



RIBBLE VALLEY
BOROUGH COUNCIL

FOR THE
ATTENTION OF

21 AUG 2012

For office use only

Application No 320120765P

Date received

Fee paid £

Receipt No:

Council Offices, Church Walk, Clitheroe, Lancashire. BB7 2RA Tel: 01200 425111 www.ribblevalley.gov.uk

Application for Planning Permission.
Town and Country Planning Act 1990

Publication of applications on planning authority websites.

Please note that the information provided on this application form and in supporting documents may be published on the Authority's website.
If you require any further clarification, please contact the Authority's planning department.

1. Applicant Name, Address and Contact Details

Title:	Mr	First name:	John	Surname:	Ward
Company name:					
Street address:	Old House Farm,		Country Code	National Number	Extension Number
	Birks Brow		Telephone number:		
	Thornley		Mobile number:		
Town/City:	Preston		Fax number:		
County:			Email address:		
Country:					
Postcode:	PR3 2TX				
Are you an agent acting on behalf of the applicant? ☒ Yes ☐ No					

2. Agent Name, Address and Contact Details

Title:	Mr	First Name:	Melanie	Surname:	Lawrenson
Company name:	ML Planning Ltd				
Street address:	2 Nightingale Way		Country Code	National Number	Extension Number
	Catterall		Telephone number:	01995 600733	
	Garstang		Mobile number:		
Town/City:	Preston		Fax number:		
County:	Lancashire		Email address:		
Country:	United Kingdom				
Postcode:	PR3 1TQ		mel@mlplanning.co.uk		

3. Description of the Proposal

Please describe the proposed development including any change of use:

Installation of a Wind Turbine - See attached e-mail

Has the building work or change of use already started?

☐ Yes ☒ No

2153925

4. Site Address Details

Full postal address of the site (including full postcode where available)

Description:

House: Suffix:
House name:
Street address:

Town/City:
County:
Postcode:

Description of location or a grid reference
(must be completed if postcode is not known):

Easting:
Northing:

5. Pre-application Advice

Has assistance or prior advice been sought from the local authority about this application?

☒ Yes ☐ No

If Yes, please complete the following information about the advice you were given (this will help the authority to deal with this application more efficiently):

Officer name:

Title: First name: Surname:

Reference:

Date (DD/MM/YYYY): (Must be pre-application submission)

Details of the pre-application advice received:

6. Pedestrian and Vehicle Access, Roads and Rights of Way

Is a new or altered vehicle access proposed to or from the public highway? ☐ Yes ☒ No

Is a new or altered pedestrian access proposed to or from the public highway? ☐ Yes ☒ No

Are there any new public roads to be provided within the site? ☐ Yes ☒ No

Are there any new public rights of way to be provided within or adjacent to the site? ☐ Yes ☒ No

Do the proposals require any diversions/extinguishments and/or creation of rights of way? ☐ Yes ☒ No

7. Waste Storage and Collection

Do the plans incorporate areas to store and aid the collection of waste? ☐ Yes ☒ No

Have arrangements been made for the separate storage and collection of recyclable waste? ☐ Yes ☒ No

8. Authority Employee/Member

With respect to the Authority, I am:

- (a) a member of staff
- (b) an elected member
- (c) related to a member of staff
- (d) related to an elected member

Do any of these statements apply to you? ☐ Yes ☒ No

9. Materials

Please state what materials (including type, colour and name) are to be used externally (if applicable):

Walls - description:

Description of *existing* materials and finishes:

Description of *proposed* materials and finishes:

9. (Materials continued)

Are you supplying additional information on submitted plan(s)/drawing(s)/design and access statement?

320120765P

If Yes, please state references for the plan(s)/drawing(s)/design and access statement:

Location Plan
Site Plan
Elevations Plan
Design and Access Statement
Landscape and Visual Impact Assessment
Ecological Survey
ZTV

10. Vehicle Parking

Please provide information on the existing and proposed number of on-site parking spaces:

Type of vehicle	Existing number of spaces	Total proposed (including spaces retained)	Difference in spaces
Cars	0	0	0
Light goods vehicles/public carrier vehicles	0	0	0
Motorcycles	0	0	0
Disability spaces	0	0	0
Cycle spaces	0	0	0
Other (e.g. Bus)	0	0	0
Short description of Other			

11. Foul Sewage

Please state how foul sewage is to be disposed of:

Mains sewer ☐ Package treatment plant ☐ Unknown ☐
Septic tank ☐ Cess pit ☐

Other

n/a

Are you proposing to connect to the existing drainage system?

☐ Yes ☒ No ☐ Unknown

12. Assessment of Flood Risk

Is the site within an area at risk of flooding? (Refer to the Environment Agency's Flood Map showing flood zones 2 and 3 and consult Environment Agency standing advice and your local planning authority requirements for information as necessary.)

☐ Yes ☒ No

If Yes, you will need to submit an appropriate flood risk assessment to consider the risk to the proposed site.

Is your proposal within 20 metres of a watercourse (e.g. river, stream or beck)?

☐ Yes ☒ No

Will the proposal increase the flood risk elsewhere?

☐ Yes ☒ No

How will surface water be disposed of?

☐ Sustainable drainage system

☐ Main sewer

☐ Pond/lake

☒ Soakaway

☐ Existing watercourse

13. Biodiversity and Geological Conservation

To assist in answering the following questions refer to the guidance notes for further information on when there is a reasonable likelihood that any important biodiversity or geological conservation features may be present or nearby and whether they are likely to be affected by your proposals

Having referred to the guidance notes, is there a reasonable likelihood of the following being affected adversely or conserved and enhanced within the application site OR on land adjacent to or near the application site:

a) Protected and priority species

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

b) Designated sites, important habitats or other biodiversity features

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

c) Features of geological conservation importance

☐ Yes, on the development site ☐ Yes, on land adjacent to or near the proposed development ☒ No

14. Existing Use

Please describe the current use of the site:

Agricultural

Is the site currently vacant? ☐ Yes ☒ No

Does the proposal involve any of the following?

If yes, you will need to submit an appropriate contamination assessment with your application

Land which is known to be contaminated? ☐ Yes ☒ No

Land where contamination is suspected for all or part of the site? ☐ Yes ☒ No

A proposed use that would be particularly vulnerable to the presence of contamination? ☐ Yes ☒ No

15. Trees and Hedges

Are there trees or hedges on the proposed development site? ☐ Yes ☒ No

And/or: Are there trees or hedges on land adjacent to the proposed development site that could influence the development or might be important as part of the local landscape character?

☐ Yes ☒ No

If Yes to either or both of the above you may need to provide a full Tree Survey, at the discretion of your local planning authority. If a Tree Survey is required, this and the accompanying plan should be submitted alongside your application. Your local planning authority should make clear on its website what the survey should contain, in accordance with the current 'BS5837: Trees in relation to construction - Recommendations'.

16. Trade Effluent

Does the proposal involve the need to dispose of trade effluents or waste? ☐ Yes ☒ No

17. Residential Units

Does your proposal include the gain or loss of residential units? ☐ Yes ☒ No

18. All Types of Development: Non-residential Floorspace

Does your proposal involve the loss, gain or change of use of non-residential floorspace? ☐ Yes ☒ No

19. Employment

If known, please complete the following information regarding employees:

	Full-time	Part-time	Equivalent number of full-time
Existing employees	0	0	0
Proposed employees	0	0	0

20. Hours of Opening

If known, please state the hours of opening for each non-residential use proposed:

Use	Monday to Friday		Saturday		Sunday and Bank Holidays		Not Known
	Start Time	End Time	Start Time	End Time	Start Time	End Time	

21. Site Area

What is the site area?

05.50

sq.metres

22. Industrial or Commercial Processes and Machinery

Please describe the activities and processes which would be carried out on the site and the end products including plant, ventilation or air conditioning. Please include the type of machinery which may be installed on site:

Wind Turbine

Is the proposal for a waste management development? ☐ Yes ☒ No

23. Hazardous Substances

Is any hazardous waste involved in the proposal? ☐ Yes ☒ No

24. Site Visit

Can the site be seen from a public road, public footpath, bridleway or other public land? ☐ Yes ☒ No

If the planning authority needs to make an appointment to carry out a site visit, whom should they contact? (Please select only one)

☐ The agent ☒ The applicant ☐ Other person

25. Certificates (Certificate A)**Certificate of Ownership - Certificate A****Town and Country Planning (Development Management Procedure) (England) Order 2010 Certificate under Article 12**

I certify/The applicant certifies that on the day 21 days before the date of this application nobody except myself/ the applicant was the owner (owner is a person with a freehold interest or leasehold interest with at least 7 years left to run) of any part of the land or building to which the application relates.

Title: First name: Surname:
Person role: Declaration date: ☒ Declaration made

25. Certificates (Agricultural Land Declaration)**Agricultural Land Declaration****Town and Country Planning (Development Management Procedure) (England) Order 2010 Certificate under Article 12**

Agricultural Land Declaration - You Must Complete Either A or B

(A) None of the land to which the application relates is, or is part of an agricultural holding. ☒

(B) I have/The applicant has given the requisite notice to every person other than myself/the applicant who, on the day 21 days before the date of this application, was a tenant of an agricultural holding on all or part of the land to which this application relates, as listed below: ☐

If any part of the land is an agricultural holding of which the applicant is the sole tenant, the applicant should complete part (B) of the form by writing 'sole tenant - not applicable' in the first column of the table below

Title: First Name: Surname:
Person role: Declaration date: ☒ Declaration Made

26. Declaration

I/we hereby apply for planning permission/consent as described in this form and the accompanying plans/drawings and additional information. I/we confirm that, to the best of my/our knowledge any facts stated are true and accurate and any opinions given are the genuine opinions of the person(s) giving them.

☒ Date



Make an application

Application Overview

Use the tabs below to navigate through the details of your application.

[View video help for the online application process \(/helpcontent/applvhelp/applyingonline/applyingonline\)](#) (opens in a popup window).

- [Overview \(/PpApplications/genpub/en/MyApplicationSummary? appRef= 2153925& appVersion= 1\)](#)
- [Forms \(/PpFormServer/genpub/en/FormsOverview? appRef= 2153925& appVersion= 1\)](#)
- [Supporting Docs \(/PpApplications/genpub/en/MyAttachments? appRef= 2153925& appVersion= 1\)](#)
- [Fees \(/PpFormServer/genpub/en/FeeOverviewServlet? appRef= 2153925& appVersion= 1\)](#)
- [Payment \(/PpApplications/genpub/en/PaymentDetails? appRef= 2153925& appVersion= 1\)](#)
- [Check \(/PpApplications/genpub/en/CheckApp? appRef= 2153925& appVersion= 1\)](#)
- [Submit \(/PpApplications/genpub/en/Submit? appRef= 2153925& appVersion= 1\)](#)

Description of the Proposal

*Indicates a required field

*Please describe the proposed development including any change of use:

Erection of a 15kw Turbine on a 15 Meter Mast 5 Meter Blades Total finished height of 21 Meters

*Has the building work or change of use already started?

☐ Yes ☒ No

If Yes, please state the date when the building work or use started (DD/MM/YYYY):

(Date must be pre-application submission)

*Have the building work or change of use been completed?

☐ Yes ☒ No

If Yes, please state the date when the building work or change of use was completed

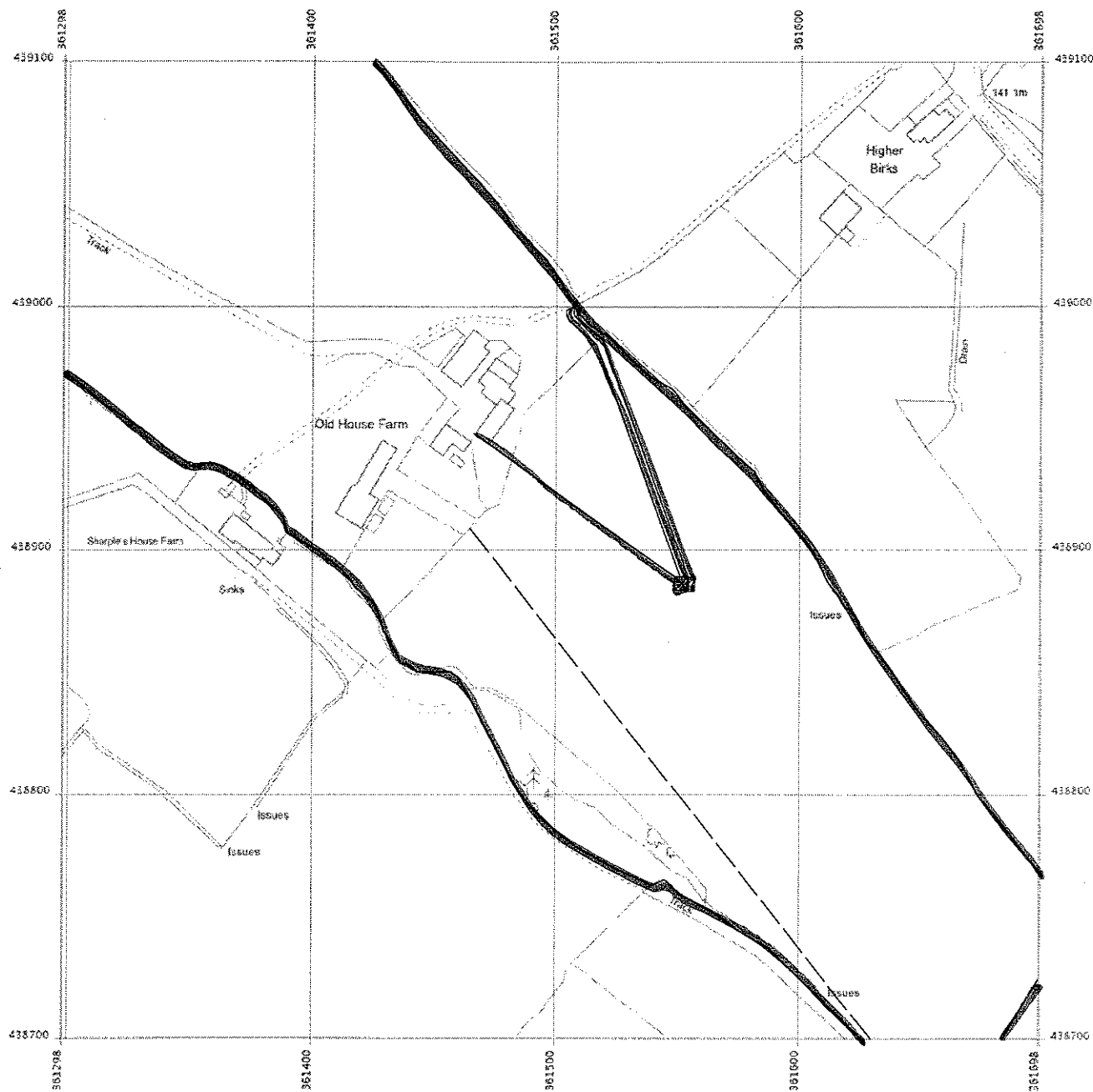
(Date must be pre-application submission)

[Save and previous](#)

[Save and next](#)

28 AUG 2012

FOR THE
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The representation of a road, track or path is no evidence of a right of way. The representation of features as lines is no evidence of a property boundary.



OLD HOUSE FARM
BIRKS BROW
PRESTON
PR3 2TX

Supplied by: Stanfords
Reference: OI427370
Centre coordinates: 361498 438900

ML Planning Ltd.

DESIGN & ACCESS STATEMENT & SUPPORTING INFORMATION

August 2012

Applicant: Mr. John Ward

Site Address: Old House Farm. Birks Brow, Thornley, Longridge, Preston, PR3 2TX

Proposal: Erection of a 15kw Turbine on a 15 Meter Mast, 5 Meter Blades, Total finished height of 21 Meters.

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18. Appendix 4: Extract from Microgeneration Installation Standard: MIS 3003 regarding shadow flicker.
19. Appendix 5: Extract from Microgeneration Installation Standard: MIS 3003 regarding ice prevention.
20. Appendix 6: Turbine Colour BS00A09

Applicant	John Ward
Address	Old House Farm
	Birks Brow
	Thornley
	Longridge, Preston
Postcode	PR3 2TX
Tel No	
Mobile	
Email	
Site Address	As above
Total Area of Works	5.5 square meters

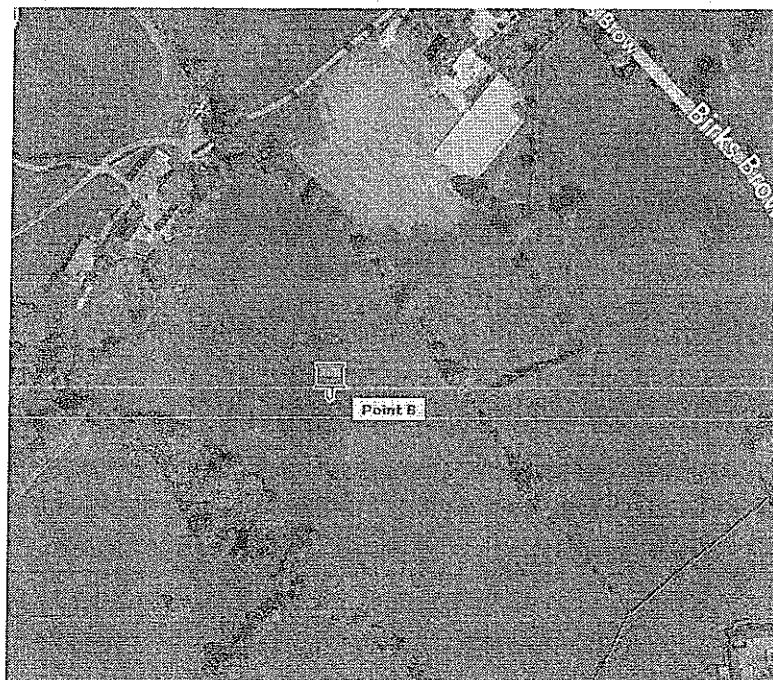
1 Outline Description of the Application

1.1

Erection of a 15kw Turbine on a 15 Meter Mast, 5 Meter Blades, Total finished height of 21 Meters.

1.2

The turbine will be sited on agricultural land to the south east, 132 meters from the Old House Farm. This distance and location has been determined as optimum by the turbine providers in relation to output, acoustics and visual impacts.



Satellite image of the site, point B marks the position of the turbine.

2 Background & Reason for Application

- 2.1 Old House Farm is a mixed livestock farm, which is predominantly a Dairy unit, with approximately 130 acres of land associated.
- 2.2 The state of British Farming is almost in crisis, with a pint of Milk costing less than a bottle of water. The total Agricultural Business at Old House Farm is struggling to survive at present.
- 2.3 The application for a Wind Turbine is sought to benefit and stabilise the farm, its future capacity to remain as a working farm and to support the farm by providing opportunity for on-site Rural Business Diversification.
- 2.4 The aim of this application is to demonstrate how this benefit to the site, and Agricultural Diversification in a wider economic context, can outweigh the Landscape and Visual Impact of the proposal on the Forest of Bowland Area of Outstanding Natural Beauty, which the site is contained within
- 2.5 The three sons at the Farm are all trained engineers; the youngest son is being made redundant from Hanson Cement at Clitheroe at the end of August. He is a fully trained mechanical maintenance engineer and is looking to work on the farm and may have to subsidise his wage by doing agricultural related engineering work
- 2.6 There has been a farm engineering workshop established on site, at present it does not have the capacity to run efficiently on single phase electricity. At present the only means of running the machinery in the workshop on site is by using a tractor driven 3 phase generator, burning fuel and tying up a tractor that could be used for farming activities.
- 2.7 The funds generated by the installation of the Turbine would allow the installation of 3 phase electricity, which would allow the agricultural business to diversify: the sons would be able to and run lathes, milling machines, welding machines and other 3 phase plant, which make a possible engineering workshop business on the farm viable and secure an extra form of income for the farm.
- 2.8 The applicant has reviewed various types of renewables and had several independent reports undertaken on the best ways of providing heating and electricity to the site. All of which have recommended a wind turbine as the best option. The primary use for the energy produced by the turbine will power the commercial business on the farm, with the excess being put into the national grid. This in turn will reduce commercial running costs and in turn reduce the carbon footprint.
- 2.9 Old House Farm has a membership with the Red Tractor Farm Assured Scheme; this body encourages forms of renewable energy to counter the carbon footprint of livestock and farm equipment where possible

3 Proposed Development

- 3.1 One new wind turbine is being applied for, which is within the small/domestic wind turbine category. The turbine will stand on a 15 Meter Mast, 6 Meter Blades with a Total finished height of 21 Meters.
- 3.2 The installation of this wind turbine will supply renewable energy on the site. This energy will be utilised by the site occupant with surplus energy being made available to the local grid.

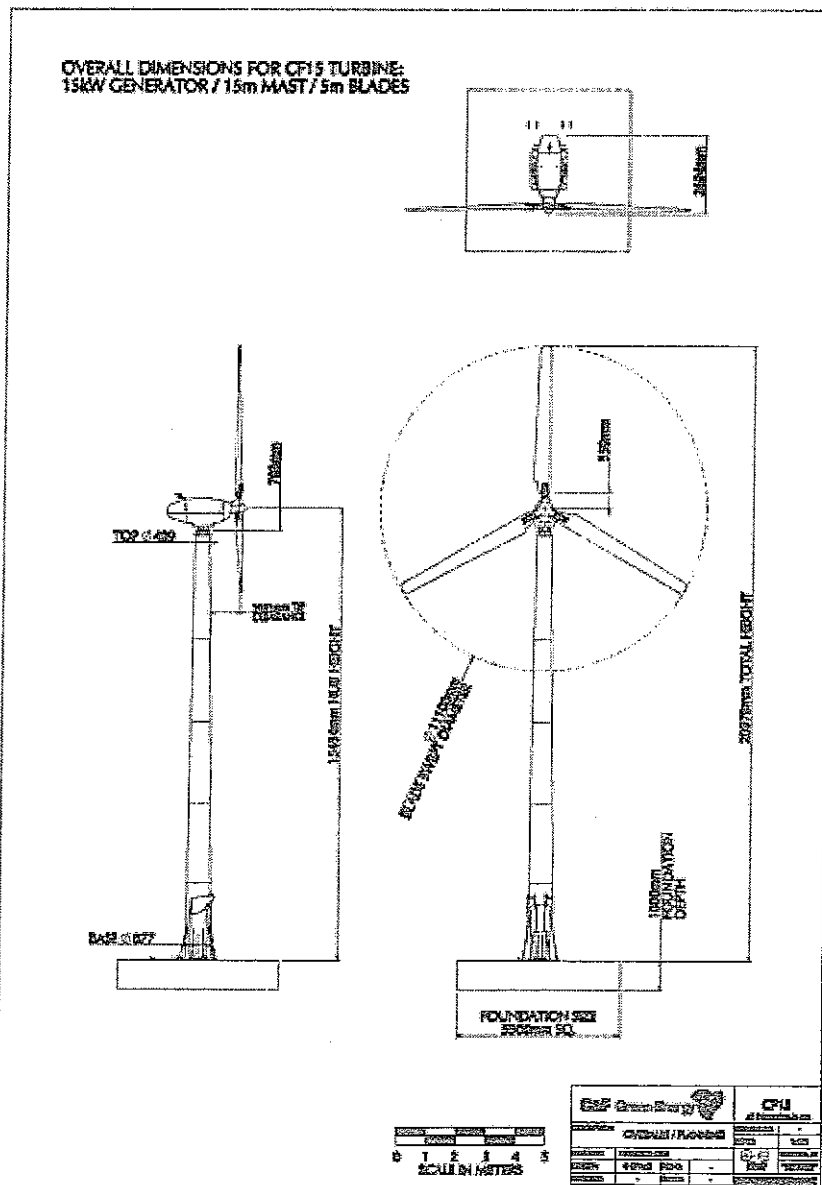
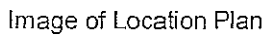


Image of Elevations Plan



4.2 The Grid reference for the position of the base of the turbine is:-

Y: 438887



Image showing proposed location, looking south at rear position to farmstead, intended to show incline in field as it rises

4.3 The field is of a low quality rough grazing field used on a temporary basis for the farm stock such as sheep and young cattle. The field, due to its falling incline from the top of Birks hill has drainage culverts running down and through it, resulting in rush growth and water collection in places. This limits its capacity as a grazing field and overall agricultural quality.

4.4 In the immediate setting of the proposed turbine location are Trees/Woodland to the east, at 50.7 meters and overhead power cables at 54.8 meters.

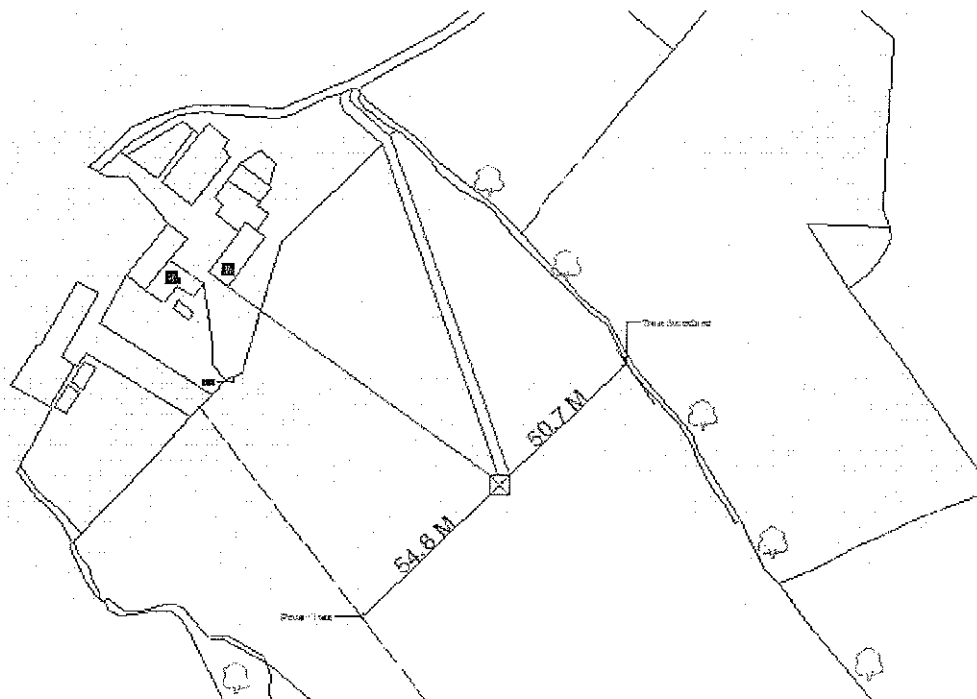
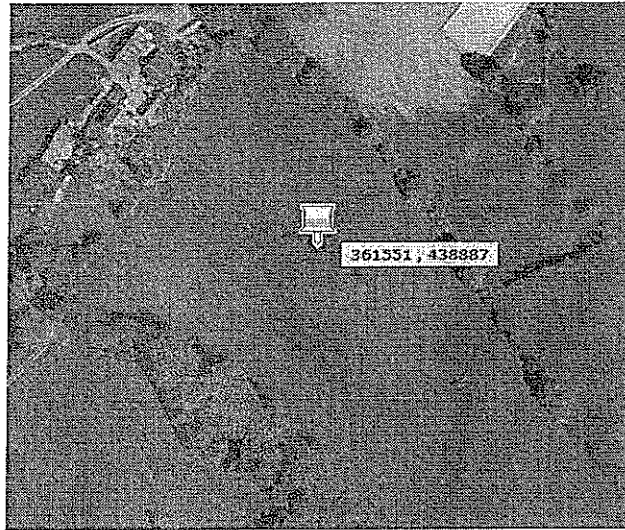


Image of illustrative Plan LG/SW/270311 to show clearance distances to Trees/Woodland and Overhead power cables

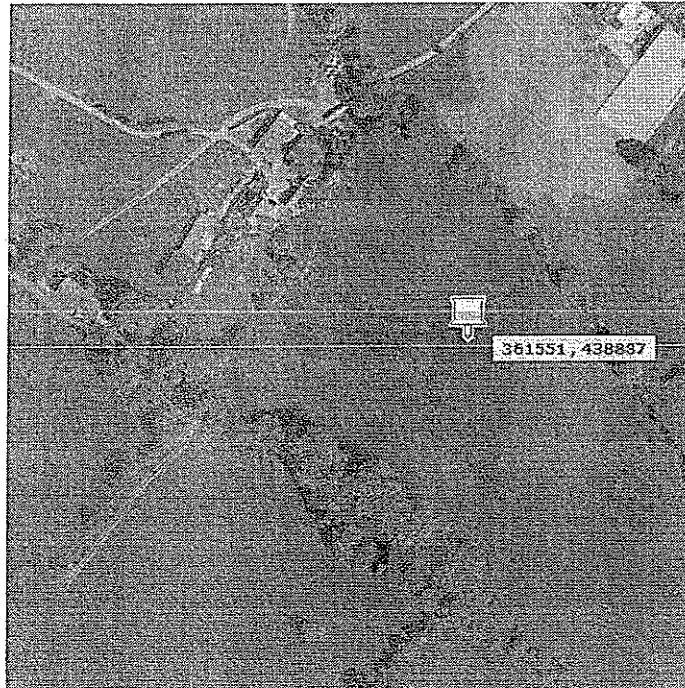
- Guidance on clearance distances to Ecological Features can be found in Natural England Technical Information Note TIN05, in which 50 meter buffer zone between turbines and ecological features is advised.

4.3 Clearance Distance to:-

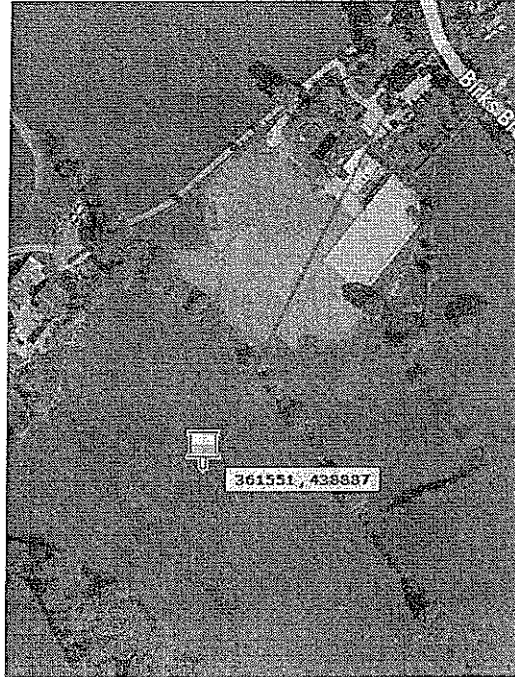
- To associated property is 108.73 Meters



- To the nearest non-associated property is 168.92 Meters



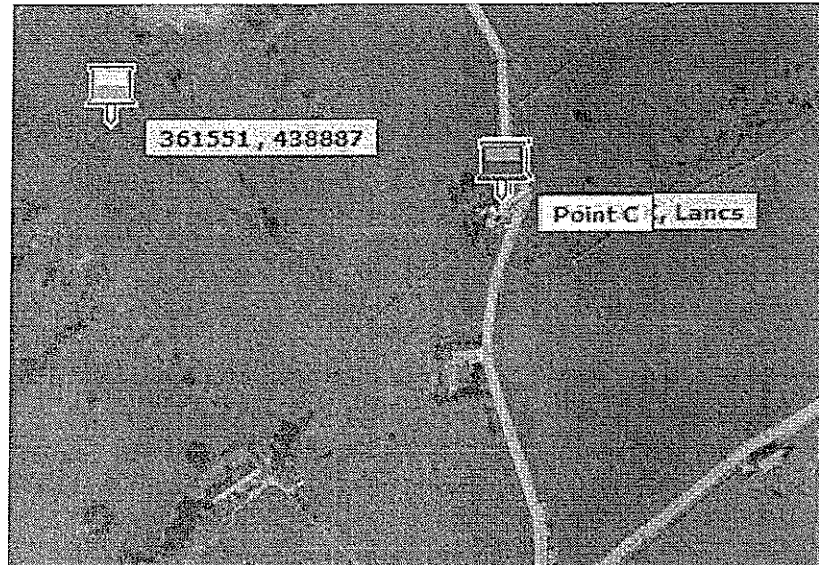
- To neighbouring property is 205.85 Meters



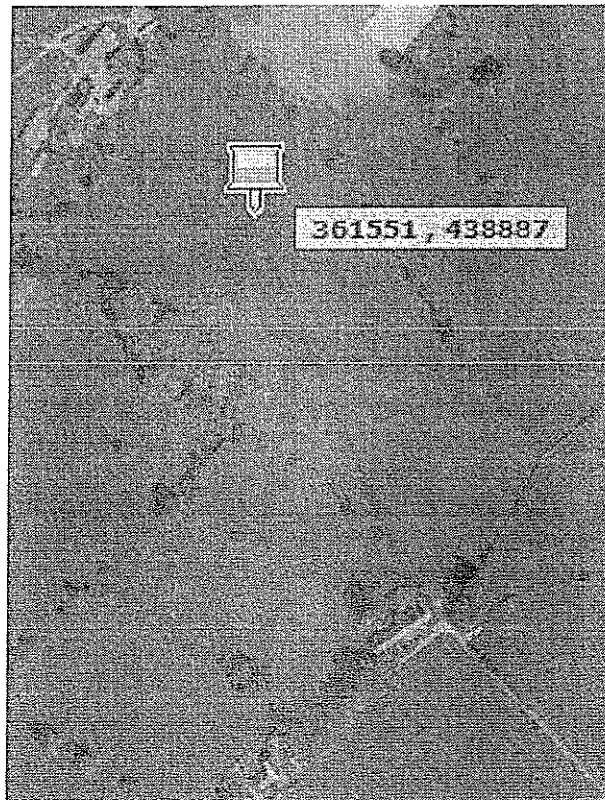
- To second nearest neighbouring property 260 meters

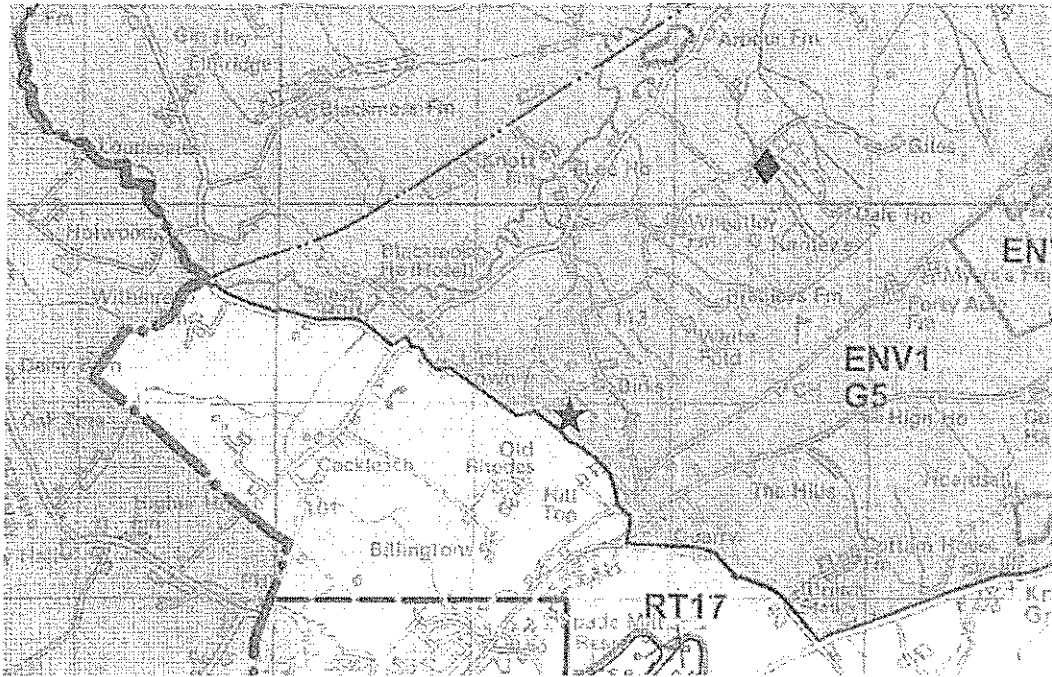


- Neighbouring property to South east 265 meters



- Neighbouring property to South is 235 meters





- 5.1 The proposal site's location is in the Forest of Bowland AONB. The western perimeter fence-line of the field in which the proposed turbine is located is also the western boundary of the AONB.
- 5.2 A pre-application enquiry was submitted, ref: - RV/2012/ENQ/00119. The pre-application enquiry took the form of a description of the Proposed Development as well as Plans and Supporting Documents submitted to RVBC. A site visit was requested and conducted with the applicants and agent present, as well as the pre-planning advice officer Gareth Fort.
- 5.3 The proposal was discussed on site in terms of the reasons to support the need and justification for the proposed turbine, as well as the sensitivity of the site and surroundings to the impact of the proposal.
- 5.4 In the written response to the enquiry the pre-planning advice officer gave a summarised Policy assessment from the Ribble Valley District-wide Local Plan which, it was advised, the proposal will be measured against
The policy assessment is as follows:-

The National Planning Policy Framework also emphasises the weight that should be placed on conservation of these areas at paragraph 115.

Policy **G5** of the Local Plan suggests that outside the main settlement boundaries, permission will be granted for small-scale uses which are, *inter alia*, essential to the local economy or social well-being of the area, or other small-scale uses appropriate to a rural area which conform to the policies of the plan.

Policy **ENV 3** suggests that in the open countryside development will be required to be in keeping with the character of the landscape area. Proposals to conserve and enhance landscape features, will be permitted, providing regard has been given for the characteristic landscape features of the area.

Policy **ENV 24** suggests that in the view of the general environment benefits associated with harnessing renewable energy sources, the Borough Council will support the development of renewable energy schemes provided it can be shown such developments would not cause unacceptable harm to interests of acknowledged importance in the local environment.

Policy **ENV 25** states that in assessing proposals for renewable energy schemes, the Borough council will have particular regard to, *inter alia*, the immediate and wider impact of the proposed development on the landscape; and the AONB in particular the need to protect features and areas of natural, cultural, historic and archaeological interest; the measures that would be taken during and after construction, to minimise the impact of the development on local land use and residential amenity; the local and wider benefits the proposal may bring; the fact that certain renewable energy sources can only be harnessed where that resource occurs.

Policy **ENV 26** relates particularly to wind energy. The policy states that applications will be approved providing that, *inter alia*, the visual impact of the proposal on the wider landscape is justifiable; the proposal does not harm any wildlife habitat or area of historical or architectural importance; the degree of nuisance caused by shadow flicker and noise is minimal; the proposal does not interfere with electromagnetic signals; the design colour layout and scale of turbines and ancillary structures must be appropriate to the character of the area.

- 5.5** In summary the officer advised that the proposal would be deemed a large-scale development, for domestic use, that will have significant impacts in terms of the wider countryside and AONB. The applicant has opted for a smaller model of turbine that the one submitted in the pre-app, the 15 meter mast turbine should be deemed as small scale.

The main aim of this application is to demonstrate that the impacts of the proposal, upon the setting, can be made acceptable. In order to do so the following section will discuss the very special circumstances that should help to balance the impacts that the Turbine may have on the AONB. The application is also accompanied by a Landscape and Visual Impact Assessment, an Ecological Scoping Survey and an assessment of the proposal on any nearby areas of archaeological interest or listed heritage sites; this all helps to demonstrate how the proposal can be made acceptable.

- 5.6** As part of this application it is intended to demonstrate very special circumstances, which outweigh the impact of the wind turbine development on the AONB.

It is our understanding that there is no accepted definition of very special circumstances:-

- The main aim of the Turbine is to allow the farms future capability to support a business on site.
- The Turbine will allow the more efficient running of the Milking and Dairy machinery and equipment on site.
- The turbine is needed to help pay for connecting the farm to 3 phase electricity, approx. cost £20,000.
- A wind Turbine, along with the 3 phase connection would fix current electrical supply issues, reduce the carbon footprint, reduce electricity bills and create a valuable additional form of income for a small family dairy farm. It would power milking and cooling equipment and would allow the applicant to fit cheaper more efficient 3 phase motors to this plant and equipment.
- The Turbine is needed to allow the business to continue, grow and diversify. The farm is restricted in options to grow and to add land to the business is very difficult in the area.
- Reduce electricity costs of the farm, £800 pound per quarter 5000 KWH (approx.) on the last bill.
- This turbine is not being put in by energy Investment Company renting the site; it is a totally self-initiated venture of the farm.
- The Red Tractor farm assured scheme, which the farm is a member of, encourages forms of renewable energy to counter the carbon footprint of livestock and farm equipment where possible.
- 3 phase electricity is needed at the farm to run workshop equipment, lathes, milling machines, pillar drills, welders, air compressors etc.
- This turbine will be part of the agricultural business and even though it is in the AONB, the wind turbine itself has become part of the view of a modern farming environment, in that it represents diversification and sustainability.

- 5.7** Due to recent housing developments in the area there has been an increase in use of electricity and load, thus causing supply issues to the farm, making it impossible to run the milking and chilling equipment on the farm at the same time as the oven in the house. The voltage drops to such a level that it causes the milking machine vacuum pump to stall, this is happening on an almost daily basis especially at weekends. This turbine along with the related 3 phase electricity connection would alleviate the problems the farm faces and the surrounding properties.

- 5.8** It is considered that the opportunity for the applicant to sustain a rural business, potentially provide a new employment opportunity in the rural area and reduce carbon emissions significantly, as a result of the installation of a single small scale wind turbine, are very special circumstances.

- 5.9** These very special circumstances provide benefits to the scheme that outweigh the limited impact a turbine would have, specifically on the site and the surrounding area.

6 Planning Considerations & The New National Planning Policy Framework

- 6.1 The following sections and assessment of the NPPF has been selected to demonstrate the impetus from government placed on Local Authority, to support and encourage sustainable growth for rural businesses. Granted the NPPF does not have the same weight currently as Saved Local Policies and Plans or the Core Strategy, but it should have a bearing in terms of what to consider appropriate development in the countryside.
- 6.2 At the core of the new National Planning Policy Framework is a presumption in favour of sustainable development. The NPPF is intended to replace a large amount of previous planning policies such as PPS22. Planning Law requires that applications must be determined in accordance with the new development plan, unless material considerations indicate otherwise. This framework is a material consideration in planning decisions.
- Paragraph 14 states that “for decision-taking this means approving 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, granting permission unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this framework taken as a whole”
- 6.3 Delivering sustainable development & the business venture at Old House Farm
- Paragraph 19 states that the Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore significant weight should be placed on the need to support economic growth
 - The applicant wishes to use the energy generated by the proposed turbine to power the business on site at Old House Farm. The turbine application will allow them to power the farm business, engineering workshop in a sustainable manner and will also in turn allow them to cut running costs and carbon emissions, making the business more sustainable
 - Paragraph 98 states *When determining planning applications, local planning authorities should:-*
 - o 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
 - o approve the application if its impacts are (or can be made) acceptable.
- 6.4 In considering these points and objectives raised by the NPPF and in conjunction with the goal of the application which will support the business on site, in a rural employment area, in a sustainable way, it is believed that this application is consistent with the NPPF.
- 6.5 The NPPF places a strong emphasis on the encouragement of site-specific small-scale development; stresses that the position of clean sources of sustainable energy can override perceived landscape harm and can provide a limited but valuable contribution to overall output

of renewable energy and to meeting energy needs both locally and nationally. The proposal generates electricity from a sustainable source in order to meet the energy needs of Old House Farm and will have minimal impact on the landscape, amenity and wildlife.

6.6 Documents replaced by the National Planning Policy Framework

The Government believes that climate change and the future sustainability of carbon-based fossil fuels are the greatest long-term challenges facing the world today. Policies and priorities for action, both in the UK and internationally, are set out in the Climate Change Programme and the Report of the 2006 Energy Review. PPS 22 sets the objective based criteria that must be applied by local planning authorities in deciding individual planning applications. These documents provide the framework within which local authorities decide on individual planning applications. The ministerial statement made by Yvette Cooper formalised government support for PPS22. It also encouraged local planning authorities to include in their local development frameworks policies requiring new developments to generate at least 10% of their own energy from on-site renewable sources.

PPS 22: “Planning for Renewable Energy” and its associated “**Companion Guide**” made the case for supporting, through the Planning Framework, the development of small-scale projects which cumulatively can contribute to local and regional energy needs.

PPS22: also places special emphasis on the wider environmental benefits of all proposals for renewable energy – This proposal would provide an annual reduction in carbon dioxide emissions of 42.6 tonnes and could redirect up to 30kWh to the National Grid. It is considered that the environmental benefits of the proposal outweigh the very limited visual impacts of the turbine.

Paragraph 11: “...small scale developments should be permitted within sensitive landscape areas providing that there is no significant environmental detriment to the area concerned .” and that

Paragraph 20: “...in assessing planning applications, local authorities should recognize that the impact of turbines in the landscape will vary according to the size and number of turbines and the landscape involved. .”

Companion Guide 6.7: “for small and medium sized projects, in cases where power can be dedicated to on-site uses, economically attractive schemes are a strong possibility and should be supported through the Planning Framework.”

PPS 7: “Sustainable Development in Rural Areas” also draws attention to the government’s objectives for the countryside and the importance of a diversified rural economy with;

Paragraphs 16 (i) and (iv) referring to the importance of sensitive exploitation of renewable energy supplies

PPS 1: “Delivering Sustainable Development, Planning and Climate Change” (Supplement to PPS 1) here the government recommends that Core Strategy Policies should be designed to promote and not restrict renewable and low-carbon energy and its supporting infrastructure

EN-3: "Draft National Policy Statement for Renewable Energy Infrastructure" – recently presented to Parliament pursuant to section 5 (9b) of the Planning Act 2008 reinforces the view that that electricity generation from renewable resources is considered to be an important element in the government's transition to a low carbon economy, a transition that is now considered to be urgent

The following policies are taken from the Blackburn with Darwen Local Plan which covers the area of the Site Location and are considered to be relevant:

Policy ENV8 sets out the general support for renewable energy developments, provided that the proposal has no unacceptable adverse impacts and Policy ENV9 sets out the criteria within which the proposal is to be considered.

Policy ENV8: Renewable Energy states that proposals for renewable energy will be supported where it is demonstrated that the installation, its associated infrastructure and operation will not have an unacceptable adverse impact on the environment by virtue of its size, scale, siting, design, noise, emissions or waste production.

Policy ENV9: Wind Farms states that the council will allow wind farm proposals provided that the development, including the turbines, associated infrastructure and grid connections:

- Has no unacceptable visual impact
- Has no unacceptable impact on heritage assets
- Has no unacceptable impact on nearby properties
- Has no unacceptable impact on sites of ecological significance
- Does not impact on traffic and transport and public rights of way
- Does not cause nuisance through noise or shadow flicker
- Does not impact on soils, groundwater or hydrology
- Does not interfere with telecommunications

Subsequent sections of this document will demonstrate that this application is environmentally sustainable and is in keeping with planning restrictions and guidance and meets the local core strategy elements of West Lancs Borough Council

7 Access

- 7.1 Access will be gained via an agricultural vehicle access gate; the point comes off of the main access track into the farmstead, just before the built-up area of the farm.
- 7.2 A new track will be created, from the perimeter fence line of the field in which the Turbine is proposed. The new track is approx 102 meters long.

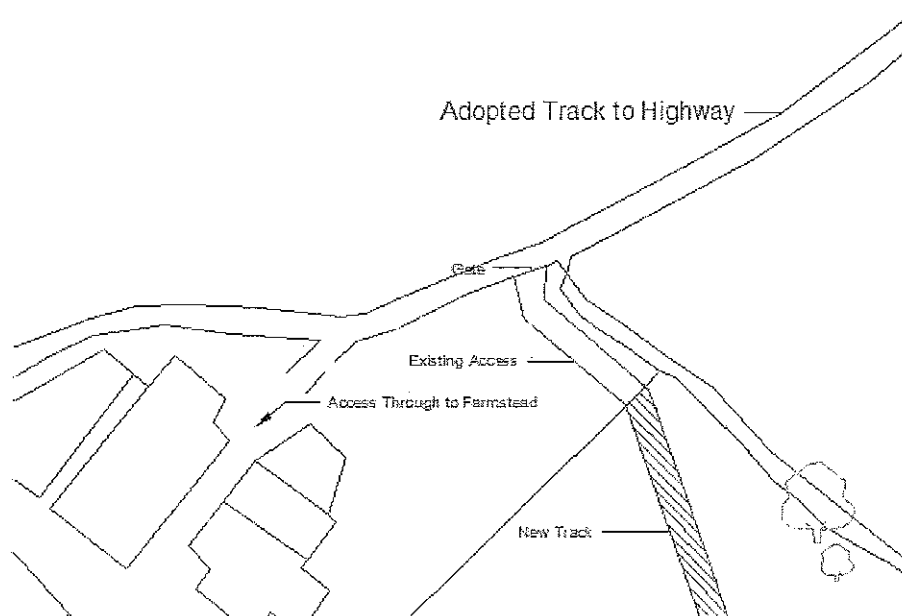


Image of Plan LG/JW/2703I

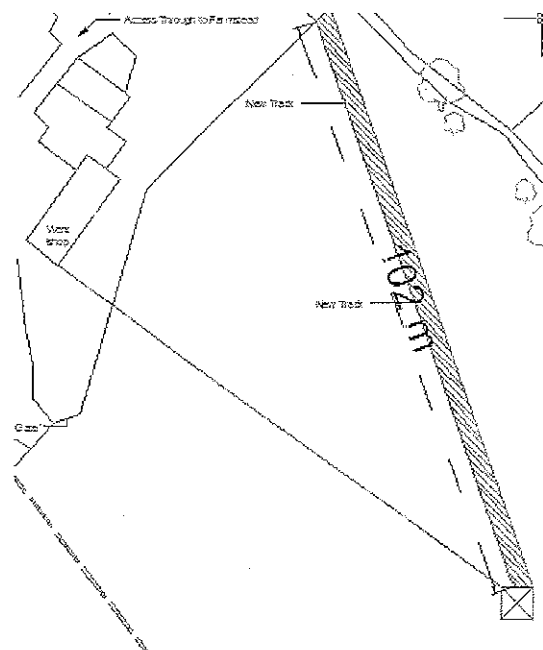


Image of Plan LG/JW/2703I

- 7.3 The existing access track runs east from the main highway. The existing track ranges from 3-4m in width and is suitable for large farm vehicles, which frequently use the track without issue. The new track will be 3-4 meters in width
- 7.4 There is adequate room in the entranceway for turning and manoeuvring vehicles, plus access for emergency services if they were ever needed.
- 7.5 Excavations for the foundation and cable trenches will be carried out by small, tracked mini-digger. All excavations, protection, cable laying, builders work, holes through existing walls etc. will be carried out in accordance with relevant health and safety requirements and good construction practice and the safe use of tools and equipment.
- 7.6 No impacts are predicted on the network of public roads or rights of way during the construction or operation of the turbine, therefore no additional measures are thought to be necessary.
- 7.7 **Turbine Delivery**
Vehicles Required
 1x Delivery Lorry & 1x Forklift / Telehandler
Duration
 1-2 hours
- 7.8 **Turbine Installation**
Vehicles Required
 360 degree excavator & Telehandler
Duration
 1 Day
- 7.7 The existing entranceway is wide with good visibility. There is adequate space in the existing farmyard to turn large vehicles. In dry weather these vehicles can turn on the field next to the turbine site. In wet conditions they can reverse into the yard and turn there. All reversing manoeuvres will be carried out using a qualified banksman.
- 7.8 The track made in the field will be temporary and it will be reverted to grass once the works have been completed.
- 7.8 There is also further information on how the turbine will be delivered and installed; the documents detail the procedure and operations that will be followed during the installation. We

advise that attention be drawn to two documents, listed below, that are appendix to this Design and Access.

CFGE-HS-0002_Loading Unloading Turbine from Flatbed Truck RA rev

CFGE-HS-0003_Turbine_Installation_Method Statement rev1 (2)

8 Shadow Flicker & Neighbouring Properties

- 8.1 The Shadow Flicker Evidence Base compiled by the Dept of Energy and Climate Change states that *"shadow flicker has been proven to occur only within ten rotor diameters of a turbine position within 130 degrees either side of north"*.

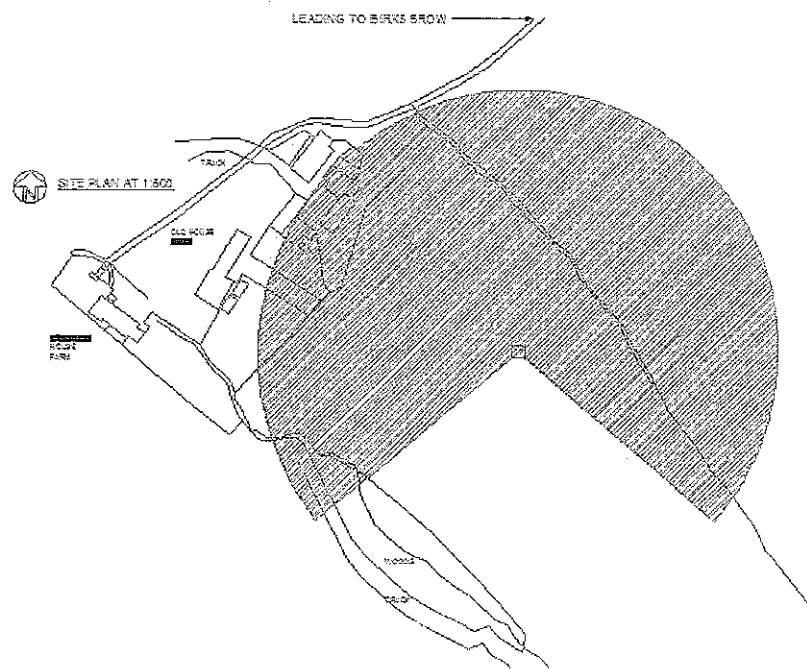


Diagram to show range in which shadow flicker may occur

- 8.2 In this case, with a rotor diameter of 12m, this distance would be 120m. There are no non-associated properties within these parameters; Old House Farm is occupied by members of the family who run the farm business. Shadow flicker will not be an issue on residential amenity of neighbours.

9 Ecological Issues

- 9.1 In accordance with Natural England guidance, a cut off distance of 50m is required from the tip of the turbine blades to the nearest ecological linear feature which may be used for roosting bats. In this case, there are no linear features which fall within this distance.
- 9.2 A more in depth ecological report details any impacts which would arise as a direct result of the installation of this turbine. This is will be submitted to accompany this application.

10 Archaeological Issues

- 10.1 The turbine site is sufficiently remote from listed buildings and scheduled monuments so as not to cause an adverse impact. Although it is not anticipated that there will be any sites of archaeological interest affected by the proposed construction or operation of the wind turbine due to the modest ground works associated with the development, the applicant is concerned to assist the Local planning authority to meet the ambitions of PPS16 (Planning and Archaeology). Accordingly, during the excavations for the base and cable trench, should any building foundations, artifacts or other unusual finds be made these will be notified to the relevant local authority archaeologist.

11 Acoustics

- 11.1 In accordance with information provided by Renewable UK, the sound of a working wind turbine is actually less than that of normal road traffic or an office. Even when wind speed increases, it is difficult to detect any increase in turbine sound above an increase in normal background sound, such as the noise of the wind itself and the rustling of trees.
- 11.2 With relevance to this site specifically, the HSE sets permitted noise levels in accordance with different types of industry. Those set for agricultural and equestrian operations are those which are applicable to the applicant.
- 11.3 There is a general rule that farm operations have a permitted maximum noise level of 87dBA, although there are higher limits for certain specific activities
- 11.4 The acoustic data provided for CF 15kW Wind Turbine states that even in the strongest of winds, and at the closest proximity, a turbine will only produce a maximum of 60dBA, with the general level being somewhere around 30-40dBA at average wind speeds. This level is greatly reduced at a distance of 30m+ from the turbine itself. As the proposed turbine is sited 130m from the nearest public right of way, acoustic issues should not be a problem.
- 11.5 In view of this information, it is apparent that the installation of this wind turbine will not exceed the site's existing noise levels, and therefore it is thought that a separate background noise test would be unnecessary.

12 Electromagnetic and Aviation Radar Interference

- 12.1** Because of their physical size, in particular their height, wind farms can have an effect on aviation and radar interference. The aviation community has procedures in place which are designed to assess the potential effect of developments such as wind farms on its activities, and, where necessary, to identify mitigating measures.
- 12.2** As detailed in the Civil Aviation Authority's '*Policy & Guidance on Wind Turbines*', potential impacts on line of sight and radar interference caused by wind turbines are only likely to occur within 10km of its position.

13 Turbine Specifications

(as provided by Green Energy Ltd.)

- Blade Pitch (Pitch Actuator) - The blades are automatically controlled to optimize aerodynamic performance under different operating conditions. This ability improves efficiency compared to fixed-blade turbines. The pitch feature can also be used to act as a brake by feathering the blades out of the wind and, in hurricane force winds; this same feature can be used to assist survival. This technology is normally reserved for large wind turbines.
- Build Quality - The C&F turbine is designed and manufactured to withstand the most severe operating conditions. Most components are made from high strength alloys and all critical items such as the bearings, shafts, blades and chassis are designed to withstand winds of over 160 mph. In addition, galvanizing and powder paint coatings are employed to withstand the harsh environmental conditions that are commonly encountered.
- Generator - The generator is a novel design not commonly encountered in wind turbine applications. It is an axial flux, permanent magnet, air-cooled, multi-plate generator which was developed in-house by C&F. Although costly to manufacture, this type of generator affords significant advantages. No core is used in the coil so that, over time, magnet leakage cannot adversely affect the turbine performance. The coils are individually encapsulated, which affords significant protection from the elements and from the ingress of debris. The axial configuration allows a modular construction which enables the user to segregate the output for different independent electrical loads.
- Wind Direction Sensor (Yaw Actuator) - A wind direction vane is monitored by the turbine microprocessor which then activates the yaw motor to align the turbine into the wind. This feature, universally employed on large turbines, improves performance and energy yield.
- Blades - The blades are manufactured from aerospace type composite materials which are stronger than steel. The CF6/11 turbines use carbon fibre reinforced polypropylene while the larger machines use glass fibre reinforced vinyl ester.
- Mechanical Brake - A mechanical brake is employed as a failsafe back-up to the blade pitch brake. This is an essential safety feature universally employed on large turbines and it acts in such a way that the brake automatically engages should a fault be detected. The brake is also an important asset when servicing the turbine.
- Skins - The skins are made from acrylic capped ABS. This material is strong and rugged. In addition, it is very resistant to colour fade as a result of UV exposure.

- Mast - All C&F turbines employ a monopole mast which can withstand hurricane force winds.
- Controller/GSM - C&F have developed their own microprocessor to control their range of turbines. The microprocessor is GSM enabled allowing the machine to be remotely monitored and controlled over the internet or even by mobile phone. Thus, all C&F turbines are continually monitored from their technical HQ. This enables them to rapidly respond to any fault and, in the event of an extreme weather forecast, they can remotely shut the turbine down. In addition, they can gather performance data for each individual turbine which can be accessed by the customer via web browser.
- Inverter - C&F employ an Aurora inverter. This inverter affords a significant advantage over many competitors in that the generator load can be continually varied to optimise performance at different wind conditions.

14 Conclusions

- 14.1** The proposed development will provide a renewable energy source for a site that presently uses a vast amount of grid electricity, leading to a large carbon footprint and high running costs.
- 14.2** The visual impacts of the turbine have been minimised through colour, scale and design, with the mature surrounding landscape being more than capable of absorbing a turbine of this scale. Any visual impacts, no matter how slight, are greatly outweighed by the economic, social and environmental benefits of the proposal outlined above. This development, taken together with the demonstration of no harm, is appropriate for the location and purpose for which it is proposed.
- 14.3** The turbine will be constructed and operated in a way that will not adversely affect the integrity, character and value of the local landscape. All works may be carried out without prejudice to any local public highway throughout the construction and operational phases, and if applicable the decommissioning period at some point.

Appendix 1

Risk Assessment for Turbine Delivery & Installation
 CFGE-HS-0002_Loading Unloading Turbine from Flatbed Truck RA rev



Hazard Identification / Risk Assessment / Risk Control																				
Area/Cell	Shipping/Loading on/off site		Date: 03/03/2011																	
Assessed By:	Aidan Kelly	Revision Number:	1																	
Activity Covered by this Assessment:	Loading & Unloading of Turbine nacelles, blades, towers and other associated parts from flat-bed truck																			
Number of People Involved:	2 installation engineers (1 truck driver, 1 machine operator)																			
Duration of Activity:	1-2 Hours																			
Assessment of Hazard (Severity) H = Fatality / Major Injury or Illness Causing Long Term Disability M = Injury or Illness Causing Short Term Disability L = Other Minor Disability	Assessment of Risk (Likelihood) H = Certain or Near Certain M = Reasonably Likely to Occur L = Very Seldom / Never	S E V E R I T Y LIKELIHOOD <table border="1"> <tr> <td></td> <td>L</td> <td>M</td> <td>H</td> </tr> <tr> <td>L</td> <td>L</td> <td>M</td> <td>H</td> </tr> <tr> <td>M</td> <td>M</td> <td>M</td> <td>H</td> </tr> <tr> <td>H</td> <td>H</td> <td>H</td> <td>H</td> </tr> </table> RISK ASSESSMENT				L	M	H	L	L	M	H	M	M	M	H	H	H	H	H
	L	M	H																	
L	L	M	H																	
M	M	M	H																	
H	H	H	H																	
Hazard Identification		Assessment of Hazard (Severity) H / M / L	Assessment of Risk (Likelihood) H / M / L	Risk Assessment H / M / L																
1.	Manual Handling Injuries – Back injury, lower back strain, musculoskeletal disorders	M	L	M																
2.	Fall/Collapse of Materials or Parts – Being struck by falling/moving parts or materials, Crushing Injuries/Entrapment from falling/moving materials	H	M	H																
3.	Work at Height – Falls from height,	M	M	M																
4.	Machinery/Cranes/Hoists – Being struck by moving machinery, being struck by moving materials	H	M	H																
5.	Lifting Gear – Lifting gear failure/breakage, fall of materials, overload	M	M	M																
6.	Contact with Over-head power lines – Electrocution, fire,	M	L	M																
Note: If the overall risk factor is low (L), for all hazards identified, then no further action is required. If the overall risk factor is medium (M) or high (H) then the remainder of this form must be completed.																				
Risk Control Measures																				
Reference Documentation and / or Standards Required: Safety Health & Welfare at Work Act 2005 Safety Health & Welfare at Work (General Application Regulations) 2007 Safety Health & Welfare at Work (Construction Regulations) 2006 Green Energy Site rules and safety induction																				
Supervision Required: Site supervisor is responsible for safety supervision on site.																				

Control Measures:
1. Manual Handling:

- Manual Handling of materials and parts from the truck/trailer will be avoided where reasonably practicable
- All transporting of turbine materials and associated parts will be lifted by mechanical aids where possible.
- The safe lifting principles of manual handling training must be adhered to where the manual handling of parts or materials cannot be avoided.
- Protective gloves must be worn by operatives when restraining the load with chains and straps.

2. Fall/Collapse of Materials or Parts:

- Turbine Materials and parts will be loaded on the flatbed truck in a safe manner which will take into account safe unloading procedures.
- All materials and parts will be loaded in such a way as to eliminate the need for persons to access the back of the truck trailer during unloading.
- All materials and parts will be held securely in place on the truck trailer with ratchet straps and/or chains which are in good working order
- The use of chocks will be utilised where there may be a risk of materials rolling off the back of the truck trailer
- The truck trailer will be fitted with removable load securing posts which will prevent the turbine towers from rolling off the truck trailer.

3. Work at height:

- Work at height will be avoided where reasonably practicable.
- Materials and parts will be loaded onto the truck trailer in such a way as to prevent the need for any person to access the truck trailer during unloading operations.
- Climbing on materials on the truck trailer is strictly prohibited
- Access to the truck trailer is by designated access point only i.e loading ramps or access steps, persons must not climb up the truck trailer or use the wheels as access steps
- Where work at height cannot be avoided, appropriate personal protective equipment to be worn while carrying out activities at height e.g. fall arrest equipment / helmet

4. Machinery/Cranes/Hoists:

- C&F Green Energy site supervisor will ensure the use of cranes is planned taking into account the size weight and position of the maximum loads to be handled
- All machinery used for lifting and moving materials onto and from the truck trailer will be in good working order and will have a valid inspection test certificate along with the specified Safe Working Load (SWL) which will be displayed clearly on the equipment
- Traffic management plan must be implemented on site one way

systems, traffic routes outlined etc. Where plant is operated in restricted access.

- If overhead power lines are along traffic routes barriers shall be erected and notices put in place before the barriers to alert the drivers
- Persons must not walk under raised loads.
- Persons must not pass behind working machinery or equipment without first ensuring the driver can see them and acknowledges their intention to pass behind
- All plant shall and vehicles on site to have flashing beacons and be maintained in the correct manner.
- Pedestrians on site must wear high visibility clothing at all times while on site. Visitors on site to wear the appropriate personal protective equipment and be accompanied at all times by a competent person.
- Only competent and trained persons can operate/drive machinery and they must be in possession of a valid CSCS skills card/ticket for the particular machine/equipment that they intend to operate
- Ground bearing capabilities must be taken into account before attempting any lift so as to ensure ground is stable and sufficiently level.

5. Lifting Gear:

- All lifting gear including chains, slings, straps etc. will be inspected before use and will be destroyed and taken out of use if found to be defective.
- All lifting gear must have a valid up to date inspection test certificate and must not be used unless the certificate is on file.
- All materials will be securely attached to lifting gear before raising a load.
- Lifting gear including chains and slings must be attached to the materials in a safe and appropriate manner and only designated lifting points can be used to lift turbine nacelles.
- Lifting slings must be securely choked on turbine blades and positioned as close to centre of gravity as possible to avoid unbalance swing.
- The use of a rope tag line on materials should be utilised to avoid violent swing and keep control on raised loads.
- Lifting operations must not be undertaken where members of the public are in close proximity to the work area.
- No lifting will take place in poor weather conditions i.e. heavy rain or wind.
- No lifting materials above work areas or where persons are working below
- All lifting operations must be planned and supervised.

6. Contact with Over-head power lines:

- The C&F Green Energy supervisor will identify and communicate all site specific hazards to the installation crew on induction and

C&F Green Energy

location of any over head power lines will be discussed with all crew members including machinery operators and delivery personnel - Protective barriers and or bunting will be erected and warning notices displayed where there are overhead power lines on a site. - Lifting operations must not take place where there is a risk of contact with overhead power lines or similar.			
Safety Training / Competency Required: All operatives must have Manual Handling Training All drivers must have required C S C S skills cards and tickets. The contents of this risk assessment will be communicated to all interested parties.			
PPE Required: General PPE requirements including: Steel toe capped shoes/boots, Hard hat where lifting of materials is being carried out High visibility clothing. Protective gloves where required for transporting and delivery.			
Assessment of Residual Risk (after controls have been put in place).			
Hazard Identification	Assessment of Hazard (Severity) H / M / L	Assessment of Risk (Likelihood) H / M / L	Risk Assessment H / M / L
1. Manual Handling Injuries – Back injury, lower back strain, musculoskeletal disorders	L	L	L
2. Fall/Collapse of Materials or Parts – Being struck by falling/moving parts or materials, Crushing Injuries/Entrapment from falling/moving materials	L	L	L
3. Work at Height – Falls from height,	L	L	L
4. Machinery/Cranes/Hoists – Being struck by moving machinery, being struck by moving materials	L	L	L
5. Lifting Gear – Lifting gear failure/breakage, fall of materials, overload	L	L	L
6. Contact with Over-head power lines → Electrocution, fire,	L	L	L
Note: If the remaining risk factor is medium (M) or high (H), then additional risk control measures are required.			
Other Specific Actions Required: 1. The truck trailer must be fitted with removable upright support posts on each side of the truck trailer so as to prevent mast sections from rolling off when restraining straps and/or chains have been removed. This risk assessment document will be updated and revised by the site supervisor if there is any change in process or other matter in relation to the loading and unloading process.			
Above Measures Approved By:			
Name (Print): Aidan Kelly	Name (Sign):	Position: Safety Officer	
Review Date: March 2012 (or before if other risks have been identified)			

Appendix 2

Method Statement for Turbine Installation

CFGE-HS-0003_Turbine_Installation_Method Statement rev1 (2)

C&F Green Energy
Method Statement

Contractor	Name: C&F Green Energy	Address: Coshla, Athlery, County Galway, Ireland.	Tel: 0035391-790368 E-mail: info@candfgreenenergy.com
Project Name (Site Specific)			
Site			
Address/Location:			
Description of the Task/Activity for which this method statement covers	CF Turbine Installation	Start Date/Time:	
		Finish Date/Time:	
Personnel Involved	Name	Role/Trade	
	Patrick Lardner	Installation Supervisor	
	William Fitzgerald	Installation Engineer	
	John Burke	Installation Engineer	
	Peter Murphy	Machine operator	
Site Supervisor:	Pat Lardner	Tel:	0035387-6146717
Safety Officer:	Aidan Kelly	Tel:	0035387-6736070
Key Plant & Tools (Attach Certification)	360 Excavator, Telehandler, pneumatic impact gun, Hydraulic rams, Petrol generator Mobile Elevated Work Platform (MEWP) & Mobile crane where required.		
Key Materials			
Other Essential Equipment:	(i.e. access platforms, ladders, etc.) Access ladders, nylon lifting straps and lifting chains.		
Specific Identified Residual Hazards: (or refer to the task specific risk assessment(s))	General hazards: Falls from height, falls of materials from height, electric shock, moving & reversing site plant & equipment, manual handling injuries, slips/trips/falls. Site specific i.e. buried services, overhead cables		
Specific Staff Training	Site specific induction talk including site installation rules and procedures. Manual Handling training. Electrical Hazards training.		

CFGE-HS-0003

Revision 1

1

C&F Green Energy

Method Statement

Sequence of Operations: (include sketches if required)	1. Site will be secured with fencing to prevent unauthorized access of third parties. 2. Review drawings including services drawings to identify all underground services, gullies, service pipes or cables and any overhead power-lines etc. 3. Install any exclusion zones as required i.e. lifting areas. 4. Remove all materials & parts from delivery trailer with forklift and store them in a neat and safe manner until use. 5. Inspect concrete base foundation for defects, bolt spacing and levels. 6. Insert steel spacers where necessary so as to ensure base ring and hinge plate are level. 7. Secure hinge plate bracket to concrete base with specified nuts. 8. Secure hydraulic ram holding brackets to concrete base with specified nuts. 9. Lift base section of mast into position with forklift, telehandler or other lifting plant using lifting slings/straps/chains that are in good working order. 10. Connect the base section of the mast to the hinge plate bracket with the steel connecting pin. 11. Connect the hydraulic rams to the ram holding brackets on the concrete base and on the base section of the mast with appropriate steel pins. 12. Remove the lifting slings/straps/chains from the mast base section via secure ladder (A frame type). 13. Lift the next section of the mast into position with the forklift/telehandler and align the two sections together so that the bottom of the 2nd mast section fits into the top of the base section. 14. Push the next section of mast into the previous section by using the forklift/telehandler until the pre marked inter-connection depth has been reached. 15. Connect all sections of mast together using the same method until the required mast length has been achieved i.e. 10kw = 3 sections, 15kw = 5 sections, 20kw = 6 sections etc. 16. The top section of the mast will be supported with a specially designed tri-pod stand to take the weight of the mast and to hold the mast securely in position for the turbine head connection process. 17. The electrical cables will be threaded through the mast using fish tape and will be left in position for the electrical engineer to connect. 18. The turbine head will be moved into position on its specially designed transporting frame with a forklift/telehandler. 19. The turbine head will be lifted into position via lifting chains attached to lifting eyes on the turbine head with an appropriate lifting device i.e. forklift/telehandler or similar. 20. The turbine head will be unbolted from the transporting frame. 21. The turbine head will be securely bolted to the mast top ring plate. 22. The electrical cables will be connected to the turbine head assembly. 23. The lifting chains will be removed from the turbine head using a secure ladder (A-frame type) to access the top of the turbine. 24. All covers will be replaced on the turbine head and secured in position. 25. The 3 turbine blades will then be choked with nylon lifting straps and will be lifted into position using a forklift/telehandler. 26. The 3 turbine blades will be bolted securely in position onto the blade roots using the specified bolts and will be torqued accordingly. 27. The hydraulic rams will be connected to the generator and the rams will be activated in order to raise the mast upright. 28. When the mast has been erected into the vertical position the mast base plate will be bolted securely onto the concrete base pad with a pneumatic impact gun. 29. Following final inspections & checks of the installed turbine the installation area will be cleared and left in a neat & tidy manner.
Temporary Supports and Props needed to facilitate the work:	(if using steel poles) Specially designed & tested steel tri-pod stand used to support the top end of the mast during turbine head installation process.

C&F Green Energy

Method Statement

Method of Access and Egress to the work area:	All lift terrain vehicle (uplift with crane) will be used to access all remote sites and carry equipment and tools to the point of installation. A rated 36" x 48" x 12" will be used to transport all heavy items. A platform of materials to be in addition site.						
Fall Protection Measures: (Where work at height cannot be eliminated consider both Personnel & Materials)	Use Ground Ropes Two Ropes Brick Guard Safety Harness Protection Zones, etc.						
Hazardous Substances: (Attach MSDS if required)	 Very Toxic	 Harmful Irritant	 Combustible	 Dangerous for the environment	 Oxidizing	 Highly flammable	 Explosive
Applicable:	No	Yes	No	No	No	No	No
Identification of Hazardous Substances & Storage Arrangements:	Possibility of contact with hydraulic oil, used in lifting runs process. Protective Gloves must be worn by operatives, wash all oil from skin immediately.						
Details of Permits to Work:	None. There may be on occasion the requirement for a permit to dig if installation is taking place in an urban area where there is the possibility of buried underground services in the area.						
SWL's:	Identify any limits on the loadings, apply limits to temporary plant equipment or fixed elements of the structure where the work is taking place. Turbine head assembly SWL 1200kg, Lifting straps SWL 2000kg, 3 leg lifting chains 4250kg.						
Required Personnel Protective Equipment: (Tick required items of PPE)							
Emergency Procedures:	In case of emergency on site i.e. fire, explosion, gas leak, electrical fault etc. all personnel will assemble inside the first access gate to the site which is adjacent to the road where the site supervisor Pat Lardner will carry out a roll call.						
	Name of On-Site First Aider:	Pat Lardner					
First Aid Facilities:	First Aid Box Location:	First Aid box located in Green Energy Van.					
	Location of Nearest Hospital:						
Welfare Requirements	The client will make their existing welfare facilities available to onsite workers.						
Services to be supplied by Others	N/A						
Other information &							

C&F Green Energy

Method Statement

Comments	
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All work will be undertaken by qualified competent persons with experience of the type of work described above, and in all cases in full accordance with safety procedures specified in the companies' health and safety Policy.

Prepared by: Aidan Kelly

Position: Health & Safety Officer

Date: 21.03.2010

Reviewed by: Mark Flaherty

Position: Quality Manager

Date: 21.03.2010

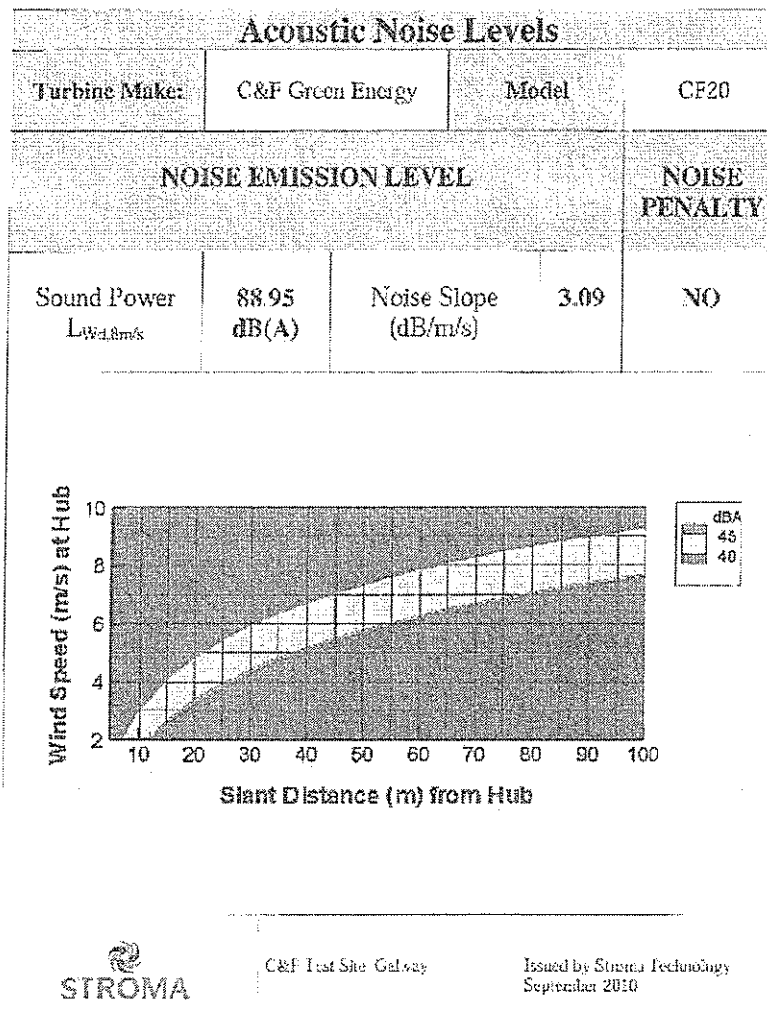
Items Attached:	Yes	No
Sketches	☐	☐
Certification of Plant etc.	☐	☐
Programme of Work	☐	☐
Risk Assessments	☐	☐

Appendix 3

Acoustic Details – CF20 Wind Turbine

C&F Green Energy

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Appendix 4: Extract from Microgeneration Installation Standard: MIS 3003 regarding shadow flicker.

In the Figure 2 below the wind turbine is at the centre of the image and North is at the top of the image. Figure 2 is suitable for turbines mounted at hub heights of 3-4 times rotor diameter (B_d , where B_d is blade diameter for a HAWT or blade length for a VAWT) and reference should be made to Annex D for other cases

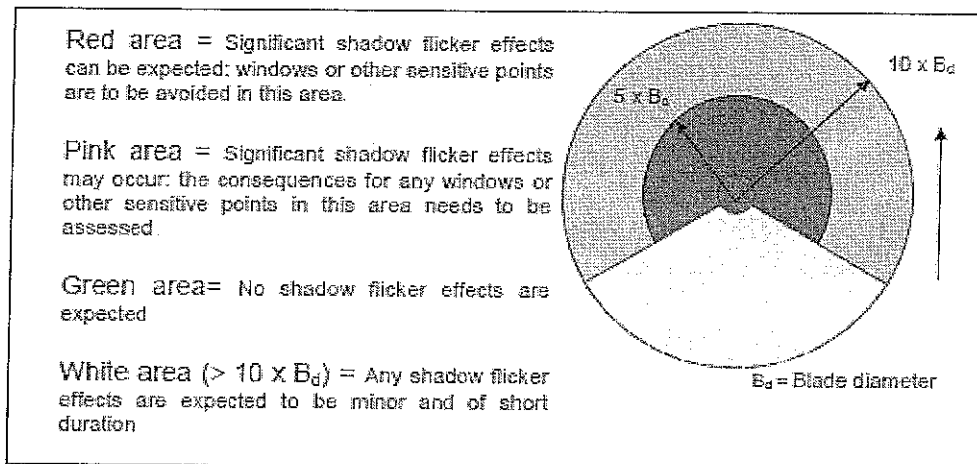


Figure 2: Diagram of shadow flicker zones of interest for UK

(Note: The wind turbine is at the centre, and that this diagram is appropriate for UK latitudes in the Northern hemisphere where the green sector forms an arc of approximately 100 degrees)

APPENDIX D Detailed assessment of shadow and flicker

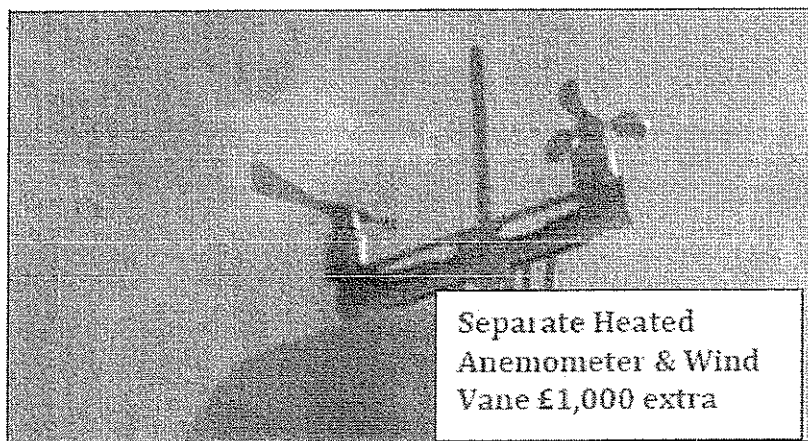
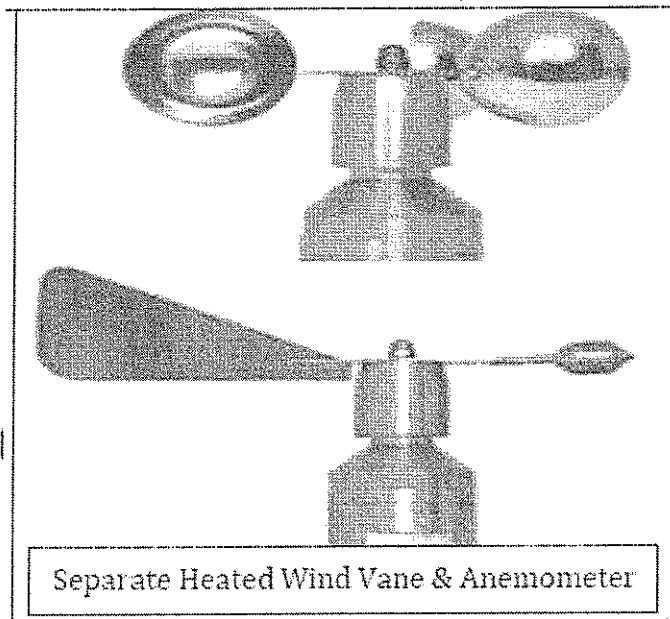
D. 1. Shadow flicker

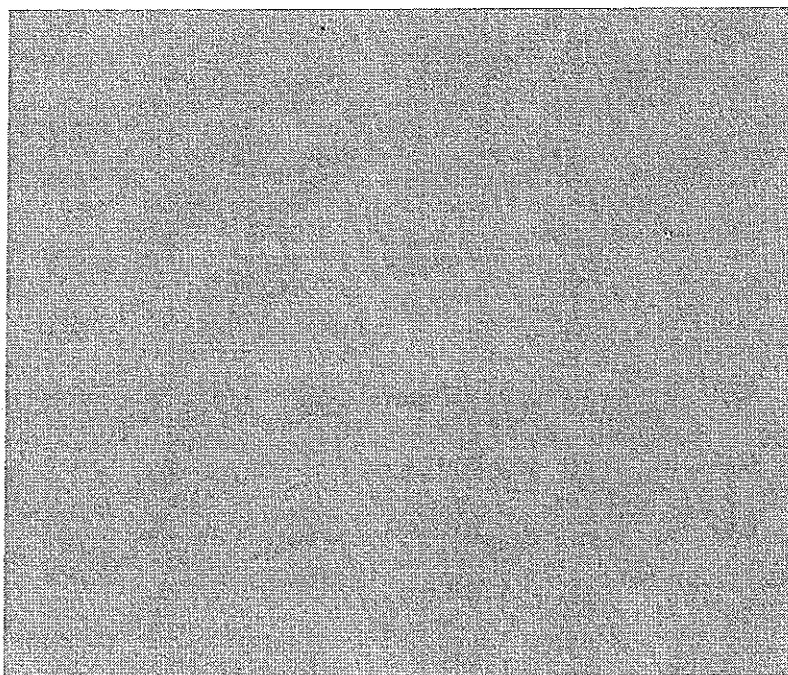
"problems caused by shadow flicker are rare" (PPS16)

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'.

Appendix 5: Extract from Microgeneration Installation Standard: MIS 3003 regarding ice prevention.**3. Heated Wind Vane & Anemometer**

C&F Green Energy now offer our customers a heated anemometer and wind vane. This product is far superior to the original Davis system and is the standard on all mega watt turbines. This heated system constitutes a significant product enhancement and eliminates downtime during harsh winter conditions. The new heated wind vane and anemometer guarantees superior winter operation of the turbine, greater ensuing revenue from the turbine during frost, hail, snow and other cold weather conditions. This system costs an additional £1,000.



Appendix 6: Turbine Colour BS00A09**BS00A09 Flint Grey**