

Landscape and Visual Impact Assessment

Desktop and Field Report

Ponds Farm, Snowden Hill, Oxpring, Sheffield, S36 8YR

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1.0. Introduction

1.0.1. This report has been compiled in accordance with the guidelines set out in the second edition of 'Guidelines for Landscape and Visual Impact Assessment' (Landscape Institute of Environmental Management & Assessment).

1.0.2. EverGen Ltd have, on behalf of Mr. Matthewman of Ponds Farm, Oxpring, undertaken a landscape and visual impact assessment as part of the formal submission of a planning application, in support of a Bergey 10kWp micro generation wind turbine, to further support the running of his domestic property from low cost and low impact renewable energy sources.

1.0.3. The scope of the scheme has been and should be considered within the scope of UK governments National Planning Policy Framework (NPPF) and Barnsley Councils Local Plan and development framework.

1.1. Methodology

1.1.1. Local and national planning policies, relevant to this proposal have been included within the planning statement. Specific information relating to the landscape under investigation and moreover, the landscape character type (LCT) and Landscape character area (LCA) is based upon information taken from the Barnsley Borough Landscape Character Assessment, rev. D, 2002.

1.1.2. Specifically, the proposal relates to the Penistone Upland Farmland character area within the Uplands Farmland character type.

1.1.3. The evaluation methodology was undertaken in two parts; a desktop study, followed by an on site field study. The desktop study methodology primarily involved consultation with relevant professional parties and texts. Primary consultation on the proposed site was between the Agent, EverGen Ltd and Barnsley borough council.

1.1.4. The field study involved the collection of visual information relating to the previously commissioned Zone of Theoretical Visualisation (ZTV). Photomontages have been produced, based on the results of the ZTV, which has highlighted a total of 7 sites, where the turbine may be of visual prominence, or a sensitive receptor may be sited.

1.1.5. Photographs were taken using a Canon 450D (DSLR), using the stock EF-S 18-55mm lens, set at 50mm, to mimic the natural optics of the eye and therefore replicate the actuality of any placed visual receptor.

1.1.6. The process of establishing receptor points as well as the creation of the ZTV has been undertaken through the use of OS mapping and overlaid 3D digital modeling. Through these processes, the points of potential visual observance have been established for investigation.

1.1.7. All locations were noted on site using a Garmin GPS device. The accuracy of these positions are accurate to +/- 1m. Locations were recorded on site as OS 10 figure co-ordinates and then reverted back to latitude and longitude bearings, allowing us to plot the positions accurately on OS maps and any aerial photography. Marker distances from GPS were cross referenced against google earth and OS distances for accuracy. Position, elevation and distance from the turbine are marked on each image.

Visualisations were produced using Adobe Photoshop, using physical reference points, whether existing or placed for reference to site the turbine and relevant mathematical

principles to confirm turbine height in situ.

Scale was determined based on the lens optics to absolute optics ratio.

1.2. Scope, Issues and Constraints

- 1.2.1.** The scope of this assessment is the evaluation of the potential impact of the small scale, single wind turbine on the landscape with a view to further exploring its impact from pre-determined visual receptors within a prescribed boundary radius of 5Km.
- 1.2.2.** Key issues with small-scale wind turbines are stereotypically associated with the impact created when adding a vertical, non-static element into a broadly horizontal and fixed landscape, where periods of change are normally long and slow.
- 1.2.3.** When considering the addition of 'a vertical element' into the landscape, we would draw attention to the multiple overhead power line poles and pylons within the local 'scene', determined to be a key feature in the landscape character description. It is understood that these elements are now accepted as part of the rural scene when at one time, they would have carried a comparable visual impact on the local landscape. These lines also have a 'spanning' effect and so have a wider impact over the scene. Whilst the turbine may create a level of visual impact from a small number of locations in its infancy, it is believed that the turbine will become accepted as part of the local scene over time, compounded by an aesthetic considered to be similar to that of the transmission poles that exist within the sites context.

It is considered that the turbine will 'blend' into the array of transmission poles and pylons, reading as a congruous element within the transmission infrastructure character typology. Perceptual visual impact from receptors with a regular occupancy period (local residents) should also diminish as perception of scene and its associated impact changes over time. We propose a 'diminishing scale' of visual impact relevant, with respect to time in this case, diminishing over the medium and long terms. The area is predominantly occupied by local residents, with no real tourism or heritage links to substantiate sporadic visitation associated with such trades. We therefore believe that it is unlikely that the site or surrounding area will be occupied by high level receptors, whose occupancy period and frequency of visit would act outside the proposed diminishing impact scale i.e. single visit receptors such as tourists.

- 1.2.4.** The issue of aesthetic is commonly raised, with the presence of an object of artificial and mechanical aesthetic sited within the natural landscape, cited as a negative impact of wind turbine proposals. The turbine has been selected, based on its colouring and sympathetic aesthetic to the surrounding context and character. The greys of the turbine should blend against the deep tones and commonplace greys of the British landscape and skies. The proposal has been sited, taking into account the points above, based on existing electrification infrastructure in the vicinity, with a view to amalgamating two visually in an effort to minimise cumulative visual impact from short range receptors.

Whilst the proposed is not static, the scale and comparatively small mass of the turbine, in particular that of the swept area and the nacelle under normal operation creates a far less visually intrusive aesthetic than that of the generally perceived large scale commercial turbines. It is also considered that by comparison to the recently approved, 50kw wind turbine to the south, visual impact shall be far less significant to local receptors. Whilst cumulative impact will occur in some capacity, the supplementary effect is considered to be minimal.

- 1.2.5.** Other common concerns about wind turbines generally concern scale, abundance and inter-visibility. Wind turbines are becoming increasingly more popular as reducing it becomes increasingly important at both local and national level to reduce carbon emissions and the cost of both producing and using electricity rises. A common perception of wind turbines conforms to the largest and most infrastructure heavy models. Some also argue that there are already too many, with large schemes visible in relation to each other, causing ‘inter-visibility’ issues.

In this case, there is one other turbine in the immediate vicinity of the site. This 50kw machine is for the most part masked by the change in topography between the two sites. Alongside this, the scale and aesthetic of the two machines are vastly different and for these reasons, we do not believe that inter visibility will be a cause for concern.

Within the Penistone district, wind turbines have proven to be extremely popular due to the high quality wind resource in the area. However, the majority of wind turbine development is to the west of the district, with a number of large-scale commercial installations, notably ‘Spicer Hill’. Within the vicinity of the proposed site, there is a small number of domestic scale turbines, predominantly ‘Gaia’ machines, serving local farms and domestic properties. We do not believe that this represents over development and is in keeping with both the scale of the landscape and the needs of the occupants. Due to the varied topography and geographic segregation between sites, we do not believe that the proposed represents a significant inter-visibility issue.

1.3. Site Context

- 1.3.1** As per the spatial framework for baseline assessment of landscape and visual impact, the following character area description has been provided as a localised description of place and character (Penistone Upland Farming landscape Character):

1.3.2 Key characteristics

- **Stepped Landform**; rising to 364m at Hartcliffe Hill.
- **Fields of Pasture**; comprising small to medium geometric field units strongly defined by distinctive stone walls.
- **Linear or circular beech plantations**; stand out on the skyline, sometimes enclosed by stone walls.
- **Unimproved pasture**; with scrub on steeper slopes.
- **Scattered farmsteads**; of local light coloured stone.
- **Penistone**; is the largest settlement in the area, on the edge of Don Valley
- **Isolated Trees**; form silhouettes against the skyline
- **Pylons and Power Lines**; are visually prominent on the skyline
- **Single lane Rural Roads**; crisscross the open countryside, bounded by stone walls
- **Disused Industrial Quarries, Shafts and Mines**; indicate the historical importance of the area for the extraction of coal and stone
- **Panoramic Views**; Over adjacent river valleys and towards the open moorland of the Peak District National Park

- 1.3.3** The above landscape character description can and should be read in conjunction with the Penistone Upland Farmland character area description below.

1.3.4 Upland Farmland; Character Description

- 1.3.5** The following has been taken from the Barnsley Borough Landscape Character Assessment, which has been included within the submission. Particular attention has been paid to section F2: Penistone Upland Farmland.

“The underlying solid geology of the Penistone Upland Farmland is formed by the complex beds of the Lower Coal Measures, comprising bedded sandstones, shales and mudstones with intermittent coal seams. This has given rise to differential weathering of the beds and a characteristic undulating landform, some 300m above sea level. The valley of the River Don bounds the area to the north and east and the valley of the Little Don River bounds the area to the south. This discrete area has a distinctly upland character, enhanced by its proximity to, and views across, unenclosed moorland. The network of intact stone walls is a dominant and unifying feature of the landscape, resulting in an extremely strong and distinctive, geometric field pattern. Some of these field divisions relate to early Tudor enclosure of small walled fields, perhaps most notably at Oxspring where long narrow fields form a striking pattern on the landscape. Other distinctive field patterns arise as a result of the circular boundaries of sheep pens. Woodland cover is relatively low, although ribbons of deciduous woodland thrive in the shelter of the incised valleys of the dikes that drain into the River Don. There are also some large deciduous woodlands in the shelter of the slopes that descend into the valley of the Little Don River. Beech trees are a feature of the area, either growing in a stunted form on the steeper, ungrazed slopes, or as isolated stands silhouetted on the skyline. Often stone walls bound these stands. Power lines and pylons are also prominent elements of the skyline.

This is a rural agricultural landscape. The land remains almost entirely grazed pasture and is famous for its former wool industry and the 'Penistone' wool. Remaining unimproved areas on the steeper or more elevated slopes, and damp pastures alongside dikes and springs, are valuable for nature conservation. The area has a tamed character, but retains a sense of remoteness. The only built elements are the stone farmsteads and agricultural barns that are scattered at low density throughout the area, although Penistone, located on the edge of the Don Valley, is a notable centre of population. Straight rural lanes, bounded by stone walls, cut across the hills, linking adjacent farms. The tranquillity and stillness of the area is disturbed in the vicinity of the A628, a busy freight route between Barnsley and Manchester. The presence of disused quarries and shafts indicate the former piecemeal mining activities in the area.

Views are panoramic, stretching over the valley of the River Don to the north and over the valley of the Little Don River to the adjacent open moorland the south. The wind farm at Spicer Hill (in the adjacent F1 Ingbirchworth Upland Farmland character area) is a prominent feature in views.”

(Barnsley Borough Landscape Character Assessment, University of Sheffield, 2002)

- 1.3.6** As per the description, the sparsely occupied nature of the region creates a sense of remoteness, which has now been bisected by major supply routes through the character area. It is considered that the majority of receptors to the proposed, given the developing nature of the area will be transient, predominantly transport based and that impact shall be negligible, given the period of occupancy. More permanent receptors, namely occupants of Penistone are experiencing significant change in the form of new development as the market town experiences modernization and expansion. It could be considered that the proposed and proposals of this nature could and should be considered as part of the modernisation of this urban settlement and so form part of its developing landscape character.

Minimal levels of development, predominantly redevelopment of sporadic farm stead dwellings in the area limit the number of local, short range receptors to any prescribed impact, therefore bringing into question the concept of impact being relative to the population density of those whom it impacts upon.

As the supplied photomontages show, from and beyond regions of dense domestic occupation, namely the market village of Penistone, visual impact, due to a lack of proximity to the development is almost, if not completely indiscernible.

1.4. Baseline Landscape Study

1.4.1 Table 1: Landscape Sensitivity

Landscape sensitivity is assessed against the following parameters:

Landscape Resource	Scale of Sensitivity
Landscape of specific/ important character, possibly susceptible to small changes.	High
Landscape with generic characteristics, which would be reasonably tolerant of changes.	Medium
Landscape with few features of value or interest, deemed to be tolerant of change.	Low

1.4.2 Table 2: Magnitude of Landscape Change

In line with a sensitivity study, magnitude of landscape change is established against the following parameters:

Landscape Change	Magnitude
A substantial change in the landscapes key characteristics over an extensive area or a very intensive change over a limited area. The change is both long term and permanent.	Substantial
A moderate change in landscape over a wide area or a moderate change in a small/ localised area.	Moderate
A discernable yet minimal change in landscape. Change is deemed to be temporary and short term.	Slight
Virtually imperceptible change to landscape. Impact of a scale deemed to be insignificant.	Negligible

1.4.3 Table 3: Significance of Change on the Landscape

In line with the sensitivity study undertaken, we have established significance of landscape change against the following parameters:

	S, Low	S, Medium	S, High
M, Substantial	Moderate Impact	Substantial Impact	Substantial Impact
M, Moderate	Slight Impact	Moderate Impact	Substantial Impact
M, Slight	Slight Impact	Slight Impact	Slight Impact
M, Negligible	Neutral Impact	Neutral Impact	Slight Impact

1.4.4 As per the Barnsley borough landscape character assessment, character strength, sensitivity and capacity for change has been considered as follows;

1.4.5 Strength of Character

F2 Penistone Upland Farmland is a good example of the Upland Farmland landscape type as a result of its strong topography, intact network of stone walls, rural upland character and panoramic views. The presence of these characteristics ensure that the overall strength of character is considered to be **strong**.

1.4.6 Condition

Although this area is an extensive tract of intact farmland, the condition of some of the individual features is in decline. For example, many of the stone walls are beginning to erode and natural regeneration of trees is low. Some vernacular stone buildings are in a state of dereliction. Overall landscape condition may be described as **moderate**.

1.4.7 Landscape Sensitivity and Capacity

Although this is an exposed upland area, some visual enclosure is provided by the incised valleys of the dikes that drain into the Don and Little Don. Beech plantations also provide some visual enclosure. However, the rural character of the area, and its low density settlement pattern and distinctive field patterns, make this landscape particularly sensitive to built development. The presence of Regionally Important Geographic Sites, such as Bullhouse Quarry, increase sensitivity to change. The area is highly visible from the Peak District National Park and this further increases its sensitivity to change. In view of the above, landscape sensitivity to built development is judged to be **high** and landscape capacity is considered to be **low**.

1.4.8 As per the landscape character assessment, the strategy objective for F2 Penistone Upland Farmland is to **Conserve and Restore**.

1.4.9 The following have been prescribed as key components of the conserve and restore strategy;

- Conserve the network of stone walls that are strong features of the landscape and promote the restoration and re-building of declining stone walls.

- Conserve the rural stone buildings and barns as features of the landscape, restoring these in favour of building new properties.
- Maintain the low-density development pattern of rural farmsteads and hamlets.
- Ensure any new development is well placed within areas screened by landform and trees.
- Consider a tree planting strategy to enhance tree cover and provide shelter for wildlife, encouraging natural regeneration of trees where possible.
- Conserve stands of beech on the skyline as features of the landscape.
- Conserve traditional stone gate posts as features of the agricultural landscape and consider replacement of those that have been lost.
- Care should be taken in introducing new agricultural buildings into the landscape - attention to scale, materials and colour will be crucial to their successful integration.
- Consider opportunities to develop the network of footpaths for recreation, and to study and interpret the wildlife habitats through nature trails and interpretative centres.
- Consider opportunities to interpret and explain the area's rich history in the form of heritage trails, together with a programme of identifying and restoring significant local landmarks and historic artefacts including stone walls.
- Consider new opportunities for farmers to diversify into recreation and other land uses.

1.4.10 In consideration of the key points made above as part of the landscape management strategy, we believe that the proposed scheme does not conflict with these conservation and restoration aims and therefore would be acceptable within the landscape management strategy.

1.4.11 It is considered that this area represents what is generally considered to be a rural and agricultural aesthetic, and that this aesthetic is neither unique nor specific to this area. Whilst the stone walls and uniform field patterns may define the area as agricultural, afore mentioned elements, contributing to the modernisation of the settlement now act to diversify the character assessment of the area, beyond that of being purely rural agricultural. The scale and level of development in the area also describes a landscape deemed to be tolerant of change, with a local abundance of national grid pylons, quarries, abandoned mines and other assorted modern infrastructure scattered across the landscape. It is proposed that the turbine fits within the aesthetic of the electrification infrastructure, noted as part of the landscape character description and therefore would not expect the turbine to be considered to be in contravention of local character.

Based upon these factors, we would argue that the landscape in question has a greater level of diversity and therefore has a **medium** level of landscape sensitivity.

1.4.12 With regards to the magnitude of landscape change, we would describe the scheme as being both non-permanent and short term when using rate of landscape change as a frame of reference. As the scheme only consists of a single, small scale turbine, coloured, where possible, to suit the surrounding landscape palette, we propose that the schemes visual impact would be discernable to moderate over a localised area and therefore, we would propose a **slight to medium** magnitude of landscape change.

- 1.4.13** In comparison to the findings set out in the Barnsley Borough Landscape Character Assessment, we have made the following judgements:

	Sensitivity	Magnitude	Significance
Landscape	Medium	Slight / Moderate	Slight / Moderate Impact

1.5. Visual Receptors

1.5.1 Table 5: Sensitivity of Visual Receptors

We have considered 7 primary visual receptors, required as per our ZTV investigation. Evaluation of receptor sensitivity is based upon the following criteria;

Criteria	Sensitivity
Residential properties within 1km from the proposed development with a direct view from either ground or first floor windows, towards the development. Also, Public Rights of Way (PROW) less than 1km from the development with direct views.	High
Residential properties more than 1km from the proposed development with a direct view towards the development. Also, Public Rights of Way (PROW) more than 1km from the development, or with restricted views. Local side roads and lanes, as well as sporting and recreational facilities and allotments.	Medium
Offices, commercial developments and industrial sites, as well as main roads and rail routes.	Low

- 1.5.2** All sites detailed below were visited in a single day, allowing for continuity of weather conditions.
- 1.5.3** All seven sites were visited and photographs taken from head height (approx. 1.8m or 5'10"), looking towards the site. These have been produced to establish the potential visual impact of constructing the proposed turbine. Before and after photographs have been provided for comparison.
- 1.5.4** As per the attached ZTV, 7 sites have been noted for field study evaluation.
- 1.5.5** CFD and other associated computer modeling techniques have not been employed as these normally fall within the requirements for wind farm scale projects. The scale of the

proposal did not demand such levels of information.

1.5.6 All noted receptors are located between 213m and 4,644m from the proposed turbine.

1.5.7 All photographs were taken from publically accessible locations. We are not legally allowed to access either private properties or the residential curtilage of private properties without prior permission.

1.5.8 Short Range Views (<1000m)

Two sites fall within a 1km boundary of the proposed turbine. These are;

- 1 – Viewpoint facing west. From junction of public road and public right of way
- 2 – Viewpoint facing southeast. From location adjacent Snowden Hill.

1.5.9 Mid Range Views (1000m ≤ D ≤ 2500m)

Two sites fall within a secondary ring fence boundary, 1.5km beyond the limit of any short-range views. These are;

- 3 – Viewpoint facing south. From Trans Pennine Trail in Oxpring.
- 4 - Viewpoint facing south. From on road cycle route in Four Lane End.

1.5.10 Long Range Views (2500m ≤ D ≤ 5000m)

Three sites fall within a tertiary ring fence boundary, 2.5km beyond the limit of any mid range views. These are;

- 5 – Viewpoint facing northeast. From road running through Whitewell Moor.
- 6 - Viewpoint facing west. From Barnsley Boundary Walk near Finkle Street.
- 7 - Viewpoint facing southeast. From road to the north of Penistone.

1.5.11 Sensitivity of Visual Receptors Continued ...

Based upon the sensitivity framework included above, the following receptors have been noted as having some level of significance.

1.5.12 High Level Receptors

High-level receptors have been defined as “Residential properties within 1Km from the proposed development ...”. Based upon these constraints, the following high-level receptors have been noted;

Local Farmsteads; Based on a desktop study, within a 1km radius of the proposed site, there are 3 isolated domestic properties and 2 working farm premises with incorporated domestic dwellings that topographically have the potential for direct line of sight. All other properties within the 1km radius are shielding from view by topological elevation changes.

In the case of the isolated properties, the turbine has been placed in a manner that uses the clients own property to screen the turbine from glazed openings on the eastern facades of these properties, thus minimising visual impact during occupancy. The remaining isolated property to the east of the site along Pond Common Lane is well

contained with a dense and well aged landscaping. A separation distance of approximately 350 metres, set against the domestic dwellings behind also serves to partially screen the turbines presence.

To the south West, there are two working farm premises, both appearing to have associated domestic dwellings. In this instance, visual obstructions, namely agricultural buildings and associated domestic landscaping inhibit direct line of sight, offering only partial of glimpsed views from within the dwellings themselves.

Finally, there is a public right of way, approximately 230 metres to the east of the site. Whilst the turbine would be prominent from this location, the trail, now leading towards Stockbridge and more importantly Stocksbridge bypass appears to be used infrequently, due to its remote location. It is not believed that the volume of footfall along this route would warrant a significant visual or environmental impact when weighted against the associated environmental benefits, in light of the occupiers being transient receptors and the presence of a far larger turbine, further along the trail.

In conclusion, it is not believed to be the case that the turbine will be prominent within the landscape with respect to these high level receptors and measures have been taken to use natural features, where possible to further mask conspicuous viewpoints.

1.5.13 Mid Level Receptors

Mid-level receptors are described as having the same characteristics as high-level receptors, with a separation distance of greater than 1Km. These mid level receptors are mostly domestic dwellings, to which the argument put forward in the previous point applies once again.

The mid level receptor zone encompasses the outskirts of a number of densely populated settlements, namely Oxpring, Thurgoland and Penistone South. Diverse and often dense landscaping, coupled with varying topology between the two regions means that direct views, where publically available are obscured in a number of ways, often cumulatively. Furthermore, at this distance, the comparatively small-scale turbine becomes difficult to perceive, where the scale and mass of the turbine is far outweighed by surrounding tree and pylon silhouettes against the horizon line. This differential in scale, mass and abundance detracts attention from the turbine at this distance, reducing the impact of the turbine to the point of being non-discernable.

Views from public rights of way, the most commonly used being the Trans Pennine Trail on the southern boundary of Oxpring and Thurgoland are again inhibited by distance and the turbine physical dissimilarity in both scale and mass to surrounding landscape elements. Views from this route are open and panoramic. The included photomontage shows that the proposed does not affect openness at this range, nor is it prominent along the horizon line.

1.5.14 Low Level Receptors

Low level receptors are described as being offices, commercial developments and industrial sites, as well as main roads and rail routes. These receptors are predominantly based around the market town of Penistone to the North and manufacturing town of Stocksbridge to the south. Both have developed significant transport infrastructure in recent years and as such, traffic volumes have increased significantly. With respect to the site, most commercial developments within Penistone

and Stocksbridge are encased with the high urban density of the developing market and manufacturing towns and as such, are unlikely to have any direct line of sight views to the site. Topology particularly infringes Stocksbridge and its associated bypass from attaining any direct line of sight as the turbine is sighted on the opposite slope of the hill side to that which faces the town. Commercial farming ventures have been considered in terms of domestic dwellings due to their high receptor level and proximity to site.

As a remote part of the region, traffic through the site is very sporadic and rare, often only used by local residents. Based on this, we do not place great weight on transient receptors as exposure shall be both brief and infrequent. Due to the scale of the turbine and its comparable aesthetic to surrounding electrification infrastructure, we do not anticipate that it will cause any significant cumulative distraction beyond the existing. We cannot however guarantee this and rely on the rigour of road users to maintain focus on the task at hand.

1.6. Zone of Theoretical Visualisation (ZTV)

1.6.1 As per the following, we have considered 7 visual receptor points, required as per our ZTV investigation. The sensitivity of these receptors is evaluated against the criteria detailed in section 1.5.1.

1.6.2 Table 2: Magnitude of Impact Upon the Visual Receptor

Scale	Prescribed Impact
The majority of viewers are affected or ... Major changes over a large proportion of the view.	Substantial
Many of the potential viewers are affected or ... Major changes over a smaller proportion of the view or ... Moderate change in the view or partial view	Moderate
Few viewers are affected or ... Minor change in view or glimpsed view	Slight
Indiscernible change to the view	Negligible

1.6.3 Table 3: Impact Significance (Relative to Sensitivity and Magnitude)

	S, Low	S, Medium	S, High
M, Substantial	Moderate	Substantial	Substantial
M, Moderate	Slight	Moderate	Substantial
M, Slight	Slight	Slight	Slight
M, Negligible	Neutral	Neutral	Slight

1.6.4 Site 1: Junction of road and public right of way

Receptor Sensitivity: High
Impact Magnitude: Slight/ Moderate
Significance: Slight/ Substantial

There is some ambiguity in the evaluation of this site, due to the scale of impact, relative to the number of receptors and both the frequency and duration of their occupation. Whilst many of the viewers in the area would be affected, this constitutes a very small number of properties, with transient receptors very rarely occupying the site. Secondly, whilst the turbine may be considered to be a moderate change across a partial view, we would suggest that due to screening from elements (buildings, trees, etc) effecting viewers looking from east to west, it could be considered as causing only a minor change. For these reasons, the allocation is divided.

1.6.5 Site 2: From location adjacent Snowden Hill

Receptor Sensitivity: High
Impact Magnitude: Slight
Significance: Slight

From this location, the turbine is in close proximity to a small number of domestic dwellings associated with a working farm. In this case, whilst the impact would be considered high, due to said proximity, there is significant shielding in the form of a number of domestic dwellings to the east as well as associated flora (mature trees) that mask the turbine for the most part, meaning that the turbine now represents a minor change in what should be a glimpsed view, hence its allocated slight impact.

1.6.6 Site 3: From Trans Pennine Trail in Oxpring

Receptor Sensitivity: Medium
Impact Magnitude: Negligible
Significance: Neutral

At this range and in the context of associated transmission infrastructure and prominent flora, the turbine is not discernable as a distinct, or perhaps more importantly prominent element within the landscape, to the point where unintentional sighting would be highly unlikely. Large-scale national grid pylons dominate the character of the view, detracting attention away from associated vertical elements in the surrounding areas, including the proposed.

1.6.7 Site 4: From on road cycle route in Four Lane End.

Receptor Sensitivity:	Medium/ Low
Impact Magnitude:	Negligible
Significance:	Neutral

From this location, road sided tree lines limit broad views from the road towards the proposed. Coupled with this, a lack of proximity, similar to that of site 3, means that the turbine is again, very difficult to distinguish in comparison to far more prominent vertical elements along the horizon, due to its comparatively small scale and mass.

Furthermore, due to the nature of the occupant, whether it be cyclists or road users, all can be considered to be transient and therefore, the landscape would not or should not be the primary focus as a road user. Permanent occupancy in this area is sparse due to major highway infrastructure nearby, with the area being predominantly open farmland.

1.6.8 Site 5: From road running through Whitewell Moor.

Receptor Sensitivity:	Low
Impact Magnitude:	Negligible
Significance:	Neutral

Due to the separation distance, but more importantly the topography of the area, there is no line of sight to the proposed from this location, due to the nature of the valley that separates them.

1.6.9 Site 6: From Barnsley Boundary Walk near Finkle Street.

Receptor Sensitivity:	Medium
Impact Magnitude:	Negligible
Significance:	Neutral

As the photomontage shows, local landscaping and the nature of the topography, specifically the ridge of the hillside around the green moor area means that views of the site are completely obstructed and so, the perceived impact shall be negligible.

1.6.10 Site 7: From road to the north of Penistone.

Receptor Sensitivity:	Low
Impact Magnitude:	Negligible
Significance:	Neutral

The A629 represents a major transport route through the area. In the case of the proposed, due to the separation distance, the diverse built environment between the road and the site and the high-speed nature of the road, visual impact is certain to be both negligible and highly unlikely. This particular piece of highway is not popular with pedestrians due to the nature of the road, and due to that speed, glimpsed views are highly unlikely from road users.

1.6.11 As per the ZTV, which has defined potentially sensitive visual receptors within a 5Km radius, we have also included the photomontages excluding the turbine as a visual description of amenity. The two sets of visualisations should be read in conjunction with

one another when establishing grounds for confirmation of sensitivity.

1.7. Project Description

1.7.1 Please refer to the technical drawings provided for information on physical dimensions and appearance. With the exception of the turbine itself, there shall be no plant on site that requires any additional construction, in terms of separate buildings, out houses, etc. All associated permanent plant will be housed will the clients buildings.

1.7.2 Information on siting can be found on the site layout drawing, highlighting proposed location and related exclusion zones as indicators on choice of location.

1.7.3 The following points detail the activities involved in constructing the turbine, its operation and long term decommissioning;

1.7.4 Construction

1.7.5 The construction phase involves the following;

- The excavation of the pit for the turbine foundation, using a mini excavator and a dumper vehicle. Waste soil shall be piled temporarily nearby, to be spread across the field, following completion of the ground works.
- The assembly and installation of the turbine foundation kit, involving one piece of plant equipment (telehandler) and personnel, working at low level.
- The installation of concrete into the foundation, forming the completed foundation kit. Installation involves a small number of concrete delivery vehicles, creating an increased level of vehicle movement for a short period of time.
- The excavation of a single channel between plant room (within domestic dwelling) and turbine to house cabling. Material shall be temporary piled alongside the trench and backfilled, once cabling has been installed.

1.7.6 Erection

1.7.7 The erection phase involves the following;

- The delivery of the turbine tower, head, blades and associated components. This involves an increased level of vehicle movement to/ around for a short period of time.
- The assembly of the above components into one component. This involves personnel and a single plant vehicle (telehandler).
- The erection of the turbine. This involves the use of temporary pneumatic plant with no temporary or permanent land impact.

1.7.8 Operation

1.7.9 The operation phase involves the following;

- The operational phase involves the normal running of a single, 15 metre (hub height), matt grey (RAL code in planning statement) wind turbine during wind conditions above 3m/s at a rate of revolution of approximately 200RPM under normal operating conditions.
- All permanent plant will be housed within the domestic garage and so does not form part of the LVIA.

- We do not anticipate the need for mitigation measures at this stage.

1.7.10 Decommissioning

1.7.11 The decommissioning phase involves the following;

- The turbine is easily lowered (undertaken annually for maintenance) and removed. All impacting components can be removed with metallic components reused or recycled.
- Whilst the turbine foundation would not be viably removable, the surface area lost would be very small and small amounts of landscaping could render the area invisible from all recorder sensitive receptors.
- The installation does not affect the existing use of the land and will not, following decommissioning.

1.7.12 Installation Programme

1.7.13 The programme of works where disturbance will be at its peak, as per the items detailed above is as follows;

Activity	Duration
Excavation – foundation and cable run	1 day
Foundation assembly	0.5 - 1 days
Installation including concrete	0.5 - 1 days
Curing period	2 weeks
Foundation grouting	0.5 days
Curing period	1 – 2 days (weather dependent)
Turbine erection	0.5 days

1.7.14 Site Areas

1.7.15 There will be three designated site area uses. Two shall be active installation, one being mechanical at the siting of the turbine and the other electrical within the domestic property. The third shall be a delivery zone within the immediate confines of the domestic property. This also includes termination points and turning points for all delivery vehicles.

1.8. Scheme Alternatives and Mitigation Evaluation

- 1.8.1** The clients land ownership has been described in the included site map. As the map shows, there is one partitioned field of potential use. The field currently has no active agricultural use, described as open grassland.
- 1.8.2** Within the prescribed field, we have highlighted necessary exclusion zones, based on proximity to third party dwellings for acoustics and fall distances to public rights of way and land boundaries.
- 1.8.3** In terms of validating the choice of technology, there were two options; wind and/ or solar. The client already possesses two 4kWp solar installations that provide low cost electricity to his domestic property. The wind turbine will act in addition to the solar array to further support the electrical demands of the property in a greater capacity, allowing the client to act in more of a self-sustaining manner. This represents a more holistic and diverse approach to energy self reliance and allows the client to be able to consider future forms of low cost electrical heating, further reducing his CO₂ footprint by separating himself from a dependence on expensive oil for domestic heating.
- 1.8.4** Further equal investment in solar would not result in equal amounts of power production and so the property would be left with a greater reliance on the national grid. Furthermore, with the exception of the field in question, all feasible roof spaces and green spaces have been used to accommodate existing solar PV. Therefore, a ground mounted system within the proposed site would be necessary, taking up far more surface area than the proposed, having a greater detrimental effect on the land itself and reducing the fields capacity for alternative land use in the future.

2.1. Conclusion

- 2.1.1** We are proposing a single, small-scale turbine, in contrast to the multiple, large-scale schemes that have been approved and constructed in the area.
- 2.1.2** Whilst the clients site boasts only a small gradient, rendering the very immediate landscape open, the undulating local topography, flora and myriad power and communication infrastructures shall provide a level of screening for the turbine over mid to long range viewpoints, rendering it indiscernible within the broader area. It is considered that a significant proportion of short-range viewpoints will be occupied by transient occupants and on balance, will represent minimal impact.
- 2.1.3** As the photomontages show, the visual impact at sites beyond the locations' immediate context is very low, with a number of other larger turbines and associated man made structures creating far greater visual impact within the panoramas of the region. Even within the sites immediate context, the photomontages show that the turbines scale, mass and colouring create no greater than a comparative impact to the power transmission masts cutting through the site, even at close quarters.
- 2.1.4** Whilst there are a number of public rights of way in the area, the impact from them is not extreme and coupled with low frequency and sporadic use, means we anticipate minimal impact. Receptors from these points are also transient and temporary, therefore minimising the impact further.

- 2.1.5** Whilst there are a number of existing wind turbine in the vicinity of the site, there is only one machine that could be read in relation to the proposed. However, the difference in scale, mass and colouring means, in our opinion, they would be perceived as independent of each other. The abundance of both large and small scale turbines in the area, gives merit to the argument that the landscape is not just capable of accepting turbines, it is capable of disguising them and amalgamating them within its own fabric.
- 2.1.6** Any secondary views not noted in the ZTV are determined to be of a distance so significant that the turbine would be indiscernible, with receptors determined to be transient, therefore having minimal impact upon them.
- 2.1.7** The site has green belt and borough landscape value designation, both of which have been discussed in the planning statement.
- 2.1.8** It is our belief that there are no planning policies that would impair the passing of this application and so we would presume planning permission to be granted based on the information provided. Precedents in the area supports this presumption in our opinion.

2.2. References

- **Guidelines for Landscape and Visual Impact Assessment**
Second Edition
The Landscape Institute
Institute of Environmental Management & Assessment
Spon Press, 2002.
- **CAP 764 – Policy and Guidelines on Wind Turbines**
Civil Aviation Authority
www.caa.co.uk/docs/33/Cap764.pdf
- **MoD – Guidelines on Wind Turbines**
Ministry of Defense
<http://www.mod.uk/DefenceInternet/MicroSite/DIO/WhatWeDo/Operations/ModSafeguarding.htm>
- **Barnsley Borough Landscape Character Assessment**
Final report, May 2002.