

PLANNING SUPPORTING STATEMENT

**RE: PLANNING APPLICATION FOR THE
ERECTION OF A 6 KW DOMESTIC WIND TURBINE
ON A 15 METRE MAST**

AT

**LAND ADJACENT TO CLIFFE KENNELS,
BARNLEY ROAD, HOYLANDSWAINE
PENISTONE, SOUTH YORKSHIRE
S36 7HB**

September 2009

1.0 INTRODUCTION

- 1.1 The Design and Access Statement accompanying this report indicates that the proposal can support a sustainable form of development, able to satisfy many of the basic tenets of national planning policy, outlined in Planning Policy Statement (PPS) 1 'Creating Sustainable Communities' and PPS22 'Renewable Energy'. The latter reminds us that it should be regarded as material to decisions on individual planning applications re renewable energy proposals.
- 1.2 The Design and Access Statement shows that the proposal can mitigate against climate change creating a renewable energy supply without dependence on fossil fuel helping to cut carbon dioxide emissions.
- 1.3 The Design and Access Statement also addresses how the development can satisfy development plan policies on general design re height, scale, materials used and effect of the proposal on visual and local amenity.
- 1.4 A further planning policy issue of relevance, concerns assessment of the proposal in the context of development plan policies. In this instance policies appear particularly restrictive given general concern on the affect that development will have on the openness of Green Belt. There are also policies concerning renewable energy and climate change to take into consideration.
- 1.5 These matters are considered relevant because the proposal is a renewable energy scheme sited in a free standing location within the Green Belt and is intended to reduce the applicant's dependence on fossil fuel and so contribute to reducing future carbon emission.
- 1.6 A Landscape Character Assessment (LCA) published in 2002 also exists. It identified the site within an area described as West Barnsley Settled Wooded Farmland (E1). The applicant has therefore had regard to landscape character including the RSS Joint Character Areas categorisation of the site as within the Nottinghamshire, Derbyshire and Yorkshire Coalfield, and to the LDF Draft Core Strategy Preferred Options policies on climate change.
- 1.7 The site is not in a landscape that is specifically designated for protection. It is located below a high ridge that runs along the western boundary of the LCA which generally restricts the sites visibility out of area E1. The applicant highlights such matters as it demonstrates that an appreciation of the quality, character and distinctiveness of the local environment has been made, and that consideration has been given to how the development will impact on the landscape.
- 1.8. The development is closely associated with Cliffe Kennels and the attached residential unit, and is not a stand alone development in the landscape. Its function is to provide electricity generation from wind

energy to serve the existing commercial operation and associated residential unit. There will therefore be a clear visual relationship between the proposed turbine and other built structures in the landscape.

- 1.9 The proposal will contribute to meeting the electricity needs of Cliffe Kennels and house with a single renewable energy development of a domestic scale. Such development is normally generally supported in principle by planning policies on sustainable development, subject to amenity and environmental considerations.
- 1.10 The application also includes separate reports in support of the proposal re potential noise generation and a technical report about the operation of the turbine to assist the planning department in determining the submission. These reports should be read in conjunction with this statement and the Design and Access Statement.

2.0 PLANNING POLICY BASE RELEVANT TO THE PROPOSAL

RENEWABLE ENERGY POLICIES

National planning guidance

- 2.1 PPS22 Renewable Energy advises policies recognise specific location requirements of renewable energy sources and the potential for exploiting them. Small scale projects, it considers, can provide a limited but valuable contribution to overall outputs of renewable energy.
- 2.2 It recommends planning applications be assessed against specific criteria set out in Regional Spatial Strategies (RSS).
- 2.3 Paragraph 16 of the policy statement refers to most renewable energy sources can only be utilised where the resource exists. It further acknowledges in paragraph 20 that wind turbine developments will have the greatest visual landscape effect. This effect however is not regarded as an absolute constraint against the erection of wind turbines.
- 2.4 It can therefore be seen that the needs associated with accommodating the location requirements of a wind turbine are considered a material planning consideration. Wind energy can only be exploited where the wind energy strength is of sufficient force to enable the turbine to function properly. As such it is relevant to note that the site's height at 265m above sea level and with wind strength strong enough to enable efficient operation of this type of domestic wind turbine.

2.5 In selecting the application site, full regard has therefore been had to this planning policy advice, and as such should weigh in favour of the proposal.

2.6 The move towards developing more renewable energy output is fostered by:

- UK emissions of greenhouse gases having fallen by only 0.5% in 2005-06 and carbon emissions staying virtually the same (source: www.lga.gov.uk). The implication is quite stark. Without radical action, the UK will not meet its targets on emissions.
- target reduction of emission levels are set to rise. The G8 meeting in Rome, 07 July 2009, of which the UK is a member has given a commitment to reduce carbon emission levels by 80% by 2050.
- **Announcing the results** of The Meteorological Office Hadley Centre (June 2009) Report, the Environment Secretary, Hilary Benn, said global warming will affect "every aspect of our daily lives". The scientists say summer rainfall in south-east England could decrease by one-fifth by the 2050's. Average mean temperatures were likely to rise by more than 2C across the UK. If carbon emissions continue to rise, there is a 10% chance that temperatures in the south-east could rise by 8C or more by the 2080s. The report predicts the UK will experience wetter milder winters, longer drier summers and rising sea levels.
- The Environment Agency predicts rising sea levels and increased rainfall means investment in flood defences will need to double to £1bn a year by 2035 just to maintain the current levels of protection.
- the governments white paper on energy (2009) is proposing financial assistance for households implementing renewable energy schemes
- the Wicks Report on "Energy Security: A National Challenge in a Changing World" (05/8/2009), complements the government White Paper (The UK Low Carbon Transition Plan to Boost Renewables"), & recommends we need to do more to develop indigenous and alternative energy resources by increasing development and deployment of technologies that use alternative energy sources.
- the UN Climate Change Conference agenda for the 2009 Copenhagen summit proposing developed countries increase their renewable energy targets to allow undeveloped countries to expand their economies and increase consumption of fossil fuel.

2.7 There is therefore a strong presumption in favour of renewable energy schemes subject to their being an absence of significant harm.

RENEWABLE ENERGY

Regional Planning Policy

- 2.8 The current statutory RSS was published by GOYH on 21 May 2008. RSS core policy on climate change and resource use YH2 (A)(7) advises that there is a need to increase renewable energy. The target for reducing GHG emissions is then directly linked with renewable energy capacity in the outcomes/ targets table.
- 2.9 RSS sub area policy for South Yorkshire SY1 where the site is located advises the need to adapt to climate change. RSS policy ENV5 on Energy in addition advises that the region will:
- maximise improvements to energy efficiency and increase renewable energy capacity
 - reduce GHG emissions by maximising the use of power sources
 - provide for new efficient energy generation in keeping with local amenity
 - maximise renewable energy capacity by delivering set sub regional targets e.g. South Yorkshire 47MW by 2010; 160MW by 2021 and those planning applications be monitored to establish whether targets are being met. To achieve this, targets are then provided for each authority, to help inform delivery of the sub-regional target – in the case of Barnsley, capacity for 15MW by 2010 is required with a planned rise to 34 MW by 2021.
 - securing greater use of decentralised renewable energy

RENEWABLE ENERGY

Local Planning Policy -Unitary Development Plan

- 2.10. Policy ES12 on wind energy generation lists a number of factors that will need to be taken into consideration in the determination of such proposals. The UDP indicates in paragraph 3.226 that in Barnsley, the most significant source of renewable energy is from wind, because the more elevated areas, especially in the western half of the Borough have sufficiently high annual mean wind speeds to make the establishment of wind turbines viable. It is therefore relevant to note that the application site is located in the western part of the borough where wind speeds are known to be high.
- 2.11 Individual assessment of each proposal is nevertheless still required.

Policy ES12 Volume 1 Wind Energy Generation includes a list considerations to take into account including:
effect on landscape, residential amenity, highway access matters, connection to the grid, effect on wildlife, and possible shadow flicker - all aspects for consideration in the determination process.

RENEWABLE ENERGY

Draft LDF 2009 Core Strategy (Revised Preferred Options)

- 2.12 Section 9.11 on Climate change reiterates central government belief that climate change is the greatest long term challenge facing the world today, and a main challenge to delivery of sustainable development.
- 2.13 Policy CSP45 Climate Change "Impact on Climate Change" declares the Council will reduce the borough's impact on climate change by promoting development that generates renewable energy.
- 2.14 Policy CSP49 "Development that produces renewable energy states":

"We will allow development that produces renewable energy as long as there is no significantly harmful effect on:

- the character of the landscape and appearance of the area
- living conditions
- biodiversity and
- historical and cultural features and areas

Planning applications must be accompanied by information that shows how the local environment will be protected, and that the site will be restored when production ends".

The draft policy is largely in line with policy EN1 of Background Paper 12 "Renewable Energy and Climate Change" October 2005.

- 2.15 It should be noted that the above draft development plan policy is now more in line with current government planning policy than the December 2000 adopted Barnsley development plan.

GREEN BELTS

National Planning Guidance

PPG2 Green Belts

- 2.16 The site is designated as Green Belt in the RUDP. National Planning guidance on Green Belts is outlined in Planning Policy Guidance Note 2 Green Belts. (PPG2) Paragraph 3.4 of guidance

states that the construction of new buildings in the Green Belt is inappropriate unless it is for a limited number of named purposes. Wind turbines are not listed in this paragraph as an exception to the general presumption against new building in the Green Belt.

- 2.17 Were the erection of a single wind turbine not considered harmful to the openness of Green Belt, the proposal could be accepted in principle. If however this were not the case, such development, would by definition constitute "inappropriate development" and consideration of harm in principle and any other harm would have to be assessed.
- 2.18 PPS22 also acknowledges that notwithstanding that renewable energy projects may well locate in the Green Belt, they also may impact on the openness of Green Belt. Paragraph 13 of PPS22 as well as paragraph 3.2 of PPG2 advise where Green Belt is affected by inappropriate development, that careful consideration be given to impact, and that applicant's demonstrate the existence of very special circumstances to support their application that clearly outweigh any harm by reason of inappropriateness and any other harm.
- 2.19 PPS22 is nevertheless still regarded as a material planning consideration in the determination process of such applications. The merits associated with renewable energy production and the wider community benefit associated with utilising sites where wind power can most effectively be harnessed helps contribute to the existence of very special circumstances in any event.
- 2.20 The optimisation of wind resource where there is an absence of harm to openness and amenity of the Green Belt, can therefore outweigh the general presumption against new development in Green Belt.
- 2.21 Just as mineral sites are acceptable in the Green Belt because they can only be worked where they are found and then restored, (paragraph 3.11 PPG2), a parallel can apply with wind turbine sites, where suitable restoration conditions can be applied. Wind turbine masts have equally a finite life, and their acceptance in principle can still be the subject of restoration to ensure the permanent openness of Green Belt is maintained in line with Green Belt policy objectives.

GREEN BELTS/AGRICULTURAL LAND

Regional Planning Policy

- 2.22 RSS core policy YH9 makes reference to the Green Belt being identified on the RSS Key Diagram and confirms the contribution

Green Belts make to urban renaissance and conservation of the countryside.

- 2.23 Policy ENV7 on agricultural land advises if development is to be located on agricultural land it centre on poor quality land to protect higher quality land and ensure functional landscapes.
- 2.24 RSS policy ENV8 on Biodiversity seeks to safeguard and enhance the biodiversity and ecology of the region, so that it functions in an integrated way.
- 2.25 RSS policy ENV10 re Landscape, advises on safeguarding and enhancing landscapes that contribute to the distinctive character of the region. Natural England's Joint Character Map for Yorkshire and Humber then identifies the site as within the Nottinghamshire, Derbyshire and Yorkshire Coalfield.

GREEN BELTS /LANDSCAPE POLICIES

Local Planning Policy

- 2.26 The adopted development Plan for the area is the Barnsley Unitary Development Plan.
- 2.27 UDP policy GS6 relates to the extent of Green Belt outside the urban area. Policy GS7 refers to development within the Green Belt will not be permitted unless openness is maintained and development does not conflict with the purposes of Green Belt. Policy GS8 explains new buildings will not be permitted except in very special circumstances unless as listed for purposes condoned by national planning guidance (PPG2).Policy GS9 concerns protection of the visual amenity of Green Belt and that the siting, materials or design of development should not result in significant harm to the visual amenity of Green Belt.
- 2.28 The Secretary of State issued a direction 17 September 2007 that such policies be saved until replaced by the LDF process. The Council policy GS13 on Areas of Borough Landscape Value were not saved.
- 2.29 LDF core policy GB1maintains a commitment to PPG2 national planning policy on Green Belt, whilst policy LCA1: Protecting and improving landscape character allows for development where the visual quality of landscape continues to be protected and, where appropriate improved.

3.0 Assessment of the development relative to relevant Planning Policies with demonstration of the of existence of Very Special Circumstances to Justify the Proposal

- 3.1 The Council is committed to facilitating, so far as it can an increase in the use of renewable energy to meet the target of 10% of all electricity to be produced from renewable sources by 2010.
- 3.2 The Council will therefore allow proposals for the installation of wind turbine generators particularly where the impact upon the immediate and wider landscape is considered acceptable and that it can be seen to be providing a wider environmental benefit.
- 3.3 Such development can according to relevant planning policy outlined above be accepted if there is no significant harmful effect, openness of the Green Belt is maintained, very special circumstances are demonstrated and renewable energy proposal are able contribute to RSS and LPA targets.
- 3.4 The Design and Access Statement and the introduction to this statement indicates that landscape and resource factors have been taken into consideration in selecting the site e.g. (E1) rolling landform with farmland interspersed with woodland, and restricted outward visibility westward due to the presence of a high ridge.
- 3.5 The application site is not within a specifically protected land designation e.g. a Nature Conservation Area or a SSI, neither is it within an area of Outstanding Natural Beauty. The fact that the site lies in open countryside does not therefore preclude against consideration of micro renewable energy generation projects.
- 3.6 The merits associated with renewable energy production and the wider community benefit associated with utilising sites where wind power can effectively be harnessed, as well as the need to meet government targets and increase renewable energy capacity are all publicly recognised.
- 3.7 The Council is not averse to considering stand alone renewable energy proposals for single dwellings subject to environmental and landscape impact and amenity considerations.
- 3.8 The site is located in an open setting, and as such is relatively unconstrained because it is where a natural resource can be easily utilised for electricity generation. The presence of wide open spaces associated with Green Belt, as exists in this instance will therefore help the functioning of the proposed wind turbine.
- 3.9 The Proven WT 6000 outline specification indicates it has a :

- 6000W (6kW)
- 48V / 120V / 240V / 300V
- c 7,000-20,000 kWh (depending on location and average wind speed at the site).

3.10 The Proven Energy Wind Turbine web site claims the cumulative impact of its installed turbines have since 1991 saved approximately 6,917,726,192 KWH and reduced CO2 emissions by 3,441,524,547 tonnes. Each additional turbine that is installed will increase the level of benefit. At a micro level, the benefit of installing a 6kw turbine, as proposed in this instance, includes an example on the Proven web site of St Columb Minor Primary School. The school estimates their turbine produces an annual yield of 10,000kwh, reducing CO2 emissions of 4300KG per year. These examples highlight that considerable weight needs to be given to acceptance of this type of proposal where impact on landscape is not a cause of material harm.

3.11 The principle of advancing a carbon reduced operation is achieved with this application proposal, not only because it will generate electricity from a renewable energy source, but also because it affords an opportunity to trade off this benefit against the carbon generated in the process of manufacturing the turbine. Proven estimate that the embedded energy (amount of energy used from creation to purchase of a turbine product) of a properly sited Proven Energy wind turbine reaches carbon neutrality between 6 months and 2 years dependant on wind strength.

3.12 What is of specific relevance as a renewable energy scheme is that there will be:

- i. direct physical linkage between the proposal and Cliffe Kennels and house. The wind turbine would provide a power source for domestic use, demonstrating a direct need for such a proposal. Any surplus power could then be exported thereafter to the electric grid and shared, providing a wider environmental and economic benefit.
- ii. the site has been selected, (having had due regard to amenity and safety considerations), to optimise the power that can be generated relative to domestic need; it is in a location where wind power is known to be relatively strong.
- iii. the presence of strong prevailing high winds does not arise everywhere within the district, and ought to be harnessed where it exists if there is no demonstrable harm.
- iv. a precedent exists for acceptance of single wind turbines in this part of the region, due to the nature of the relief, level of wind power and character and ability of the terrain to accommodate such development without any significant detriment to the countryside and its visual amenity.

- v. The spot height of The Cliffe is approximately 270m above sea. Given its height, two telecommunication masts are already based here, one located between the two copse areas on the hill top west of The Cliffe, the other east of the The Cliffe within the curtilage of Hoyland Swaine Reservoir. The current proposal would locate at 265m on a site previously approved in 2008 for a 20m aluminium radio mast on 10m base, for Penistone Radio. The application for a wind turbine similarly wishes to utilise the site's height attributes this time for wind energy production. The site's planning history, supporting a similar scaled mast development, appears to provide a precedent for supporting the current proposal.
- vi. planning policy statements such as PPS7 support exploitation of natural energy resources in rural areas whilst PPS22 also acknowledges that renewable energy projects can often locate in the open countryside. Such statements are according to government planning policy a material planning consideration in the determination process.

3.13 A presumption in favour of the development should therefore normally be afforded in the absence of material harm.

Impact on Green Belt

- 3.14 The site is washed over with a Green Belt designation. It is considered the current proposal is appropriately sited by virtue of the presence of strong winds and that the scale of the relatively open landscape will help visually absorb such small scale development. A clear need to advance such renewable energy schemes exists. The scale of a single domestic wind turbine mast would be absorbed into the extensive open countryside with the backcloth of the hillside, whilst the opportunity to introduce dull grey colours or a specified colour if conditioned on a decision notice re the mast, would help camouflage and reduce its visual impact. The associated cable infrastructure between turbine and Cliffe Kennels would be buried underground and hidden from view. The turbine would locate on a site with good exposure to winds, designed as a relatively low noise generator and sited so that health and safety aspects and public amenity are not compromised.
- 3.15 There would be no significant impact on the character of the landscape. The openness of the landscape with its rolling landform, will still dominate. The character and structure of this part of the landscape will therefore not be materially affected by the implementation of this development.
- 3.16 The site has been selected because it is close to The Kennels and house yet set in open countryside where uninterrupted winds on the ridge tend to prevail. Given the proposals domestic scale and height, and

neutral colour, the mast, with its pencil like proportions will be visually absorbed into the landscape when viewed from afar. It is not a prominent site given its background setting, and visual exposure would quickly diminish with distance. Indeed when travelling through the countryside an observer is likely to have a constantly moving focus and will not consider the mast to be a salient feature within the landscape.

3.17 Paragraph 3.12 above provides a list of relevant material considerations to take into account in support of the proposal.

3.18 As such the weight to be given to the merits of the submission i.e. contribution to renewable energy generation in meeting government targets, a reduced carbon footprint and wider environmental benefits associated with slowing down climate change, plus the relative limited impact of the proposal on landscape, indicates the merits of the proposal can outweigh any amenity concerns.

3.19. Acceptance of the proposal could always be made subject to restoration conditions to protect landscape interests in the longer term were the turbine to become redundant. Moreover there is opportunity to condition any approval with enhancement works such as landscape planting within the land area which the applicant controls, but not necessarily screening the development.

3.20 As regards any concerns about potential effect on amenity from noise generated by the turbine, Proven Energy turbines are designed to minimise noise and maintenance. They have a direct drive generator, which operates without a gearbox. Compared with other modern small turbines, the blade tip speed of a Proven Energy turbine is low. This means that noise is reduced substantially. Given the prevailing winds the operation of the turbine is unlikely to affect local public amenity. Aerodynamic noise from wind turbines is generally unobtrusive – it is broadband in nature and in this respect is similar to, for example the noise of wind in trees. Wind generated background noise increases with wind speed and at a faster rate than the turbine noise increases. It is therefore wind noise that will be more pronounced and audible in strong winds rather than noise emitted from the turbine itself. Acoustic Data is included in a separate noise emission report.

3.21 Concerning impact on biodiversity. The scale, design and height of the turbine will not impede general wildlife movement or act as a barrier preventing foraging/movement. As regards effect on bird and bat flight behaviour and activity levels, a publication by Sterling University in March 2009 by Dr Kirsty Park "Assessing the effects of micro-turbines on wildlife" considered that: "This is not likely to be an issue for micro turbines as their erection tends not to alter surrounding habitat in any substantive way."

3.22 Equally the results of Mark Desholm's 2003-2008 Environmental Research Project at Denmark's Nysted wind farm clearly shows that

most of the birds just fly around the wind farm and those that go through appear to thread a path between the turbines. David Gibbons head of conservation science at the Royal Society for the Protection of Birds (RSPB), also told the BBC News website that this study therefore suggests that the risks to birds were smaller than had been feared. To complement such confidence in the use of wind power generation, the RSPB has installed a Proven 15 KW turbine at its visitor centre at Rainham Marshes, at Purfleet Essex.

- 3.23 This is not to say there will be no bird flight strikes, just that their frequency and quantity will be extremely low. The proposal should also not be fully compared to a wind farm where the height and number of turbines concerned would dwarf the impact of single Proven wind turbine.
- 3.24 Notwithstanding that the turbine is of a domestic scale compared to wind farm turbines, and relates in scale and height to dwellings, it should also be noted as an additional consideration that the site is not within an Aerodrome Safeguarded Area nor likely to affect aerodrome or aircraft telecommunication equipment.
- 3.25 The applicant has indeed considered the advice tendered by the Directorate of Airspace Policy in its most recent publication CAP764-CAA " Policy Guidelines and Wind Turbines" February 2009.
- 3.26 Paragraph 5.2 in chapter 1 of these guidelines states it is not automatic that a wind turbine development will cause a problem to air traffic. Paragraph 1.1 in chapter 2 acknowledges that it is the larger, commercial turbines that have the greatest impact on aviation. As this application is for a single medium sized mast, its size, shape and density is unlikely to create radar clutter or reflect a significant amount of power. In addition there is no wind turbine clutter as regards cumulative effect of turbines to affect radar. Where it is considered a doppler effect / refracting affect might arise, equipment, can, we are advised always be changed to filter this out/ blank this out. However in this instance the proposal is for the erection of a Proven 6 wind turbine, the blade material for which does not cause radar interference. As such interference with use of airspace should not be a concern.
- 3.27 Lastly, as regards affect on telecommunication equipment given the presence of existing masts adjacent to the site, it should be noted that:
- the need for connectivity continues to grow extensively, more wind turbine equipment and telecommunications equipment such as cellular base stations and satellite communication devices are installed in close proximity to each other or integrated on single masts. Small wind turbines can be cost-effectively used to power such telecommunication sites.
 - Today's domestic wind turbines are designed to power a wide range of

telecom sites at grid-connected and off-grid locations worldwide and are an ideal powering solution for:

- TV and radio stations
- Cellular base stations
- Landline telephone exchange hubs
- Wireless internet sites
- Monitoring stations

4.0 CONCLUSION

- 4.1 This statement therefore confirms that there is no absolute constraint against development of a wind turbine in this Green Belt location. The relevant material considerations presented justify planning approval being granted.
- 4.2 It is considered the merits of the application are sufficient to meet the terms of planning policy. The applicant, it is further considered, has been able to show why planning permission should be granted, providing very special circumstances to justify such inappropriate development, as it is clearly outweighed by other considerations.
- 4.3 The proposal also satisfies renewable energy policies, and can demonstrate it will have no material adverse effect on landscape character, overall landscape quality and setting, nor effect nature conservation and aviation interests, being appropriate in terms of need, siting and scale as well as in offering to minimise impact through restoration should the turbine operation cease.
- 4.4 For the above reasons therefore, the Council is requested to give positive consideration to the proposal and grant approval with appropriate planning conditions on the lines as outlined.