AAH planning consultants

LANDSCAPE AND VISUAL IMPACT ASSESSMENT

SHAFTON ADVANCED LEARNING CENTRE, COLLIER ROAD,

SHAFTON

PROPOSED SITING OF WIND TURBINE

Our Ref: AAH/1803/11PLA

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1.0 Introduction

1.1 This Landscape and Visual Impact Assessment assesses the potential landscape and visual implications of locating 1 no. 225kw, 33m high wind turbine serving the Shafton Advanced Learning Centre. The landscape and visual assessment is divided into the following sections;

- Introduction and methodology
- Assessment of existing views and extent of visibility of the site
- Proposed mitigation measures
- Predicted impacts on views, landscape and amenity
- Visual impacts and conclusions

Assessment Methodology

1.2 The format of this assessment is based on the principles described in The Countryside Agency and Scottish Natural Heritage's Landscape Character Assessment Guidance for England and Scotland, published 2002 (ref 1-1) and The Landscape Institute and Institute of Environmental Management and Assessment Guidelines for Landscape and Visual Impact Assessment, Second Edition, published 2002 (ref 1-2). The assessment is also in accordance with the requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 1999.

1.3 A desktop study was made of published information to establish the landscape context of the site and identify potential viewpoints which may be affected by the development. These viewpoints were considered to illustrate the impact from all directions of the application site. The photomontages are found in Appendix A of this report.

1.4 The application site and surrounding area was visited on 18th February 2011. The weather conditions were good and visibility was clear on the visit.

2.0 Landscape and Visual Impact Assessment

2.1 The Landscape Impact Assessment describes the likely nature and scale of changes on individual landscape elements known as 'receptors' and the resultant effect on the landscape character due to the proposed development. The extent to which a landscape can accommodate change due to development varies according to a range of factors such as land use, the scale and pattern of the landscape, visual enclosure, and quality of view and the value of the landscape. Changes to the fabric and character of a particular landscape may affect the perceived value of that landscape, giving rise to changes in its quality. The scale or magnitude of landscape effects ranges from negligible, through to minor, moderate and major. Such changes are described as either adverse or beneficial.

2.2 The Countryside Agency's guidelines make a clear distinction between the characterisation process (in which the attributes of the landscape are described) and the judgment making process. This section of the assessment, the characterisation process, is considered and later sub-sections make judgments about the potential effects of the proposed development based upon the characterisation.

2.3 The Countryside Agency guidelines describe how landscape character assessment can be applied at different scales, from the national or European level, to the parish level. Assessments are ideally prepared at different scales that should fit together as a nested series or a hierarchy of landscape character types and/or areas, such that each level of assessment adds more detail. The three main levels identified by The Countryside Agency are:

1. National and regional scale
2. Local authority scale
3. Local scale

This assessment uses and presents a summary of the relevant published assessments at national and regional scale and local authority scales. These wider character assessments are then used to provide the context for the local scale landscape assessment for the application site.

2.4 The Countryside Agency's guidance recommends that the characterisation process should be based on an assessment of natural factors, cultural and social factors and aesthetic and perceptual factors. These factors have been examined for the site's surroundings, the

existing site as it stands today and the site, as it would be, following completion of the development.

2.5 The assessment of visual effects describes the changes in the visual character of available views and in the visual amenity of local receptors arising from the development. The sensitivity of visual receptors and views will be dependent on the context of the view, the importance of the view and the nature of the receptor. The scale or magnitude of visual change is affected by scale, the degree of contrast, the permanence of the effect, angle of view, distance and the extent of change.

2.6 Principal viewpoints are selected on the basis of which points provide the clearest views of the site and are also the most accessible to the public. As previously mentioned, the photomontages are attached in Appendix A.

3.0 Significance Criteria

3.1 The potential significance of landscape and visual impact is determined by a combination of the magnitude of the potential impact and the sensitivity of the receptor to change. These two variables can be correlated as illustrated in Table 1, below. Thus, a landscape impact of low magnitude may nevertheless be assessed to have a moderate impact in a highly sensitive landscape such as an Area of Outstanding Natural Beauty (AONB) or a National Park. In general the following principles apply:

	Magnitude of Impact			
Sensitivity of Receptor to Change	**Negligible**	**Low**	**Medium**	**High**
Very High	Negligible	Moderate	Moderate/Major	Major
High	Negligible	Minor/Moderate	Moderate	Moderate/Major
Medium	Negligible	Minor	Minor/Moderate	Moderate
Low	Negligible	Negligible	Minor	Minor/Moderate

Table 1 – Principles of Assessing Significance of Landscape and Visual Impacts Magnitude of Impact Sensitivity of Receptor to change

3.2 The above consideration of the sensitivity of the receptors with the magnitude of the potential impacts provides an overall assessment of the potential significance of impacts. However, this process is not a quantitative process; there is not an absolute scoring system. Although considerations are made according to recognised features and methods of working, as outlined in this report, the correlation of the two factors is in the end a matter of professional judgement.

3.3 Table 2, below, provides a brief definition of the full range of significance criteria. It must be emphasised that both landscape and visual impacts can be either adverse or beneficial in nature.

3.4 These ratings reflect the existing site condition, established use and existing planning consents, but also the nature and scale of the proposed development. The visual impacts arising from visual changes in the appearance of the landscape associated with the development and perceived by the visual receptor may be beneficial or adverse and are assigned a significance rating.

Table 2 – Landscape and Visual Impact Significance Definitions

Significance	Definition
Negligible	The proposed scheme is appropriate in its context. It may be difficult to differentiate from its surroundings and would affect very few or no receptors.
Minor	The proposed scheme would cause a barely perceptible impact, and would affect few receptors.
Moderate	The proposed scheme would cause a noticeable difference to the landscape, and would affect several receptors.
Major	The proposed scheme would completely change the character and/or appearance of the landscape for a long period of time or permanently. It would affect many receptors.

4.0 Determining Landscape Capacity and Sensitivity

4.1 Topic Paper 6 of Landscape Character Assessment Guidance for England and Wales seeks to define concepts of Capacity and Sensitivity. The following definitions are suggested:

- Overall Landscape Sensitivity refers primarily to the inherent sensitivity of the landscape itself, irrespective of the type of change that may be under consideration.
- Landscape Sensitivity to a specific type of change is used where it is necessary to assess the sensitivity of the landscape to a particular change or development.
- Landscape Capacity describes the ability of a landscape to accommodate different amounts of change or development of a specific type.

4.2 Sensitivity is the degree to which a particular landscape type or area can accommodate change arising from a particular development, without detrimental effects on its character and will vary with:

- Existing land use;
- The pattern and scale of the landscape;
- Visual enclosure/openness of views, and distribution of visual receptors;
- The scope for mitigation, which would be in character with the existing landscape;
- The value placed on the landscape.

4.3 Overall landscape sensitivity to change will be judged using a three point verbal scale of high, medium or low. Judgements are then made of each of the constituent aspects of sensitivity and these assessments are tabulated to provide a profile of a particular landscape area. An overview is than taken of the distribution of the assessments of each aspect and this is used to make an informed judgement about the sensitivity of the landscape to accommodate the specific change.

5.0 Determining the Sensitivity of Visual Receptors

5.1 Principal viewpoints are selected on the basis of which points provide the clearest views of the site and are also the most accessible to the public. Secondary viewpoints represent views from areas which are not commonly used by the public, or which would provide less clear views of the proposed development. Secondary viewpoints also represent areas which may be perceived to be sensitive to the visual impact of the proposed development due to their nature or proximity, but which in reality have restricted views of the site.

5.2 Sensitivity of visual receptors is typically assessed by ascribing one of the following levels: very high, high, medium or low sensitivity to change. The sensitivity of visual receptors and views will depend on the context of the view, the importance of the view and the nature of the receptor.

5.3 Table 3 below provides a description of the criteria used to define the sensitivity of the visual receptors:

Table 3 – Criteria for Assessing Sensitivity of Visual Receptors

Sensitivity	Definition of Visual Receptor
Very High	The principal views from residential buildings; beauty spots and picnic areas. Users of outdoor recreational facilities including strategic recreational footpaths, cycle routes or rights of way, whose attention may be focused on the landscape; important landscape features with physical, cultural or historic attributes.
High	Other footpaths; secondary views from residential buildings, people travelling through or past the landscape roads, train lines or other transport routes.
Medium	People engaged in outdoor sports or recreation (other than appreciation of the landscape), commercial buildings or commercially engaged pedestrians, whose attention may be focused on their work or activity rather than the wider landscape.
Low	Views from heavily industrialised areas.

Determining Magnitude of Impacts on Landscape Character and Visual Receptors

5.4 Magnitude is determined by the distance from the viewer, the extent of change in the field of vision, the proportion or number of views affected and the duration of each from each viewpoint, or a sequence of viewpoints that may have transient views (e.g. along a road).

5.5 Generally, greater weight is given to visual impacts on public viewpoints than on private properties. Table 5 below, provides a description of the criteria used to assess the magnitude of impacts on landscape and visual receptors:

Table 5 – Assessing Magnitude of Impacts on Landscape and Visual Receptors Magnitude: Typical Criteria

Visual Receptor Magnitude	Assessment
High	Total loss of or major alteration to key elements/ features/ characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements considered to be totally uncharacteristic when set within the attributes of the receiving landscape.
Medium	Partial loss or alteration to one or more key elements/ features/ characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that may be predominant but may not necessarily be considered to be substantially uncharacteristic when set within the attributes of the receiving landscape.
Low	Minor loss of or alteration to one or more key elements/ features/ characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that may not be uncharacteristic when set within the attributes of the receiving landscape.
Negligible	Very minor loss or alteration to one or more key elements/ features/ characteristics of the baseline i.e. pre-development landscape or view and/or introduction of elements that are not uncharacteristic within the surrounding landscape – approximating the 'no change' situation.

Nature of the Development

5.6 The proposal is for the installation of 1 no. 225kw, 33m wind turbine to the west of Engine Lane, Shafton. Information on the location of the wind turbines and further detail on the structure is shown on the drawings which accompany this application.

Baseline Conditions

5.7 The site is located to the south of the village of Shafton, and to the east of Cudworth, and lies to the west of Engine Lane. The construction of the wind turbine is proposed to be located in a 0.1km area on the north of an open paddock. There are some residential properties to the north-east and west, but all are within the statutory distance away, and are some distance from the site.

Landscape Character Designations Broad Landscape Character

5.8 The study area lies within an area which has been classified as 'Green Belt'. The Local Plan identifies this area as primarily being used for agriculture, forestry and tourism, as well as retaining existing employment uses. The policy accepts that certain types of development will be required in the countryside, especially if it fulfils a rural need, or a social, economic or environmental need.

5.9 Having viewed the Magic website (Multi Agency Graphic Information for the Countryside) it was found that there are no precluding land designations within proximity to the site.

Visual Assessment – Zone of Visual Influence (ZVI)

5.10 A visual assessment has been made of the proposed turbine and the principle views in and out of the site, to identify the extent of visual impact arising from the proposed siting of the wind turbine. In the following section there is a brief description of the existing visibility of the site in the context of the surrounding landscape and receptors.

ZVI to the West of the Site

5.11 The extent of the ZVI to the west of the site is defined by the open fields and paddocks with the urban landscape beyond.

ZVI to the North

5.12 The site is bounded by farmland, and beyond the village of Shafton. The vegetation within these fields and existing features creates visual barriers to the north.

ZVI to the East

5.13 The extent of the ZVI to the east of the site is defined by the vegetation and the woodland planting. The topography of the adjacent land also restricts views of the site.

ZVI to the South

5.14 The land to the south includes the open farmland and fields. To the south west is a large employment zone and the settlement of Grimethorpe beyond.

Receptors

5.15 The principle receptors, from where photomontages have been developed, are found in Appendix A.

Impacts on Landscape Character

5.16 The introduction of the 1 no. wind turbine at Shafton will have a negligible impact on both the broad and local landscape character of the area due to the relatively small scale of it in relation to the wider open environment within the site and surrounding area, and the presence of other wind turbines of larger scale within the locality. It may reasonably be concluded that the site may be considered as a medium landscaped area. The quality of the landscape, in terms of designation and value, may be considered as 'meduim', in accordance with the classification table.

Impacts on Visual Receptors

5.17 The assessment of impacts on visual receptors during the construction of the development and subsequent completion is summarised below, along with the significance of these impacts.

5.18 Photomontage at Location 1 (Appendix A) shows the view of the turbine from this location. The landscaped nature of the site, with an urban background, with associated features of power lines, buildings and hard landscaping, collectively reduce the impact. It is likely, as the turbine structure is white, that the turbine itself is further reduced as the distant urban views help to screen the turbine. In terms of the impact upon the sensitivity of the receptor, the site's only designation is designated Greenbelt, however, from this viewpoint the impact may be considered as a 'medium impact'. The turbine itself, from this receptor, may be

considered as a medium magnitude of impact. This means, in terms of assessing significance, there would be minor/moderate significance on visual impact at this receptor.

5.19 Photomontage Location 2 (Appendix A) demonstrates that the turbine would be screened by the existing buildings, when viewed from the highway. The back ground of power lines and large scale electricity pylons are in proportion to the turbine itself. This would further limit the impact, having a neutral impact on this receptor. This receptor is viewed from the designated Greenbelt, outside of any landscaping protected areas. In terms of impact, the vista from this receptor is limited. Again, from this location sensitivity to receptor change may be considered as medium, and in terms of the magnitude of impact, may be considered medium, as the turbine is visible from this point.

5.20 Photomontage Location 3 (Appendix A) shows the view of the turbine from this location. The site is screened by vegetation, which would mean that the site is effectively screened during the summer months. The proximity to the electricity pylon itself would mean that the proposal would be integrated into the landscape. This site, by virtue of the proximity to the road, would mean that this site is not highly visible from this receptor. In addition, the predominately urban landscape, which blocks vistas to the site, further mitigates against any adverse impact. In terms of overall landscape impact, it may be considered that from this receptor there is low impact. .

5.21 Photomontage Location 4 (Appendix A) shows that the turbine would be well screened by vegetation. This would limit the receptor issues and reduce visual impact. When viewed from this receptor there would be a moderate sensitivity change. The proposed turbine would be clearly visible; however, this would be mitigated throughout the summer months through vegetation and screening. From this location there is a low magnitude of impact resulting in a minor impact on significance with regard to visual impact.

5.22 Photomontage Location 5 (Appendix A) illustrates that the turbine is barely visible, by virtue of the existing urban landscape. This means that there is a negligible impact, which preserves the area in terms of visual impact. This receptor is located within an established urban area, and is one of the key receptors as this looks from the urban area, the turbine. The vista from this receptor would result in a negligible impact, as it would be barely visible from this location. This would mean that there would be no material impact.

6.0 Conclusion

6.1 The wind turbines have a negligible impact from most receptors largely due to the surrounding landform and features forming the backdrop to them and the amount of mature existing vegetation interrupting and preventing views. The only adverse affects occur closer to the site where the turbines are visible as skyline features, although these impacts will reduce after 15 years due to the proposed vegetation establishing within the view.

7.0 References

11-1 Countryside Agency and Scottish National Heritage (2002); Landscape Character Assessment Guidance for England and Scotland.

11-2 The Landscape Institute and Institute of Environmental Management and Assessment, Second Edition (2002); Guidelines for Landscape and Visual Impact Assessment.

11-3 Countryside Commission (1998); Countryside Character. The Character of England's natural and man-made landscape, Volume 3: Yorkshire and the Humber.

1-4 ECUS and Land Use Consultants (2001); Barnsley Borough Landscape Character Assessment

1-5 www.magic.gov.uk – Multi Agency Graphic Information for the Countryside

APPENDIX A

PHOTO MONTAGES