# Kirk Balk ALC

Locating of wind turbines within the proposed school site

## Landscape and Visual Supporting Statement

Dec 2009

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# 1. LANDSCAPE AND VISUAL ASSESSMENT

## 1.1 Introduction

1.1.1 This landscape and visual statement assesses the potential landscape and visual implications of locating 1 no. 1.5kw, Swift wind turbine within the new building development at Kirk Balk ALC site in Hoyland. 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 an amenity.
- Visual impacts and conclusions.

## 1.2 Assessment Methodology

1.2.1 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.

1.2.2 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 discussed and agreed with Barnsley MBC prior to commencement of the study.

1.2.3 The application site and surrounding area was visited on 17th November 2009. The weather conditions were good and visibility was clear on the visit.

## 1.3 Landscape and visual assessment

1.3.1 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.

1.3.2 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 deals with the characterisation process and later sub-sections make judgments about the potential effects of the proposed development based upon the characterisation.

1.3.3 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 to the one above. The three main levels identified by The Countryside Agency are: national and regional scale; local authority scale; and 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.

1.3.4 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.

1.3.5 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.

1.3.6 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. The viewpoints selected for the production of the photomontages were identified and agreed with Barnsley MBC.

## 1.4 Significance Criteria

1.4.1 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 1.1, 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:

**Table 1.1 - Principles of Assessing Significance of Landscape and Visual Impacts**

| Sensitivity of Receptor to change | | Magnitude of Impact | | | | Significance of Effect |
|---|---|---|---|---|---|---|
| | | 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 | |

1.4.2 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. Instead, the correlation of the two factors, although reflecting recognised features and methods of working outlined in this report, is in the end a matter of professional judgment.

1.4.3 Table 1.2, 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:

**Table 1.2: Significance Criteria for Landscape and Visual Impacts**

| 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. |

1.4.4 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 form 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.

## 1.5 Determining Landscape Capacity and Sensitivity

1.5.1 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.

1.5.2 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.

1.5.3 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 assesments 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.

**Table 1.3: Principles of Assessing Landscape Sensitivity to Change**

| Landscape area | Landscape character sensitivity | Sensitivity of individual elements | Sensitivity of aesthetic aspects | Visual sensitivity | Landscape sensitivity | Value of Landscape | Landscape sensitivity to change |
|---|---|---|---|---|---|---|---|
| Area A | High | Medium | Medium | High | HIGH | Low | MEDIUM |
| Area B | Low | Medium | Low | Low | LOW | Low | LOW |
| Area C | High | High | High | Medium | HIGH | High | HIGH |

## 1.6 Determining the Sensitivity of Visual Receptors

1.6.1 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.

1.6.2 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.

1.6.3 Table 1.4 below provides a description of the criteria used to define the sensitivity of the visual receptors:

**Table 1.4: 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 right of ways, 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 |

## 1.7 Determining Magnitude of Impacts on Landscape Character and Visual Receptors

1.7.1 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).

1.7.2 Generally, greater weight is given to visual impacts on public viewpoints than on private properties. Table 1.5 provides a description of the criteria used to assess the magnitude of impacts on landscape and visual receptors:

**Table 1.5: Assessing Magnitude of Impacts on Landscape and Visual Receptors**

| Magnitude | Typical Criteria |
|---|---|
| **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. |

## 1.8 Nature of the Development

1.8.1 The proposal is for the installation of 1 no. 1.5kw, Swift turbine to be mounted on the proposed Energy Centre for the new school building which sits to the west of the existing leisure centre. Information on the location of the wind turbines and further detail on their structure is shown on drawing BP4L_KBK_AWP_DR_94_BW_LL_11 which is included within the application.

## 1.9 Baseline Conditions

1.9.1 The site is centrally within the village of Hoyland. Due to the sites location it is bounded by residential properties for the most part but to the north east there is also a Cemetery. There are currently a series of terraces within the site which the existing buildings area located on and the levels generally fall from east to west and north to south. There is significant tree cover both to the north of the site, around the playing fields, and to the east of the site where there is a belt of mature trees. To the western boundary there is a belt of relatively young trees planted on the bank between the school site and the highway.

## 1.10 Landscape Character Designations

### *Broad Landscape Character*

1.10.1 The study area lies within Character area 38 'Nottinghamshire, Derbyshire and Yorkshire Coalfield' as defined in The Countryside Commission's Countryside Character, 'The character of England's natural and man-made landscape', Volume 3: Yorkshire and The Humber (Ref. 1.3). The key characteristics of area 38 'Nottinghamshire, Derbyshire and Yorkshire Coalfield' are as follows:

- Widespread evidence of industrial activity including mine buildings, former spoil tips and iron and steel plants;
- Complex mix of built up areas, industrial land, dereliction and farmed open country;
- Many areas affected by urban fringe pressures creating fragmented and downgraded landscapes;
- Substantial areas of intact agricultural land in both arable and pastoral use;
- Small, fragmented remnants of pre-industrial landscape and semi-natural vegetation, including many areas of woodland, river valley habitats, subsidence flashes and other relict habitats;
- Ever-present urban influences from major cities, smaller industrial towns and mining villages;
- Widespread influence of transport routes, including canal, road (M1, M62) and rail, with ribbon developments emphasising the urban influence in the landscape;
- Rolling landforms with hills, escarpments and broad valleys;
- Local variation in landscape character reflecting variations in underlying geology;

- Strong cultural identity arising from history of coal mining and other heavy industry.

***Local Landscape Character***

1.10.2 In terms of local character the site sits within Character Area E4: 'Hoyland Settled Wooded Farmland' as defined in ECUS and Land Use Consultants 'Barnsley Borough Landscape Assessment' (Ref 1.4). The key characteristics of this area are:-

- Rolling landform with slopes towards River Dave watershed and canal associated with Elsecar;
- Diverse range of land use including residential, woodland, agricultural, industry, landscape renewal, communication and recreation;
- Presence of large settlements on broad valley sides up to higher ground;
- Smaller settlements are found in elevated locations;
- Strong urban influence;
- Mainly deciduous woodland blocks of various sizes, including ancient woodland and new plantations on reclaimed tips;
- Farmland is a mixture of arable and permanent pasture;
- Degraded and unmanaged field boundaries;
- Scattered farmsteads are found in areas of agricultural land between the settlements;
- Evidence of current and past industrial activity;
- Presence of major road corridors.

## 1.11 Landscape Designations

1.11.1 Having viewed the Magic website (Ref 1-5) it was found that there are no national or local landscape designations within 1.5km of the site.

## 1.12 Visual assessment ZVI

1.12.1 A visual assessment has been made of the two principle views in and out of the site, as agreed with Barnsley MBC, to identify the extent of visual impact arising from the proposed siting of the wind turbines. 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

1.12.2 The extent of the ZVI from the west is largely defined by the hedgerow forming the perimeter to the arable fields to the west. The topography of the site is such that the buildings within the site are hidden from view with only the flue stack being visible allowing distant views over the site to Mapplewell and Barnsley. Oblique views are available to users of Upper Field Lane.

1.12.3 ZVI TO THE NORTH

1.12.4 Due to the landform dropping away to the north only views of the northern section of the site are visible. Distant direct and oblique views are available from sections of the M1.

ZVI TO THE EAST

1.12.5 Views of the site are available from first floor windows of properties to the west of Kexbrough, off Brookfield Road. Views can also be achieved from the grounds of ? although these are significantly screened by a belt of mature trees. A public right of way also runs along the east of the site and oblique views are available along the majority of the route where it runs immediately adjacent to the site.

ZVI TO THE SOUTH

1.12.6 To the south of the site the land falls away down to Cawthorne restricting views of the site from this village. Other elevated villages to the south and travellers using the M1 have clear views of the site as it sits on a hill top.

RECEPTORS

1.12.7 The principle receptors, from where photomontages have been developed, were agreed with Barnsley MBC and are indicated in the table below.

**Table 1.6: Significant Visual Receptors**

| Visual Receptor | | Approx. Distance from site | Grid ref |
|---|---|---|---|
| ***Key Potential Visual Receptors*** | | | |
| 1 | View from Upper Field Lane | 0km | N 09795<br>E 29216 |
| 2 | Public right of way to the east | 0km | N 09767<br>E 29835 |

## 1.13 Assessment of Impacts

IMPACTS ON LANDSCAPE CHARACTER

1.13.1 The introduction of the roof mounted wind turbine at the Kirk Balk site 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 existing built form within the site and surrounding area.

IMPACTS ON VISUAL RECEPTORS

1.13.2 The assessment of impacts of the locating of the wind turbines on visual receptors is summarised below and the significance of these impacts is detailed in Table 1.8. The impacts have been assessed taking into consideration the parallel construction operation of building the new school and associated grounds.

***Cemetery to north east of site***

1.13.3 During all phases of the development of the wind turbine, from construction through to 15 years after completion the impact of the turbine will have a negligible impact on this receptor as the proposed school building totally obscures views of it from this location.

***Residential area to west of site***

1.13.4 During all phases of the development of the wind turbine, from construction through to 15 years after completion the impact of the turbine will have a negligible impact on this receptor as the existing leisure centre building totally obscures it from view.

Table 1.8 Significance of Impact on Receptors

| Visual Receptor | | Sensitivity of viewpoint | Magnitude of the impact during construction | Significance | Magnitude of the impact on completion | Significance | Magnitude of the impact after 15 years | Significance |
|---|---|---|---|---|---|---|---|---|
| **Key Visual Receptors** | | | | | | | | |
| 1 | Cemetery | High | Negligible | Negligible | Negligible | Negligible | Negligible | Negligible |
| 2 | Residential properties to west | Medium | Negligible | Negligible | Negligible | Negligible | Negligible | Negligible |

## 1.14 Conclusion

1.14.1 From both receptors it is evident that the proposed and existing buildings on site completely obscure views of the roof mounted wind turbine from the agreed viewpoints resulting in an overall impact of negligible significance.

## 1.15 References


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

1-2 The Landscape Institute and Institute of Environmental Management and Assessment, Second Edition (2002); Guidelines for Landscape and Visual Impact Assessment.

1-3 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

# APPENDICES

# APPENDIX 1

## Photomontages



Before (90 degree view)



After (wireframe)



After (solid render)




Viewpoint Location

**Viewpoint Parameters:**

Grid reference: **N00791, E36543**

Elevation: **170m**

EPS (Estimated Position Error): **3m**

Tripod height: **1.75m**

Date and time of photography: **14.30PM Tuesday 7/11/2009**

Turbine: **Swift 1.5kw wind turbine**

Note: Photographs were taken using a 35mm Digital SLR, which is equivalent to 50mm SLR.

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PROJECT
Barnsley Schools BSF

DRAWING TITLE
Photomontage Location - Kirk ALC1

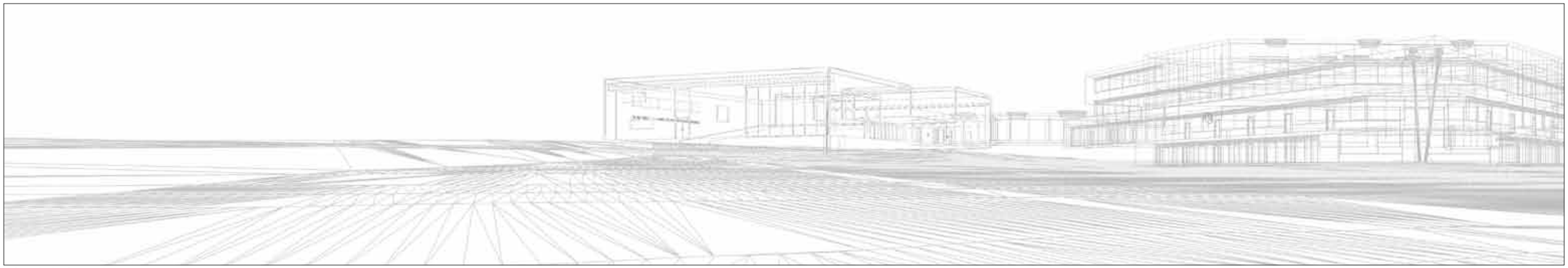
| DRAWING No. | SCALE (A3) | DATE | DRAWN | CHKD |
|---|---|---|---|---|
| Kirk ALC1 | NTS | 20/11/09 | KA | JM |

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Before (90 degree view)



After (wireframe)




After (solid render)




Viewpoint Location

**Viewpoint Parameters:**

Grid reference: **N00500, E36246**

Elevation: **165m**

EPS (Estimated Position Error): **3m**

Tripod height: **1.75m**

Date and time of photography: **14.40PM Tuesday 7/11/2009**

Turbine: **Swift 1.5kw wind turbine**

Note: Photographs were taken using a 35mm Digital SLR, which is equivalent to 50mm SLR.

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PROJECT
Barnsley Schools BSF

DRAWING TITLE
Photomontage Location - Kirk ALC2

| DRAWING No. | SCALE (A3) | DATE | DRAWN | CHKD |
|---|---|---|---|---|
| Kirk ALC2 | NTS | 20/11/09 | KA | JM |

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