupy a

© Entec UK Limited

small proportion of the view from this location, within a landscape which has a demonstrated capacity to accommodate turbines.

7.8.36 The landscape within which the SAM is located is locally designated as an Area of Borough Landscape Value (ABLV), and is considered to be of a ***medium*** sensitivity.

7.8.37 The magnitude of change upon the views from the SAM at Castle Hill is considered to be ***medium*** , within a small proportion of the view directly towards the turbines only as a result of the views of existing turbines at Royd Moor and the consented turbines at Hazelhead.

7.8.38 There is no public access to the SAM, therefore visual receptors from this location are likely to be interested parties/archaeologists, therefore visual receptor value is considered to be ***low***. This would result in a predicted ***slight – moderate*** and not significant level of effect to those visual receptors at the SAM.

7.8.39 The appreciation and interpretation of the site and overall setting would not be adversely affected nor the reason for the designation or protection of this feature.

Visual Effects on Views from Recreational and Tourist Sites

7.8.40 Recreational receptors may experience views of the proposed turbines at a variety of different recreational and tourist destinations and locations. The assessment of visual effects for receptors is presented for each of the following types of destination:

- Local public footpath routes/locally promoted walks;
- Nationally promoted long distance recreational routes/National Cycle Route; and
- Open access land.

7.8.41 The visual effects on recreational and tourist destinations within the study area, including local footpaths, have been assessed in Table 7.18.

© Entec UK Limited

Table 7.18 Visual Assessment of Recreational and Tourist Destinations (Figures 7.1 and 7.6)

Name	Assessment
<10km from Blackstone Edge Wind Farm	
Local Footpath/Bridleway Routes/Locally Promoted Routes e.g. Barnsley Boundary Walk **Refer to VP 1 / 3 / 13**	There is a network of public footpaths and bridleways within proximity of the proposed site, notably the Barnsley Boundary Walk situated north and east of the site (at ~1.6km distance), a bridlepath/footpath ~500m west of the site, and a bridlepath/footpath ~1.2km east of the site. The are views of the existing wind turbines at Royd Moor Wind Farm from these receptor locations. In particular receptors of medium sensitivity on the local public footpath/bridleway network around Blackstone Edge within 2kms of the site would be visually affected by the development. Visibility from the public footpaths would be extensive within this 2km radius of the proposed wind farm, reduced only by the undulating topography and intervening scattered woodland plantation/tree cover. The predicted magnitude of change would high due to close proximity of the routes to the proposed turbines, despite the views of the existing neighbouring turbines at Royd Moor, within an open, upland farming landscape. The overall visual effects on recreational receptors using the public footpath/bridleway network would be moderate – substantial, and significant. This effect is not anticipated to be adverse due to the presence of the existing turbines at Royd Moor, a new landscape feature is not being introduced.
The Trans Pennine Trail (National Cycle Route 62) **(Refer to VP 9 / 15)**	The Trans Pennine Trail (TPT) is a nationally promoted recreational route which links the Irish and North Seas and runs through the Pennines, it runs west – east within the study area. The route is for walkers, cyclists and horse riders. Of the 331km route approximately 19km lies within the study area. At its closest point the TPT is situated ~2.2km due south of Blackstone Edge where is follows the route of a former railway route within the Upper River Don Valley. A section of ~3km of the TPT lies outwith the ZTV within the study area, to the south west, parallel with the A628(T) road near Longside Moss. Also, ~9km of the route lies within the Peak District National Park. Medium – long distance views of the proposed turbines, alongside the existing turbines at Royd Moor, may be obtained from the north east facing slopes near Gallows Moss, leading to Dunford Bridge. Once in the river valley, and following the former rail line potential visibility reduces, with additional potential screening by vegetation along the route. The turbines would continue to be visible on the horizon north of the route, but potential views will reduce to blade tips only on the horizon within ~2.5km. The TPT continues within the broad open valley, at a slightly elevated location on the former rail line, so predicted views continue through Ecklands and onto Penistone, where the built development screens views. East of Penistone potential visibility occurs, but is likely to be limited within the valley and by surrounding buildings. Recreational receptors along this route are considered to be of a high sensitivity. The predicted magnitude of change would be low at its closest point at ~2.5km due to the local topography screening the majority of the turbines on the horizon. This then increases to medium where there are open views within the broad valley between 2.5 and 5km beyond which the magnitude reduces once again to low – negligible. The overall visual effects on recreational receptors using the public footpath/bridleway network would be moderate to slight - moderate and not significant, with potential moderate – substantial visual effects on those sections of the route between 2.5 – 5km distance due to the high sensitivity of

© Entec UK Limited

Table 7.18 (continued) Visual Assessment of Recreational and Tourist Destinations (Figures 7.1 and 7.6)

Name	Assessment
	the receptors along the route. This effect is not anticipated to be adverse due to the presence of the existing turbines at Royd Moor, a new landscape feature is not being introduced.
Open Access Land **(Refer to VP 12)**	There are scattered areas of open access land identified by Barnsley MBC which are open for public use for recreational activities and are often linked to public rights of way. Recreational receptors within these areas are considered to be of a high sensitivity. The magnitude of change arising from the proposed turbines at Blackstone Edge, alongside the existing Royd Moor turbines, is considered to be high within ~2km of the site. This would include a small area north of the site at Broadstone Reservoir, and an area south of the site at Shiner Hill. Three further areas at Crow Edge, Shiner Hill and Carr House are likely to have partial views of the turbines due to the steeply rising topography to the north, resulting in a low magnitude of change. There is a predicted low magnitude of change from Tinker Hill Open Access area ~3.5km to the west of the site. There is a predicted medium magnitude of change from the open access areas surrounding Ingbirchworth Reservoir, which due to its lower elevation would have partial views of the proposed turbines to the west alongside the Royd Moor turbines on the horizon. The overall visual effects on recreational receptors using the open access areas would be moderate to slight - moderate and not significant overall. This effect is not anticipated to be adverse due to the presence of the existing turbines at Royd Moor, a new landscape feature is not being introduced.
Local Attractions **(Refer to VP 7)_**	The Royd Moor Viewpoint Location is a local heritage initiative located adjacent to a local road south east of the proposed site. Visitors to the viewpoint are considered to be of medium sensitivity. The magnitude of change arising from the proposed turbines is considered to be low, with the proposed turbines appearing behind the existing turbines at Royd Moor. The overall visual effects would be slight/moderate and not significant overall. This effect is not anticipated to be adverse due to the presence of the existing turbines at Royd Moor, and a new landscape feature is as such not being introduced.

Effects on Views from Designated Landscapes

7.8.42 The landscape, within the study area, which has been subject to designation to afford it special protection within the relevant planning authority development plans, has been assessed here with reference to the landscape character and quality, the special components particular to the designation (where these are known) and the relevant landscape planning policies.

Peak District National Park

7.8.43 The proposed site does not lie within the Peak District National Park (PDNP) designated area.

7.8.44 The aim of the National Park designation is to conserve and enhance the natural beauty of the area and to provide enjoyment of the area by the public.

© Entec UK Limited

7.8.45 The PDNP Board has defined the Park's valued characteristics as,

"The valued characteristics of the Peak National Park include quiet enjoyment; wildness and remoteness; landscape, wildlife and plants; clean earth, air and water; its cultural heritage of history, archaeology, customs and literary associations; and any other features which make up its special quality."

7.8.46 It is a dynamic and working countryside, along side the farming rural diversification has led to an increase in the promotion of tourism within the area to maintain sustainable communities. The PDNP has large areas of open access land on hill tops used by walkers, with designated short public footpath routes in and around villages, both are promoted by the PDNP Authority to encourage people to visit and experience the National Park. The Trans Pennine Trail route passes through the PDNP also. Country pursuits are popular within the PDNP, with grouse moors and horse trekking within the hills. The local road network is used for day trips by road.

7.8.47 Potential receptors within this nationally designated landscape, both residential and recreational, are considered to be of a high sensitivity. At its closest point the National Park boundary is located ~2.5km south of the proposed site at Hazelhead. The PDNP extends west and south from this point within the study area (refer to Figure 7.6 and 7.9).

7.8.48 The ZTV illustrated in Figure 7.9, indicates potential visibility of the proposed turbines within 2.5 and 5km radius of the site within the PDNP at Thurlestone Moors (refer to Viewpoint 13). There are views of the existing wind turbines at Royd Moor (~0.7km distance) and potential views of the consented turbines at Hazelhead (~1.7km distance) from this area also. Due to the existing views of turbines, and the large scale landscape within which the turbines are located, the predicted magnitude of change resulting from the proposed turbines at this location is considered to be ***low***. This would result in a ***moderate***, and not significant visual effect on those receptors within the PDNP from this area. The visual effect is not considered to be adverse due to the presence of existing turbines in the views from the PDNP and the proposed turbines at Blackstone Edge are not introducing a new feature in to the landscape. Views from the settlement of Hazelhead and the Trans Pennine Trail are discusses in previous sections.

7.8.49 The ZTV indicates that views from within the Peak District National Park between 5 – 10km are largely restricted to the north facing slopes of the northern boundary of the National Park area and hill top locations. The sensitivity of the routes are considered to be ***high*** and the magnitude of change would be ***negligible*** to recreational receptors. The selection of viewpoints was discussed with the PDNP and an additional viewpoint accommodated at their request. The overall visual effects would be slight, long term (reversible), and not significant (refer to Viewpoints 17 / 18 / 19).

7.8.50 In conclusion, the visual effects, experienced as views of the wind farm would be ***slight*** overall, but with limited areas of ***moderate*** effect that would not be significant. The type of effect would be temporary during construction and long term (reversible) during operation. Overall, the visual effects are not considered to be adverse as the wind farm would not add a new feature or element to the landscape composition, located on the boundary of the PDNP within an area that is

© Entec UK Limited

already settled. In most cases, all turbines of the wind farm would be visible, but the large scale landscape is such that it would be reasonably accommodated within the wider landscape, viewed as a feature beyond the open moorland of the PDNP. Views from within the Peak District National Park ***would not be significantly or adversely affected by the proposed wind farm at Blackstone Edge.***

Areas of Borough Landscape Value

7.8.51 The Barnsley MBC UDP[27] Policy GS13 'Area of Borough Landscape Value' states,

"The designated areas of Borough Landscape Value are recognised as being of higher landscape quality than other countryside areas. The principal of protecting and enhancing valuable landscape areas was established in the former local and structure plans.

In areas designated as being of a Borough Landscape Value on the proposals map conservation and enhancement of the landscape will be extremely important consideration. Subject to Policies GS8 & GS9, development will only be allowed if:

- *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 ABLV are also in the Green Belt and development will therefore be limited to that which is appropriate in such areas in accordance with Policy GS8.

Because of the special quality of these areas, any development which is acceptable should conserve the character of the area, and should, wherever possible, positively enhance the environment through its location, siting, scale, design, materials and landscaping."

7.8.52 The existing turbines at Royd Moor Wind Farm, the consented turbines at Hazelhead and proposed turbines at Blackstone Edge are located within the ABLV (Figure 7.6). During construction the magnitude of change would be ***zero - high*** and there would be a temporary, ***moderate - substantial*** and ***adverse*** effect within 2.5km of the site. At a further distance the potential magnitude of change would be ***low***, resulting in a ***slight – moderate*** and ***adverse*** effect.

7.8.53 A study of wireframes from a number of locations around the ABLV revealed that there would be potentially significant, yet localised, visual effects on views from within the ABLV , especially within 1.5 – 2.5km radius of the site during operation. The magnitude of change, in areas where the local topography and tree cover within the wider landscape up to 10km would screen views, would be ***negligible***.

7.8.54 Therefore, localised effects of the turbines will vary from high magnitude of change within a designated area of ***medium*** sensitivity with moderate-substantial, therefore

[27] Barnsley Metropolitan Borough Council, Unitary Development Plan, Adopted 2000

© Entec UK Limited

significant, ***long term (reversible) visual effects*** to a ***zero - negligible*** magnitude of change, within a designated area of ***medium*** sensitivity, resulting in ***slight - negligible, long term (reversible) visual effects***.

Areas of High Landscape Value

7.8.55 The AHLV to the north in Kirklees Council area is illustrated in Figure 7.6. When viewed alongside the ZTV to blade tip (see Figure 7.2) it can be seen that only small areas within the AHLV fall within the ZTV. Of the areas within the ZTV, woodland Viewpoint 16 is within the AHLV.

7.8.56 The closest area of the AHLV to the proposed site is at Victoria to the west. Viewpoint 5 is to the east and closer to the site with more limited potential screening from the buildings of the settlement than the AHLV.

Visual Effects on Views from Historic Parks and Gardens

7.8.57 English Heritage co-ordinate the Historic Parks and Gardens Register within England and Wales. Receptors within Historic Parks and Gardens are considered to be of a high sensitivity within a designed landscape open to the public. Within the study area there are no Registered Parks and Gardens.

7.8.58 There is a locally designated Country Park at Cannon Hall (see Figure 7.6). However, surrounding woodland vegetation, topography and intervening buildings are likely to screen views of the proposed turbines for those within the ZTV area, and therefore this site has not been considered further within this assessment.

Summary of Significance Evaluation

7.8.59 Table 7.19 summarises the conclusion of the assessment of predicted visual effects of the proposed development on the visual receptors within the 10km radius study area.

7.8.60 A summary of visual effects and an evaluation of their significance is provided in Table 7.19.

Table 7.19 Evaluation of Significance of Visual Effects

Location of Visual Receptor				**Significance**	
	Sensitivity	**Magnitude**	**Level of effect**	**Level**	**Rationale**
Visual Effects on Visual Receptors within Landscape Character Areas (within 10km) during Operation					
Ingbirchworth Upland Farmland LCA	Medium (recreational) High (residential)	High (within 2.5km) Medium (2.5-10km)	Moderate – Substantial (within 2.5km) Substantial (2.5-10km)	**Sig**	Visual effects would be long term (reversible) and cumulative.

© Entec UK Limited

Table 7.19 (continued) Evaluation of Significance of Visual Effects

Location of Visual Receptor				Significance	
	Sensitivity	**Magnitude**	**Level of effect**	**Level**	**Rationale**
Thurlestone and Langsett Un-enclosed Moorland	High	Low	Moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
West Barnsley Settled Wooded Farmland	Medium (recreational) High (residential)	Low	Slight – Moderate (recreational) Moderate (residential)	Not Sig	Visual effects would be long term (reversible) and cumulative.
Penistone Upland Farmland	Medium (recreational) High (residential)	Low	Slight – Moderate (recreational) Moderate (residential)	Not Sig	Visual effects would be long term (reversible) and cumulative.
Upland Don River Valley	Medium (recreational) High (residential)	Medium – Low	Moderate to Slight – Moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
Visual Effects on Views from Designated Landscapes (within 2.5km) during Operation					
Area of Borough Landscape Value	Medium	High (within 2.5km) but Negligible overall	Moderate – Substantial (within 2.5km) and Slight – Negligible overall	Sig	Visual effects would be long term (reversible) and cumulative.
Visual Effects on Views from Designated Landscapes (within 10km) during Operation					
Peak District National Park	High	Low (2.5 – 5km) Negligible (5 – 10km)	Moderate (2.5 – 5km) Slight (5 – 10km)	Not Sig	Visual effects would be long term (reversible) and cumulative.
Visual Effects on the Overall Visual Amenity of Local Residents (within 2km) during Operation					
Pottersgate House (33) & Potters Hose (34)	High	High	Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
2 properties at Heystack Farm (31)	High	High	Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Fair View (4)	High	High	Substantial	Sig	Visual effects would be long term (reversible) and cumulative.

© Entec UK Limited

Table 7.19 (continued) Evaluation of Significance of Visual Effects

Location of Visual Receptor				Significance	
	Sensitivity	**Magnitude**	**Level of effect**	**Level**	**Rationale**
New Maythorn Farm	High	High	Substantial	Sig	Visual effects would be long term (reversible).
Lower Wood Royd Farmhouse (12)	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Set Stones House (13)	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
2 properties at Broadstone Lodge (3)	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Green Lane Head (37)	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Martins Nest (9)	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Other residential properties within 2km	High	A further 31 properties may experience views that are not likely to be significant in terms of the visual effects on the overall visual amenity of these properties due to a predicted low – negligible magnitude of change, although a particular view from the property may be significantly affected.			
Visual Effects on those in Settlements (within 3km) during Operation					
Crow Edge	High	Negligible	Slight	Not Sig	Visual effects would be long term (reversible) and cumulative.
Victoria	High	Medium	Moderate – Substantial	Sig	Visual effects would be long term (reversible) and cumulative.
Millhouse Green	High	Negligible	Slight	Not Sig	Visual effects would be long term (reversible) and cumulative.
Carlecoates	High	Low	Moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
Hazelhead	High	Negligible	Slight	Not Sig	Visual effects would be long term (reversible) and cumulative.
Birds Edge	High	No visibility	-	-	-
High Flatts	High	Negligible	Slight	Not Sig	Visual effects would be long term (reversible) and cumulative.
Ingbirchworth	High	Negligible	Slight	Not Sig	Visual effects would be long term (reversible) and

© Entec UK Limited

Table 7.19 (continued) Evaluation of Significance of Visual Effects

Location of Visual Receptor				Significance	
	Sensitivity	**Magnitude**	**Level of effect**	**Level**	**Rationale**
					cumulative.
Visual Effects on those on Routes during Operation					
A629	Low and Medium within AHLV)	Negligible – Medium	Slight – Moderate & Moderate within AHLV	Not Sig	Visual effects would be long term (reversible) and cumulative.
A628(T)	Low and Medium within AHLV)	Negligible – Low	Negligible to Slight - Moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
A616	Low and Medium within AHLV)	Negligible – Low	Negligible to Slight - Moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
Visual Effects on those visiting SAM/Listed Buildings during Operation					
Castle Hill (SAM)	Low	Medium	Slight-moderate	Not Sig	Visual effects would be long term (reversible) and cumulative.
Visual Effects on those visiting Recreational and Tourist Sites (<10km) during Operation					
Local footpaths/bridleways/ Locally promoted routes	Medium	High			Visual effects would be long term (reversible) and cumulative.
Trans Pennine Trail (NCN Route 62 shared)	High	Low – Medium			Visual effects would be long term (reversible) and cumulative.
Open Access Land	High	High (up to 2km radius) Low (Tinker Hill)	Substantial (up to 2km radius) Moderate (Tinker Hill)	Sig (up to 2km radius) Not Sig (2-10km radius)	Visual effects would be long term (reversible) and cumulative.
Royd Moor Viewpoint Location	Medium	Low	Slight/Mod	Not Sig	Visual effects would be long term (reversible) and cumulative.
Note: The visual effects on some recreational and tourist destinations have been assessed earlier and there would be no significant or adverse visual effects.					

7.9 Cumulative Visual Effects and Assessment

7.9.1 The cumulative assessment includes existing wind farms (those operating or under construction), proposals with planning permission, and those that are currently the

© Entec UK Limited

subject of undetermined applications within a 30km radius of the Blackstone Edge Wind Farm site centre.

7.9.2 The list of wind farm sites to be included in the assessment has been compiled from known wind farm planning applications and formal requests for scoping opinions held by Barnsley MBC and the local planning authorities within the cumulative study area. The list was finalised in March 2007. Wind farms included or referred to in this assessment are listed in Table 7.4 and illustrated on a plan in Figure 7.40. Due to the lack of wind farms within this study area, the cumulative visual assessment has concentrated on the reduced study area of 10km radius.

7.9.3 A series of potential cumulative ZTVs are illustrated in Figures 7.41 – 7.44, showing the potential cumulative ZTV for combinations of the known wind farms. Each ZTV has been calculated to blade tip and based on the turbine dimensions and available layouts at the time of this assessment. The cumulative ZTVs help to build up a picture of the potential or theoretical extent of visibility, but do not take into account of vegetation and built form that would otherwise screen the development from view. The assessment considers simultaneous visibility where more than one wind farm from a viewpoint fixed in one direction and/or successive views when the viewer turns, and sequential visibility of wind farms, viewed from a particular journey through the landscape.

7.9.4 All the viewpoints included within this LVIA have presented a cumulative wireframe/photomontage for wind farms of more than one turbine, based on the available information. These viewpoints are illustrated in Figures 7.10 - 7.38 and the assessment of each of the viewpoints is contained in Appendix D5.

7.9.5 Two or more wind farms are required for the occurrence of a cumulative visual effect. This assessment has therefore considered the proposed Blackstone Edge Wind Farm in addition to other wind farm sites in the landscape in order to test the landscape capacity of the area and provide conclusions for the CLVIA relevant to this proposal (see Figures 7.41-7.44 inclusive).

Cumulative ZTV – existing wind farms and Blackstone Edge Wind Farm within 10km

7.9.6 Royd Moor is the only existing wind farm within 30km radius of the proposed site at Blackstone Edge. It is situated ~0.7km east of the site. Blackstone Edge and Royd Moor ZTVs (as per Figure 7.41) are very similar, being determined largely by the valley and upland topography of this area. The cumulative ZTV for both sites illustrates that the proposed turbines at Blackstone Edge will not extend the current visibility of the existing Royd Moor turbines within much of the 10km study area.

7.9.7 Generally, the cumulative visibility within 10km of Blackstone Edge is likely to be sequential along the recreational and road routes within the area of the open, upland farmland landscape and the more visually constrained Upper Don River Valley to the south.

7.9.8 There are potential significant cumulative visual effects arising from the proposed turbines at Blackstone Edge and Royd Moor within a 2.5km of Blackstone Edge only. The proposed turbines at Blackstone Edge are 101m in height, compared to the existing 53m high Royd Moor turbines, therefore the juxtaposition of both sites will have a visual scale effect on those nearby visual receptors. Residential receptors within this area are of a ***high*** sensitivity, and for those with a predicted

© Entec UK Limited

high magnitude of change arising from the proposed turbines, (Table 7.13 Residential assessment), this would result in a ***substantial*** and significant cumulative visual effect. Residential receptors within this area are of a ***high*** sensitivity, and for those with a predicted ***medium*** magnitude of change arising from the proposed turbines, this would result in a ***moderate/substantial*** and significant cumulative visual effect. Recreational receptors within this area are of a ***medium*** sensitivity, which would result in a ***moderate – substantial***, and significant visual effect.

7.9.9 There are predicted medium – long distance views from the Peak District National Park to the south and west. The magnitude of change arising from the proposed turbines at Blackstone Edge reduces with distance from the site. There may be low magnitude of change from views within the PDNP (high sensitivity of receptors) within 2.5 – 5km, which would result in localised area of ***moderate*** and not significant cumulative visual effects Beyond 5km the magnitude of change reduces to ***low – negligible***, and therefore the predicted cumulative visual effect on receptors within the PDNP would be ***slight, slight - moderate*** and not significant.

7.9.10 There is a predicted sequential visibility from the Trans Pennine Trail (TPT) when the route passes in close proximity to the site boundary (<2.5km) with views to Royd Moor Wind Farm to the north. Potential visibility along this route varies from areas of open views within the broad open valley to more enclosed river valley areas with vegetation along the former rail route screening views to the north. Recreational receptors along this route are considered to be of a ***high*** sensitivity. Overall, the predicted magnitude of change resulting from the turbines with Royd Moor Wind Farm along the TPT would be ***low***, which would result in a ***moderate*** and not significant visual effect.

7.9.11 These effects are not considered adverse because the proposed turbines at Blackstone Edge are not introducing a new landscape element, rather the two sites will be viewed alongside each other on the horizon from many locations.

Existing single turbines and Blackstone Edge Wind Farm within 10km

7.9.12 There are two single turbines within the 10km radius of the site; Bullhouse at Ecklands and Longley Farm.

7.9.13 Bullhouse has not been operational for approximately one year and enforcement action is currently being undertaken to decommission and remove the turbine. It has therefore been excluded from the CLVIA.

7.9.14 Details of the single turbine at Longley Farm have been archived by Kirklees Council and the information available is that the turbine will be in operation for another 10-15 years. It is 15-20m in height (which is assumed to be hub height) and therefore height to blade tip is gauged from this as approximately 30m. It is located approximately 5km west of the proposal site. It can be seen on a clear day from both viewpoint 14 (approximately 6.75 km from the proposed site, Figure 7.33) in a 90° viewing angle, in the distance along the A628 and also from viewpoint 19 (approximately 10 km from the proposed site, Figure 7.38) seen in a 90° viewing angle. In this view, it is visible against the background of the moors to the south of Hepworth. In both photomontages/wireframes the Blackstone Edge site will be seen to the right of the existing Royd Moor site. This single turbine at Longley Farm is

© Entec UK Limited

not visible from other viewpoints, either owing to the viewpoint location and the angle of view to the proposal site or the localised screening topography. Longley Farm turbine is contained within and along the valley towards Penistone in contrast to the relative hilltop setting of Royd Moor, the consented Hazelhead and the proposed Blackstone Edge sites .

Cumulative ZTV – consented wind farms and Blackstone Edge Wind Farm within 10km

7.9.15 There is one consented wind farm within 10km of Blackstone Edge; Hazelhead Wind Farm, situated ~1.7km south west of Blackstone Edge.

7.9.16 It should be noted that the existing turbines at Royd Moor are approaching the end of their lifespan and will be decommissioned in 2018 at the latest (refer also to chapter 2, section 2.3). As such the cumulative effects of the Blackstone Edge wind farm will change over time. For a maximum of 8 years (assuming operational start of Blackstone Edge in 2010) cumulative effects will be influenced by the existing turbines at Royd Moor and the consented Hazelhead Wind Farm. Beyond 2018, or earlier if Royd Moor is decommissioned at an earlier date, cumulative effects will be influenced by the consented Hazelhead scheme only. Therefore the cumulative assessment presented below has considered the existing Royd Moor wind turbines and the consented Hazelhead scheme, as this is considered to be the worst-case in respect of cumulative effects and short to medium term when compared with the predicted operational time of Blackstone edge wind farm. Following the decommissioning of Royd Moor, cumulative effects will be less significant than those prior to decommissioning with Blackstone Edge and Hazelhead wind farms forming a more consistent image

7.9.17 There are potential significant cumulative visual effects arising from the existing turbines at Royd Moor and the consented Hazelhead turbines. The visual effects on views by residential receptors of a ***high*** sensitivity, at a ***medium*** level of magnitude of change, would result in a ***moderate- substantial*** and significant cumulative visual effect within 2km of the Blackstone Edge site. Recreational receptors within this area are considered to be of a medium sensitivity, with a ***medium*** level of magnitude of change, would result in a ***moderate*** and not significant cumulative visual effect within 2km of the Blackstone site.

7.9.18 These effects are not considered adverse because the proposed turbines at Blackstone Edge are not introducing a new landscape element, rather the two sites, along with the existing Royd Moor Wind Farm will be viewed alongside each other.

7.9.19 The potential cumulative effects associated with the different rotational speeds of turbines at Blackstone Edge, Hazelhead and Royd Moor have been considered. Whilst viewers of the developments may be aware of different rotational speeds of the turbines, which may arise either due to differing wind speed at particular turbines and/or due to the different size of the Royd Moor turbines compared with those at the consented Hazelhead site and the proposed Blackstone Edge Wind Farm, the effect is judged to be of negligible magnitude and therefore not significant.

Sequential Cumulative Assessment of Road Routes

7.9.20 The main routes for which there would be a potential significant sequential cumulative visual effect include the A628(T)/A629/A616 roads.

© Entec UK Limited

7.9.21 The A628(T) road runs west to east in the study area, at a distance of ~3.7km at its nearest point to the wind farm, over a distance of ~6km of the road route within the study area. Receptors using the road are considered to be of a ***medium – high*** sensitivity (high within the Peak District National Park). The magnitude of change resulting from the proposed turbines at Blackstone Edge, alongside the existing and consented turbines, would be ***low***. The cumulative effect of Blackstone Edge Wind Farm on the A628(T) road would be ***moderate***, and not significant visual effect.

7.9.22 There is a predicted ***medium*** cumulative magnitude of change on those ***low*** sensitivity receptors using the A629 road for a ~1km section of the route south of High Flatts, as a result of the proposed Blackstone Edge turbines and the existing Royd Moor and consented Hazelhead turbines, resulting in a ***slight - moderate*** cumulative visual effect for a short section of the road, there would be a ***negligible*** cumulative visual effect on the A629 road overall.

7.9.23 The A616 road runs north west – south east within the study area and is situated between Royd Moor and Blackstone Edge sites to the north east and Hazelhead to the south west of the road within 2.5km of Blackstone Edge. Road users in this locally designated area are considered to be of a ***medium*** sensitivity. The magnitude of change for a ~5km section of the road is predicted to be ***high***, with direct and oblique views of the three sites near Victoria and Hazelhead. This would result in ***moderate – substantial*** and significant cumulative visual effects for a short section of the overall route, which would reduce to ***slight- moderate*** and slight (not significant) with distance from the site.

7.9.24 There are predicted substantial and significant cumulative visual effects from the local road network within 2.5km of the site.

7.9.25 Overall, the wind farm would be mostly viewed alongside the existing turbines at Royd Moor, and the additional proposed turbines would not result in adverse cumulative visual effects from the road routes within the study area.

Predicted Cumulative Assessment: Conclusions

7.9.26 The two existing sites most relevant to this assessment are the existing Royd Moor Wind Farm and the consented Hazelhead Wind Farm. There are predicted significant cumulative visual effects with the proposed turbines at Blackstone Edge within ~2.5km radius of the site, reducing to not significant beyond 2.5km radius of the site.

7.9.27 These cumulative effects are not considered adverse because the proposed turbines at Blackstone Edge are not introducing a new landscape element and careful attention to design has been paid to the layout of the two sites at Blackstone Edge and Hazelhead.

7.9.28 Given that Royd Moor will be decommissioned in 2018 at the latest, the cumulative effects described above will change over time. The cumulative effects that will arise before the decommissioning of Royd Moor (and that have been considered in this assessment) are considered to present the worst-case scenario. The cumulative effects are considered to be less significant after decommissioning of Royd Moor.

© Entec UK Limited

7.10 References

Scottish Natural Heritage (2001) *Guidelines on Environmental Impacts of Wind farms and Small Scale Hydro Electric Schemes.*

Scottish Natural Heritage Advisory Services Landscape Group (4th Draft May 2004) *Guidance for the Assessment of Cumulative Landscape and Visual Impacts Arising from Wind farm Developments.*

The Landscape Institute, Institute of Environmental Management and Assessment (2002) *Guidelines for Landscape and Visual Impact Assessment*, Second Edition.

University of Newcastle (2002) *Visual Assessment for Wind farms: Best Practice*, Report No F01AA303A.

University of Sheffield and Landuse Consultants (2002) *Landscape Character Assessment: Guidance for England and Scotland* (Countryside Agency and SNH publication).

The Countryside Agency (June 2005) *Planning Principles for Landscape, Access and Recreation, Moving on from 'Planning Tomorrow's Countryside*

The Countryside Agency February 2005 *North East Region Briefing Note – Treatment of Landscape, Access and Recreation Issues in Environmental Impact Assessment* (The Countryside Agency North East Regional Office, in association with Chris Blandford Associates)

Barnsley MBC, *Unitary Development Plan, Adopted 2000*

Barnsley MBC, Emerging Core Strategy Policies

Kirklees Council, *Unitary Development Plan, Adopted March 1999 (Addendum March 2000)*

Sheffield City Council, *Unitary Development Plan, Adopted March 1998*

High Peak Borough Council, *Local Plan. Adopted March 2005*

High Peak Borough Council, Local Development Framework Landscape Character SPD5. *Adopted March 2006*

Peak District National Park Authority, *Structure Plan, Adopted April 1994*

Office of the Deputy Prime Minister (2004) *Planning Policy Statement 22, Renewable Energy*

Scottish Natural Heritage (29 March 2006, Published March 2007) *Visual Representation of Wind Farms - Good Practice Guidance*, Horner & Maclennan and Envision

© Entec UK Limited

© Entec UK Limited