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Design, Access and Planning Policies Statement

**IN SUPPORT OF THE PLANNING APPLICATION FOR THE
ERECTION OF AN ENDURANCE E3120 WIND TURBINE
ON LAND AT
THE HILLS FARM, LONGRIDGE, PRESTON, PR3 2YX**

November 2012

Prepared By



Project Quality Control Sheet

ORIGINAL	Author	Checked by	Approved by
Signature			
Date	31/10/2012	31/10/2012	05/11/2012
Company	Aardvark EM Ltd	Aardvark EM Ltd	Aardvark EM Ltd

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Grid Reference: NGR: 362257,438552

Project Manager: Phil Cookson MSc

Report Authors: Phil Cookson MSc
Jon Pettitt MSc AIEMA

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Report Written and Produced By

Aardvark EM Limited, Higher Ford, Wiveliscombe, Taunton, Somerset, TA4 2RL

Telephone: 01984 624989, Facsimile: 01984 623912

Email: environment@aardvarkem.co.uk, Web: www.aardvarkem.co.uk

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1 Executive Summary

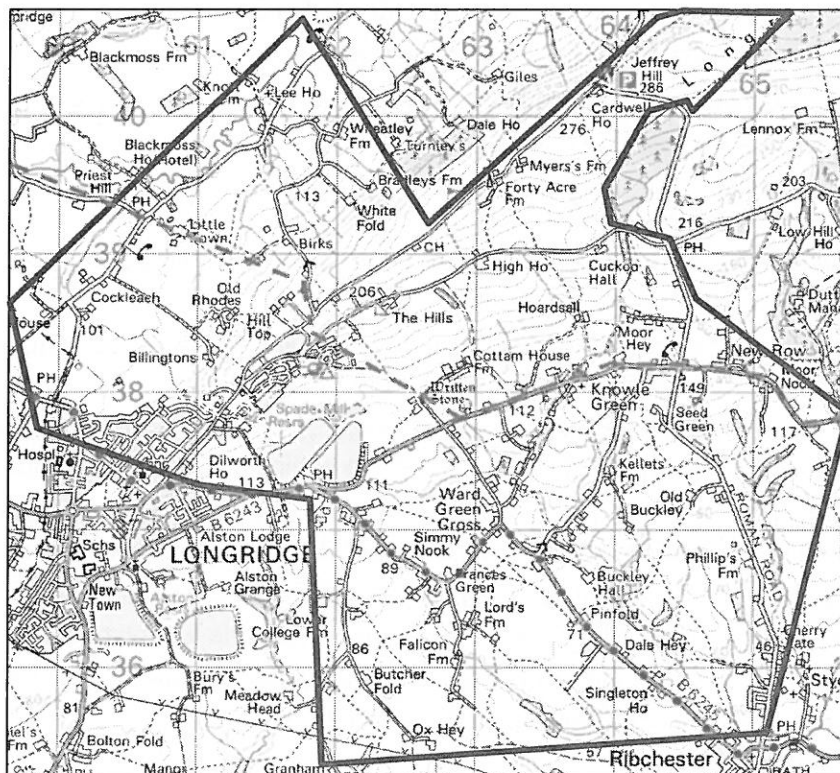
This report supports the Planning Application by Aardvark EM Ltd, on behalf of Mr and Mrs Proctor of The Hills Farm, to Ribble Valley Borough Council for consent to develop a single wind turbine on land owned by Mr and Mrs Proctor "the Applicant". The full National Grid Reference for the location of the proposed turbine base is 362257,438552, on the very outskirts of 803km² the Forest of Bowland Area of Outstanding Natural Beauty (FoB AoNB) territory.

The proposed wind turbine would be 34.5m to blade tip and so classed as a small-scale turbine withing the FoB AoNB Renewable Energy Position Statement.

The Applicant is required by both Arla Foods and Tesco to reduce their farming carbon emissions; such reductions will secure the Applicant's milk supply contracts in 2013 and beyond. Carbon emission reductions have already been delivered by the Applicant; the proposed turbine would deliver a further 13% reduction in annual farm carbon emissions.

It has been assessed that there would be some locations from which **significant** and **moderately significant adverse visual** impacts would be received when viewing the proposed turbine from the two country lanes and footpaths, golf course and open access land along the lower part of the ridge and the south-eastern slopes of Longridge Fell above the Lower Ribble Valley, within 11km² of the 803km² of the Forest of Bowland AoNB (AoNB boundary denoted by the blue hashed line below).

Locations within a further 10km² outside of the AoNB boundary would receive **moderately significant visual** impacts, due to the formal educational messages and societal informal awareness about energy resilience and security, farm diversification and carbon emissions' reductions that views of the proposed wind turbine would provide.



It has been assessed that there would be some locations from which ***moderately significant*** adverse visual impacts could be received on days with excellent visibility when viewing the proposed turbine from the south-easterly and easterly facing slopes of Parlick and Beacon Fell and the lower Loud Valley, north-west and west of Chipping, located within a further 25km² of the AoNB territory.

It is assessed that locations in only 4.5% of the 803km² Forest of Bowland AoNB territory could receive significantly or moderately significant adverse views of the proposed wind turbine. These views of the moorland fringe and improved grassland, at the very edge of the AoNB boundary, also include farm buildings and telecoms masts in the foreground and the plains below, with major built development of Preston North End football stadium, BAE Systems airfield and industrial sheds and other major commercial and industrial estates, Preston and the surrounding villages all clearly visible.

On balance, it is concluded that the continuation of the commercial viability of the dairy farm outweighs these likely adverse visual impacts, which would not cause *unacceptable* harm to the viewers' appreciation of the natural beauty and special qualities of the Longridge Fell, Longridge Fell Fringes and other local landscapes.

This report describes that the proposed wind turbine would:

- be located on land owned by the Applicant with no Title Deed restrictions to development;
- be in conformity with:
 - The National Policy Framework, March 2012;
 - The Development Plan encompassing the North West Regional Spatial Strategy (2008) and Ribble Valley District Wide Local Plan;
 - The Ribble Valley Draft Core Strategy;
- generate electricity equivalent to that used by up to 43 households per annum, based on an average wind speed of 6.5m/s.

Design and access headlines

- the candidate turbine is an Endurance E3120 turbine, with a 24.8m hub height and total height of 34.5m to the vertical blade tip;
- The longest length of the two delivery vehicles to the site will be 15m, requiring no widening or removal of any highways or access points;
- A new farm track and crane pad (totalling 425m²) will be constructed from the gateway on Higher Road to, and at the turbine site; the turbine base will be an additional 36m²;
- The power from the proposed turbine will directly supply the applicant's on-site demand and will be connected to the National Grid so that any surplus power can be exported;
- Temporary fencing will be constructed around the development area during construction and decommissioning. There will be no fencing around the turbine post-development;
- Infra-red aviation lights will be situated on the turbine, to be agreed with the relevant authorities. No other lighting will be installed.

Appraising the context of the proposed turbine

- It is assessed that the installation of the proposed turbine would result in an insignificant landscape impact on the National Character Area (NCA) 33: Bowland Fringe and Pendle Hill; and to have a moderately significant adverse impact upon the Moorland Fringe Landscape Character Area (LCA) 4f Longridge Fell Fringes and the Forest of Bowland Landscape Character Type (LCT) Moorland Fringe Longridge.
- It is assessed that the installation of the proposed turbine would result in significant adverse visual impacts from within approximately 11km² of the Forest of Bowland Area of Outstanding Natural Beauty (AoNB), as illustrated by the photomontages from Higher Road above Fell House Farm, and Longridge Fell above the layby at Jeffrey Hill.
- It is also assessed that the installation of the proposed turbine would result in moderately significant, adverse visual impact upon some receptors within a further 25km² of the AoNB in the lower Loud Valley, as illustrated by the photomontages from Fell Foot and Beacon Hill Country Park; and from the lanes and footpaths on the south-eastern slopes of the lower Longridge Fell, as illustrated by the photomontage from Knowle Hill Green Village Hall.
- Views from receptors including the garden at the Alston Arms and the Corporation Arms, the entrance to Green Bank Park on Old Clitheroe Road, the Beacon Reach Education Centre, and Ward Green Lane have also been assessed as moderately significant, though the impact is considered neutral. Views from the footpath stile at Fell House and Myers Farms, the AoNB boundary along Clitheroe Road above Huntongdon Hall and from east of Chipping, the Ribble Valley Way, in and around the historic town of Ribchester and on the A59 east of Copster Green were not significant.
- The cumulative impact of the proposed turbine at The Hills Farm and the wind turbine proposed at Dilworth Brows had consented at Dutton Doghouse, have also been assessed as part of the Landscape and Visual Impact Assessment (LVIA):-
 - The addition of the proposed turbine to other proposed would add a slight adverse impact to the surrounding landscape, however this impact is not considered to be significant due to the medium sensitivity of the landscape;
 - The cumulative visual impact of the proposed turbine and other proposed at Dilworth Brows has been assessed from each of the viewpoints through the use of photomontages. The cumulative visual impact has been assessed to be of moderate, adverse significance from viewpoints at Higher Road above Fell House Farm, Longridge Fell above Jeffrey Hill and the garden at the Alston Arms. The cumulative visual impact has been assessed to be of moderate, neutral significance from other viewpoints, including the entrance to Green Bank Park on Old Clitheroe Road and the Corporation Arms. From all other viewpoints the cumulative impact of the proposed turbine in addition to that proposed at Dilworth Brows is not significant.
- A Phase 1 Ecology Report concludes that there are no constraints to the siting of a wind turbine at the proposed location due to wildlife policy and legislation. No examples of BAP Priority Habitat, fragile plant communities, rare or protected plants were found within range of the site that would require consideration. The site was also assessed as having negligible habitat value for nesting birds. Whilst the site falls within the Bowland Fells Important Bird Area (IBA) the site is not considered to support the trigger species for which the IBA is designated. No further ecological surveys are required.

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- The proposed turbine will have no adverse shadow flicker impacts on other residences, on any in-field archaeology, or constitute a significant alteration to the existing in-field drainage.
- The height above sea level of the proposed turbine site is 205m. The hills and ridges to the east and north-east rise up to 350mAOD. North and north-west of the proposed turbine site the landscape drops down to the Loud Valley and then rises up onto the fells over 6.5km away. The land falls away to the south along the slopes of the Ribble Valley, and to the west towards the town of Longridge. The top tip of the turbine will be 240mAOD approx. and therefore will not penetrate the skyline from views over the Ribble Valley from the A59 to the south-east, against the background of the higher fells to the north, or from views from the north-west against the higher ground to the south-east of the proposed turbine.

The proposed turbine would provide an appropriate form and amount of renewable power to meet the needs of the applicant's low carbon business contracts and farm diversification without causing significant and moderately significant landscape and visual impacts from within more than 4% of the Forward of Bowland Area of Outstanding Beauty and so complies with all relevant national and local Planning policies, including Policy ENV26 of the Ribble Valley Local Plan (1998) and Forest of Bowland Area of Outstanding Natural Beauty Renewable Energy Position Statement (2011).

2 Introduction

2.1 The Site

The location of the site for the proposed turbine is at The Hills Farm, Longridge, as shown in Figures 1 and 2 (Appendices 1 and 3); the National Grid Reference (NGR) is 362257,438552.

The height above sea level of the proposed turbine site is 205m, with the Longridge Fell rising up to 350m.

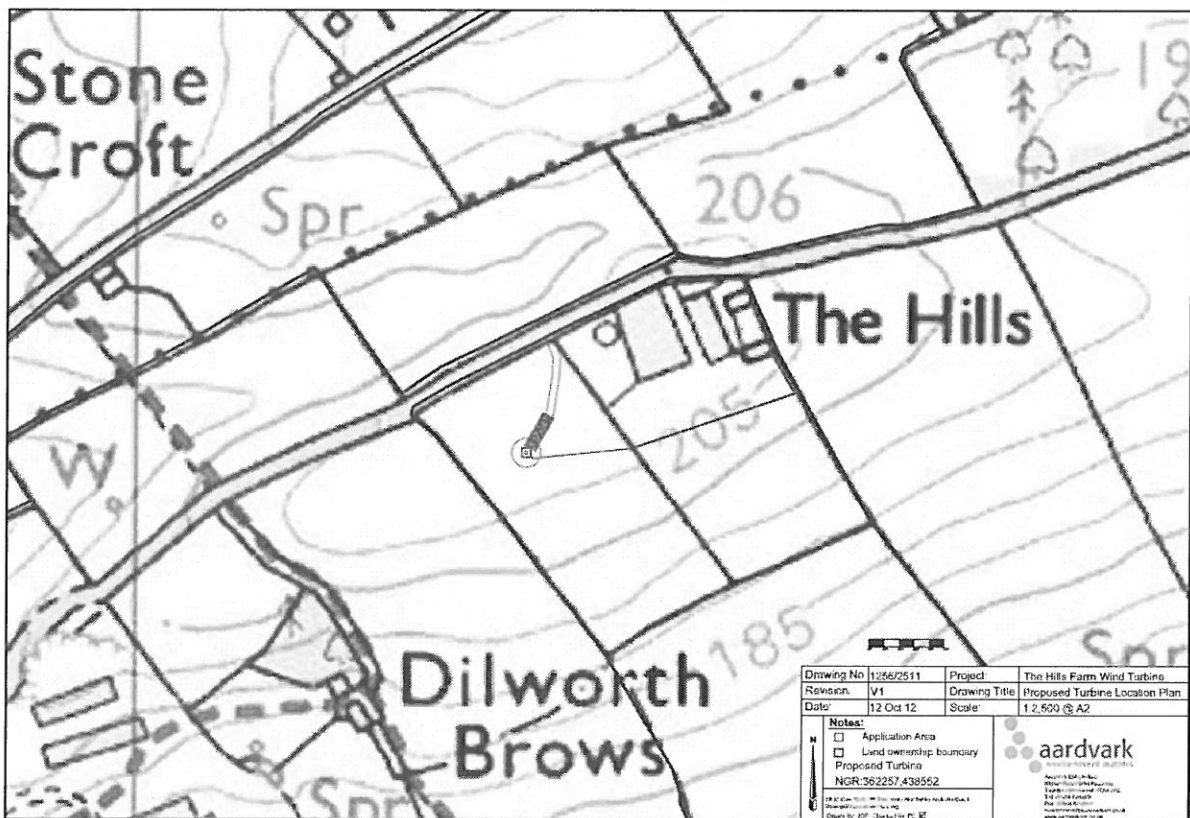


Figure 1: Location Plan

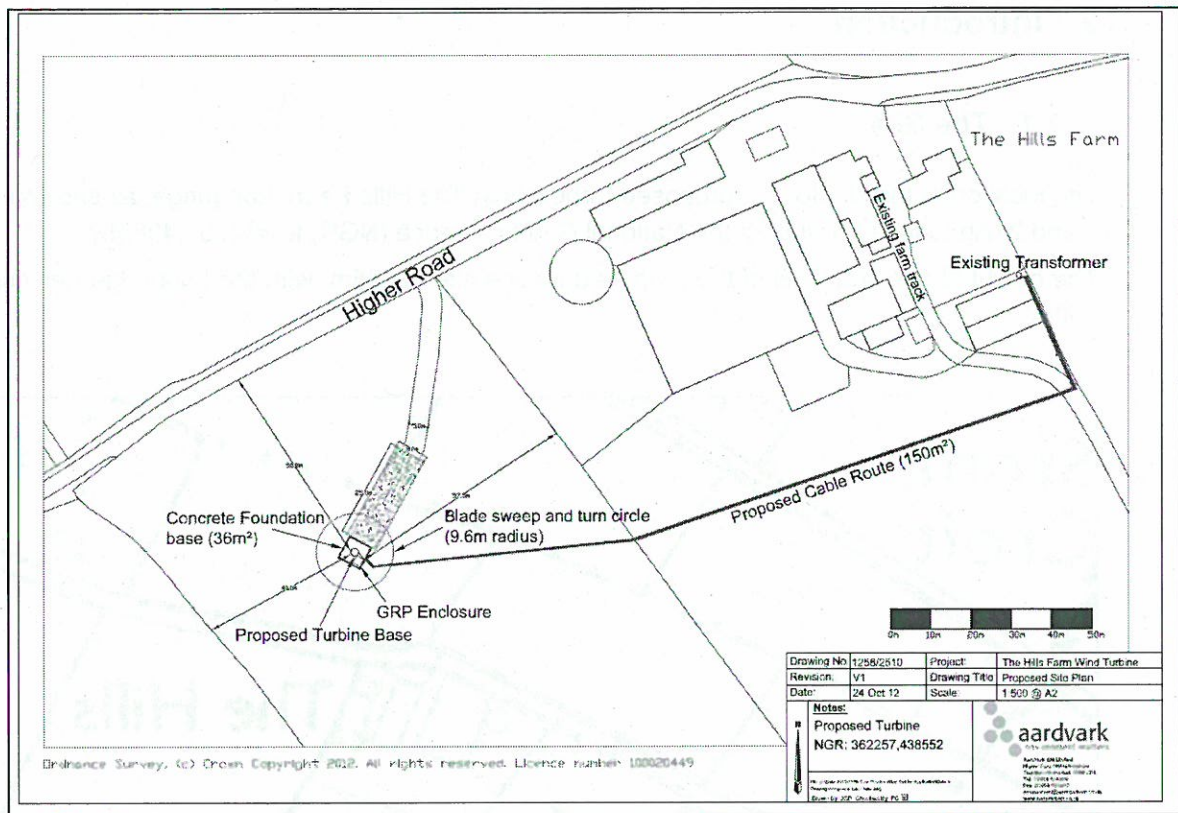


Figure 2: Proposed Turbine Site Plan

The site is owned by the Applicant, as shown by the blue line boundary shown in Figure 1.

The proposed access to the site is from Higher Road and through the farm yards. The proposed development would be 200m from the nearest residential dwelling unconnected with the Applicant.

The site falls within the Forest of Bowland Area of Outstanding Natural Beauty (AoNB) and the Bowland Fells Important Bird Area (IBA).

2.1.1 Site Selection

The site has been selected primarily because it is owned by the Applicant and is situated in the field next to the Applicant's farm buildings. There are no restrictive covenants on future use of the land, nor rights of access by any Third Party.

3 Use

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3.1 Development in Relation to Current and Future Land Use

The site is currently a semi-improved grass field used for grazing dairy cows. The proposed development would bring 36m² of the field into additional productive use, generating renewable power to reduce the net carbon emissions of the Applicant's businesses. The small footprint of the proposed turbine and access track will enable the current grazing of stock in the field to continue.

3.2 Contractual imperative

The milk produced by the Applicant is purchased by Arla Foods on behalf of Tesco. Both companies have initiatives to reduce their carbon emissions.

Tesco has introduced various carbon reduction initiatives under the company's primary environmental aim to become a zero-carbon business by 2050. One of the ways Tesco is achieving this aim is by reducing carbon emissions made through their supply-chain businesses; Tesco has calculated the carbon footprint of over 400 of Tesco's dairy farms, and is actively encouraging farmers to pursue measures to reduce their carbon emissions. As a consequence of Tesco's strategy, Arla Foods is currently defining a standard for sustainable dairy production scheduled to come into force into 2013. Future milk procurement contracts depend upon suppliers, like the Applicant, reducing their carbon footprint. The Applicant has already improved the milk output per quantity of feedstock, thus reducing the kg of methane per litre of milk produced. Installation of a wind turbine would enable the Applicant's contract with Arla Foods and Tesco to continue.

3.3 Current Carbon Footprint and Technology choice

Emission/Saving Source	tCO ₂ e
Energy	59.831
Fertiliser (nitrogen only)	131.308
Dairy cows, cattle and sheep	540.925
Other livestock (ducks and turkeys)	39.631
Total Gross Emissions 2011/2012	830.645
Proposed Wind Turbine	106
Total Projected Carbon Emissions 2013/2014	724.645

Figure 3: The Hills Farm summary carbon emissions from the Carbon Accounting for Land Managers calculator

The applicant has selected an Endurance E3120 wind turbine, as the wind turbine's efficiency, low cut-in speed (3.5m/s or 7.8mph), electricity generation rating and projected power generation is assessed to contribute a 13% reduction in the Applicant's fossil fuel carbon emissions. Whilst the fossil fuel carbon emissions will not be completely mitigated, to achieve this, a larger or more wind turbines would be required and the Applicant accepts that this would cause unacceptable landscape and visual impacts.

The financial investment and economic returns from installing alternative renewable technologies, such as solar PV or anaerobic digestion mean that such projects are not commercially viable.

3.4 Electricity Generating Capacity

Based upon modelled data (Figure 4), the proposed development of the Endurance E-3120 wind turbine, at an average wind speed of 6.5m/s (@ 25m agl; Source: National Wind speed Database), would generate approximately 195,000kWh renewable power (c.106 tonnes CO₂e) annually. This is the equivalent of 43 average UK households, should they each consume 4,500kWh annually.

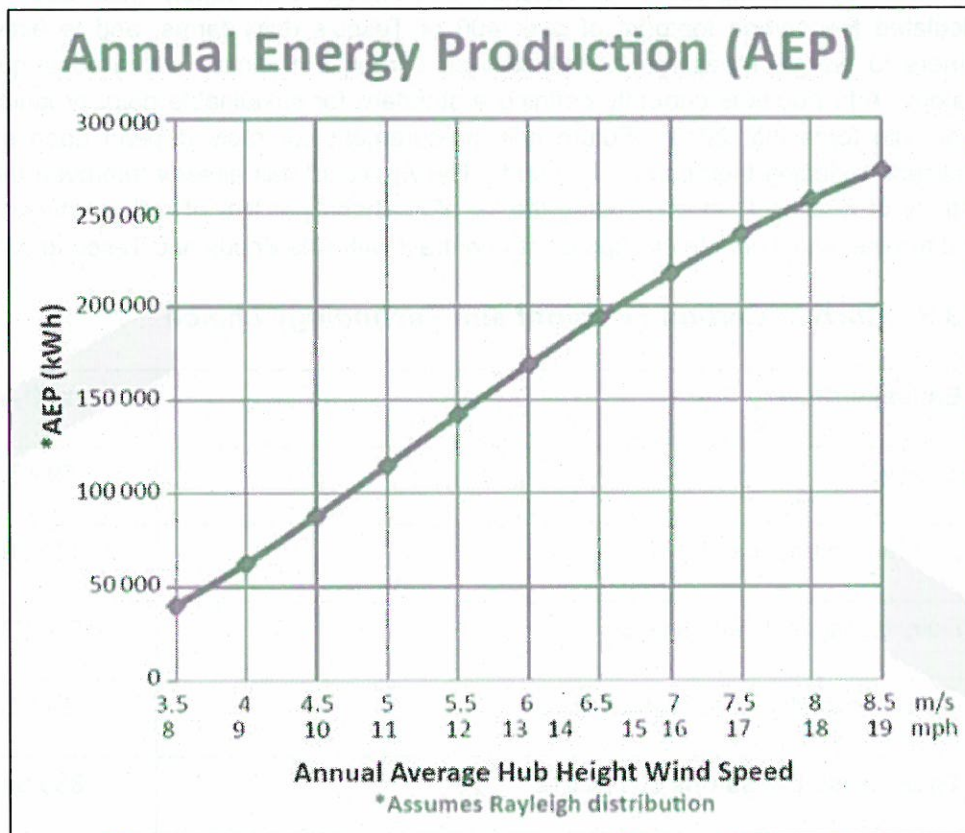


Figure 4: Summary of Endurance E-3120 Annual Energy Production for a range of mean annual wind speeds (Source: Endurance)

4 Amount, Scale, Appearance and Access

The application proposes the erection of a single Endurance E3120 wind turbine. Details of the specification, materials and appearance of the turbine are set out in the Endurance E3120 specification documents, including the to-scale elevation drawing (Appendix 4) and foundation details drawing (Appendix 5).

The height from ground to top-tip is 34.5m (Figure 5). The 24.8m tower is steel and the blades are fibreglass and epoxy.

The turbine foundations will be 36m². The proposal does not require any levelling of the application area.

The longest length of the two delivery vehicles to the site will be 15m, requiring no widening or removal of any highways or access points. The existing curve area of the lane and farm entrance is more than adequate for the delivery vehicles, which would be no larger than existing visiting agricultural haulage vehicles. In addition, a new farm track (425m²) will be constructed from the farmstead to the turbine site to enable the crane to easily access the field (Figure 2, Appendix 3, Proposed Site Plan).

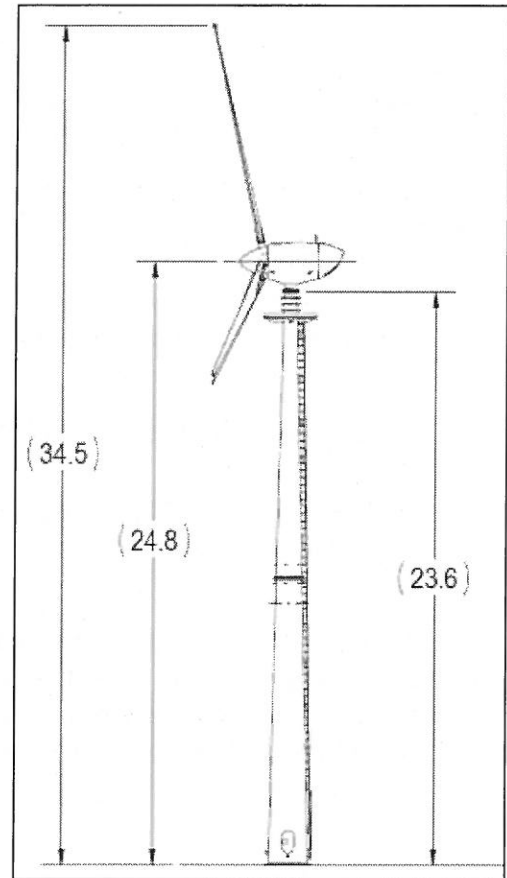


Figure 5: Elevation Drawing

(Source: Endurance)

5 Planning Policy context and assessment conclusions

The Hills Farm site is approximately 2km north east of Longridge within the Borough of Ribble Valley.

The development plan comprises the North West Regional Spatial Strategy (2008); the Ribble Valley District Wide Local Plan (1998) and the National Planning Policy Framework (2012). Given the age of the Local Plan, it can have only limited weight. The Core Strategy has yet to reach a stage where the policies can be applied with any significant weight.

There is no Lancashire Structure Plan, however there is interim policy advice regarding Landscape and Heritage.

The site is subject to the following designations:

- The Hills Farm house is Grade II listed, as is the neighbouring farm house at Dilworth Brows; and
- The site lies within the Forest of Bowland AONB for which there is a "Renewable Energy Position Statement" (2008).

Whilst the need to assess the impact of wind turbine developments is recognised by both national and local policy, it is clear that significant importance is attached to the contribution renewable energy developments make to strategic sustainable development targets. Government policy set out in the National Planning Policy Framework (NPPF) 2012 below strongly advocates a positive policy infrastructure.

5.1 National Policy

National planning policy is now contained within one single document, the National Planning Policy Framework (NPPF) *March 2012*.



National Policy
Framework *March 2012*

The NPPF encourages a proactive and supportive approach to economic development and renewable energy projects.

Paragraph 17 of the NPPF states:

At the heart of the National Planning Policy Framework is a **presumption in favour of sustainable development**, which should be seen as a golden thread running through both plan-making and decision-taking.

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This means planning authorities should, when decision-taking:

- approve development proposals that accord with the development plan without delay; and
- where the development plan is absent, silent or relevant policies are out-of-date, grant permission unless:
 - any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the NPPF taken as a whole; or
 - specific policies in the NPPF indicate development should be restricted.

Paragraph 7 explains that the planning system should facilitate sustainable development and has 3 dimensions: social, economic and environmental:

- **Economic Role** Planning should contribute to building a strong, responsive and competitive economy. There should be sufficient land to identify and coordinate development and support innovation and technology. This will apply to infrastructure provision.
- **Social Role** Planning should support strong, vibrant and healthy communities.
- **Environmental Role** Planning should contribute to the prudent use of natural resources and **help to mitigate and adapt to climate change including moving to a low carbon economy.**

Paragraph 17 of the NPPF sets out 12 core planning principles, including:

- proactively drive and support sustainable economic development;
- support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and **encourage the use of renewable resources (for example, by the development of renewable energy);**
- contribute to conserving and enhancing the natural environment and reducing pollution;
- encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production);

Paragraph 18 explains that the Government is committed to securing economic growth and to **meeting the twin challenges of global competition and of a low carbon future.**

Paragraph 28 requires planning policies to **support economic growth in rural areas** by taking a positive approach to sustainable new development. To promote a strong rural economy, planning should:

- support the sustainable growth and expansion of all types of business and enterprise in rural areas;
- promote the development and diversification of agricultural and other land-based rural businesses.

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Paragraph 93 states that, central to the economic, social and environmental dimensions of sustainable development, planning plays a key role in:

- helping to secure radical reductions in greenhouse gas emissions,
- minimising vulnerability and providing resilience to the impacts of climate change, and
- supporting the delivery of renewable and low carbon energy and associated infrastructure.

Paragraph 97 states that there is **a responsibility on all communities** to contribute to energy generation from renewable or low carbon sources.

Local planning authorities should:

- have a positive strategy to promote energy from renewable and low carbon sources;
- design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources;
- support community-led initiatives for renewable and low carbon energy, including developments outside such areas being taken forward through neighbourhood planning; and
- identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

Paragraph 98 deals with the determination of planning applications, stating that local planning authorities should:

- not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and
- approve the application if its impacts are (or can be made) acceptable.

With regards to development within AONBs, NPPF paragraph 115 requires greater weight to be given to conserving landscape and scenic beauty within Areas of Outstanding Natural Beauty.

In paragraph 116 it states that planning permission should be refused for major developments in these designated areas except in exceptional circumstances. The proposals for a turbine at The Hills Farm do not constitute "major development".

In paragraph 123 the NPPF deals with the development impacts of noise and states that planning policies and decisions should aim to avoid significant adverse impacts on health and quality of life from noise and seek to mitigate noise impacts of new development.

Conclusion

The new NPPF wholeheartedly supports renewable energy development. The government view is clearly that planning is fundamental to facilitating the national carbon reduction strategy.

The NPPF prioritises sustainable economic development, and positively supports rural economic projects such as farm diversification. The policy is to balance the competing interests of economics,

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climate change, energy requirements, local amenity, visual and landscape impacts and wildlife and nature conservation to achieve acceptable development.

The NPPF seeks to promote community involvement in the planning system and goes so far as to say that there is a responsibility upon communities to contribute to the generation of energy from renewable/low carbon sources.

Whilst existing local plans from 2004 remain valid for the next 12 months, where they are silent or out-of-date in respect of their renewable energy policies, the expectation is that renewable projects should be permitted without delay wherever impacts can be addressed satisfactorily. In this case, the existing and emerging local development plans support wind energy developments in compliance with National Policy.

5.2 The Development Plan

The Development Plan comprises the North West Regional Spatial Strategy (2008); the Ribble Valley District Wide Local Plan (1998) and the National Planning Policy Framework (2012).

Given the age of the Local Plan, it can have only limited weight. The Core Strategy has yet to reach a stage where the policies can be applied with any significant weight. There is no Lancashire Structure Plan, however there is interim policy advice regarding Landscape and Heritage.

Also of significant weight is the Forest of Bowland AoNB Renewable Energy Position Statement (2011).

North West Regional Spatial Strategy (NWRSS 2008)

The policies of the NWRSS currently remain valid, and given the lack of adopted up-to-date local policy, must be given significant weight for the time being.

The NWRSS is forthright in its objective of making a more substantial contribution to national and global environmental targets and initiatives, and cites the need to reduce the effects of climate change as "particularly critical" (para 2.16).

This objective will be met by, amongst other things, the development of renewable energy.

Policy DP1 sets out the spatial principles for the region. These include:

- Promoting sustainable communities;
- Promoting sustainable economic development;
- Making the best use of existing resources and infrastructure;
- Marrying opportunity and need;
- Promoting environmental quality;
- Mainstream rural issues;
- Reducing emissions and adapt to climate change.

Policy DP9 deals specifically with reducing emissions and climate change. It states that as '*an urgent regional priority*', decisions should contribute to reductions in the region's carbon dioxide emissions from all sources, including energy generation and supply, in line with national targets. The policy lists various measures, including increasing renewable energy capacity by its promotion and exploitation.

Policy EM15 sets out a framework for sustainable energy supply in the region.

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Policy EM17 deals with renewable energy, and refers to the targets for renewable energy generation. It states that plans and strategies should seek to promote and encourage, rather than restrict, the use of renewable energy resources. Local planning authorities should give significant weight to the wider environmental, community and economic benefits of proposals for renewable energy schemes.

It states that opportunities should be sought to identify proposals and schemes for renewable energy. The policy sets out criteria that should be considered in determining renewable energy proposals, but that these should not be used to rule out, or place constraints on, the development of renewable energy technologies:

- Local amenity including noise and mitigation measures;
- Landscape character, sensitivity and visual impact, including cumulative impacts: Stringent requirements for minimising impacts upon landscape will not normally be appropriate, other than in exceptional circumstances such as within nationally designated areas (including AoNBs). The RSS notes that "small scale" developments in such areas may be permitted where there is no significant environmental detriment;
- Ability to connect to the Grid without significant negative environmental impact;
- Early community engagement;
- Protection of habitats and other nature conservation features, biodiversity and geodiversity.

Ribble Valley District Wide Local Plan (1998)

The most relevant policies within the Local Plan are:

Policy ENV25 generally supports renewable development. It states that *'In assessing proposals for renewable energy schemes, the Borough Council will have particular regard to the immediate and wider impact of the proposed development on the landscape, and AONB';* and

Policy ENV26 states that proposals for wind energy will be permitted subject to various criteria relating to visual impact, amenity and environmental considerations. It states that *'Development proposals within or close to the Area of Outstanding Natural Beauty will not be allowed, unless;*

- *the proposal cannot be better located outside such statutory designated areas,*
- *the proposal is acceptable in environmental and landscape terms; and*
- *any adverse environmental impacts as far as practicable have been mitigated.'*

This policy might be best read in conjunction with the Forest of Bowland AoNB position statement which supports micro and small (up to 60m blade tip) scale wind turbines within the AoNB subject to criteria relating to landscape. This is considered in more depth within the Landscape Visual Impact Assessment.

Policy G1 provides general development criteria, including the need for good design and landscape; development which is appropriate to the location in terms of size, intensity and nature; effects upon existing amenity and relationship and impact upon surrounding buildings.

Policy G5 considers development in the open countryside, requiring that it should be small-scale and appropriate to its location.

Policy ENV1 deals with development within the Forest of Bowland AoNB, where the protection, preservation and enhancement of the natural environment will be the priority, although regard will be given to the social and economic wellbeing of the area.

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Para 4.2.4 recognises the need for alternative farm enterprises to supplement overall farm incomes.

Policy ENV 19 states that development which causes visual harm to the setting of listed buildings will be resisted. In assessing this, the following factors will be taken into account:

- i) The desirability of preserving the setting of the building;
- ii) The effect of the proposed development on the character of the listed building;
- iii) Any effect on the economic viability of the listed building;
- iv) The contribution which the listed building makes to the countryside;
- v) The extent to which the proposed works would bring substantial benefits to the community including economic benefits and enhancement of the environment.

Policy EMP 12 encourages appropriate farm diversification and the preparation of a "Farm Plan" in support of such proposals.

5.3 The Ribble Valley Draft Core Strategy

The Publication Version of the Core Strategy has not been prepared as yet and thus the Core Strategy can only carry limited weight.

The document supports wind renewable energy and is broadly in line with the NPPF, and therefore its policies should be considered. In particular Key Statement DME5, as described below, deals with renewable energy. It states that renewable energy schemes will be supported provided they do not cause unacceptable harm to the local environment or amenity. It provides criteria, including landscape and visual impact; residential amenity in terms of noise and shadow flicker; potential benefits of the development; local and national targets for emission reduction and renewable energy generation.

With regards to proposals in the AoNB, it states these will not be allowed unless:

- i. the proposals cannot be located elsewhere;
- ii. the objectives of the designation of the area are not compromised;
- iii. adverse environmental impacts can be mitigated as far as practicable.

KEY STATEMENT DME5: RENEWABLE ENERGY

The Borough Council will support the development of renewable energy schemes, providing it can be shown that such developments would not cause unacceptable harm to the local environment or local amenity. In assessing proposals, the Borough Council will have particular regard to the following issues:

- i. The immediate and wider impact of the proposed development on the landscape*
- ii. The measures taken to minimise the impact of the proposals on residential amenity*
- iii. The potential benefits the proposals may bring*
- iv. The visual impact of the proposals, including design, colour and scale*
- v. The degree to which nuisance caused by noise and shadow flicker to nearby residential amenities, agricultural operations, recreational areas or the function of the countryside can be minimised.*

vi. National or local targets for generating energy from renewable sources and for reducing carbon emissions

Development proposals within or close to the AONB, Sites of Special Scientific Interest, Special Areas of Conservation and Special Protected Areas, notable habitat species, Local Nature Reserves or designated heritage assets and their setting will not be allowed unless

- i. The proposals cannot be located outside such statutory designated areas;*
- ii. It can be demonstrated that the objectives of the designation of the area or site will not be compromised by the development;*
- iii. Any adverse environmental impacts as far as practicable have been mitigated'.*

5.4 Other Non-Statutory Policy Guidance

5.4.1 Lancashire Supplementary Planning Guidance: Landscape and Heritage

This document considers the landscape character areas and their sensitivities to change. This is dealt with in more depth within the Landscape Visual Impact Assessment. **Policy 20** states that development must contribute to the conservation of the natural beauty of the AONB. Proposals will be assessed in relation to:

- (a) local distinctiveness;
- (b) the condition of the landscape;
- (c) visual intrusion;
- (d) the layout and scale of buildings and designed spaces;
- (e) the quality and character of the built fabric;
- (f) public access and community value of the landscape;
- (g) historic patterns and attributes of the landscape;
- (h) landscape biodiversity and ecological networks;
- (f) semi-natural habitats characteristic of the landscape type;
- (j) remoteness and tranquillity;
- (k) noise and light pollution.

Policy 21 states **Lancashire's natural and man-made heritage** will be protected from loss or damage according to its importance. The strongest levels of protection will be afforded to those heritage resources of international and national importance. Sites, areas, features and species of heritage importance will be conserved and, in appropriate circumstances, enhanced and re-established taking account of:

- (a) their rarity, vulnerability, antiquity or complexity;
- (b) their contribution to the countywide network of sites and features, to the character of their location and setting and to national and county biodiversity and the likely implications of climate change on heritage assets;

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(c) positive opportunities afforded by development for the conservation, management or enhancement of heritage resources.

Where, in exceptional circumstances, unavoidable loss or damage to a feature or its setting is likely as a result of a proposed development, measures of mitigation and compensation will be required to ensure there is, **as a minimum, no net loss** of heritage value. Such measures may include the creation of appropriate new heritage resources, on or off-site.

5.4.2 Lancashire County Landscape character areas and sensitivity to wind energy development (2005)

The site lies on the boundary of County landscape character type 4f (Longridge Fells) and 5c (Lower Ribble):

4f The Longridge Fells are considered to be of **moderate high sensitivity** with potentially appropriate wind energy development at a **small and possibly medium scale**.

5c Lower Ribble is considered to be of high sensitivity: where site specific sensitivities do not preclude development, scale will be determined by *"the extent of the appropriate location and the scale of the landscape"*.

5.4.3 Forest of Bowland Joint Advisory Committee (FBJAC): Forest of Bowland AONB Renewable Energy Position Statement April 2011 (Appendix 6)

The FBJAC comprises representatives from the six relevant local authorities (including Ribble Valley), community and other key stakeholder business groups, community groups, Natural England and other statutory agencies and voluntary groups. The Position Statement was prepared to assist local authorities in the determination of planning applications for renewable energy.

As a recently completed document, whilst not having the full statutory weight of a development plan document, it reflects the policies and aspirations of the local planning authorities and other relevant bodies and must therefore be a significant planning consideration, particularly given the existing adopted local plan dates from 1998.

The introduction states: *'It is important that the Forest of Bowland AONB plays its part in reducing emissions and this includes the small scale generation of energy from renewable sources.'*

The document defines acceptable wind turbine development within the AoNB as being up to 60m to wing tip (i.e. micro- and small- turbines) such as the proposal at The Hills Farm. The landscape character will dictate whether individual sites are acceptable and thus reference should be made to the Lancashire Landscape Sensitivity to Wind Development and the AoNB Landscape Character Assessment.

The FBJAC states that all proposals should:

- be of a form and design that is appropriate for the landscape and visual characteristics of the location;
- be an appropriate scale for the location;
- not be sited on a skyline or close to a prominent feature or within the setting of important historic features or landscapes; and

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- not have significant cumulative impacts with other operational or consented wind energy development.

Developments should be located:

- where they are appropriate to the landscape character type that they are situated within;
- where they would not be a dominant feature in the landscape;
- well back from upland edges or scarps;
- away from viewed skylines, summits, prominent landforms and other distinctive landscape features;
- away from remote and wilder areas;
- where they make sympathetic use of existing buildings, tracks and other infrastructure;
- where there would be no significant cumulative impacts with similar or other developments;
- where there are opportunities to mitigate landscape and visual impacts and compensate for any unavoidable losses;
- away from key amenity and heritage assets;
- where they respect and are sensitive to important cultural associations;
- away from public view – i.e. roads, footpaths or public open space – if at all possible; and
- within existing built areas – e.g. farmstead or settlement – where a strong functional relationship would be established rather than in isolated locations away from other built structures.

The overriding approach to small wind turbines is that they will be supported nationally, regionally and locally. However, the need for renewable energy must be balanced against the importance of the AoNB and the listed buildings nearby. The local policy framework acknowledges a need for renewable energy development within the AoNB in order to counteract several problems:

- the economic marginality of farming and the need for farm diversification to enable traditional rural practices to continue and for existing landscapes to be retained and properly managed;
- the need to support local communities via discreet rural economic development and farm diversification;
- the urgent issue of climate change and its impact upon the AoNB and the need to counter this via appropriate reduction in emissions and contribution to renewable energy production.

In terms of the appropriateness of the site and the impacts upon the AoNB and the nearby listed buildings, the Landscape and Visual Impact Assessment indicates that the turbine would not cause an unacceptable visual impact and in this regard, given the extensive social, economic and environmental benefits of it, there would be no net loss arising from the proposals.

6 Landscape and Visual Impact Assessment

This Landscape and Visual Impact Assessment and supporting documentation follows the Institute of Environmental Management and Assessment (IEMA)/Landscape Institute Guidelines on Landscape and Visual Impact Assessment, 2002. The submitted supporting documents are:

Landscape Character Areas and Types

- National Character Area 33 Bowland Fringe and Pendle Hill Information sheet (Appendix 7)
- Forest of Bowland Landscape Character Type D: Moorland Fringe (Appendix 8)

Sensitivity to Wind Energy Development in Lancashire (2005) (Appendix 9)

Lancashire Wind Turbine Sensitivity Assessment Sheet for 4f Longridge Fell Fringes (Appendix 9b)

Proposed turbine impacts assessment

- The Hills Farm Wind Turbine Landscape Impact Assessment Table (Appendix 10)
- Aardvark EM Ltd Landscape and Visual Impact Assessment Criteria (Appendix 10a)
- The Hills Farm Visual Impact Assessment Table (Appendix 11)
- 10km Zone of Theoretical Visibility (Appendix 12)
- The Hills Farm Viewpoint Locations map (Appendix 13)
- The Hills Farm Schedule of filenames and National Grid references for the locations of the submitted photomontages, wireframes, landscape elevation cross sections, photo-panoramas and digital aerial orientations and locational details from the 13 viewpoint locations (Appendix 14)
- Posters showing relevant single and cumulative photomontages and wireframes, landscape elevation cross sections, photo-panoramas and digital aerial orientations and locational details from the 13 viewpoint locations (Appendix 15)

6.1 Landscape Impacts Assessment

An assessment of national, regional and local landscape character, included as Appendix 10 details that the development would have no *significant* impacts upon National Character Area 33: Bowland Fringe and Pendle Hill, and a moderately significant impact upon Lancashire County Character Area – Moorland Fringe Area 4f: Longridge Fell Fringes, and the Forest of Bowland Landscape Character Type D11 Moorland Fringe.

6.1.1 National Landscape Character

The site is located in **National Character Area 33. Bowland Fringe and Pendle Hill** (Appendix 7) described by Natural England as:

"an undulating and rolling landscape with local variation created by numerous river valleys and by the moorland outliers of Beacon Fell, Longridge Fell and Pendle Hill on the south side of the area."

The NCA is characterised by intricate small-medium scale fields, with dry stone walls also being a common feature. Both of these features are present at the proposed turbine location, which is therefore assessed as being typical of landscapes within the NCA.

It is assessed that the proposed turbine would cause a negligible adverse landscape impact relative to the wider landscape of the Bowland Fringe and Pendle Hill character area, with a very localised, slight impact on the pattern of the landscape and slight adverse impact on the character of the natural landscape. 52% of the NCA falls within the Forest of Bowland AONB, including the proposed turbine location, which is situated on the southern boundary of the AONB, though the part of the NCA on the lower fringe of Longridge Fell is assessed as having medium sensitivity to wind development, given the clearly defined sense of character and moderate condition of the NCA.

The scale of the turbine within which the proposed turbine is located is of a relatively local scale, and thus the local impact (assessed in relation to the County Character Area of the Longridge Fell Fringes), as described below, is more appropriate to the landscape impact assessment.

6.1.2 Local Landscape Character Area

The Lancashire County Landscape Character Area (LCA) is Moorland Fringe Area 4f – Longridge Fell Fringes. As shown in Figure 6 below, this is a relatively small LCA within the wider LCAs within the wider Moorland Fringe Area.

The undulating edges of the Longridge Fell Fringes' rolling landscape are above the 150m contour line, and are influenced by their proximity to urban settlement. This area has been particularly affected by built development such as caravan parks, reservoirs, suburban development and golf courses. These offer alternative land uses to agriculture but diminish its rural character.

The proposed turbine would be situated within the south-west part of the LCA. It is assessed as having a moderately significant adverse impact upon the LCA, as the proposal will impact upon the perception and appreciation of the landscape character area of the small territorial area of the Longridge Fell Fringe character area.

The Longridge Fell landscape is assessed as having a medium sensitivity owing to its clearly defined sense of character and moderate condition. However the "Sensitivity to Wind Energy Developments in Lancashire (2005)" indicate that the small scale turbine of the type proposed may be appropriate. Whilst the turbine would not have any direct impacts upon the physical characteristics of the local natural and historic landscape, it would have an impact upon the perceptual and visual characteristics.

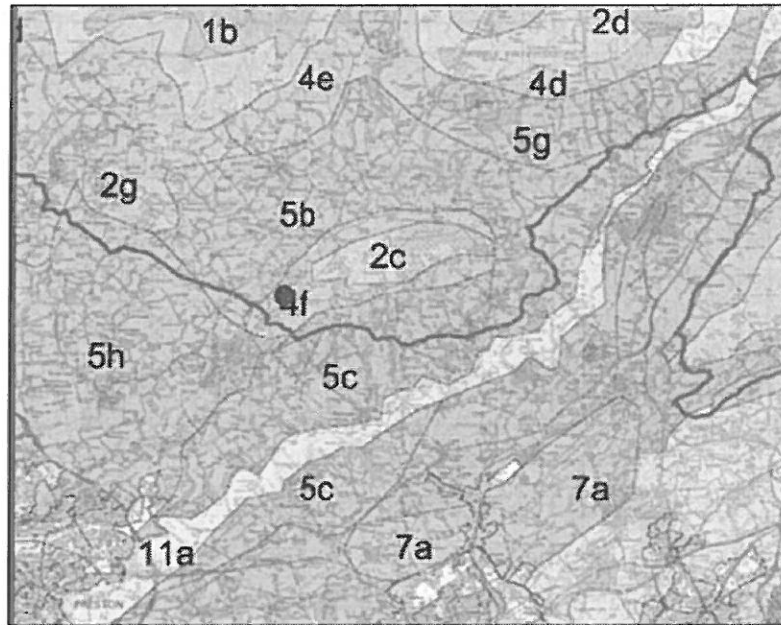


Figure 6 Lancashire County Character Area Moorland Fringe Area 4f- Longridge Fell Fringes (light green) and proposed turbine location (●)

6.1.3 Local Landscape Character Type

The Forest of Bowland Landscape Character Type (LCT) D11 - Moorland Fringe includes the lower part of the Longridge Fell ridge. It is assessed that the proposed turbine would cause a moderately significant adverse impact upon the LCT, as the proposal will impact upon the perception and appreciation of the landscape character area of the small territorial area of the Moorland Fringe character type.

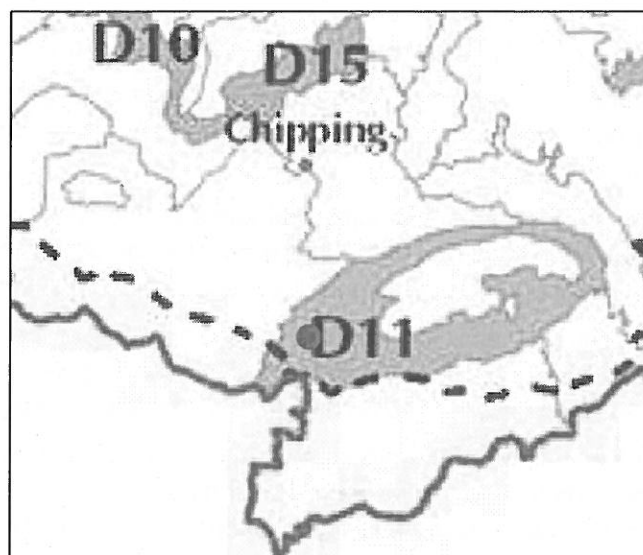


Figure 7. Moorland Fringe Landscape Character Type and proposed turbine location (●)

Figure 7 also shows the LCT D10 Bleasdale and LCT D15 Wolf-Burnslack. D10 Bleasdale is characterised by its history of estate management, and is described as having a "*distant sense of enclosure within this landscape which is provided by the backdrop of surrounding Moorland Hills to the north.*" Similarly D15 Wolf-Burnslack is described as having a "*sense of enclosure*" provided by the fells to the north, with a "*dramatic moorland backdrop to views northwards*". Given the proposed turbine location is to the south, it has been assessed to cause no change to the appreciation of these LCTs.

6.2 Visual Impacts Assessment

From the 10km Zone of Theoretical Visibility (Appendix 12), thorough desk and field surveys have identified potentially sensitive locations, including nearby residencies and settlements, historic buildings and sites, schools, village halls, public amenity and tourism sites, and vantage points along the A & B roads and other thoroughfare routes, which are detailed in the following appendices:

- Appendix 11 – The Hills Farm Visual Impact Assessment table;
- Appendix 13 – The Hills Farm Viewpoint Locations map;
- Appendix 14 – The Hills Farm Schedule of filenames and National Grid references of the 13 viewpoints; and
- Appendix 15 – Posters showing photomontages, wireframes and photo-panoramas from the 13 viewpoints.

The assessment resulting from these surveys concludes that the sensitivity of local receptors and the resulting significance of impacts fall in to three distinct categories, namely:

- a) Local (<1.5km) and medium (1.5-3km) distance views from the north-east, further up Longridge Fell and along the AoNB boundary below the site;
- b) Distant (>3km) views from the north and north-west, within the AoNB; and
- c) Local, medium and distant views from the south-east, south and south-west, from the urban town and villages around Longridge and sub-urban fringe hamlets.

6.2.1 Local and medium distance views from Longridge Fell

There would be no *significant* visual impacts during construction yet there would be *significant* visual impacts arising on completion and operation of the turbine. In summary detail, the assessment concludes that there would be:

- Locations on the public footpaths and lanes on the western and eastern sides of the ridge that receive no views due to the intervening topography, farm buildings and trees, as shown by Viewpoint posters 1 and 2, and discussed in the Visual Impacts Assessment table;
- Locations on Higher Road and the public footpaths and open access land of Jeffrey Hill, traversing the top of the ridge that will receive *significant adverse* views, as shown by Viewpoint posters 1b and 3 and discussed in the Visual Impacts Assessment table;

However, the views of the moorland fringe and improved grassland, at the very edge of the AoNB boundary, also include farm buildings and telecoms masts in the foreground and the plains below, with major built development of Preston North End football stadium, BAE Systems airfield and industrial sheds and other major commercial and industrial estates, Preston and the surrounding villages all clearly visible.

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Locations around the AoNB boundary at the bottom of the ridge along the B6243 and Old Clitheroe Road would receive moderately significant views, some neutral, as shown in Viewpoint poster 8, and some adverse, as shown in Viewpoint poster 11 and discussed in the Visual Impacts Assessment table.

6.2.2 Distant views from within the AoNB

There would be no *significant* visual impacts during construction yet there would be *moderately significant adverse* and visual impacts of *no significance* arising on completion and operation of the turbine. In summary detail, the assessment concludes that:

- there would be locations on the public footpaths and lanes on the eastern sides of Beacon, Blindhurst and Wolf Fells and Lower Hodder Valley which could, in good and excellent visibility, receive distant slight and negligible adverse visual impacts from viewing the rotor blades, or part thereof, as shown by Viewpoint posters 4, 5 and 6 and discussed in the Visual Impacts Assessment table;
- it is due to the locations within the AoNB that these receptors have been classed as high sensitivity and hence some of the impacts are of moderate significance. However, the skyline would not be broken, as shown by Viewpoint posters 4 and 5 and discussed in the Visual Impacts Assessment table, yet the vast majority of views would be either open and panoramic up and down the valley and out to the plains to the south and west from the fells and fell-sides;
- there are no *framed* views towards the turbine which include notable receptors, for instance the views towards the turbine including the Listed Buildings of Chipping Church and Hesketh End (from Mill Lane) have other foci within the view.

6.2.3 Views from the urban and sub-urban fringe settlements

There would be no *significant* visual impacts during construction, yet there would be *moderately significant neutral* and visual impacts of *no significance* arising on completion and operation of the turbine.

In summary detail, the assessment concludes that:

- there would be a neutral visual impact from a range of public gathering points where users have moderate levels of interest in the visual environment. These gathering points include children's play areas, sports pitches and pub gardens. The types of impact has been assessed as neutral as it is considered the users may receive positive informal sustainability messages, as shown by Viewpoint posters 7, 9 and 10 and discussed in the Visual Impacts Assessment table;
- there would be notable recreational pedestrian and cyclist routes from where distant, slight and negligible views would be received. A potential highly significant receptor has been assessed from the Ribble Valley Way, adjacent to the Scheduled Monument of Ribchester Roman Fort, immediately west of the Ribchester Conservation Area and Listed church. As shown by Viewpoint poster 12 and discussed in the Visual Impacts Assessment table, the distance and a variety of modern-day developments result in a conclusion that visual impacts from the turbine would not be significant;

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- the vast majority of views towards the turbine from both within the Ribchester Conservation Area and of the Conservation Area's historic and riverside landscape settings, from approaching Ribchester along the B6245 south of the valley and Blackburn Road east of the village, would be obscured by intervening topography, trees, high hedge-banks along the roads and buildings. Hence, it is assessed that there would be no significant visual impacts from such locations;
- there would be notable thoroughfares with high numbers of drivers with passing and glimpsed views across the Lower Ribble valley and of Longridge Fell. As shown by viewpoint poster 13 and discussed in the Visual Impacts Assessment table, the distance and a variety of modern developments result in a conclusion that visual impacts from the turbine would not be significant.

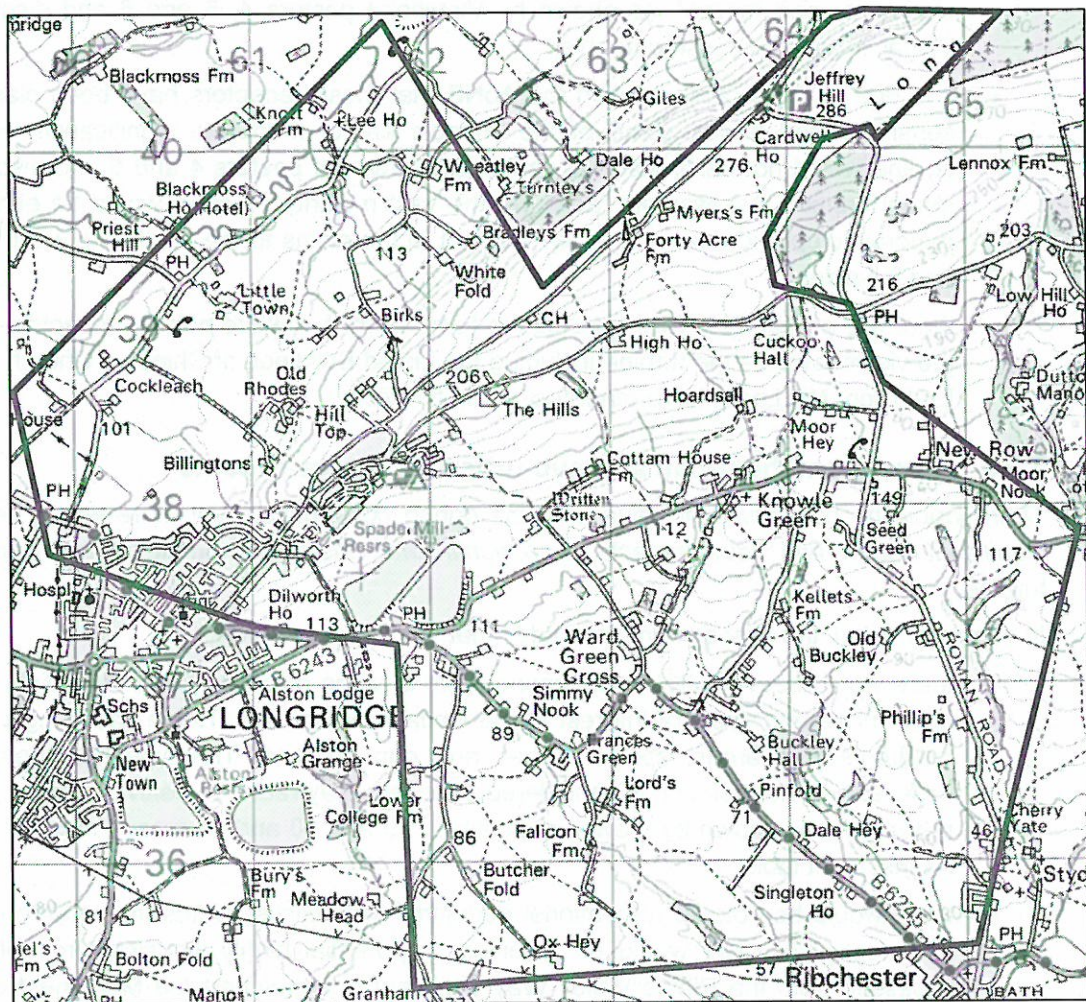


Figure 8: Map showing the approximate area of actual, notable visibility

6.2.4 Cumulative Impacts Assessment

The erection of the proposed turbine is also assessed for its cumulative landscape and visual impact, together with the turbine proposed at Dilworth Brows to the west of the proposed site. The addition of the proposed turbine to others proposed in the area is considered to add a slight overall adverse impact, however due to the medium sensitivity of the landscape, the cumulative landscape impact is assessed as being not significant.

To assess the cumulative visual impact photomontages showing the proposed turbine with that proposed at Dilworth Brows have been prepared for ten of the viewpoints (Appendix 15).

The cumulative impact of the turbine with that proposed at Dilworth Brows is considered to be of moderate, adverse significance from viewpoints including the AoNB Higher Road above Fell House Farm, Longridge Fell above Jeffrey Hill and the garden at the Alston Arms.

The cumulative impact is considered to be of moderate, neutral significance from the viewpoints, including the entrance to Green Bank Park on Old Clitheroe Road and the garden at the Corporation Arms.

From all other viewpoints, the cumulative impact of the proposed turbine in addition to that proposed at Dilworth Brows is not significant. In addition, the cumulative visual impact of the proposed turbines at The Hills Farm, Dilworth Brows and Dutton Doghouse is considered from Viewpoint 4, though the addition of The Hills Farm is not considered significant from this viewpoint.

7 Ecology Impact Assessment

A Phase 1 Habitat Assessment of the site was conducted on 2nd May 2012 by Ribble Ecology Ltd to consider the potential of the proposed development to affect habitats and protected species in and around the site.

The survey methodology complies with current wildlife legislation and PPS9. The surveys were undertaken by a relevant experienced and appropriately qualified professional ecologist. The full Phase 1 Habitat Assessment accompanies this Design, Access and Planning Policies Statement.

The turbine would be sited in a field of semi-improved grassland of low ecological value and the proposed turbine would have no significant impacts on habitat loss or disturbance, Protected or Listed species, breeding birds or bats as described in the accompanying Phase 1 Habitat Assessment, which concluded:-

- *'there are no significant risks and no constraints on the proposal location of the turbine in relation to wildlife policy and legislation'*
- *'the desk study and walkover survey has shown that there are no examples of BAP Priority Habitat, fragile plant communities, rare or protected plants that require consideration within range of the proposed turbine'*
- *'There are no known occurrences of protected species and there is negligible habitat value for foraging bats and nesting birds'*
- *There are no hedgerows within 50m of the proposed turbine location, in conformity with Natural England Technical Information Note TIN 051: Bats and onshore wind turbines.*
- *Although the site falls with the Bowland Fells IBA, 'the site and survey area are not contributing to the role of IBA in that the habitats are not suitable to support the "trigger species" for which the IBA is designated'. Therefore it is concluded that there is 'no further requirement for consideration of such species and that the proposed wind turbine does not pose a threat to the value of the IBA.'*

8 Noise Assessment

There would be no significant additional noise at the nearest residential property when considered against the relevant methodology standard (ISO 9613 - Acoustics – Attenuation of Sound During Propagation Outdoors) and against the relevant assessment standard, ETSU-R-97 ("The assessment & rating of noise from wind farms"), relating to the nearby residential properties.

The closest residential property to the proposed turbine site at The Hills Farm is 195m to the SW (Figure 9).

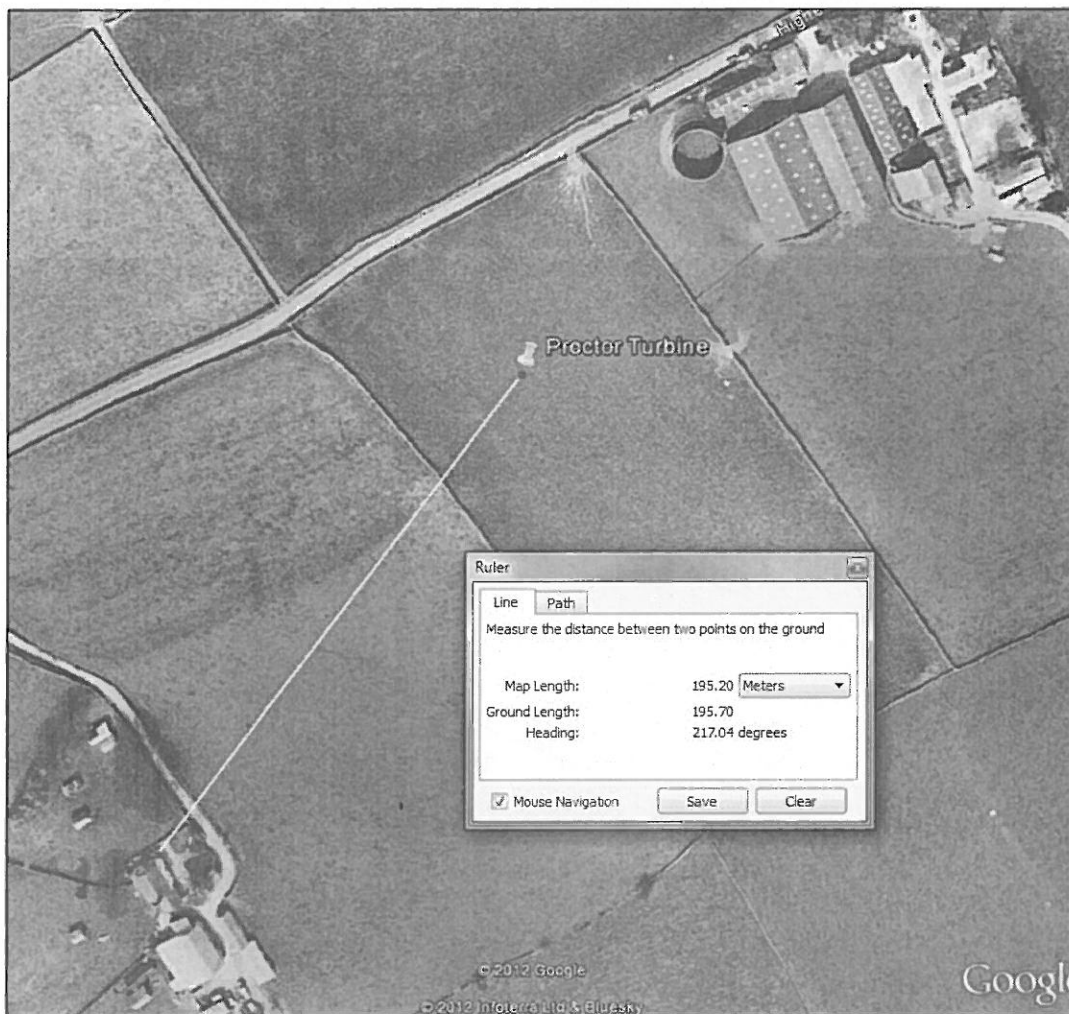


Figure 9: 195m to nearest residential property (Source: Google Earth)

Endurance has measured and analysed acoustic data of installed turbines at a farm in Cornwall and a college in Montana in accordance with the General Industry Assessment IEC standard 61400-11 to provide an acoustic noise profile for the E3120 turbine (Appendix 16). Their conclusions are that from a 30.6m tower at 10m/s wind speed the sound level from a three-phase Endurance E3120 would, assuming a 47.0dba background 10m/s wind noise level:-

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- become inaudible from 140m away from the base of the tower; and
- the 35dba level would be reached 273m away from the base of the tower.

The conclusions also state that *"The turbine sound does not have irritating tones, and is not considered tonal per IEC 61400-11."*

Further independent professional acoustic research by the Hayes McKenzie Partnership reported in July 2011 (Appendix 17) in accordance with ETSU-R-97, ISO 9613-2:1996, BS4142:1997 and BS8233:1999 predicts that at 10m/s wind speed and 25m hub height:

- o The 35db L_{A90} simplified noise limit described in ETSU-R-97 would be met for any property at a distance greater than 250m to the site; and
- o The Endurance E3120 does not produce tonal noises.

The Hayes McKenzie Partnership research predicts that the turbine would produce noise levels at the closest residential property at Dilworth Brows of 37dB (Appendix 17, Figure 1).

9 Shadow Flicker Impact Assessment

Shadow flicker analysis has been performed in accordance with the "Planning for Renewables" Accompanying Guidelines to PPS22 based on ten times rotor diameter. There would be no shadow flicker impacts upon any unconnected properties (Figure 10).

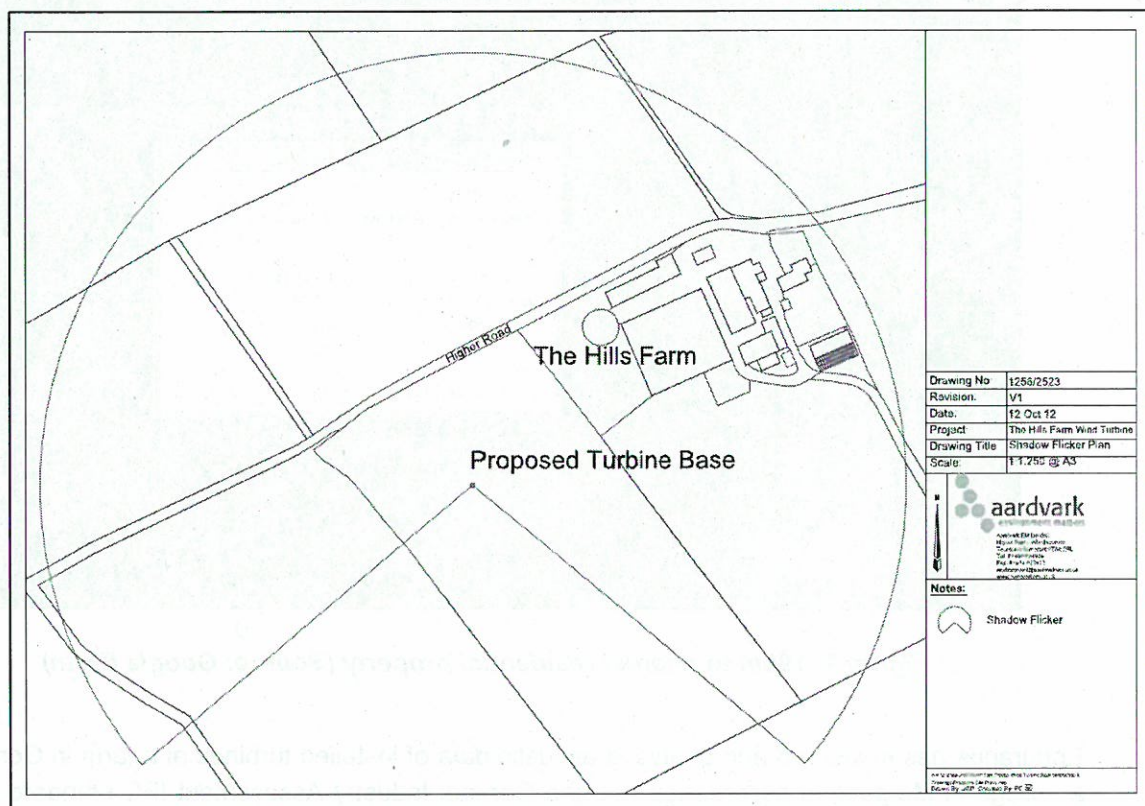


Figure 10: Shadow Flicker diagram

10 Archaeology

Predicted impacts during construction include the 36m² foundations, access track and cable trench. No sections of dry stone walls or hedgerows will be removed.

Due to the small construction footprint of the proposed development it is not considered there will be any historical or archaeological impacts.

11 Access

The wind turbine tower and blades will be delivered in a single journey on an articulated truck with a 13.7m (45ft) tri-axial flatbed trailer and a gross weight of 44t. The total length of the vehicle including the tractor will be 16m approx. The other turbine components will be delivered separately on a standard 8-wheeler articulated lorry. The crane used for the installation will be 49.5t and is likely to be shorter and have better manoeuvrability than the 13.7m arctic flatbed, as it will have *"all axle drive and steer"*.

Given the dimensions of the proposed delivery vehicles, a Transport and Visual Impact Route Inspection Report is not considered necessary. The delivery and erection of the turbine will not require special arrangements with the Highways Agency and the police, as it will not include heavy or abnormal goods traffic. It is assessed that these movements pose no specific challenges in terms of physical manoeuvring. It is anticipated that the road junctions in close vicinity to The Hills Farm that would need to be navigated are of sufficient width to allow a standard lorry with 14.3m (45ft) trailer to manoeuvre without difficulty.

In addition to the turbine component deliveries, a crane capable of lifting 50t would be transported to site for the erection of the turbine. It is not anticipated that the crane vehicle will exceed the length and width of the lorry used to deliver the turbine components to the site, and therefore it is considered to be capable of manoeuvring all road junctions on route to site.

Further traffic associated with the proposed development will be from the delivery of concrete by mixer trucks for the foundation base and from workers travelling to and from the site. The concrete delivery is anticipated to take place over the course of one day, whilst the movement of workers to and from site will be on-going throughout the construction phase of the development.

Delivery Route

The articulated truck with a trailer will leave the M6 at Junction 31A near Preston and head north-east on the B6242, turning left onto the B6243 towards Longridge, bearing left at the fork in the road which then becomes the B6244 into Longridge. In Longridge, the truck may need to traverse the inside of the roundabout onto Kestor Lane. The route proceeds turning left onto the B5269, bearing left onto Higher Road, leading to The Hills Farm. A map highlighting this delivery route in red is displayed in Figure 11 below.

The proposed turbine site is situated in a field on the right hand side of Higher Road just before it reaches The Hills Farm. The turning into the farm yard is adequate for the lorry and crane to navigate.

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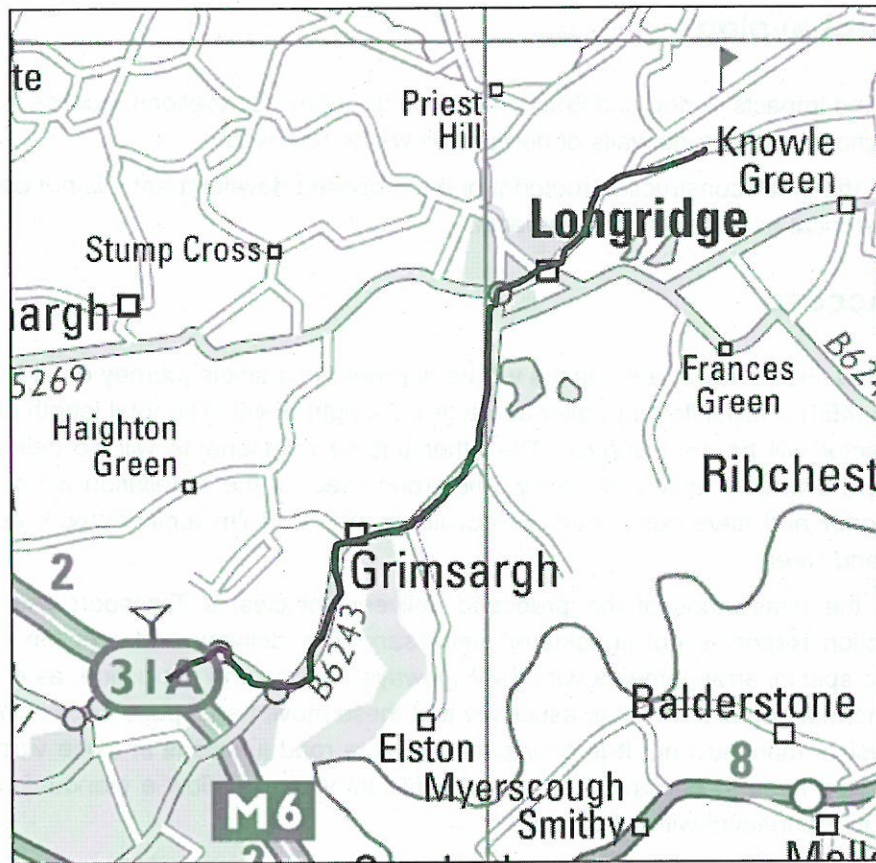


Figure 11: Map of the proposed delivery route

12 Drainage

The EA flood maps for both 1:100 year and 1:1,000 year potential inundation events show the site area lies within flood zone 1 which has a less than 0.1% annual probability of flooding (<1:1000 year event).

Construction impacts on hydrology are likely to be minor from the turbine foundation excavation and setting of the concrete and steel foundations, as pre-mixed concrete will be pumped. Sediment transfer from the excavated materials will not extend beyond the field and there is no potential alteration to natural drainage patterns. Runoff volumes and rates from the site due to construction are considered to be of no significance.

The management of erosion, sedimentation and pollution during construction is now standard practice. Accordingly, we consider that all potential effects are able to be mitigated and eliminated providing appropriate provisions are made in the design, construction planning and methodology.

Mitigation during construction would include: hydrological considerations during site layout and design especially with regard to access track design and drainage on site; site induction for contractors to ensure good practice in control of water pollution; management of track construction, and soil movement, stockpiles, trench and foundation excavation, concrete and fuels/chemicals on site to be managed with reference to best practice guidelines. Disposal of waste materials will also be managed and site monitoring will be used to ensure hydrology and sediment control are considered through the construction and operation period.

These measures will result in a decrease in potential magnitude of impact on hydrological receptors. As such, it is likely that the potential impacts will be negligible. Cumulative impacts during construction are also likely to be negligible.

All operational impacts are likely to be of negligible significance, therefore no mitigation is proposed.

There will be no residual or cumulative flooding impacts associated with the operational phase of the proposed development.

13 Conclusions

The main conclusions of this Design & Access Statement, and supporting assessment and analysis reports are that the proposed development comprising an Endurance E3120 turbine with a hub height of 24.8m and total height of 34.5m to blade tip would:

1. Be on land that is owned by the applicant with no Title Deed restrictions to development, and adjacent to the solar PV installation and farm buildings;
2. Be in conformity with:
 - The National Policy Framework, March 2012;
 - The Development Plan encompassing the North West Regional Spatial Strategy (2008) and the Ribble Valley District Wide Local Plan (1998);
 - The Ribble Valley Draft Core Strategy; and
 - Forest of Bowland Area of Outstanding Natural Beauty Renewable Energy Position Statement (2011).
3. Provide the most appropriate form and amount of renewable power to meet the needs of the Applicant's business and ensure the continuation of milk sale contracts to Arla Foods and Tesco and thus have a major beneficial effect on underpinning the financial viability of, and preserving the current and future jobs at, the Applicant's farm;
4. Generate electricity equivalent to that used by approximately 43 households, assuming each uses 4,500 kWh per annum;
5. Be located in a semi-improved grass field and bring 36m² of the field into productive use generating renewable power for the applicant's farm;
6. Cause no significant impacts from the design and construction of, and accessibility to, the proposed development;
7. Cause a negligible adverse landscape impact on the National Character Area (NCA) 33: Bowland Fringe and Pendle Hill, and to have moderately significant adverse impacts upon the perceptions and the appreciation of the Moorland Fringe Landscape Character Area (LCA) 4f Longridge Fell Fringes and the Forest of Bowland Landscape Character Type (LCT) D11 Moorland Fringe Longridge;
8. Cause significant visual adverse impacts from within 1.5km and over 11km² of the Forest of Bowland Area of Outstanding Natural Beauty (AoNB), as illustrated by the photomontages from Higher Road above Fell House Farm, and Longridge Fell above the layby at Jeffrey Hill;
9. Cause moderately significant, adverse visual impact upon receptors up to 6 km away, over a further 25km², as illustrated by the photomontages from Fell Foot, Beacon Hill Country Park and Knowle Hill Green Village Hall.
10. Mean that receptor locations that could have these significant and moderately significant adverse visual impacts of the proposed wind turbine occupy just 4.5% of the 803km² Forest of Bowland AoNB territory.
11. Views from local and medium distance receptors outside the AoNB have been assessed as moderately significant, though the impact is considered neutral, and
12. Have no significant impacts upon ecology, noise, shadow flicker, archaeology, or hydrology and drainage.