PLANNING & DESIGN & ACCESS STATEMENT

To aid the planning application for the installation of one E4660 wind turbine,

Located at:

Mossley House Farm,

Mossley Road,

Penistone,

Sheffield,

S36 9FH

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1. Introduction

Planning permission is sought to install a one small scale wind turbine and ancillary structures on agricultural land belonging to Mossley House Farm. The application site falls within the administrative boundary of Barnsley Metropolitan Borough Council.

This Planning Supporting Statement has been prepared on behalf of the applicant.

This Statement aims to supply sufficient information to Barnsley Metropolitan Borough Council in outlining the details of a proposal and addressing all relevant material planning considerations.

To aid Barnsley Metropolitan Borough Council in determining the application, the following information is covered within this Statement:

- Description of the existing site and location context;
- The nature of the proposed development;
- The context of the proposal within national and local planning policy;
- Material planning considerations and outline of potential environmental impacts;
- The planning balance and conclusions

This document is intended to supply supporting planning information regarding the proposed scheme and is not intended to constitute a full Environmental Impact Assessment (EIA).

2. The Applicant

The applicants Mr N Fretwell & Sons is a small Agricultural business. The farm has been running since 1959 and is in its 4th generation of farmers. Up until 2002 Mossley House Farm was a working dairy farm, due to the increase in overheads and price wars within the dairy industry the farm had to cease operation and diversify into other farming enterprises to cover cost of living for the family. The business now supplies dry stone walling services, supplies top quality Hay, Hayledge, Straw, Silage, General Agricultural services, harvests 45 acres of arable crops a mixture of barley, wheat and oats and has 75 cattle to supply beef to local butchers.

The small holding contains 3 dwellings which are home to family members, a large workshop that is used for Agricultural Machinery Services and Agricultural buildings which house livestock. Due to the current economic climate the business is under financial pressure once again due to the increase in business overheads and the increased cost in living. The farm currently uses 100,000kWh of electricity per annum to power 3 dwellings, lighting for cattle sheds and power machinery in the workshop, this is a significant overhead for the business. The proposed wind turbine would produce approximately 303,900kWh per annum based on a predicted average annual wind speed of 7.0m/s. This would offset against all of the energy costs for the farm, provide an additional income for the farm by exporting excess electricity into the national grid, providing energy security for the local area, contributing towards reducing Carbon Dioxide Emissions and contributing towards achieving Carbon dioxide reduction targets.

Mossley House Farm has plans to go back into the Dairy Industry to continue the generation of dairy farmers. The wind turbine would allow running costs for the business to be minimal and make it finically viable once again. In turn this will allow the business to expand, create employment opportunities, making a positive contribution to the economy whist producing renewable energy.

3. The Site

The development site is proposed to be located on land owned by the applicant which lies within the administrative boundary of Barnsley Metropolitan Borough Council.

The site is in a rural location approximately 2.5km North of Penistone. The land is open farmland and the turbines would sit at a height of 315m above sea level with excellent exposure to the prevailing south westerly winds. It is proposed that the wind turbine be located at the following British Grid Reference:

424268 ,400840

During the initial stages of the development, the selection of the site considered a number of key technical and environmental constraints within the landholding. Upon taking all of these constraints into consideration and applying appropriate exclusions zones, the above location was deemed to be the most suitable.

It is considered that the benefits of the selected site are as follows:

- Adequate wind speed that is free from obstructions turbulent effects;
- Adequate road network to support component delivery during construction;
- Adequate distance from the local energy distribution network to ensure minimal array loss when exporting energy.
- No anticipated impacts on aviation and radar safeguarding and telecommunications links;
- Suitable separation distances from residential properties in order to meet noise and shadow flicker criteria;
- Suitable separation distances from public access routes including roads, public footpaths and bridleways;
- Suitable separation distances from local ecological features including hedgerows and trees constituting linear features; and
- Suitable separation distances from sensitive landscapes and heritage designations.
- The proposed site was defined after taking all of the above into consideration as a minimum. The exact location and dimensions of the proposed turbine have been carefully developed through the mapping of environmental and technical constraints together with aesthetic considerations to ensure that an appropriate landscape visual fit is achieved. The proposal's robust design is set out in more detailed site plan which accompanies the application. This also demonstrates the technical constraints.

4. The Proposal

The proposed development consists of a three bladed wind turbine up to a maximum tip height of 36.6 Metres with associated infrastructure.

The assessments for this planning application have been based on an Endurance E-4660 Wind turbine.

- Rotor Diameter – 23.5m
- Hub Height – 24.8m
- Tip Height – 36.6m

This turbine was considered most suitable for the development site due to its scale with respect to the surrounding area and the benefits it provides in relation to its generating capacity.

In addition to the wind turbine itself, the proposed development will also incorporate associated ancillary infrastructure, which will include:

- An access road within the applicant's landholding;
- DNO substation building at the grid connection point;
- Underground cabling;
- Temporary construction assembly and storage areas used during installation.

Details of the configuration of the associated infrastructure with respect to the turbine are displayed in the Accompanying Site plan.

The installation is expected to have a lifetime of 25 years. The design of the proposed turbine is such that when it comes to the end of the project life, it can readily be dismantled and the site can then be restored to its former use.

5. Planning Policy

5.1 Central Government Position

National and local planning policy is positive towards renewable energy development. The Government has signed up to legally binding targets on carbon emissions requiring a reduction of carbon emissions of 15% by 2020 and by 80% by 2050. In order to meet these targets, immediate action must be taken in order to provide alternative sources of energy generation. Local and small scale renewable energy generation such as this proposal can help in meeting the above targets. In England the national policy context is set out in the National Planning Policy Framework (NPPF)1, published 27th March 2012

5.2 National Planning Policy

Defining and Achieving Sustainable Development

Relevant Government planning policy is now contained largely within the National Planning Policy Framework (NPPF) although in the case of wind energy development both the National Policy Statements (NPS) and the newly-published 'Planning Practice Guidance for Renewable and Low Carbon Energy' (PPG) are also relevant.

The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development and identifies the principal vehicle through which planning's contribution is made as the Development Plan. Where a development proposal is in accordance with a Development Plan that is up-to-date and consistent with the NPPF, permission should be granted for it without delay.

Where the Development Plan is out-of-date or does not contain relevant policies, permission should be granted for any development unless the adverse impacts of doing so would significantly and demonstrably outweigh the benefits when assessed against the policies of the NPPF as a whole. The weight to be given to policies in dated Development Plans is dependent upon their degree of consistency with the policies of the NPPF. The weight to be given to emerging Development Plans depends upon the stage that has been reached in their preparation, the extent of objections and the degree of consistency with the NPPF.

Perhaps unsurprisingly, given that the central purpose of the planning system is to contribute to the achievement of sustainable development, one of the core planning principles of the framework is to support the transition to a low carbon future by, inter alia, encouraging the development of renewable energy . Securing radical reductions in greenhouse gas emissions and supporting the delivery of renewable energy infrastructure through the planning system are said to be central to all three dimensions of sustainable development - economic, social and environmental. Planning applications for renewable energy development should be approved wherever its impacts are (or can be made) acceptable.

Paragraph 28 of the NPPF states that in supporting a prosperous rural economy; "Planning policies should support economic growth in rural areas in order to create jobs and prosperity by taking a positive approach to sustainable new development. To promote a strong rural economy, local and neighbourhood plans should:

- support the sustainable growth and expansion of all types of business and enterprise in rural areas, both through conversion of existing buildings and well designed new buildings;

- Promote the development and diversification of agricultural and other land-based rural businesses…."

Renewable Energy

The policies of the NPPF and NPS towards renewable energy developments reflect Government energy policy; the provisions of the Climate Change Act 2008 and the Energy Act 2008; and the international commitments embodied in the EU Climate and Energy Package.

The Renewable Energy Strategy 2009 sets out the means by which the commitments are to be met, referring to a 'renewable revolution' in which electricity generation from renewable sources in the UK must increase seven-fold from 2008 levels to meet a target of 15% of energy generation from renewable sources by 2020. A review of performance by the Committee on Climate Change in 2010 found the need for a 'step change' in delivery for the targets to be achieved.

In 2011 the Electricity Market Reform White Paper indicated a wider role for renewable electricity generation in not only helping to combat climate change but also in contributing to energy security. In the same year the UK Renewable Energy Roadmap was published, reiterating established targets and stating that it was Government policy to accelerate renewable energy delivery in the UK.

In 2012 an 'update' of the Roadmap was published which once again restated the Government's commitment to increasing the deployment of renewable energy generating technologies, including onshore wind, once again drawing attention to the dual benefits of onshore wind in contributing to carbon reduction and energy security. The 2012 Annual Energy Statement was expressed in similar terms.

Echoing the observation in the NPPF that the purpose of the planning system is to contribute to the achievement of sustainable development, the UK Renewable Energy Roadmap indicates that one of the principal objectives of the Government's programme of planning reform is to support the delivery of renewable energy developments, including in particular onshore wind.

The relevant national policy statements are the overarching NPS for Energy (EN-1) and the Renewable Energy Infrastructure (NPS) (EN-3). These statements were laid before Parliament for approval in June 2011 and were designated on 19 July 2011. They are relevant national policy material considerations to this application and their provisions should be afforded significant weight as a material consideration. This is not only explicitly confirmed in para 3 of the NPPF, but the footnote 17 to para 97 uniquely in the whole of the NPPF draw attention to the need for decision-makers on wind energy developments to have regard to the advice in the NPSs EN1 and EN3.

EN-1 10 states that in England and Wales this NPS is likely to be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended). Furthermore, "The energy NPSs should speed up the transition to a low carbon economy and thus help to realise UK climate change commitments sooner than continuation under the current planning system" (paragraph 1.7.2). The clear urgency and necessity to increase the transition to a low carbon economy (through the installation of renewables technologies) is evident.

5.3 **Local Planning Policy**

Barnsley Borough Council Local Development Framework

Barnsley Borough Council has recently adopted its Local Development Framework Core Strategy with this providing the strategic objectives and core policies which will now be used to guide development in the area, along with the remaining 'saved' policies from the Unitary Development Plan. Consideration on the local level with regards to the Green Belt issue is given to Policy CSP34 of the Core Strategy which seeks to safeguard against inappropriate development in this locality and specifies that development will not be permitted within the Green Belt unless there are very special circumstances which will justify allowing the development. One such development that can indeed bring economic and environmental benefits that might be considered to outweigh any perceived harm caused to the openness of the Green Belt land in which the proposed development is sited.

The application site is also within one of the Borough's designated areas of Landscape Character which are recognised as being of higher landscape quality than other countryside areas. The Areas of Landscape Character are also in the Green Belt and development will therefore be limited to that which is appropriate in such areas in accordance with Policy CSP37, which seeks to conserve the character of the area, and should, wherever possible, positively enhance the environment through its location, siting, scale, design, materials and landscaping.

Of particular importance to the assessment of this application is Policy CSP6 which sets out the council's requirements for proposals that seek to develop and produce renewable energy. Development will be allowed where it can be shown there would be no significantly harmful effect on:

- the character of the landscape and appearance of the area
- living conditions
- biodiversity, geodiversity and water quality
- heritage assets, their settings and cultural features and areas
- highway safety, and
- Infrastructure including radar.

Also of importance is Policy ES12c of the Unitary Development Plan, which was 'saved' and remains An important consideration. This policy states that the council will control development in the vicinity of existing wind generation installations so as to safeguard these from a reduction in local wind speeds.

Finally, of more general relevance is policy CSP29 which sets out the design principles and standards for all development. Development proposals will be expected to demonstrate that it respects takes advantage of and enhances the distinctive features of Barnsley, including:

- topography, green infrastructure assets, important habitats, woodlands and other natural features
- views and vistas to key buildings, landmarks, skylines and gateways
- heritage, townscape and landscape character including the scale, layout, building styles and materials of the built form particularly in and around:

- Barnsley Town Centre

- Penistone and the rural villages in the west of the borough

- within and adjacent to conservation areas

Development should also:

- contribute to place making and be of a high quality, that contributes to a healthy, safe and sustainable environment

- help to transform the character of physical environments that have become run down and are lacking in distinctiveness

- enable all people to gain access safely and conveniently, providing, in particular, for the needs of families and children, and of disabled people and older people

- contribute towards creating attractive, sustainable and successful neighbourhoods

- achieve a Building For Life assessment rating of 'good' or equivalent as a minimum, in developments of 10 or more dwellings.

It is clear from the above policies that the provision of renewable energy is encouraged in the District in general, and although turbines are deemed an inappropriate development in principle in the Green Belt, the benefits of this type of renewable energy provision and the government's direction on such matters can and does override Green Belt planning policy. Indeed this is illustrated by the grant of permission for the wind turbine serving High Wells Farm approximately 2km to the east of the site. The application is likely to be assessed against the above criteria. These are considered in detail within this report and it is considered that the proposals can be accommodated on this site without adversely affecting the principles of this policy.

5.4 Planning Balance and Conclusion

Benefits of the Scheme

The foregoing sections of this planning statement have demonstrated the following:

Renewable energy generation

- The need for renewable energy is confirmed in national guidance and the contribution of individual schemes to meeting this need must be given substantial weight.

- The proposed Scheme would make an important contribution towards meeting national targets for renewable energy generation, as well as a valuable contribution towards meeting the targets for the region. The proposals would also make a significant contribution towards greenhouse gas reduction.

High Energy User

- Mossley House Farm is a high end energy user that is a struggling / growing farm business, which desperately needs to diversify. Power will be fed directly into the operation, whilst also exporting power into the national grid. This not only reduces the financial pressure on the farm but also reduces the impact on the environment due to the production of renewable energy.

Very Special Circumstances / Green Belt

The NPPF states that the purpose of the planning system is to contribute to the achievement of sustainable development and identifies the principal vehicle through which planning's contribution is made as the Development Plan. Where a development proposal is in accordance with a Development Plan that is up-to-date and consistent with the NPPF, permission should be granted for it without delay.

The NPPF seeks to increase the use and supply of renewable and low carbon energy and Local Planning Authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. In addition the NPPF states that when determining planning applications for energy developments, Local Planning Authorities should not require applicants to demonstrate the overall need for renewable or low carbon energy and it should be recognised that even small scale projects provide a valuable contribution to cutting greenhouse gas emissions. In addition, Local Planning Authorities should approve the applications if the impacts are (or can be made) acceptable unless material planning considerations indicate otherwise.

Paragraph 91 of the NPPF states that when located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

The Benefits and Very Special Circumstances July 2014 RenewableUK's Wind Energy Database stated the UK has installed sufficient capacity to power the equivalent of 6,360,721 homes. In July 2014 they further stated that wind energy saves 11,566,781 tonnes of CO2 emissions per year.

The load factor for wind is defined as the actual output from a generation source expressed as a percentage of its maximum possible output in a year. This is calculated by RenewableUK as a rolling average of the past five years. The numbers quoted are on an "unchanged configuration" basis, e.g. the load factor for capacity that was running for the whole of each calendar year as stated in DECC's annual Digest of UK Energy Statistics. For onshore wind only it is currently 25.74%.

Based on this information and using DECC's standard figure of 430g/kWh16 the proposed CO2 saving for the proposal subject planning permission been granted could be up to 44 tonnes per year and 1,325 tonnes over the 25 year life time of the wind turbine.

Furthermore DECC's published energy consumption statistics states that annual electricity consumption is on average 3,827kWh per household. Based on this the proposed turbine could generate enough electricity to supply the equivalent of electricity for approximately 79 households.

The turbine will provide renewable energy to meet the high energy demand of the farming operation. The economic viability of this service is dependent on the cost of electricity. The

wind turbine proposal would provide a free and renewable energy resource and help support its long term viability.

The farm uses a substantial amount of power on site. This requires approximately 100,000kWh of energy per annum to operate, which is the equivalent energy use of over 25 domestic properties. The turbine will provide the majority of energy demand for this and the other farm uses. With the majority of demand being free energy the farm can become more financially viable.

Not only will the proposal be connected directly into the farm for use by the business but surplus renewable energy will be exported into the local network to the benefit of other properties in the area.

Therefore the proposal clearly demonstrates very special circumstances.

Economic Benefits

The NPPF stresses the importance of economic development. A direct economic benefit will be achieved by the production of renewable energy. The income generated from the turbine, will reduce the farms electricity bills and overall running costs, therefore will enable more opportunity for the farm to invest in new technologies and expand and diversify the business. As the farm will have the potential to expand and diversify with the additional income, this in turn will create more employment opportunities within the farm business and in the surrounding area. During the construction, operation / maintenance and decommissioning of the turbine, this will also create employment opportunities within the renewable energy sector; this will create opportunities for people to learn a new skill set which can be applied in other industries and enable the economy to grow.

The proposed development will produce approximately 303,900 kWh per annum. This will provide a significant contribution to the targets set out by the government.

Social Benefits

The creation of jobs within the farming bushiness and renewable energy sector can be considered social as well as economic benefits. The potential social benefits include: education and awareness raising opportunities within the local community, highly visible renewable energy technologies raise an increased awareness of renewable energy and its importance related to climate change, local and national energy security and independence awareness, home grown renewable energy sources reduce our reliance on fossil fuels which are finite and often sourced from geo political sensitive locations.

Environmental Benefits

The proposed development will produce around 303,900 kWh of low carbon, renewable electricity each year. This amount of electricity will deliver significant C02 savings. Based on this information and using DECC's standard figure of 430g/kWh16 the proposed CO2 saving for the proposal subject planning permission been granted could be up to 44 tonnes per year and 1,325 tonnes over the 25 year life time of the wind turbine. This contribution to reducing carbon emissions will contribute to local and national targets as well as the abetment of anthropogenic climate change.

Potential Impacts

The supporting Statement which identifies a limited number of likely impacts associated with the Proposed Development. These include:

- Landscape and Visual – the submitted visualisation material demonstrates that the turbine can be assimilated into the landscape with minimal impacts upon the visual amenity of the area.
- Residential Amenity – distances to on and off site properties comply with ETSU guidelines and will ensure that there will be no significant effects on existing residential amenity. In additional the topography of the landscape coupled with the natural screening at all properties will minimise the impacts of the proposal.

- Cultural Heritage – due to the application sites rural location the number of cultural heritage assets in close proximity are limited. There are a number of Assets within 1km of the development however there are no anticipated impact on the setting.

- Ecology - the proposed development will not have any adverse effects on key receptors that are significant in planning terms. The turbine is far enough away from hedgerows and tree lines to ensure that there are no detrimental impacts upon bat foraging areas.

Planning Balance

In the first instance it has been demonstrated that the scheme would make a meaningful contribution toward meeting the national need for renewable energy generation which is described as being "urgent" and to which "substantial" weight must be attached. In doing so it will assist in meeting the twin challenges of climate change and ensuring national security of energy supply which is critical to the future economic growth and stability of the nation.

While the scheme will give rise to some landscape and visual effects within the immediate locality of the wind turbine, NPS EN-3 recognises the potential occurrence of such effects. The impacts predicted in this case are not unusual or out of the ordinary and are of a magnitude experienced in association with most wind developments.

Indeed such impacts are temporary and entirely reversible. Temporal duration is a matter to be afforded significant weight in the planning balance. That the scheme will make a positive contribution to addressing / preventing the deleterious effects of climate change on landscape character both during the period of operation and beyond is a further consideration of material weight.

For the reasons set out, including the fact that the scheme demonstrates a high degree of compatibility with the receiving environment, will make a meaningful contribution to on site renewable energy production and in reductions in greenhouse gas emissions and is temporary and entirely reversible in nature, it is considered to represent a sustainable development.

Given that the wind turbine development also achieves full compliance with the development plan, it is concluded that the full weight of the Framework's 'Presumption in Favour of Sustainable Development' is applicable. The benefits associated with the proposal and the very special circumstances outweigh the potential impacts. The Council is therefore encouraged to follow the advice of the Government and to grant full planning permission.

5.5 Community Engagement

Due to new planning guidance that was released in December 2013, pre application consultation must be carried out before a planning application is submitted.

The Town and Country Planning (Development Management Procedure and Section 62A Applications) (England) (Amendment) Order 2013.

Consultation before applying for planning permission

3A. (1) Subject to paragraph (2), for the purposes of section 61W of the 1990 Act (requirement to carry out pre-application consultation) a person must carry out consultation on a proposed application for planning permission for any development involving an installation for the harnessing of wind power for energy production where—

(a)the development involves the installation of more than 2 turbines; or

(b)the hub height of any turbine exceeds 15 meters.

DC21 submitted an information leaflet to all the residents within 1000m of the turbine location. The information leaflet included the details of the proposed development this included, exact location, benefits, typical images, reasons for turbine location, turbine comparisons. The information leaflet also includes contact details and the timescale of the consultation period. If the consulted residents wish to comment or have any questions on the application they can contact DC21. The Following Addresses were consulted:

CRANBERRY FARM	CRANBERRY ROAD	SHEFFIELD	PENISTONE	S36 8FB
MILLBROOK HOUSE	MORTIMER ROAD	SHEFFIELD	CUBLEY	
MEADOWS REACH	JOAN ROYD LANE	SHEFFIELD	CUBLEY	PENISTONE
CUBLEY HALL FARM	MORTIMER ROAD	SHEFFIELD	CUBLEY	PENISTONE
MOSSLEY FARM	MOSSLEY ROAD	SHEFFIELD	PENISTONE	
1 SHEEPHOUSE FARM, MORTIMER ROAD	SHEFFIELD	CUBLEY	PENISTONE	S36 9FJ
MOSSLEY FARM	MOSSLEY ROAD	SHEFFIELD	PENISTONE	S36 9FH
CLIFFE HOUSE BUNGALOW, MORTIMER ROAD	SHEFFIELD	CUBLEY	PENISTONE	S36 9FR
LITTLE DOUBTING FARM	HARTCLIFFE HILL ROAD ,	SHEFFIELD	PENISTONE	S36 9FS
THROSTLE NEST FARM	CRANBERRY ROAD	SHEFFIELD	PENISTONE	S36 8FB
JOAN ROYD COTTAGE	JOAN ROYD LANE SHEFFIELD	CUBLEY	PENISTONE	S36 9DA
GARFIELD HOUSE FARM		SHEFFIELD	MIDHOPESTONES	S36 4GW
JUDD FIELD FARM	JUDD FIELD LANE	SHEFFIELD	PENISTONE	S36 9FF

HEATHERCLIFFE LODGE	HARTCLIFFE HILL ROAD	SHEFFIELD	PENISTONE	S36 9FS
MOSSLEY HOUSE FARM,THE BARN	MOSSLEY ROAD	SHEFFIELD	PENISTONE	S36 9FH
MOSSLEY COTTAGE	MOSSLEY ROAD	SHEFFIELD	PENISTONE	S36 9FH
THE BYRE	JUDD FIELD LANE	SHEFFIELD	PENISTONE	
LOWER JUDDFIELD	JUDD FIELD LANE	SHEFFIELD	PENISTONE	S36 9FF
THE HAYLOFT	HARTCLIFFE HILL ROAD	SHEFFIELD	PENISTONE	S36 9FS
THE NOOK	HARTCLIFFE HILL ROAD	SHEFFIELD	PENISTONE	S36 9FS
THE BARN	HARTCLIFFE HILL ROAD	SHEFFIELD	PENISTONE	S36 9FS
CLIFFE HOUSE FARM	MORTIMER ROAD	SHEFFIELD	CUBLEY	PENISTONE
SHIRE STABLES	MORTIMER ROAD	SHEFFIELD	CUBLEY	PENISTONE

(a) Any responses to the consultation that were received by the applicant; and

No Reponses were received from the consulted residents

(b) The account taken of those responses.

No Reponses were received from the consulted residents

6 Design and Access

6.1 Use

The principle use of the proposed development is to produce electricity through the harnessing of wind energy. The energy will then go on to be used by the wider community through export to the local energy distribution network. The site is currently in agricultural use and this land use would not be compromised.

6.2 Amount

Wind turbine proposals generally take up very little land in their development. Once installed, the existing land use can be maintained due to the small amount of land used by the wind turbine itself.

In addition to the wind turbine itself, the proposed development will also incorporate associated ancillary infrastructure, which will include:

- An internal temporary access road within the applicant's landholding;
- Crane platform;
- Electrical GRP kiosk; and
- Underground cabling.

6.3 Layout

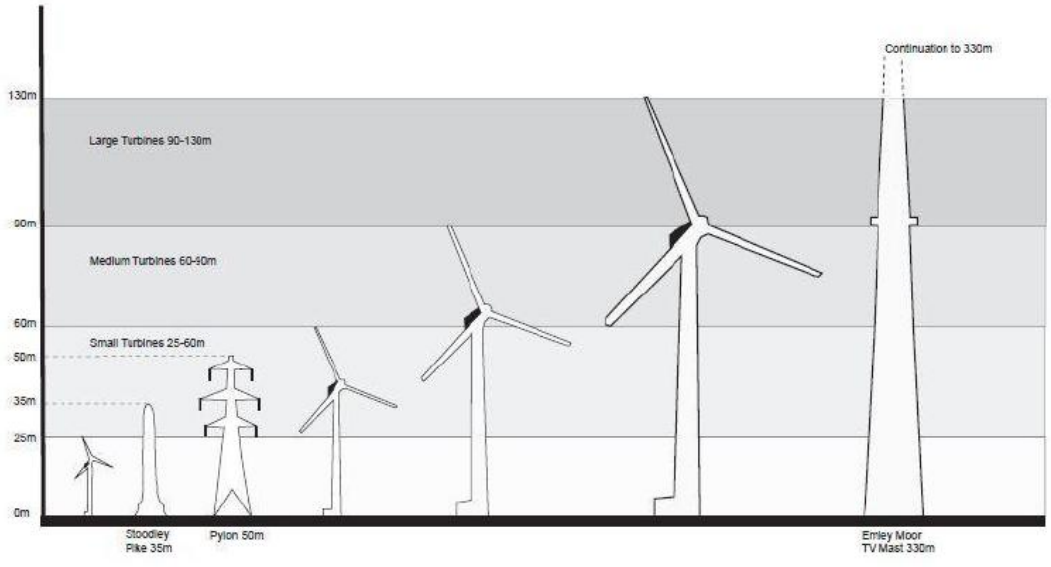
The position of the turbines has been determined following a detailed assessment of the land defined within the ownership boundary. A number of controlling factors were carefully considered to determine potential locations within the site.

The proposed layout takes into account environmental constraints and technical constraints. Further details of the site layout are illustrated on the accompanying site plan drawing.

6.4 Scale

The proposed development consists of a Endurance E-4660 wind turbine measuring a maximum of 36.6 metres to blade tip. The maximum technical parameters of the proposed wind turbine are shown in the table below:

Model	Endurance E-4660
Rotor Diameter	23.5m
Hub Height	24.8m
Tip Height	36.6m
Number of Blades	3



6.5 **Landscaping**

In the case of this proposed wind energy proposal, it is not considered that new planting is a particular requirement, since the loss of vegetation is minimised by the small footprint occupied by the wind turbine and associated infrastructure. New planting is also less effective at screening an individual wind turbine from a range of locations.

6.6 **Appearance**

The turbine has a colour code of RAL 7003. In almost every region worldwide, the mandatory colour for wind turbines is white, and other colours are specifically prohibited. EWP manufacture standard colours, and they are accepted in all the areas in the world. It is important to note that the colour for the nacelle and blades is built-in during the manufacturing process and cannot be changed. Alternate colours would absorb more solar radiation, accelerating the deterioration of the finish and increasing generator cooling requirements in warm weather. As well, the blades are accurately balanced during manufacturing, and subsequent painting would significantly change the weight and balance of these key components

6.7 **Access and Transport**

Access to the site will utilise Mossley road. The route does not include any tight bends and has already been used by HGV vehicles to access the farm.

The wind turbine would be accessed from the road along the field boundary containing the turbine and entirely within the applicant's landholding. Upgrades would be carried out to the access track where necessary to meet the specifications.

It is intended that the wind turbine components will be delivered to site from a suitable port from where they will be loaded onto vehicles and transported to the site. Due to the small scale nature of the turbine, its components can be easily transported to the site on standard articulated vehicles. This allows all construction traffic to use existing public access roads regularly used by HGVs and farming vehicles without any modifications to public highways.

The construction of the turbine will involve the intermittent movement of several vehicles to the site over a short period of the construction phase. Construction phase traffic movements are contained to two well defined time frames around the civil works and the turbine installation. The anticipated individual deliveries per turbine and traffic movements are set out in the table below.

Civil Works (5-7 days)	13T excavator (kept on site)
	Vibrating roller (kept on site)
	2 no. 4x4 or vans transporting civils team (daily)
	Flat bed delivering reinforcing steel (Day 1)
	Concrete jaeger (8 deliveries during Day 4)
	Concrete jaeger (2 deliveries during Day 5)
Turbine Installation (4-5 days)	3 no. 4x4 or vans transporting install team (daily)

	55 tonne city crane (2 days)
	80 tonne city crane (3 days)
	Telehandler (kept on site)
	2 x Standard road going articulated vehicles with 50ft trailers delivering tower sections (Day 1)
	2 x Standard road going articulated vehicle with 40ft trailer delivering nacelle and blades (Day 1)
	80 tonne city crane (Day 1 and Day 2)
	55 tonne city crane (Day 1 and Day 2)
	1 x Small skip delivery (1 day)
	1 no. 7.5T Flat bed lorry with collection of shipping frames to return to factory

There will be no real requirement for on-site parking although any vehicles will be able to temporarily park at the site either at the land adjacent to the turbine.

During the development's lifetime, access is required to the turbine occasionally for operation and maintenance purposes by a 4 x 4 or equivalent size vehicle. However, visits are likely to be infrequent and so there will be a limited amount of additional traffic to the site during the operation phase. It is estimated that this would equate to three to four vehicle movements per year.

6.8 Decommissioning

The design of the wind turbine and the choice of location have been consciously made to facilitate ease of dismantling of the equipment and restoration of the site at the end of its useful life. Scheduled maintenance will be required and measures will be taken to ensure this is carried out in accordance with health and safety requirements and to protect the safety and security of the public. There is no objection to the imposition of a planning condition requiring removal of the turbine at the end of its operational life and reinstatement of the land to its former condition.

7 Key issues

7.1 Landscape and Visual Impact

A separate report has been produced (LVIA) that accompanies the application. This includes:

- A desktop assessment of the existing landscape conditions and research of potential visual receptors
- Preparation of Zone of Visual Influence (ZVI) plans for the proposed wind turbine to evaluate an appropriate study area and viewpoint locations
- Site visit to verify landscape conditions and carry out viewpoint photography;
- Production of photomontages and wireframes; and
- Assessment and reporting of potential effects.

7.2 **Cultural Heritage**

As with any application, consideration should be given to any impact on the character of heritage assets, be they scheduled monuments or listed buildings. The surrounding heritage assets within 1km of the proposed wind turbine are illustrated on the map below

This section presents an assessment of the potential impact of a proposed wind turbine on designated heritage assets within the surrounding area. Designated cultural heritage assets include Scheduled Monuments, Listed Buildings, Conservation Areas, Historic Parks and Gardens, Battlefields, World Heritage Sites and archaeological sites.

Relevant guidance is found in the Planning (Listed Buildings and Conservation Areas) Act 1990; National Planning Policy Framework (NPPF) Chapter 12, Conserving and Enhancing the Historic Environment, paragraphs 126-141. Supporting guidance is provided by the National Planning Policy Guidance (NPPG) and PPS5 Historic Environment Practice Guide. English Heritage has also published a suite of guidance relevant to the present application, including:

- Wind Energy and the Historic Environment (2005)
- Conservation Principles (2008)
- The Setting of Heritage Assets (2011

Paragraph 128 of the NPPF states that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting.

Paragraph 129 of the NPPF states that local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including development affecting the setting or a heritage asset)…they should take this assessment into account when considering the impact of a proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposals.

Section 12 of the NPPF relates to conserving and enhancing the natural environment. Paragraph 131 states that in determining applications local planning authorities should take account a number of criteria, in particular the desirability of sustaining and enhancing the significance of heritage assets.

Paragraph 132 of the guidance states that: "Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm or loss to a Grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance, notably scheduled monuments, protected wreck sites, battlefields, Grade I and II* listed buildings, Grade I and II* Registered Parks and Gardens and World Heritage sites should be wholly exceptional."

Paragraph 134 of the NPPF states that:

"Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use"

The setting of a heritage asset is defined within the NPPF as the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its

surroundings evolve. Elements of setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

Significance is defined as: The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

Methodology

In assessing the effects on designated heritage assets, the NPPF applies a balancing exercise, where harm to the significance of the designated assets is assessed, and then weighed against the public benefits of the development. As any such 'harm' to the identified heritage assets is considered to equate to 'less than substantial' harm, this would be outweighed by the clear benefits of the proposed development, in respect of its renewable energy credentials.

A desk-based assessment of designated heritage assets within 1km of the proposed turbine and within the ZVI has been carried out. Potential impact on all Grade I and II* Listed Buildings, Scheduled Monuments, within 1km have been assessed. This desk based research involved data collected from the following sources:

- English Heritage's Pastscape website
- National Heritage List for England from English Heritage
- Defra Magic Map

The main issues to consider are the impacts that the proposed development would have on the significance and the setting of the heritage assets close to the application site. In identifying potential impacts or the degree to which harm can be identified, impacts on heritage assets resulting from the proposed development can be direct or indirect.

A direct impact implies the permanent alteration or loss of all or part of an asset, or in the case of a Conservation Area, development within it. For example, construction activities may include ground-disturbing excavations for turbine foundations, cable trenches and access roads.

Indirect impacts relate to the effect upon the setting of an asset. This may relate to the proposed development reducing views to or from cultural heritage sites with important landscape settings.

Where the proposed development will intervene in views and panoramas judged to contribute to the significance of the asset, care must be taken in assessing potential impacts. It is not necessarily the case that simply because a heritage asset will be visible from an asset or lie within a certain distance from an asset, that this will affect its significance.

Annex 2 of the NPPF defines the setting of a heritage asset as: "The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surrounding evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral."

In forming this assessment, the following grades of significance have been used:

- Exceptional significance – resources which can be demonstrated to have international or national significance, special relevance to British history or culture, and/or are of extraordinary or unique archaeological, architectural, artistic or historic merit. This will include World Heritage Sites, Scheduled Ancient Monuments (or those monuments which otherwise meet scheduling criteria) all Listed Buildings Grades I and II*, Registered Historic Parks and Gardens Grades I and II*, and Registered Historic Battlefields;

- Considerable significance – resources with importance within a national or regional context, due to special archaeological, architectural, artistic or historic interest. This category will include Conservation Areas, Grade II Listed Buildings and Registered Parks and Gardens Grade II;

- Moderate significance – resources of local importance. This might include heritage assets with archaeological, architectural, historic or artistic interest, but which do not meet the criteria for designation; and

- Slight significance – resources of limited local importance, due to their high frequency, lack of provenance or limited survival. This might include resources of local significance that have been partially destroyed by past land use, whether by agricultural activity or previous built development.

The impact of the proposed wind turbine development on nearby heritage assets has been determined. In carrying out this assessment and determining the level of impact, the following five point scale has been used:

- Substantial – elements which contribute to the significance of the heritage asset, including its setting, are substantially harmed or lost;

- Moderate – elements which contribute to the significance of the heritage asset, including its setting, are harmed;

- Slight – there is change to elements which contribute to the significance of the heritage asset or its setting, but that harm is minimal;

- Beneficial – those elements which contribute to the significance of the heritage asset, including its setting, are enhanced or better revealed; and

- No change – no change.

Assessment of Effects

The following subsection outlines all of the heritage assets which have been considered in this assessment, along with a description of the designated sites and the classification of their significance. An evaluation has then been formed as to the impact of the proposed wind turbine on each of the identified sites.

Listed buildings and Archaeology within 1km of the proposed turbine

Reference	Name	Grade	Distance from nearest Turbine Km	Impact on Setting
1191616	TAKE OFF STONE APPROXIMATELY 250 METRES SOUTH OF JUNCTION WITH MOSSLEY ROAD	II	0.41	The ZTV Diagram (Appendix 1) illustrates that the turbine will be will be visible from this asset. However due to the large trees between the asset and the proposal there will be no impact on the setting.**No Change**.

Conclusion

The proposed turbine is a feature in the wider landscape but does not significantly affect the setting of the surrounding heritage assets.

There is not anticipated to be a significant intervisibility between the proposed development and the heritage assets identified within the 1km study area. This is generally due to the effects or rising foreground and the effect of tree cover within the surrounding area.

It is therefore concluded that there will be no harm caused to the surrounding heritage assets and their setting from the proposed wind turbine development.

7.3 Noise Impact

A report outlining the predicted operational noise levels has been prepared and accompanies the application. The report concludes that the noise levels will fall within the acceptable noise level limits as indicated with ETSU-R-97 guidelines.

7.4 Ecology

A Separate ecology report has been produced and will accompany the application.

7.5 Radar and Aviation

It is possible for some wind turbine developments to have adverse effects on aviation operations. In some areas, wind turbines may represent a risk of collision with low flying aircraft or they may interfere with the operation of radar equipment.

Potential aviation issues have been considered in full during the development of this proposal. Using the conclusions of all internal assessments, it is not anticipated that the proposed wind turbine development would impact negatively on any existing aviation operations.

7.6 Telecommunications and Utilities

Wind turbines have the potential to cause electro-magnetic interference if they are sited inappropriately with respect to telecommunications links and utility infrastructure. Suitable siting of a wind turbine can usually mitigate any possible impacts to avoid any interference. The turbine has been sited in this instance to avoid all known telecommunications links and utility infrastructure, and therefore no adverse impacts are anticipated. Consultation with Ofcom and the JRC has been carried out pre planning and has raised no objections.

7.7 Shadow Flicker

Potentially under certain combinations of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off; the effect is known as 'shadow flicker'. Even though this effect is extremely rare, it should be taken into consideration when siting a wind turbine and impacts can usually be completely avoided by appropriate micrositing.

Only properties within 10 rotor diameters and located 130 degrees of north relative to the turbine can be affected at latitudes in the UK. It is generally accepted that some degree of shadow flicker is acceptable, but that limits should be imposed to restrict the number of hours per year at which the property is affected. Shadow flicker will not occur in periods of full cloud cover and its impact will be reduced in overcast skies.

The impact of shadow flicker on residences in the vicinity was considered thoroughly during the positioning of the development and is demonstrated on the accompanying shadow flicker diagram illustrating there will be no impact.

7.8 Public Rights of Way and Highways

Guidance from various organizations suggests that a separation distance equating to the overall height (including the blades) plus 10% should be maintained between a wind turbine and any public highway boundary. This clearance has also been applied to all other public footpaths.

The nearest public road to the proposed wind turbine is located 103m at its closest point to the North of the proposed wind turbine.

All clearances between public routes and the proposed wind turbine are compliant with requirements and therefore the development is believed to be appropriately sited with regard to this material consideration.

8 Conclusion

The firm position of Central Government energy and planning policy remains that of strong principle in support of renewable energy production, including wind energy development. There is a wealth of policy and advice on renewable energy set out in various Government and other publications. The European Union Renewable Energy Directive confirms a binding target of 20% of EU energy coming from renewable sources by 2020. The UK is expected to make a 15% contribution towards this. The UK Renewable Energy Strategy (July 2009) confirms that if this is to be achievable, it will require more than 30% of the UK's electricity generation to come from renewable sources (by 2020).

The NPPF is clear that installed renewable energy capacity has an important role in combating climate change by reducing greenhouse gas emissions, and that renewable energy in principle is to be encouraged through the planning system. The NPPF is also clear in its support because it identifies renewable energy development, as central to its over-riding objective of sustainable development. As the NPPF forms Central Government's planning policies, it is a material planning consideration to which significant weight should be attributed.

The proposed development has been assessed against planning policy and other material considerations. The proposed development fully complies with the policy requirements of the National Planning Policy Framework and the development plan both in terms of specific policy tests and the contribution towards sustainable development.

The applicants are taking positive steps to minimise their reliance on non renewable energy without adversely affecting the amenity of nearby residents or having a negative impact on the landscape. The application is supported by a robust evidence base which demonstrates the harm posed by the proposal is minimal and restricted to the immediate area around the turbine, being within acceptable limits when assessed from all receptors. Any minimal harm is far outweighed by the benefits of the proposed development, resulting in a sustainable development.

Furthermore, the CO_2 savings associated with the proposal will make a significant contribution to climate change mitigation. In conclusion, the benefits associated with this project outweigh any impact. We feel that the proposal will not have any negative effect on the local landscape due to the construction, design, materials and finishes to be used on the proposal. It is hoped that the information provided herein gives sufficient detail on the proposed development. However, should anything further be required please do not hesitate to contact DC21.