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**ACOUSTICAL  
CHARACTERIZATION OF  
THE ENDURANCE WIND  
POWER E-3120 WIND  
TURBINE**

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12/00278/NR

**PRESENTED TO :  
ENDURANCE WIND POWER, INC.**

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**WRITTEN BY:**



**GUILLAUME CARON, JR. ENG.**



**MARCH 2010**

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# ACOUSTICAL CHARACTERIZATION OF WIND TURBINE E-3120

## Mandate

The mandate was to describe the acoustical characterization of wind turbine E-3120 to evaluate environmental impact. This study aims to obtain the apparent sound power (with A-weighted -  $L_{WA}$ ) from this source and to forecast pressure levels generated depending on wind speed and distance. We also evaluated if there are pure tones in the wind turbine noise profile using FFT spectrum analysis. This document is a translation of the report prepared June 6, 2009.

## Abstract

This study was based on the IEC-61400-11 standard (*Wind turbine generator systems – Part 11 Acoustic noise measurement techniques Ed 2.1*).

IEC-61400-11 standard characterizes acoustic emission of wind turbine based on wind speed. It specifies the sound power level ( $L_{WA}$ ) as a function of wind speed, which allows deducing its impact for all distances.

This standard also describes the method of analysis of pure tone and precise conditions and measurement techniques such as:

- Location of measurements;
- Equipment;
- Formatting data ;
- Data analysis.

Moreover, this standard describes how to perform less detailed measurements and analysis for some cases. In the current study, some exceptions are made in relation to this standard, which does not affect the relevance of the analysis.

## Instrumentation

- Precision Sound Level Meter Larson-Davis 824 (Type 1, satisfies IEC 60651-1993, IEC 60804-1993) Serial 824A2810.
- Capacitor microphone 1/2" 2551 de Larson-Davis S/N 1082.
- 1000 Hz stallion CAL200 de Larson-Davis (Type 1) SN3899.
- Third octave spectrum analyzer (Sound Level Meter. 824 de Larson-Davis).
- FFT spectrum analyzer (Sono. 824 de Larson-Davis) (with Hanning window).
- Windscreen: half sphere of 70 cm diameter to eliminate noise caused by wind.
- Anemometer.

## Measurement description

This report is comprised of many sound level measurements at different wind speeds. Wind speeds are measured on *Endurance Wind Power's* anemometer located at 24.6 m height.

- The test was performed on *Endurance Wind Power's* test site located in Saint-Jean-Port-Joli, QC.
- Measurements, compilations and analysis were performed by Michel Bochud and Guillaume Caron.

### Position of measurements

- The turbine is placed on level ground, located 55 meters from Highway 20. The vehicles generate a lot of noise (more than the wind). This constraint forced us to wait for a long period of time to obtain a complete absence of traffic before performing measurements. Most of the time, this constraint forced us to limit the length of measurement to approximately ten seconds instead of one minute.
- The microphone is placed at a distance of 31.4 m (less than 5° of declination). Most measurements were taken inside a van with the side door open. This configuration offers the feature to create a screen to the sounds from the highway. For some other measurements, the microphone was placed at the center of a round surface of wood of 1.2 meters in diameter, according to the IEC-61400-11 standard. The microphone is protected from the wind by a hemisphere of 70 cm (the features of this screen are defined in IEC-61400-11 page 29).

### Level measurements

- A calibration is made at the beginning and at the end of each measurement session using a 1000 Hz CAL200 Larson-Davis stallion.
- The measures are *Leq* type with a variable measurement period, given the background noise of the highway.
- Noise measurements FFT spectrum are averages of 190 spectra during 10 seconds on average.
- The turbine was stopped occasionally in order to measure and correct for the background noise. The acoustic measurements are time-stamped to the second to have a correlation with wind speed compiled in the measuring station (one measurement per second).
- All measurement levels (*Leq*, 1/3 octave, FFT) were recorded and graphs are provided in appendix.

### Content measurements

- Measures level of wind noise  $dB_{(A)}$  with third-octave spectrum
- Measures level of background noise  $dB_{(A)}$  with third-octave spectrum
- FFT analysis measurements of noise from wind turbine (0 to 2000 Hz, 5 Hz wide). All measurement files are provided in the appendix.
- All measurements were taken for wind speeds ranging from 5 to 14 m / s.

## Methodology of data compilation and analysis

The methodology used is that specified in the IEC-61400-11.

All *Leqs* values (wind turbine running or off) are compiled in the same file: "Compilation\_mesures acoustiques\_EnduranceWindpower\_1erjuin2009.xlsx.

The notes BF (background noise - *bruit de fond*) indicate that the wind turbine is turned off or that the measure was done far from the wind turbine, so the noise it produces is negligible compared to background noise.

All measurements (wind turbine running or turned off) are made in the complete absence of traffic on the highway.

Note: The background noise of the sound level meter is 16 dB, which is well below the measurements.

## Synchronisation

The 824 sound level meter and the anemometer are synchronized to the second. The *Leqs*, FFTs and wind speed are the average values taken at exactly the same moment. These correlations are shown in the files "Vitesse du vent\_2009-6-1.xlsx. These files give a value per second.

## Wind speed

The wind speed, measured by the anemometer, is standardized according to the procedure 8.1 of standard IEC-61400-11.

For this calculation, the following parameters were used:

- Z: The height of the anemometer- 25 m
- H: Hub height- 25 m
- z<sub>0</sub>: Roughness length – 0.05 m
- z<sub>0ref</sub>: Reference roughness length – 0.05 m
- z<sub>ref</sub>: Reference height for wind speed - 10 m

$$V_s = V_z \left[ \frac{\ln\left(\frac{z_{ref}}{z_{0ref}}\right) \ln\left(\frac{H}{z_0}\right)}{\ln\left(\frac{H}{z_{0ref}}\right) \ln\left(\frac{z}{z_0}\right)} \right]$$

$$V_s = V_z \left[ \frac{\ln\left(\frac{10}{0,05}\right) \ln\left(\frac{25}{0,05}\right)}{\ln\left(\frac{25}{0,05}\right) \ln\left(\frac{25}{0,05}\right)} \right] = V_z \times 0,8525$$

Standardized measurements are 0.853 times the speed measured.

## Background noise correction

The turbine is very quiet; the noise is barely above the background noise. The average difference is only 4 dB. By implementing the recommendations of the IEC-61400-11, when the difference is between 3 and 6 dB, 1.3 dB is subtracted to the level measured. If it's higher to 6 dB, we apply the adjustment as the difference of sound power. Less than 3 dB, no correction is made.

### Third octave spectrum

Third octave spectra (wind turbine running or off - see Appendix) measured and presented already include the filter (A). For some spectra, there is a slight peak for the 160Hz band, however, this peak is also in some other background noise spectra.

### Analysis of pure tones (tonality)

FFT spectra (0 - 2000 Hz, 5 Hz wide, flat weighting, Hanning time window) are obtained for different wind strengths, ranging from 5 to 12 m / s, with the wind turbine in motion and stopped to have the spectrum of background noise.

Again, the FFT spectra of the wind turbine do not show significant difference compared to background noise. There are no lines that correspond to the identification of a "tone", as specified in the standard IEC-61400-11 (*local max isn't more than 6 dB above masking noise level*). We note peaks at 675 Hz, 925 Hz and 1550 Hz, but the level is below the level of background noise and they are not even audible from a distance of 31.4 meters.

### Apparent sound power level

As mentioned in the methodology of IEC-61400-11 (p. 20), we can calculate the apparent sound power level  $L_{W(A)}$ . At least, this means that the sound power is equal to or lower than this value.

Therefore,

$$L_{W(A)} = Leq_{(A)} + 10 \text{Log} \left( \frac{4\pi R_1^2}{S_0} \right)$$

Where:

$Leq_{(A)}$  is the sound power level with background noise correction ;

$R_1$  is the distance between sound level meter and the center of the rotor

$S_0$  is reference area of 1 m<sup>2</sup>.

The noise level generated by the turbine is fairly constant and if we rely on the average level ( $Leq_{(A)} = 51.2$  dB), we obtain:

For:  $Leq_{(A)} = 51,2$  dB

$$R_1 = \sqrt{(R_0^2 + H^2)} = \sqrt{(31,4^2 + 24,6^2)} = 38,9 \text{ m}$$

Where

$R_0$  is the distance at which the measurement was taken;

$H$  is the height of the nacelle.

We obtain:

$$L_{W(A)} = 51,2 + 10\text{Log}(4\pi 38,9^2) = 94 \text{ dB}$$

Let the equation of sound power:

$$L_{W(A)} = L_{eq(A)} + 10\text{Log}\left(\frac{4\pi R_1^2}{S_0}\right)$$

For a distance  $R_0$  of 100 m:

$$L_{eq(A)} = L_{W(A)} - 10\text{Log}(4\pi(R_0^2 + H^2)) = 94 - 10\text{Log}(4\pi(100^2 + 24,6^2)) = 42,8 \text{ dB}$$

This is about 4.5 dB lower than background noise, so imperceptible.

Moreover, a relation of the apparent acoustical power versus standardized wind speed has been obtained from measures taken on site:

$$L_{w(A)} = 0,5413V_S + 89,407$$

Where  $V_S$  is the wind velocity standardized according to procedure 8.1 of the standard IEC-61400-11.

## Conclusion

The actual sound power level is about 94 dB and depends slightly on wind speed.

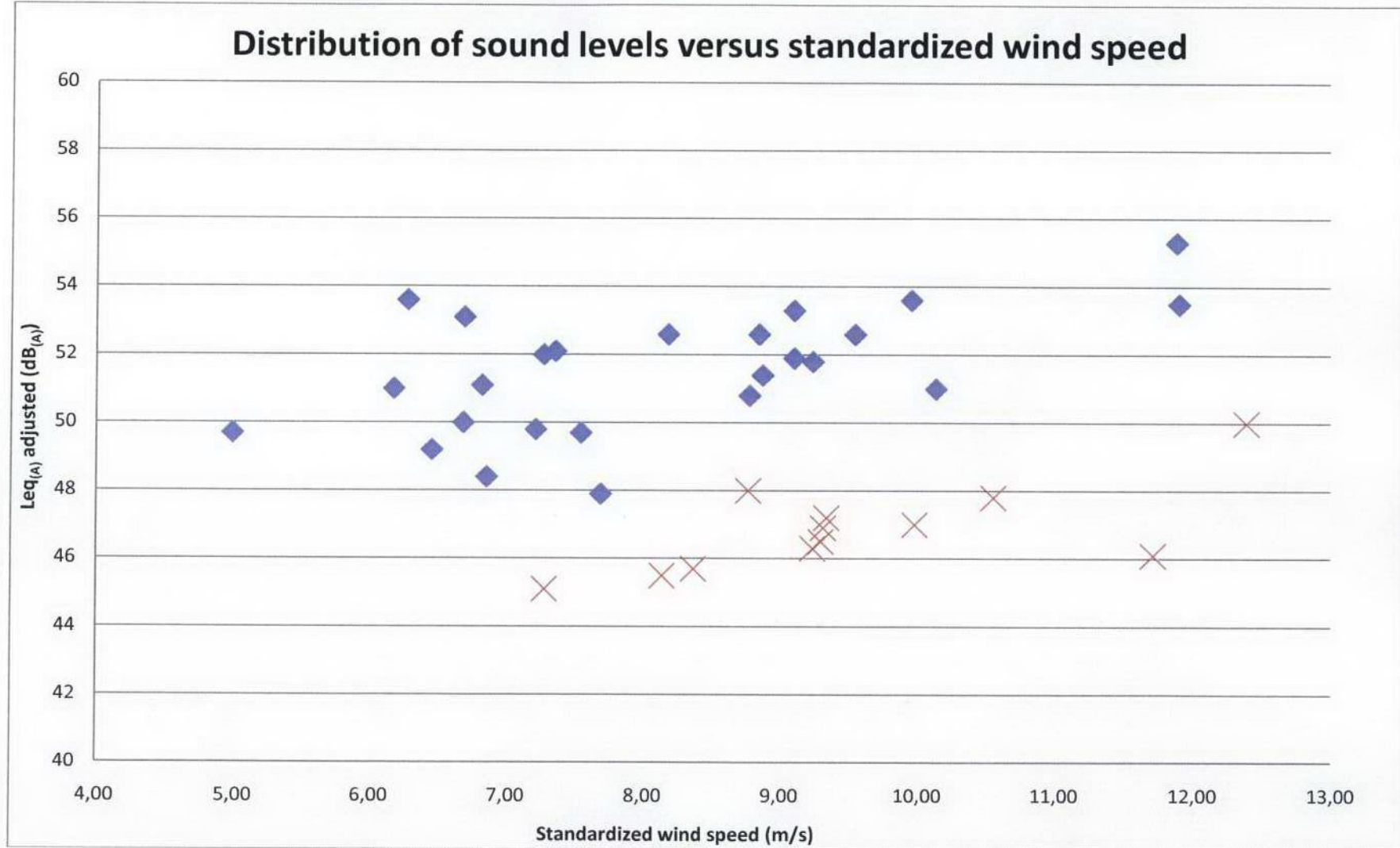
Note that this power level guarantees a sound level of around 43 dB for a distance of 100 m. At this distance, the background noise is higher than the noise of the turbine.

No trace of pure sound (tone) is audible at 100 feet. The FFT analysis shows the presence of several frequencies, but the level is too low according to background noise so they are hardly audible even to 31 meters.

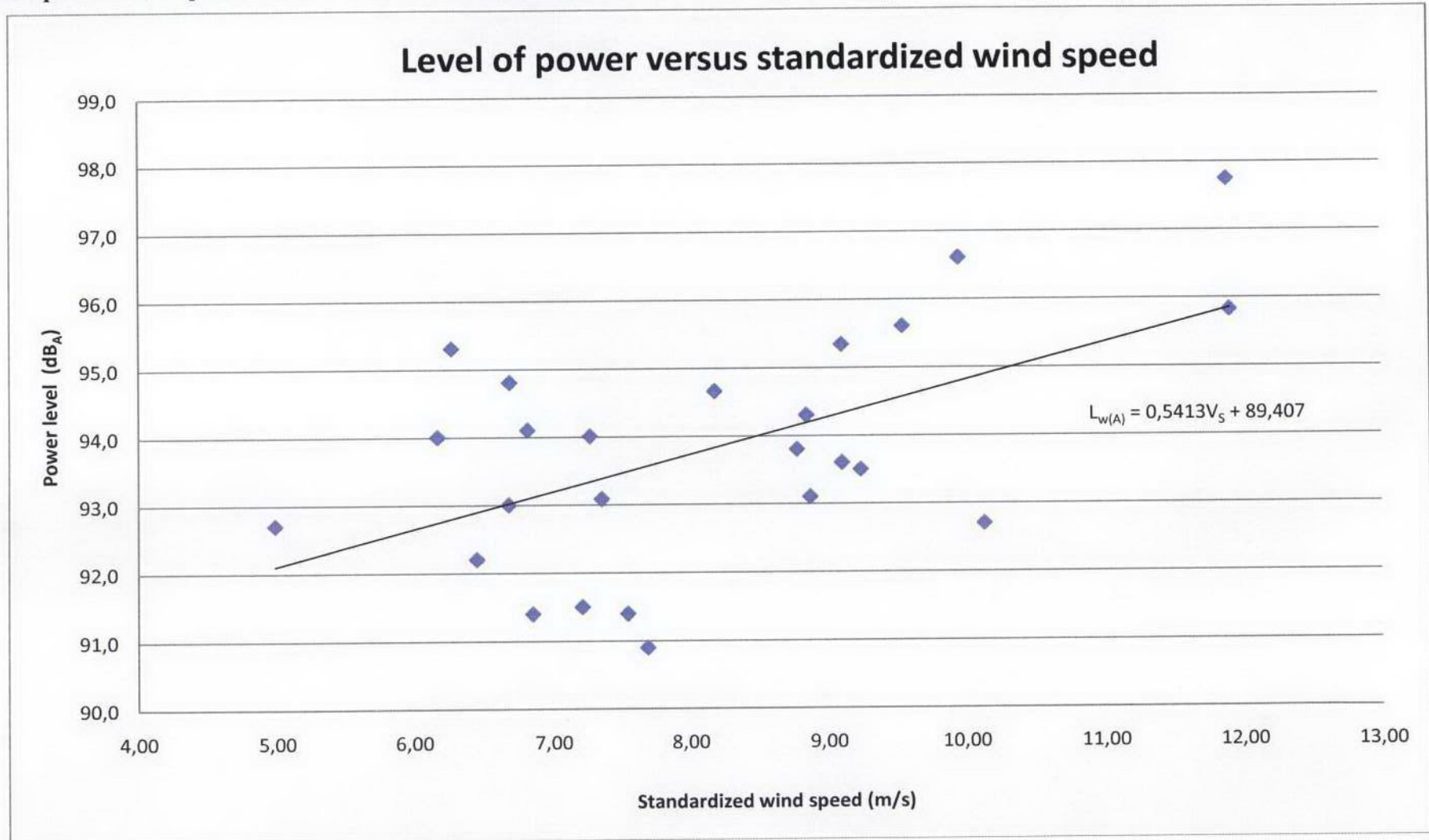


## **APPENDIXES**

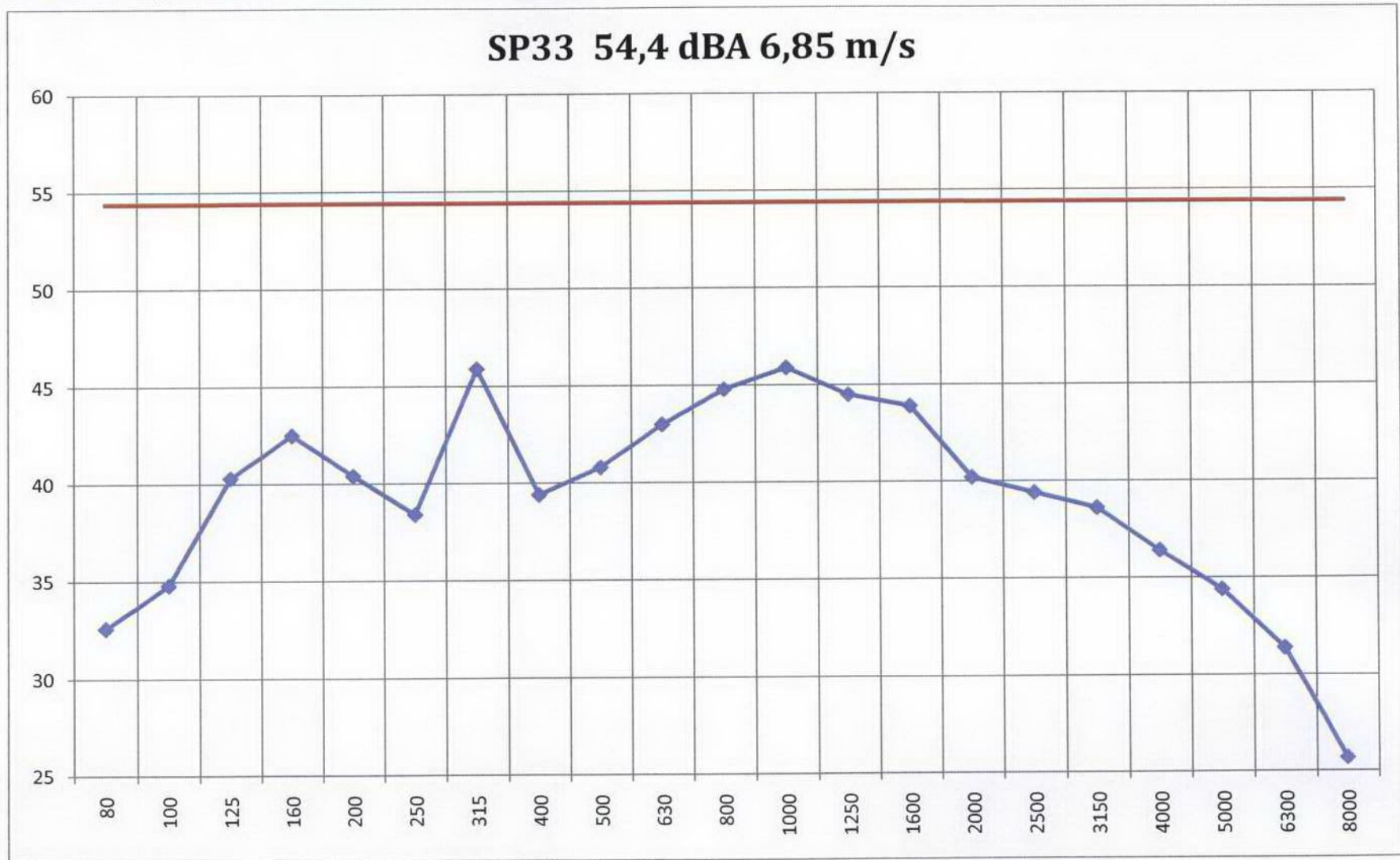
Graph of distribution of apparent sound levels versus standardized wind speed



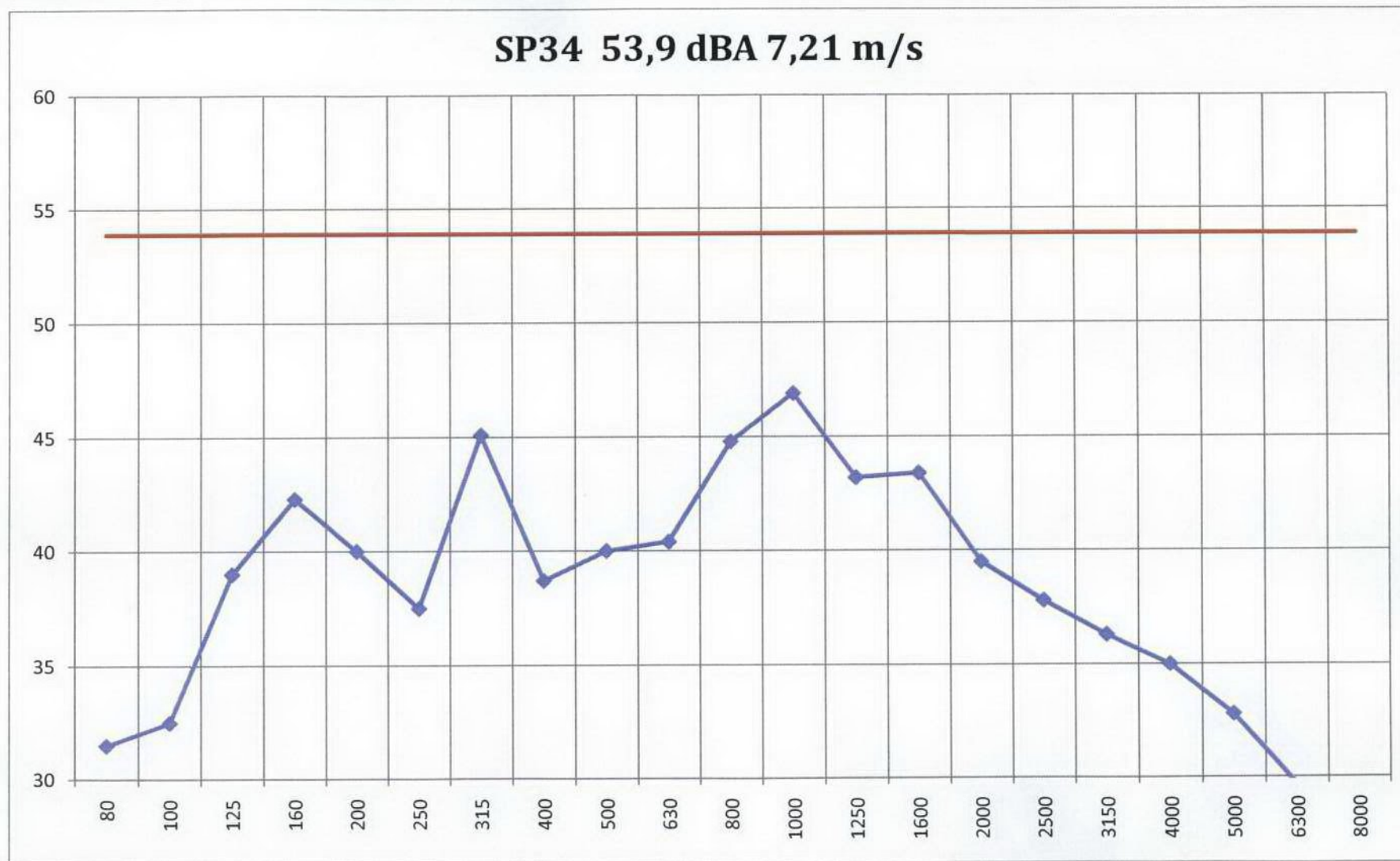
Graph of level of power versus standardized wind speed.



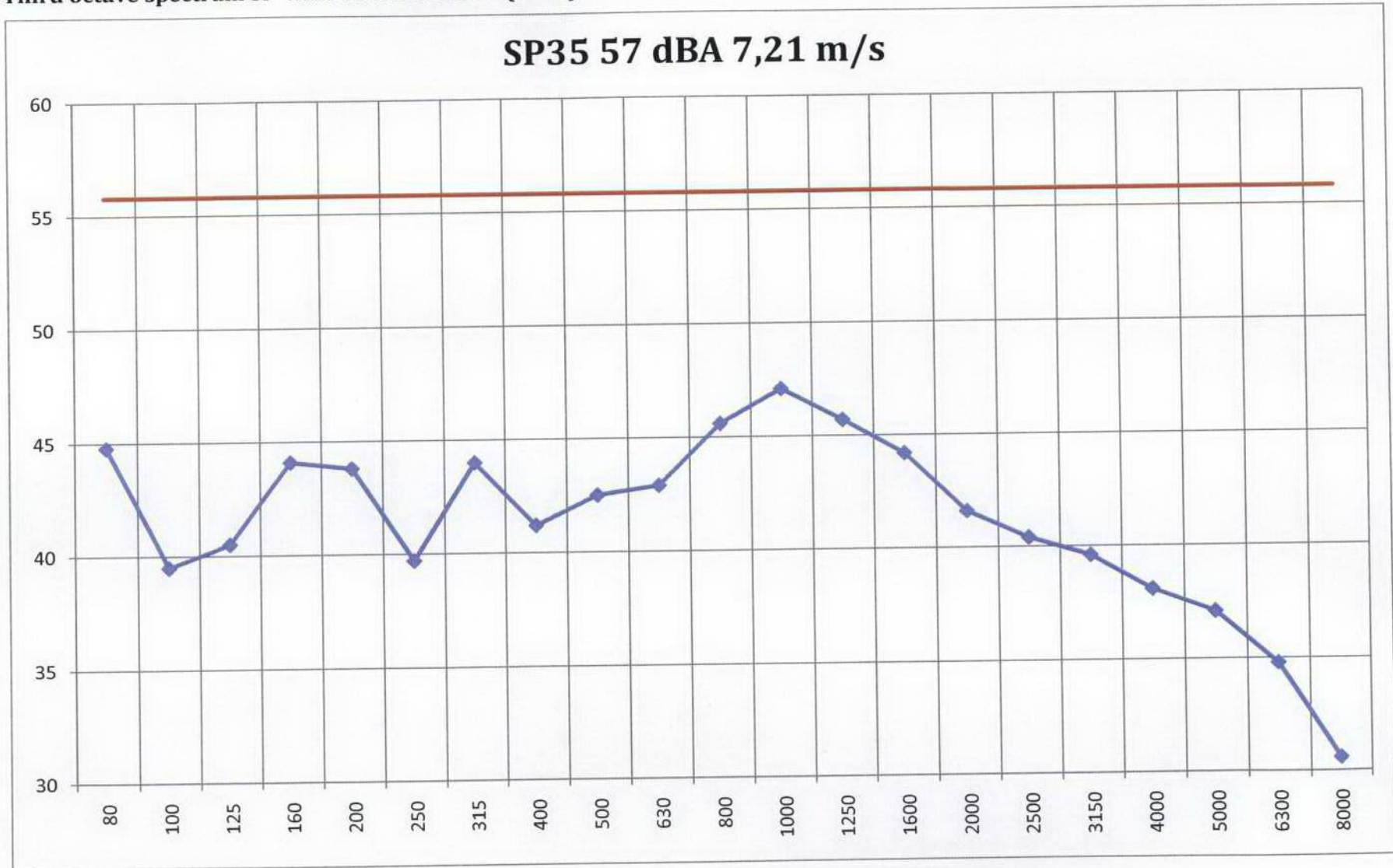
**Third octave spectrum of wind turbine's noise (SP33).**



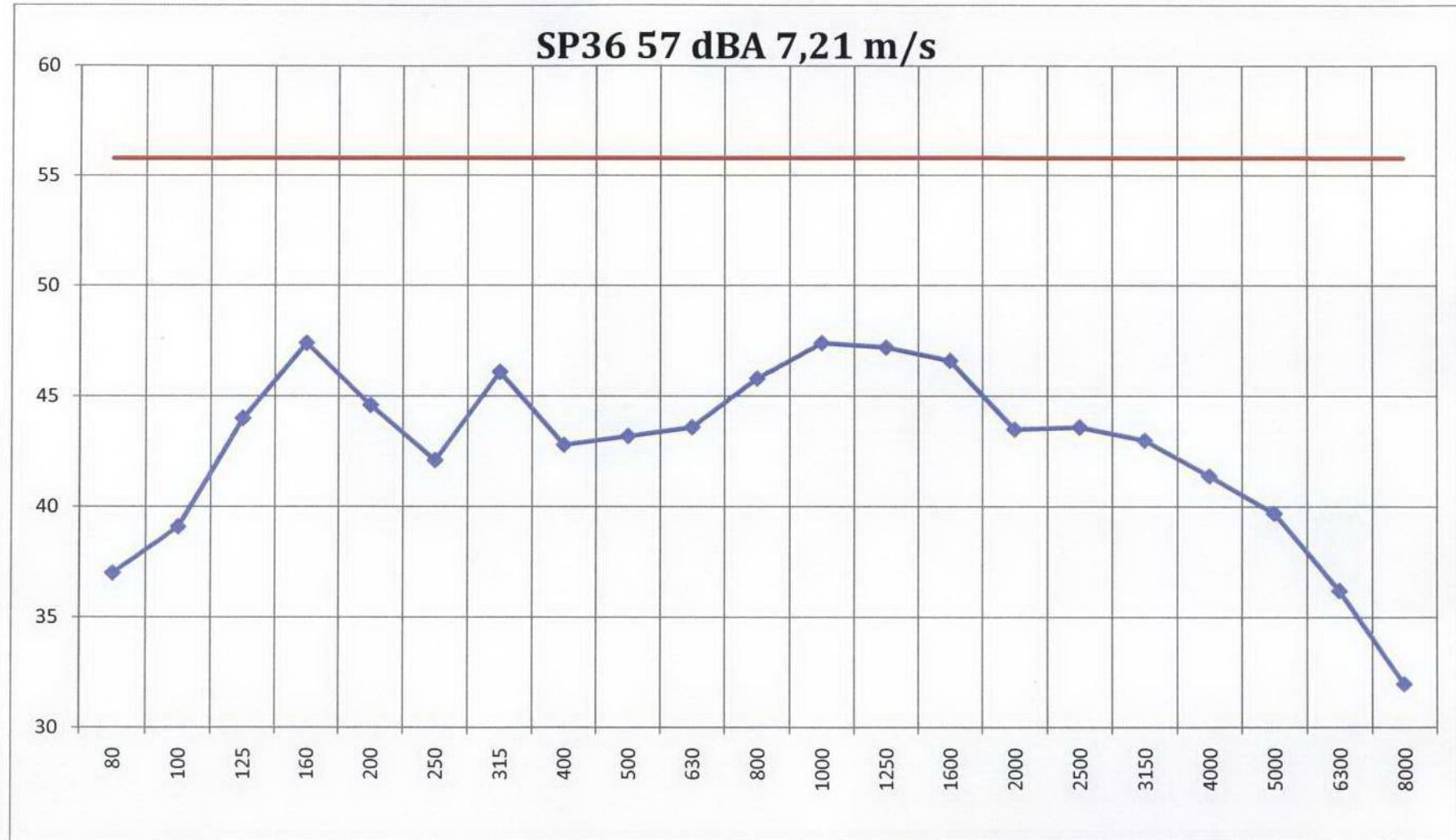
**Third-octave spectrum of wind turbine's noise (SP34).**



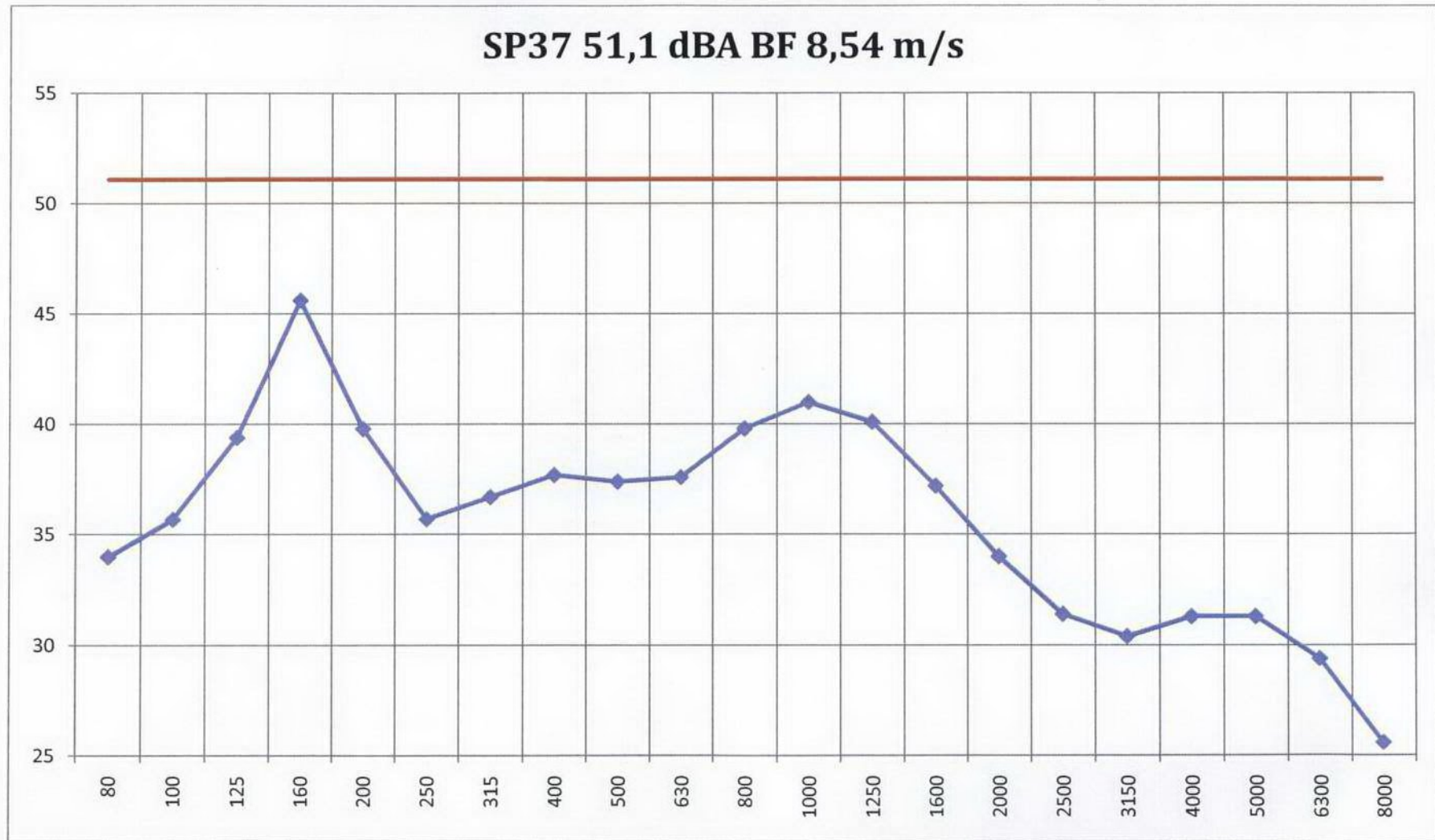
**Third octave spectrum of wind turbine's noise (SP35).**



**Third octave spectrum of wind turbine's noise (SP36).**

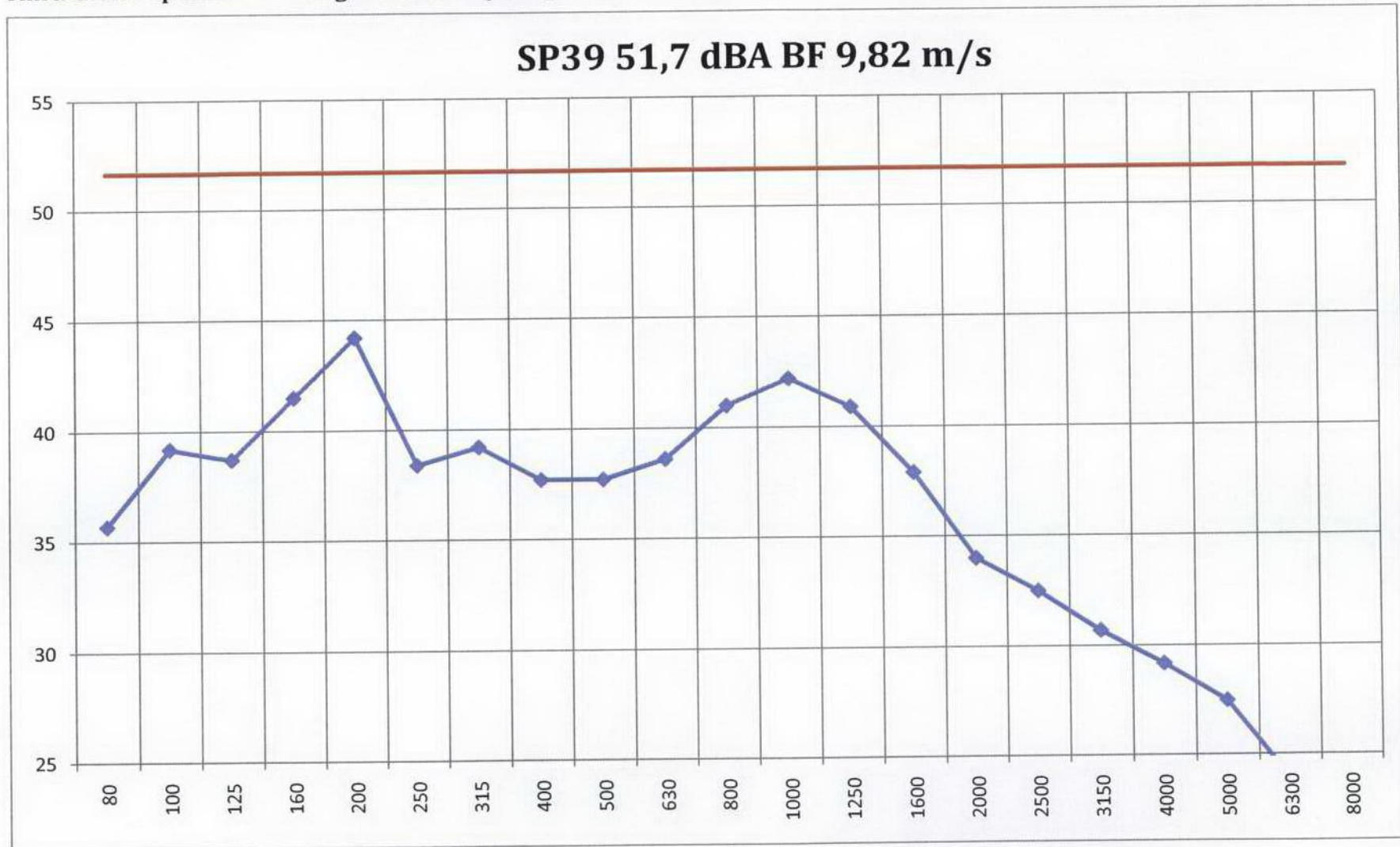


**Third octave spectrum of background noise (SP37).**

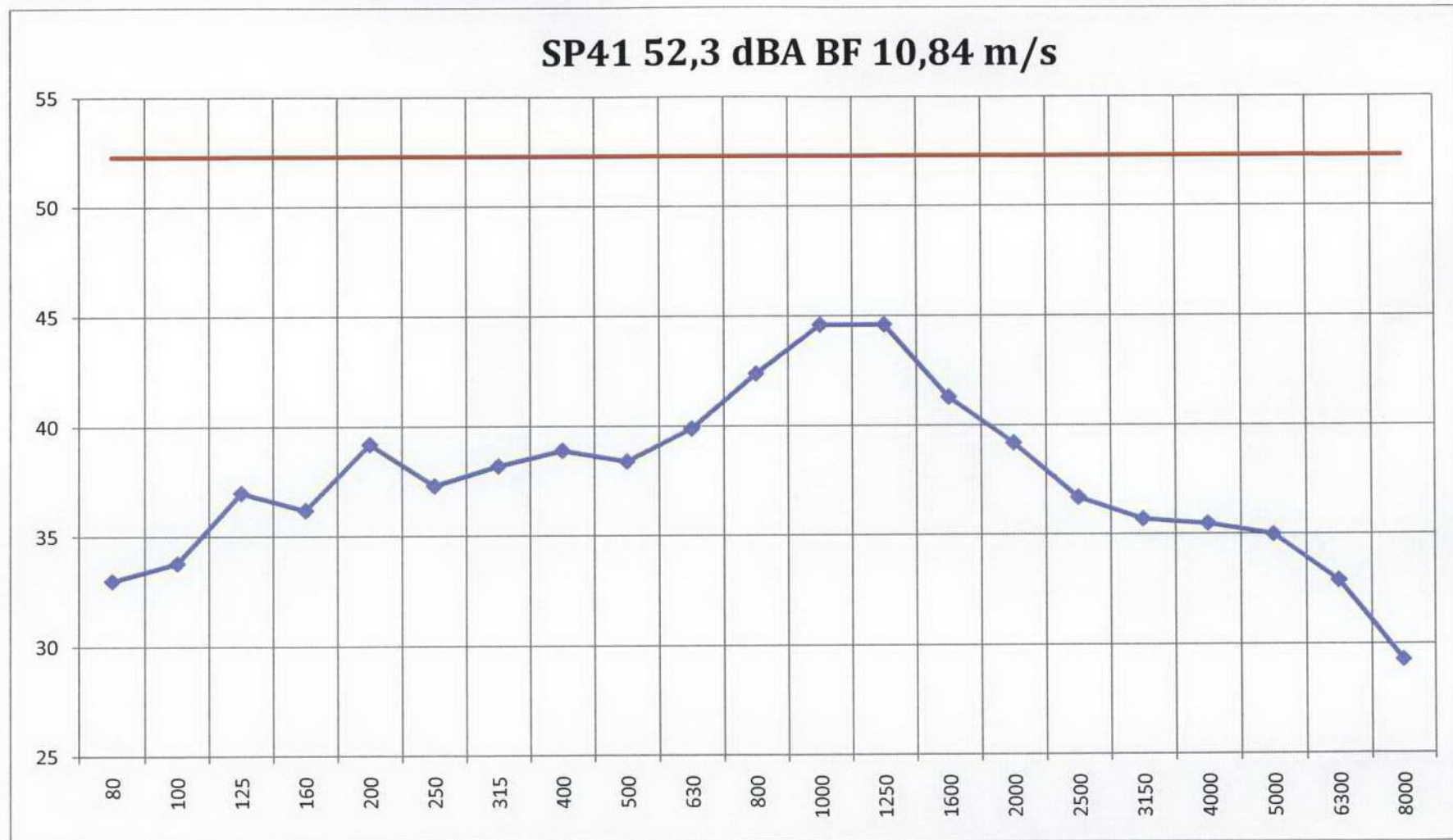




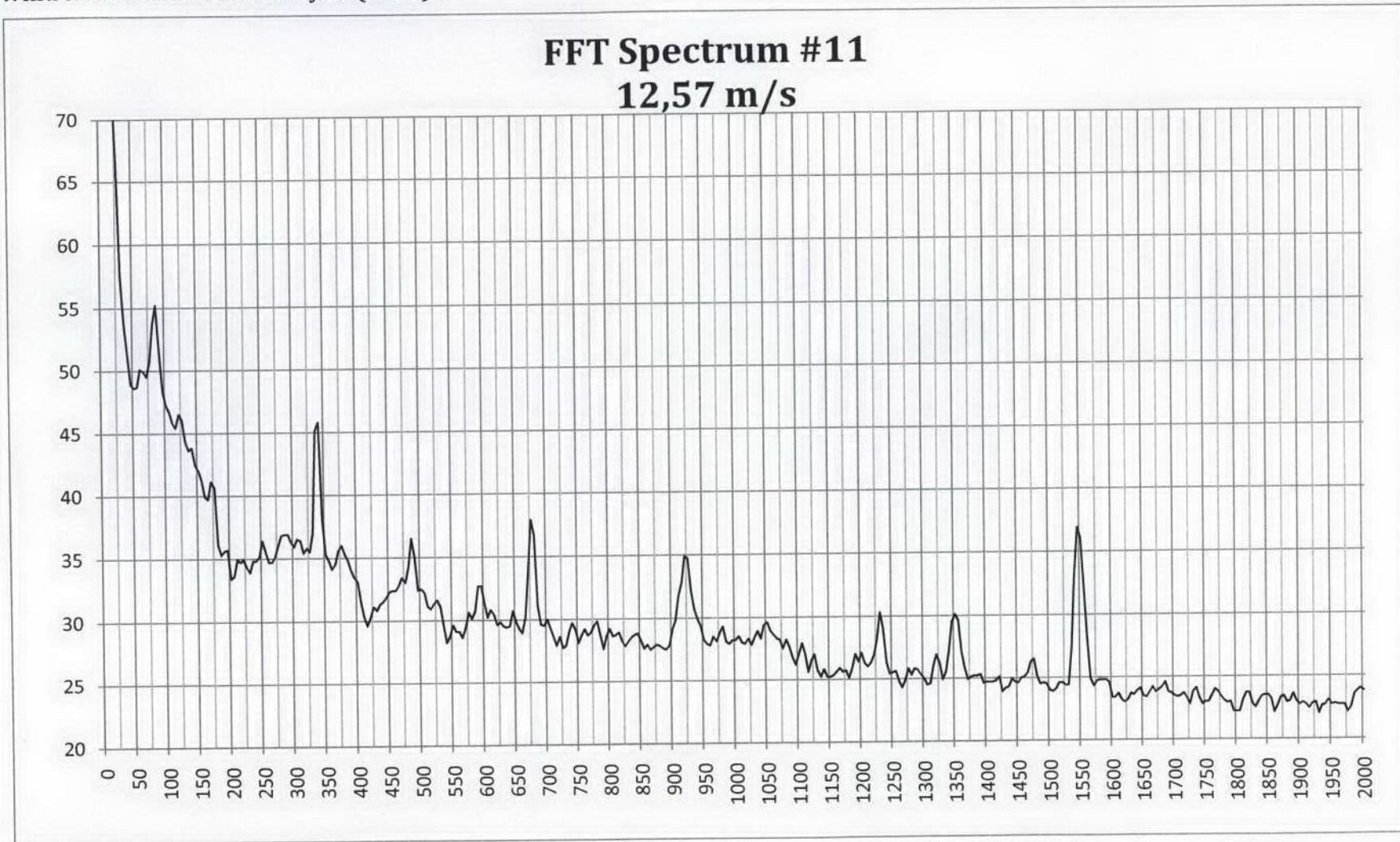
**Third-octave spectrum of background noise (SP39).**



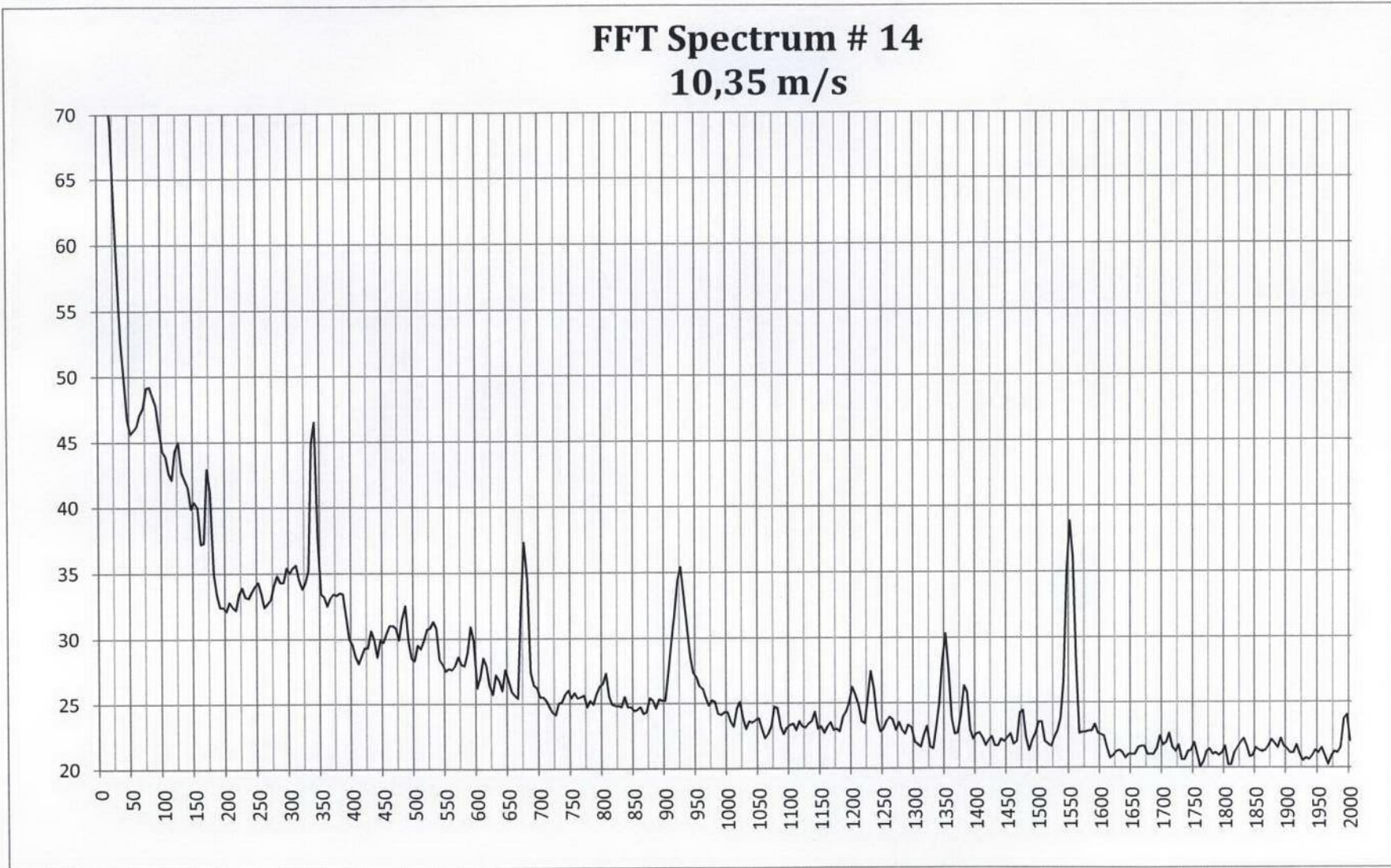
**Third-octave spectrum of background noise (SP41).**



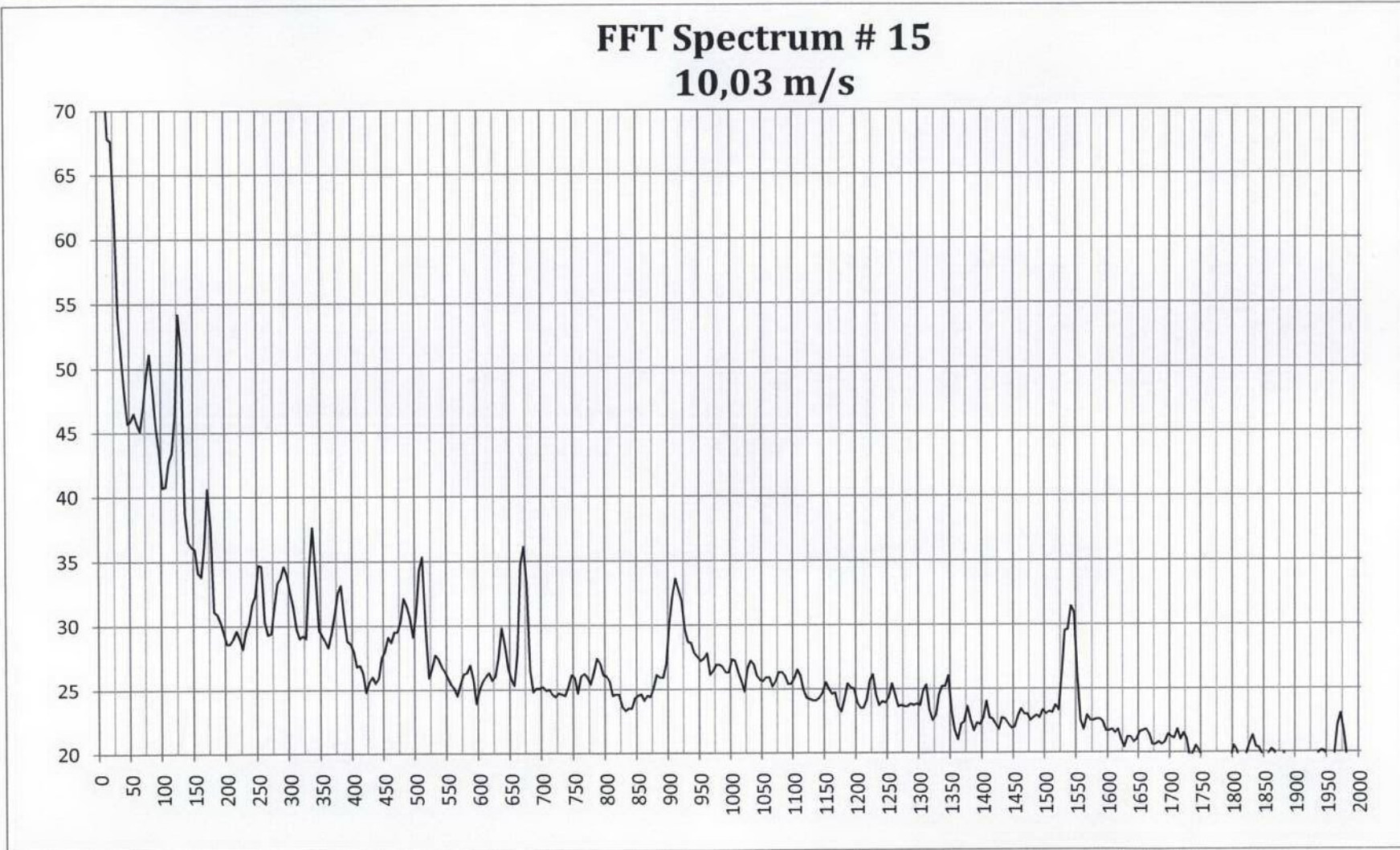
**Wind turbine noise FFT analysis (SP11).**



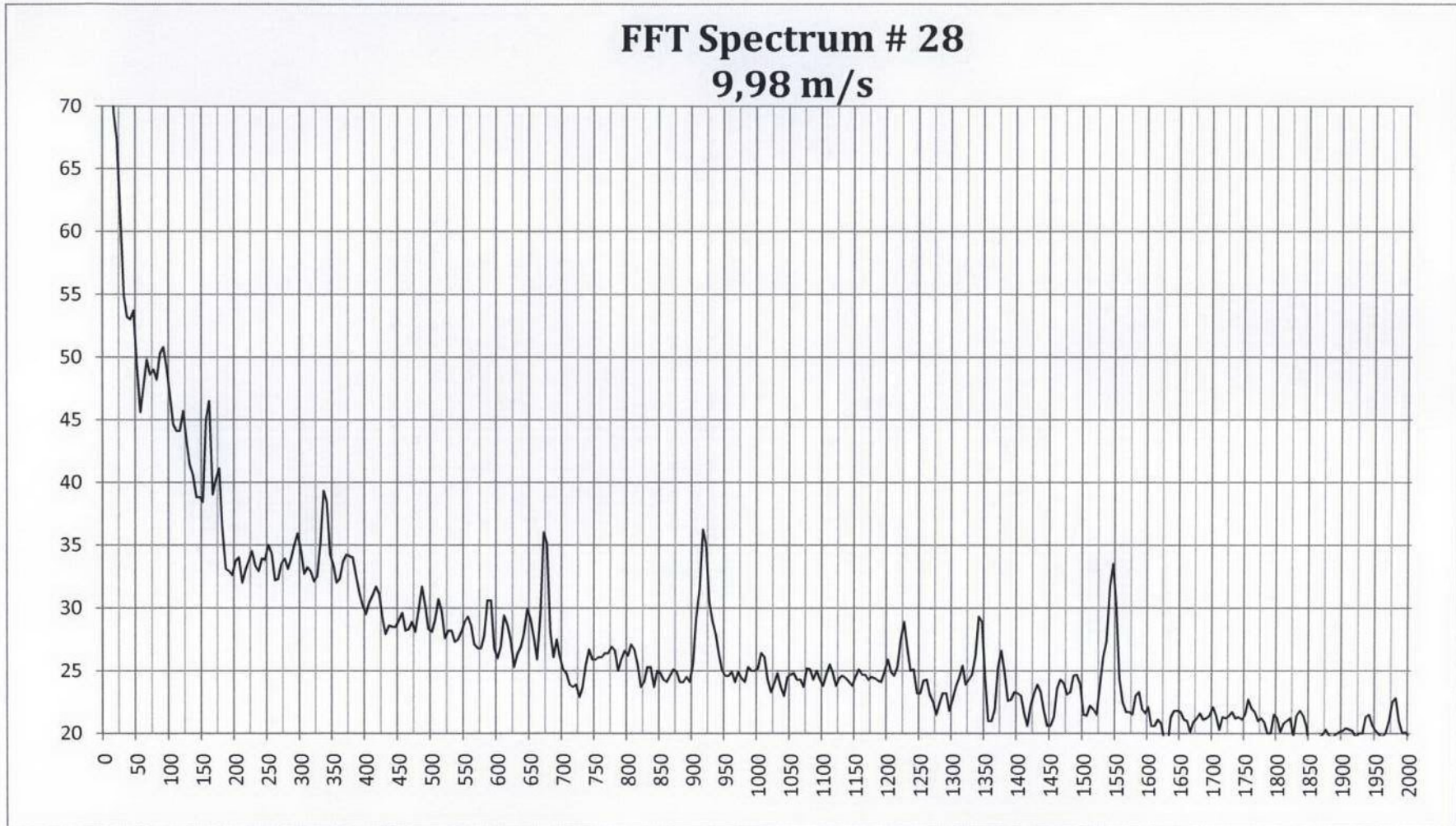
**Wind turbine noise FFT analysis (SP14).**



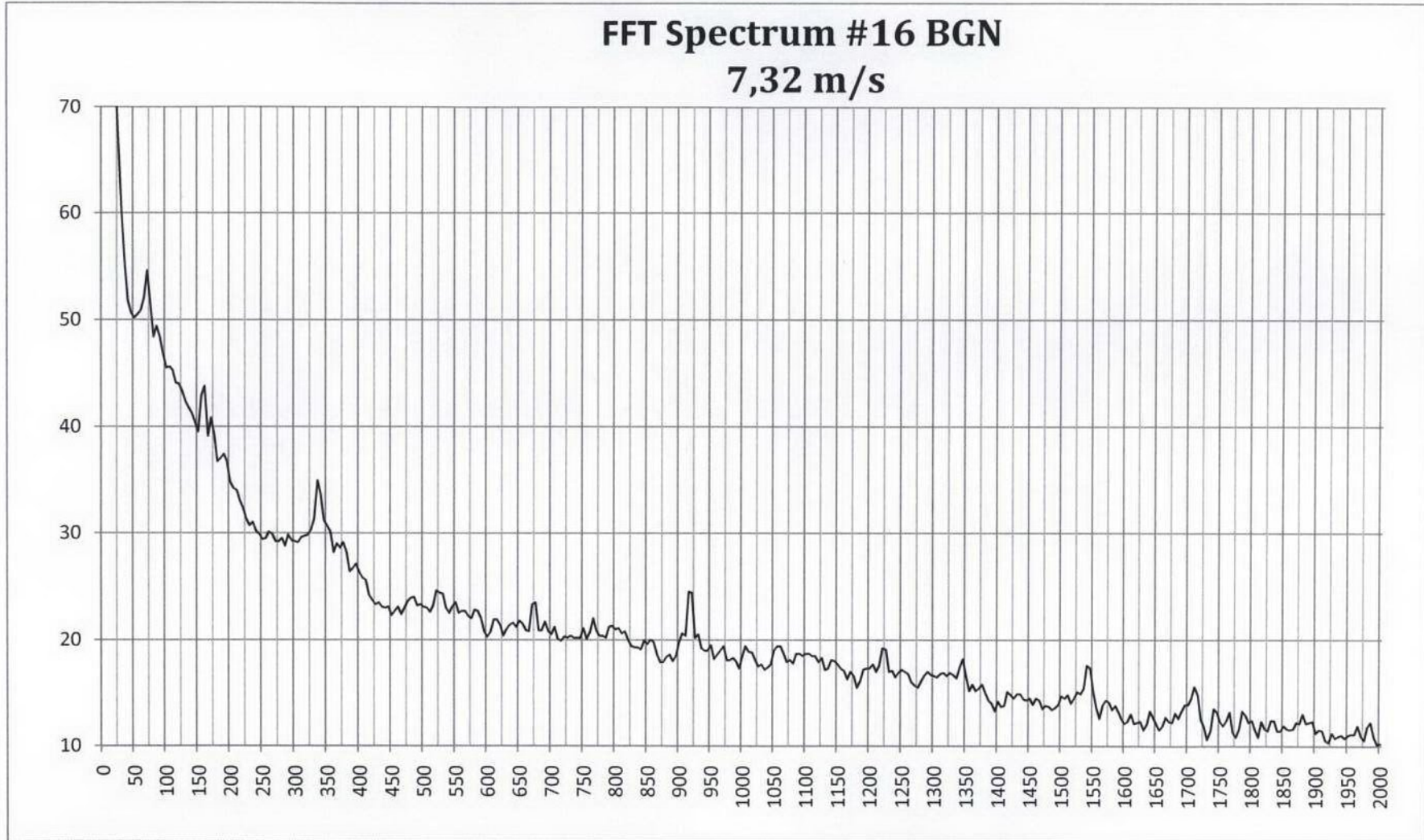
**Wind turbine noise FFT analysis (SP15).**



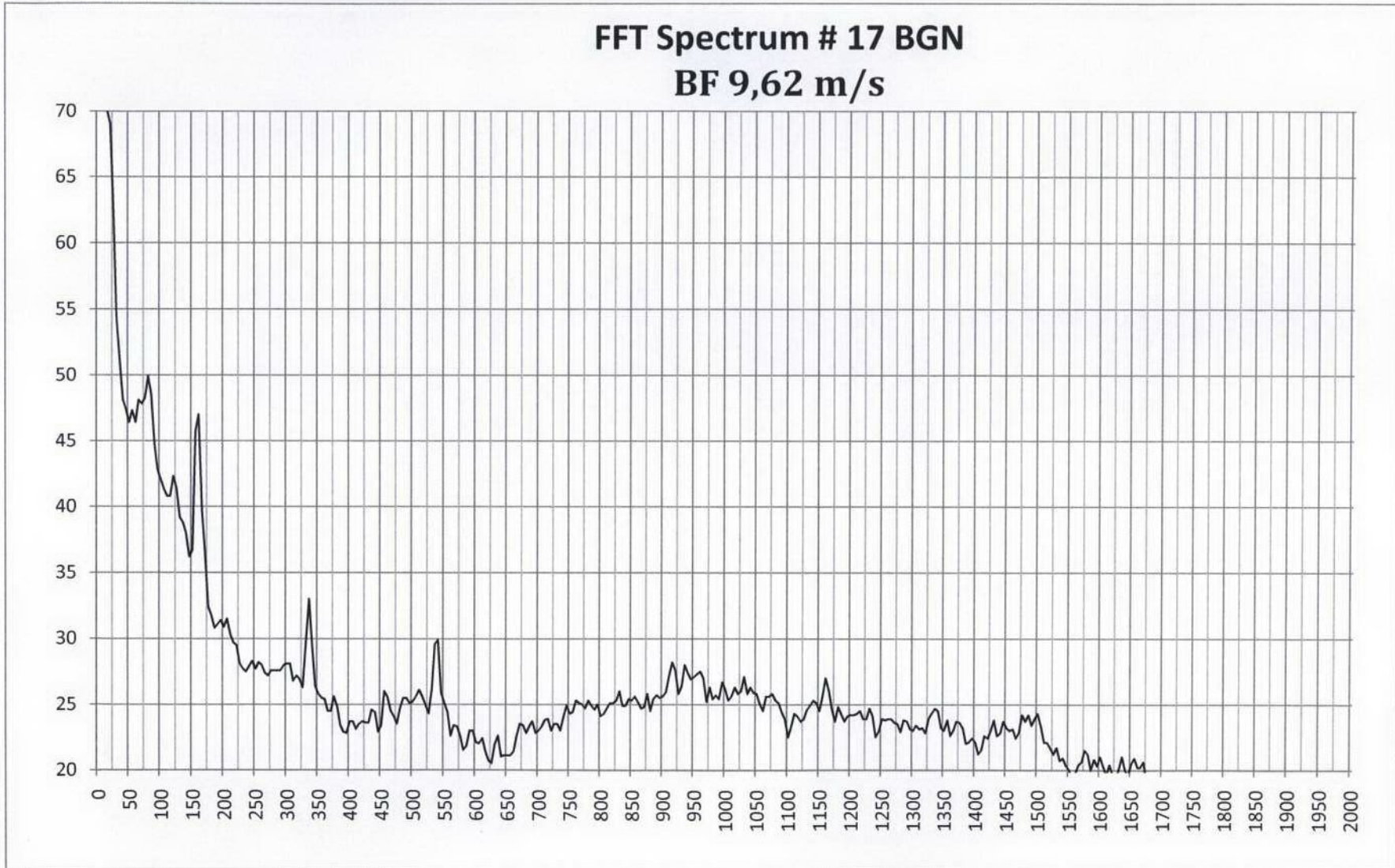
**Background noise FFT analysis (SP28).**



**Background noise FFT analysis (SP16).**

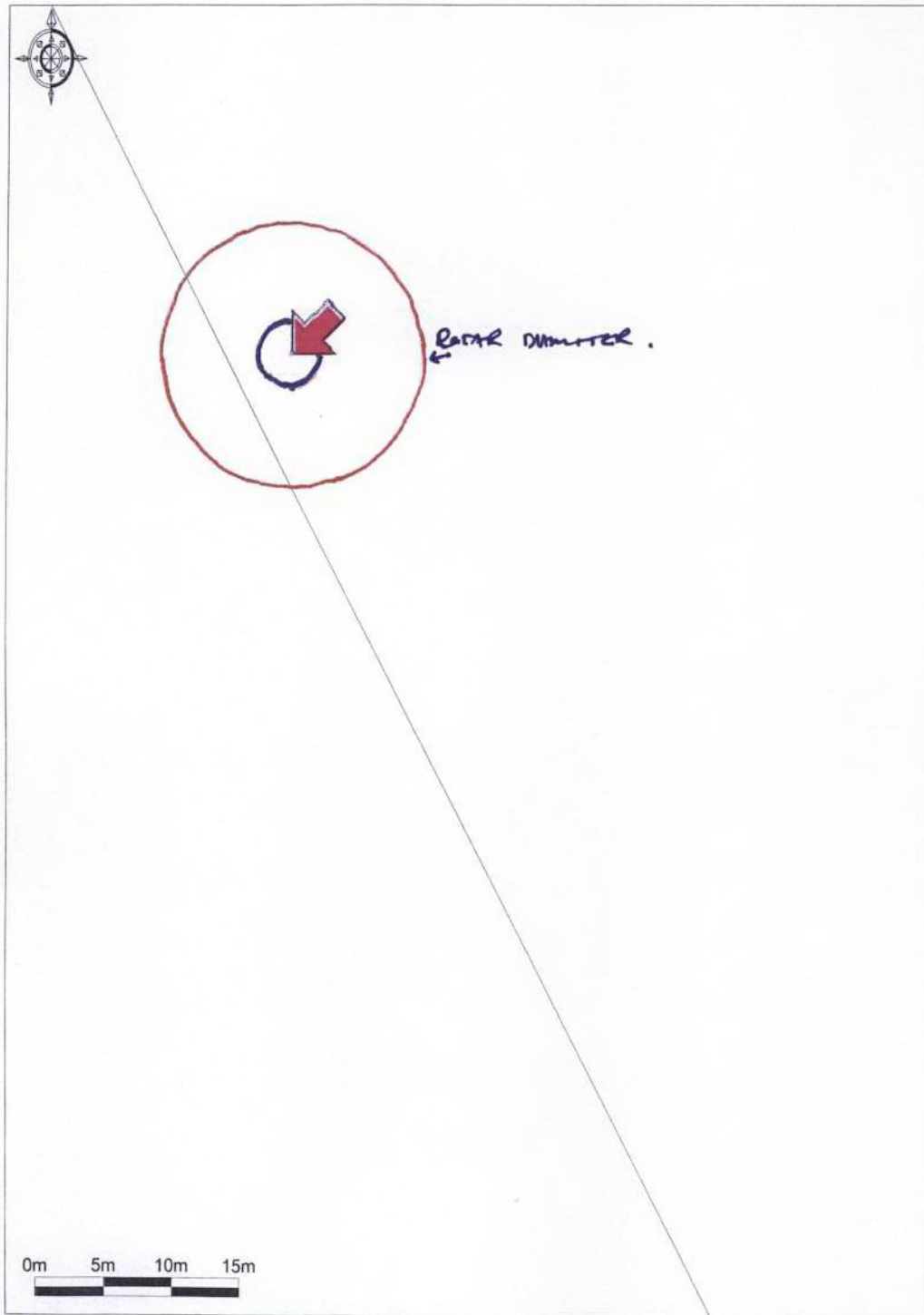


**Background noise FFT analysis (SP17).**





Abbey Mains



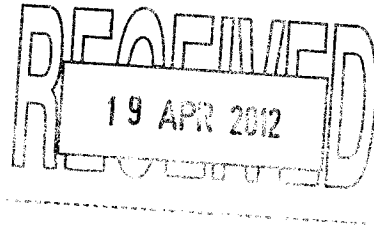
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Block Plan Scale 1:500

**PassiM**

Developments Ltd  
The Estate Office, Craigdarroch, Moniaive,  
Thornhill, Dumfriesshire, DG3 4JB

Client:  
JK Playfair & Sons,  
Abbey Mains,  
Haddington,  
East Lothian, EH41 3SB



## Design and Access Statement

Abbey Mains Farm,  
Haddington,  
East Lothian, EH41 3SB.

12 / 00278 / 112

## The Turbine Choice

The Endurance E-3120 has been chosen for a number of reasons primarily due to the potential electricity requirement on farm. The main purpose of this wind turbine is to provide electricity for farm use. We have taken into consideration the local amenity, visual impact and energy requirements for the future therefore the application is not purely financially driven. Securing energy prices for farming businesses should be paramount as they will rise over the course of the next few years.

The visual impact of the turbine has been kept to a minimum and positioned so that it will not be a overbear structure on the surrounding area.

The development of turbines is inevitable if the country is going to meet the targets set by the government in reducing carbon footprints and reducing our dependency on the traditional methods of generation electricity. The position of the wind turbine should not detract from local property prices or the amenity value of the area.

## Energy Prices and the future

The following is an extract from a report looking at UK energy prices and the future called Electricity Prices in the United Kingdom, Fundamental Drivers and Probable Trends 2008 to 2020 by Hugh Sarman, Incoteco and John Constable of the Renewable Energy Foundation.

Examination of current system data indicates that from 2010, possibly earlier, right through to 2020, there is likely to be extended tightness of supply either caused by lack of generating capacity and or tightness in the supply of gas. The period ca, 2015 will be especially critical. Due to fragile margins and high gas prices any firm predictable non-gas generator is likely to enjoy high prices. Generation or electricity storage capacity able to enter the peaking market may be extremely well rewarded even by the standards of that sector.

While many of the risks outlined above are now unavoidable, their severity can be mitigated in the medium term if prompt and determined action is taken by government to rectify the faults of energy policy during the previous fifteen years.

Notwithstanding government expectations between now and 2015 the UK is likely to see the retirement of up to 30GW of nuclear and coal generating capacity, some 75% of the country's total capacity, in order to meet international obligations with regard to 1. Acid gas emissions and 2. Kyoto Treaty targets. To avoid protracted electricity rationing and/or rolling blackouts from 2010 onwards compensating infrastructure must be built in short order, and if this is to be diverse in fuels the cost will be in the range £50-60 billion. Given the lack of financial incentives for capacity that are offered by the electricity trading arrangements and the lack of firm carbon price signals, and the lengthy planning horizon for nuclear and clean coal plants, the default near term solution is a dramatic increase in combined cycle gas turbine plants, for which there is approximately 20GW currently in various stages of planning.

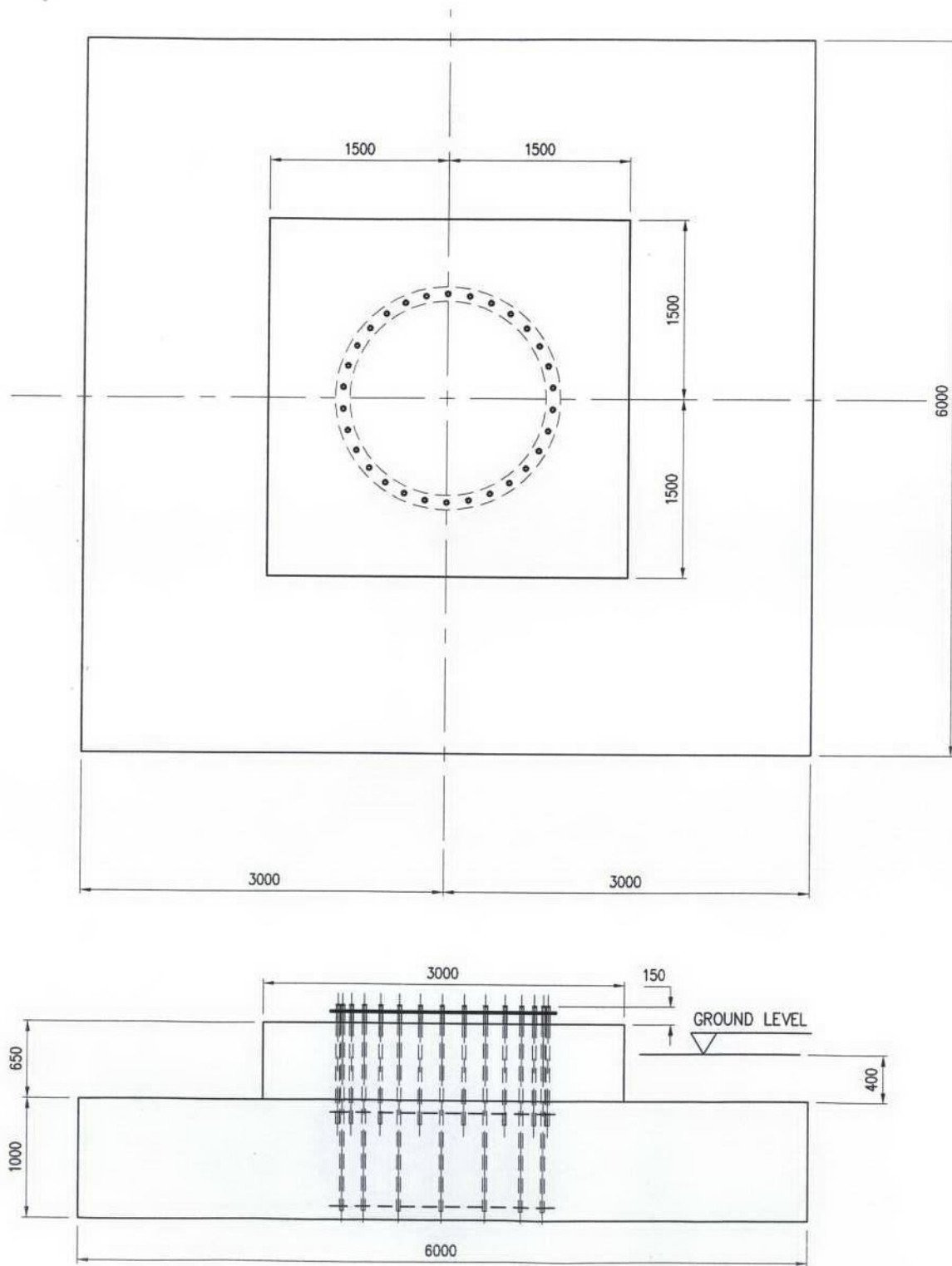
Thus the UK looks set to become even more dependent on gas. With North Sea in decline, the UK will become the world's largest sovereign gas importer, competing with the rest of Europe for gas exports, particularly from Russia.

The proposal at Abbey Mains Farm will not solve the energy problems of the UK however with National policy supporting small scale renewable energy projects the collective can start to contribute to local requirements.

The project will generate electricity to carbon neutral the farm; the farming operation expansion will use a considerable amount of electricity. By generating electricity using the natural assets of the farm's dependence of the national grid will be omitted and energy security for the future will be secured.

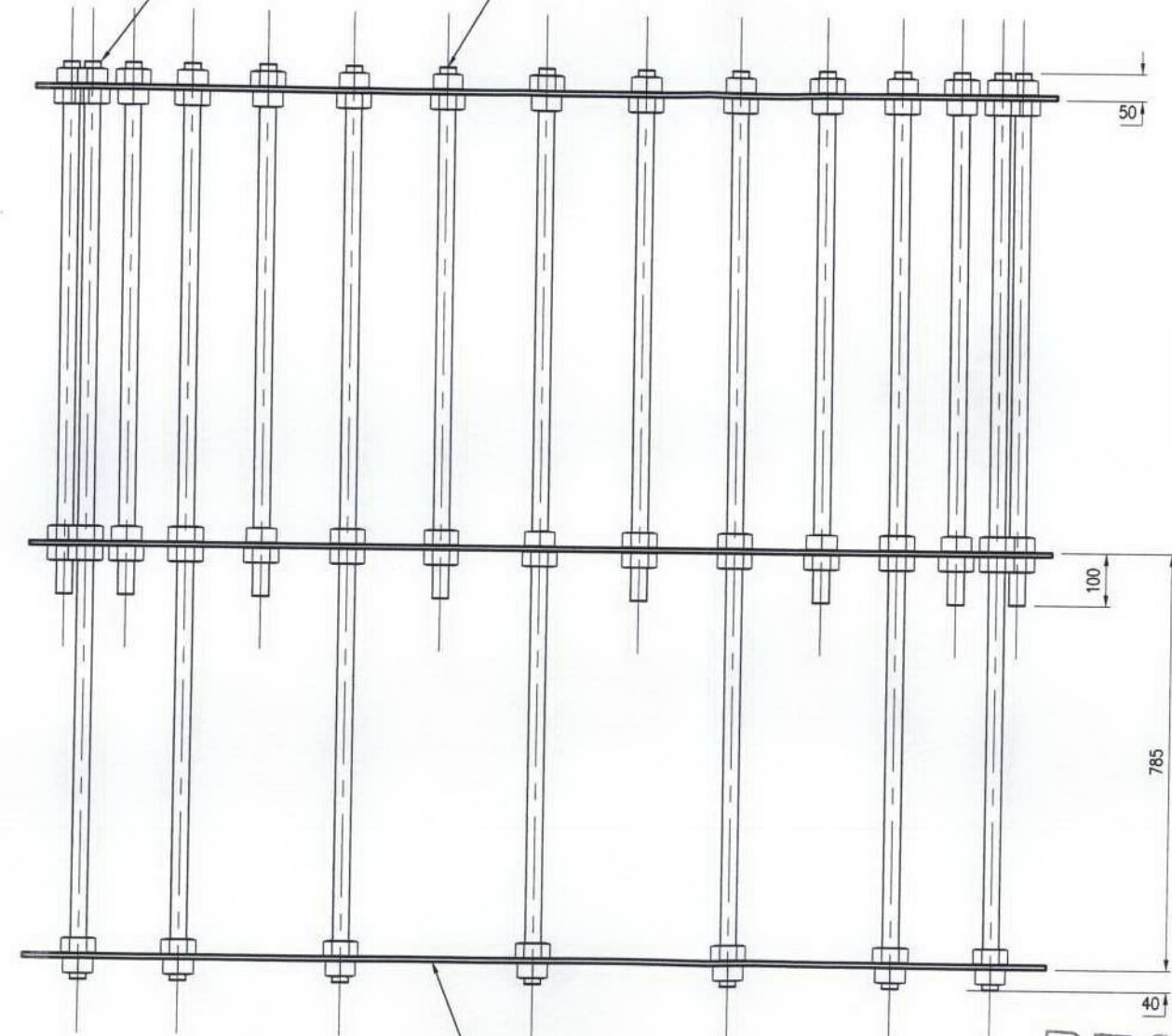
The current European and national legislation is concentrating on renewable energy and it is natural for farmers and landowners to utilise natural resources to benefit both the agricultural operations through securing energy cost and potentially generate an additional income stream if they generate more electricity than needed.

The turbine comes on a 44 foot lorry and one crane. The turbine itself is in sections with the longest part being the rotor blades. The farm access is adequate and existing vehicles of this size come onto the farm. Access to the site will be via the farm track which is well drained and will pose no problems. No main roads or access off the roads have to be altered and traffic will not be affected. Any damage to the field will be put back once the development has finished.



15 No. M36 gr 8.8 threaded bar x 1725 lg  
 c/w (finally) 6 each grade 8 (min) nuts & 1 flat  
 washer to suit, equispaced in templates.  
 Note! 5 extra nuts & washers to be supplied for levelling.

15 No. M36 gr 8.8 threaded bar x 1000 lg  
 c/w 4 each grade 8 (min) nuts & (finally) 1 flat  
 washer to suit, located alternatively with longer bolts.



3 no. total 8 thk anchor plates / template.  
 See drawing no. EWP50\_F\_003

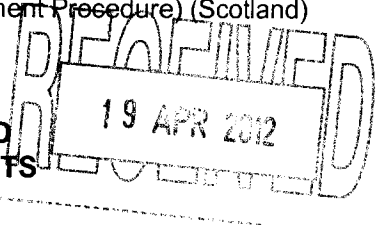
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	<p>Grid          E353465, N675914</p>
<p>Endurance E-3120 50kw Turbine          NOT TO SCALE: FOUNDATIONS</p>	

# LAND OWNERSHIP CERTIFICATES

Town and Country Planning (Scotland) Act 1997  
 Regulation 15 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008



**CERTIFICATE A, B, C OR CERTIFICATE D  
 MUST BE COMPLETED BY ALL APPLICANTS**

## CERTIFICATE A

Certificate A is for use where the applicant is the only owner of the land to which the application relates and none of the land is agricultural land.

**I hereby certify that -**

- (1) No person other than the applicant was owner of any part of the land to which the application relates at the beginning of the period of 21 days ending with the date of the application.
- (2) None of the land to which the application relates constitutes or forms part of agricultural land.

Signed:

On behalf of:

Date:

## CERTIFICATE B

Certificate B is for use where the applicant is not the owner or sole owner of the land to which the application relates and/or where the land is agricultural land and where all owners/agricultural tenants have been identified.

**I hereby certify that -**

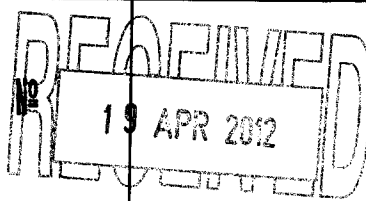
- (1) The applicant has served notice on every person other than the applicant who, at the beginning of the period of 21 days ending with the date of the application was owner of any part of the land to which the application relates. These persons are:

Name	Address	Date of Service of Notice

- (2) None of the land to which the application relates constitutes or forms part of agricultural land.

or

- (3) The land or part of the land to which the application relates constitutes or forms part of agricultural land and I have served notice on every person other than myself who, at the beginning of the period of 21 days ending with the date of the application was an agricultural tenant. These persons are:

Name	Address	Date of Service of Notice
	12/00278 / 12	

**CERTIFICATE C**

Certificate C is for use where the applicant is not the owner or sole owner of the land to which the application relates and/or where the land is agricultural land and where it has not been possible to identify ALL or ANY owners/agricultural tenants.

(1) I have \_\_\_\_\_ been unable to serve notice on **every** person other than myself who, at the beginning of the period of 21 days ending with the date of the application was owner of any part of the land to which the application relates.

or

(2) I have \_\_\_\_\_ been unable to serve notice on **any** person other than myself who, at the beginning of the period of 21 days ending with the date of the accompanying application, was owner of any part of the land to which the application relates.

(3) None of the land to which the application relates constitutes or forms part of an agricultural holding.

or

(4) The land or part of the land to which the application relates constitutes or forms part of an agricultural holding and I have \_\_\_\_\_ been unable to serve notice on any person other than myself who, at the beginning of the period of 21 days ending with the date of the accompanying application was an agricultural tenant.

or

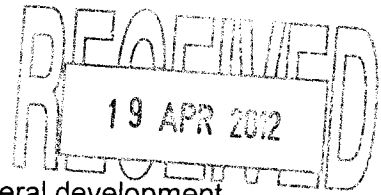
(5) The land or part of the land to which the application relates constitutes or forms part of an agricultural holding I have \_\_\_\_\_ served notice on each of the following persons other than myself who, at the beginning of the period of 21 days ending with the date of the application was an agricultural tenant. These persons are:

Name	Address	Date of Service of Notice

(6) I have \_\_\_\_\_ taken reasonable steps, as listed below, to ascertain the names and addresses of all other owners or agricultural tenants and have \_\_\_\_\_ unable to do so.

Steps taken:

12/00278/12  
CERTIFICATE D  
Certificate D



Certificate D is for use where the application is for mineral development.

(1) No person other than myself \_\_\_\_\_ was an owner of any part of the land to which the application relates at the beginning of the period of 21 days ending with the date of the accompanying application.

or

(2) I have \_\_\_\_\_ served notice on each of the following persons other than myself \_\_\_\_\_ who, at the beginning of the period of 21 days ending with the date of the accompanying application, was to the applicant's knowledge, the owner, of any part of the land to which the application relates. These persons are:

Name	Address	Date of Service of Notice

(3) None of the land to which the application relates constitutes or forms part of an agricultural holding.

or

(4) The land or part of the land to which the application relates constitutes or forms part of an agricultural holding and I have \_\_\_\_\_ served notice on each of the following persons other than myself \_\_\_\_\_ who, at the beginning of the period of 21 days ending with the date of the application, was an agricultural tenant.

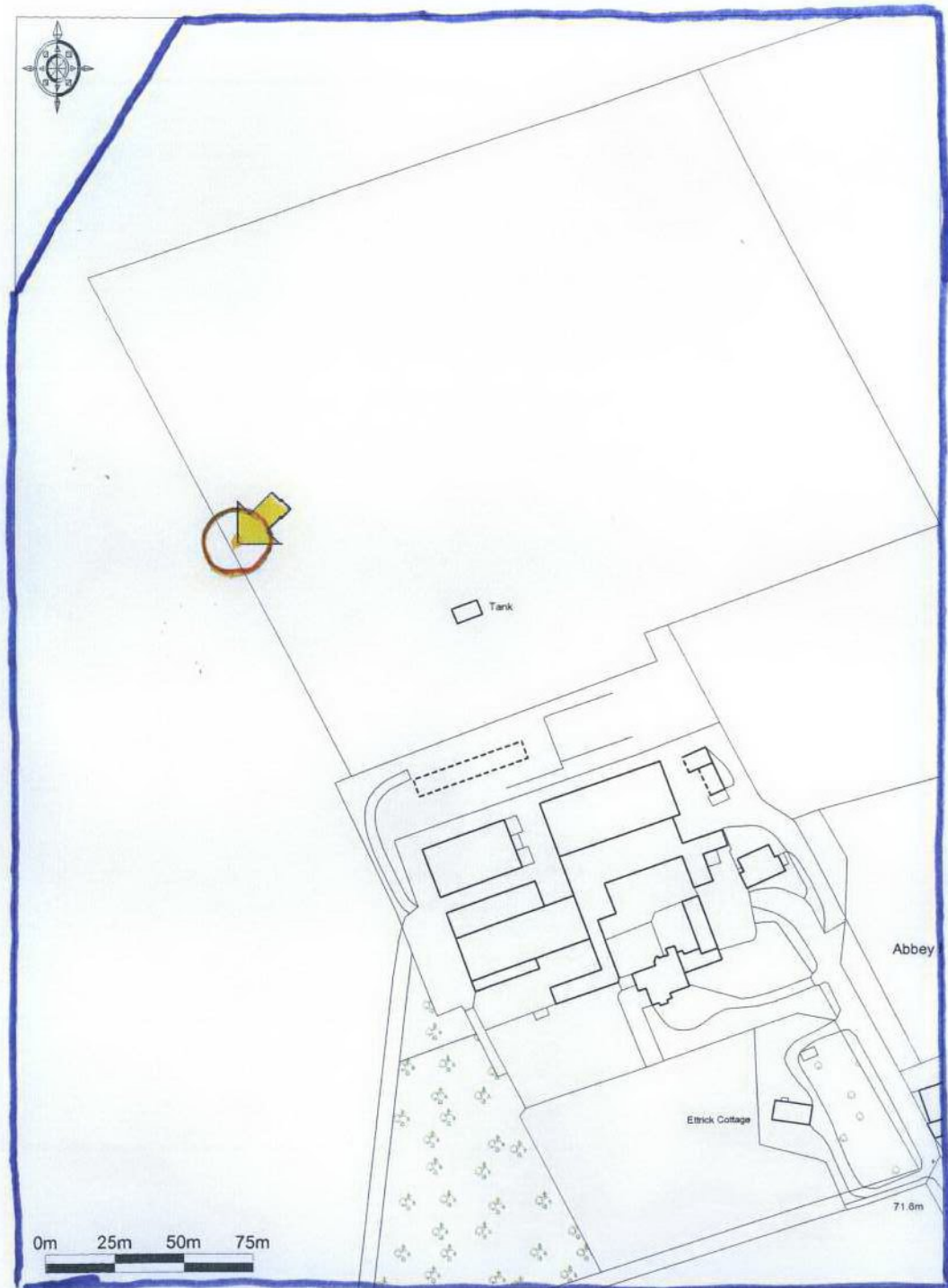
(5) Notice of the application as set out below has been published and displayed by public notice

Signed: \_\_\_\_\_

On behalf of:\* \_\_\_\_\_

Date: \_\_\_\_\_





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Location Plan

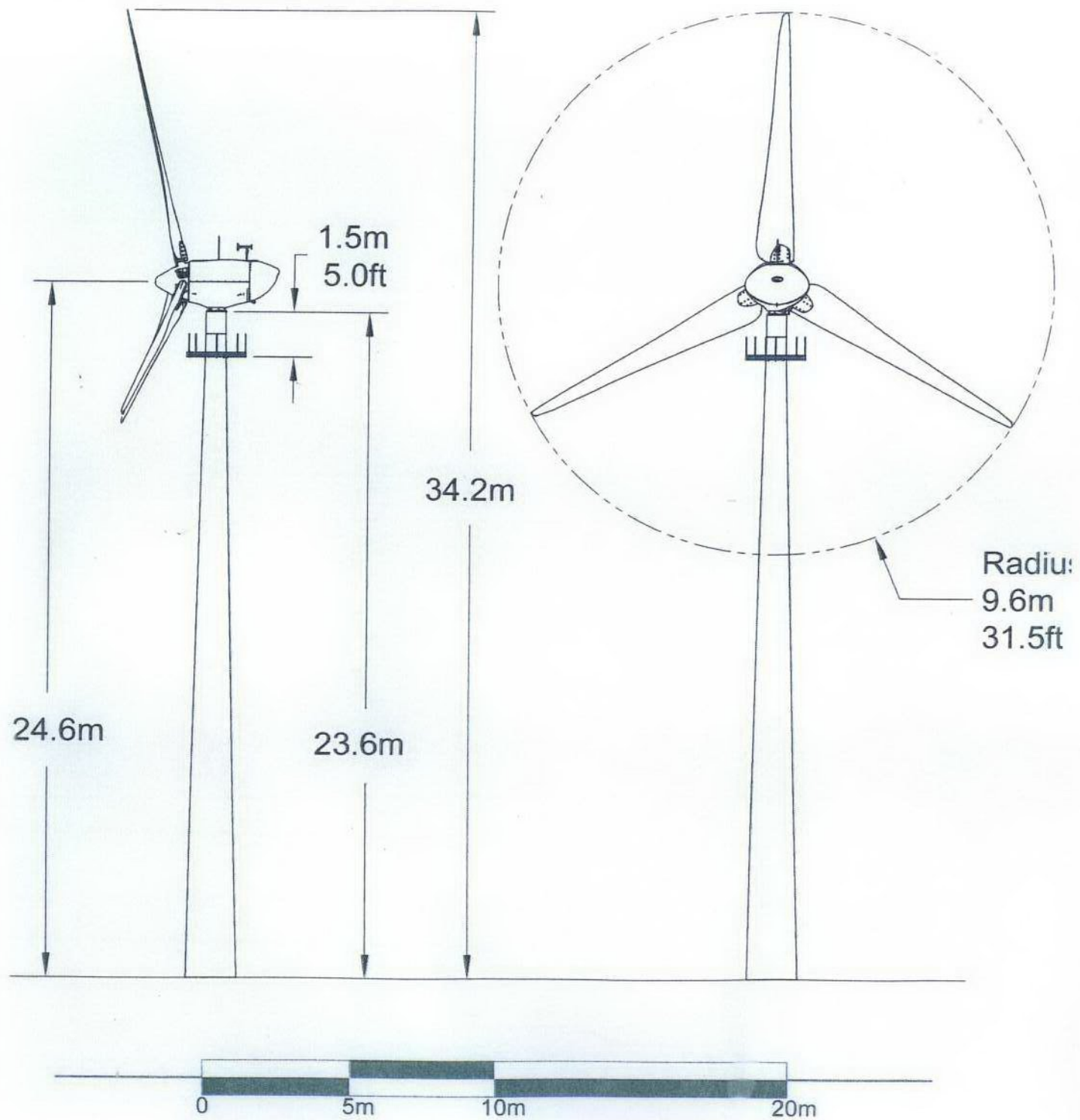


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<p><b>PassiM</b> Developments Ltd The Estate Office, Craigdarroch, Moniaive, Thornhill, Dumfriesshire, DG3 4JB 01848 200400 r.schiller@virgin.net</p>	<p>Client: JK Playfair &amp; Sons, Abbey Mains, Haddington, East Lothian, EH41 3SB</p>
<p>Endurance E-3120 50kw Turbine Location plan 1:2,500 Block Plan 1:1,250</p>	<p>Grid E353465, N675914</p>



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30 MAR 2012

<p><b>PassiM</b> Developments Ltd The Estate Office, Craigdarroch, Moniaive, Thornhill, Dumfriesshire, DG3 4JB 01848 200400 r.schiller@virgin.net</p>	<p>Client: JK Playfair &amp; Sons, Abbey Mains, Haddington, East Lothian, EH41 3SB</p>
<p>Endurance E-3120 50kw Turbine SCALE 1:200</p>	<p>Grid E353465, N675914</p>



Appeals cannot be validated until all necessary documentation has been submitted.

Thank you for completing this appeal form:

ONLINE REFERENCE 000047122-001

The online ref number is the unique reference for your online form only. The Directorate for Planning and Environmental Appeals will allocate an Appeal Number when your form is validated. Please quote this reference if you need to contact the Directorate for Planning and Environmental Appeals about this appeal.

## Appellant or Agent Details

Are you an appellant, or an agent? \* (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this appeal)

Appellant  Agent

### Agent Details

Please enter Agent details

Company/Organisation: PassiM Developments Ltd

Ref. Number:

First Name: \* Robert

Last Name: \* Schiller

Telephone Number: \* 01848 200400

Extension Number:

Mobile Number:

Fax Number:

Email Address: \* r.schiller@virgin.net

You must enter a Building Name or Number, or both:\*

Building Name: The Estate Office

Building Number:

Address 1 (Street): \* Craigdarroch

Address 2: Moniaive

Town/City: \* Thornhill

Country: \* UK

Postcode: \* DG3 4JB

Is the appellant an individual or an organisation/corporate entity? \*

Individual  Organisation/Corporate entity

## Appellant Details

Please enter Appellant details

Title: *	<input type="text" value="Mr"/>
Other Title:	<input type="text"/>
First Name: *	<input type="text" value="Michael"/>
Last Name: *	<input type="text" value="Playfair"/>
Company/Organisation:	<input type="text" value="JK Playfair &amp; Sons"/>
Telephone Number:	<input type="text"/>
Extension Number:	<input type="text"/>
Mobile Number:	<input type="text"/>
Fax Number:	<input type="text"/>
Email Address:	<input type="text"/>

You must enter a Building Name or Number, or both:\*

Building Name:	<input type="text" value="Abbey Mains"/>
Building Number:	<input type="text"/>
Address 1 (Street): *	<input type="text" value="Haddington"/>
Address 2:	<input type="text"/>
Town/City: *	<input type="text" value="East Lothian"/>
Country: *	<input type="text" value="UK"/>
Postcode: *	<input type="text" value="EH41 3SB"/>

## Site Address Details

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

Address 1:	<input type="text" value="ABBEY MAINS"/>	Address 5:	<input type="text"/>
Address 2:	<input type="text" value="GARLETON"/>	Town/City/Settlement:	<input type="text" value="HADDINGTON"/>
Address 3:	<input type="text"/>	Post Code:	<input type="text" value="EH41 3SB"/>
Address 4:	<input type="text"/>		

Please identify/describe the location of the site or sites.

Northing	<input type="text" value="675745"/>	Easting	<input type="text" value="353619"/>
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## Description of Proposal

Please provide a description of your proposal. The description should be the same as given in the application form, or as amended (with the agreement of the planning authority): \*  
(Max 500 characters)

## Type of Application

What type of application did you submit to the planning authority? \*

- Application for Planning Permission (including householder application – excluding application to work minerals).
- Application for Certificate of Lawfulness.
- Application for Listed Building Consent.
- Application for Conservation Area Consent.
- Application for Advertisement Consent.
- Application for Prior Approval.
- Application for Tree Works Consent.
- Application for Certificate of Appropriate Alternative Development.
- Application for Planning Permission to work minerals.

What type of planning application was submitted to the planning authority? \*

- Application for Planning Permission.
- Application for Planning Permission in principle
- A Further Application (including renewal of planning permission, modification, variation or removal of a planning condition etc).
- Approval of matters specified in conditions.

What type of decision did you receive from the planning authority and are now appealing against? \*

- Refusal Notice.
- Grant of permission with Conditions imposed.
- No decision - deemed refusal (NB: This does not apply to Prior Approvals).

## Statement of Appeal

You must state in full, why you are appealing against the planning authority's decision (or failure to make a decision). Your statement must set out all matters you consider require to be taken into account in determining your appeal: \* (Max 500 characters)

Note: you might not have a further opportunity to add to your statement of appeal at a later date, so it is essential that you produce all of the information you want the decision-maker to take into account.

You will though be entitled to comment on (i) any additional matter which may be raised by the planning authority in its response to your appeal, or (ii) any representations the Scottish Government might receive from any other person or body.

We are appealing under deemed refusal because of the time taken for a decision to be made. In addition with the proposed deadline 1 December 2012 it is very important for potential renewable energy projects to obtain planning consent and have a grid connection. Abbey Mains farm turbine is located behind the steding creating a minimal visual impact

Have you raised any matters which were not before the planning authority at the time the decision you are appealing against was made? \*

Yes  No

Please provide a list of all documents, materials and evidence which you have provided with your appeal and intend to rely on in support of your appeal: \* (Max 500 characters)

Application form  
Design and Access statement,  
Supporting information,  
Elevation drawing,  
Location and block plan  
example of foundations

Are you providing a separate statement of your Grounds of Appeal? \*  Yes  No

If Yes then please be prepared to upload this when you reach the end of the form.

## Grounds of Appeal

Please state your grounds of appeal here in summary: (Max 500 characters)

We are appealing under deemed refusal. The site or project is a farm diversification project and the location of the turbine is behind the farm steading reducing any visual impact. Due to other time deadlines and construction windows we feel that we have to appeal prior to further time is lost

## Application Details

Please provide details of the application and decision.

What is the application reference number? \*

What date was the application submitted to the planning authority? \*

Has a decision been made by the planning authority? \*  Yes  No

## Appeals Procedure

The person appointed to determine your appeal will decide upon the procedure to be used. However you should indicate what procedure you think is the most appropriate for the handling of the appeal.

Can this appeal continue to a conclusion in your opinion, based on a review of the relevant information provided by yourself and other parties without any further procedures? \*

Yes  No

In the event that the Scottish Government Reporter appointed to consider your appeal decides to inspect the appeal site, in your opinion:

Can the site be clearly seen from a road or public land? \*  Yes  No

Is it possible for the site to be accessed safely and without barriers to entry? \*  Yes  No

If there are reasons why you think the Reporter would be unable to access and view the appeal site alone, please explain here. (Max 500 characters)

location is on a working farm and stock may be in the field.

## Other Appeals Submitted Details

Have you or anyone else made any other related appeals to Scottish Ministers regarding this building and/or site?

Yes  No

## Checklist - Appeal Against Planning Authority Decision Or Failure Of Planning Authority To Give Decision

Please complete the following checklist to make sure you have provided all the necessary information in support of your appeal. Failure to submit all this information may result in your appeal being deemed invalid. The Directorate for Planning and Environmental Appeals cannot start processing your appeal until it is valid.

Are you submitting a supplementary statement with your grounds of appeal? \*

Yes  No

If the appeal concerns approval of matters specified in conditions, or a Further Application to vary conditions – please attach a copy of the application, approved plans and decision notice from that earlier consent.\*

Submitted  Not Applicable

Copy of Plans/Drawings: \*

Yes  No

Copy of planning authority decision notice (If no decision then this is deemed as a refusal). \*

Yes  No  No decision

A copy of original application form and if applicable include certificates relating to land ownership. \*

Yes  No

Other documents, materials and evidence which you intend to rely on. \*

Yes  No

The Report of Handling prepared by the planning authority in respect of your application, where one exists. \*

Yes  No

## Declare - Appeals against Refusals and other decisions

I/We the applicant/agent certify that this is an appeal to Scottish Ministers on the grounds stated.

Declaration Name: Robert Schiller

Declaration Date: 27/08/2012

Submission Date: 27/08/2012

**Proposal Details**

Proposal Name	Abbey Mains Farm Wind Turbine
Proposal Description	Erection of a E-3120 50kw Wind Turbine for the farm use
Address	ABBAY MAINS, GARLETON, HADDINGTON, EH41 3SB
Local Authority	East Lothian Council
Application Online Reference	000047122-001

**Application Status**

	optional
Form	complete
Main Details	complete
Checklist	complete
Declaration	complete
Supporting Documentation	complete
Email Notification	complete

**Attachment Details**

Appeals against Refusals and other decisions	System	A4
application form	Posted	A4
Design and access statement	Posted	A4
Elevation	Posted	A3
Foundations	Posted	A3
Location and Block plan	Posted	A3
Supporting statement	Posted	A4



# NOTICE OF REVIEW

UNDER SECTION 43A(8) OF THE TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997 (AS AMENDED) IN RESPECT OF DECISIONS ON LOCAL DEVELOPMENTS

THE TOWN AND COUNTRY PLANNING (SCHEMES OF DELEGATION AND LOCAL REVIEW PROCEDURE) (SCOTLAND) REGULATIONS 2008

THE TOWN AND COUNTRY PLANNING (APPEALS) (SCOTLAND) REGULATIONS 2008

**IMPORTANT: Please read and follow the guidance notes provided when completing this form. Failure to supply all the relevant information could invalidate your notice of review.**

Use **BLOCK CAPITALS** if completing in manuscript

## Applicant(s)

Name

Address

Postcode

Contact Telephone 1

Contact Telephone 2

Fax No

E-mail\*

## Agent (if any)

Name

Address

Postcode

Contact Telephone 1

Contact Telephone 2

Fax No

E-mail\*

Mark this box to confirm all contact should be through this representative:

Yes  No

\* Do you agree to correspondence regarding your review being sent by e-mail?  Yes  No

Planning authority

Planning authority's application reference number

Site address

Description of proposed development

Date of application

Date of decision (if any)

Note. This notice must be served on the planning authority within three months of the date of the decision notice or from the date of expiry of the period allowed for determining the application.

**Nature of application**

- 1. Application for planning permission (including householder application)
- 2. Application for planning permission in principle
- 3. Further application (including development that has not yet commenced and where a time limit has been imposed; renewal of planning permission; and/or modification, variation or removal of a planning condition)
- 4. Application for approval of matters specified in conditions

**Reasons for seeking review**

- 1. Refusal of application by appointed officer
- 2. Failure by appointed officer to determine the application within the period allowed for determination of the application
- 3. Conditions imposed on consent by appointed officer

**Review procedure**

The Local Review Body will decide on the procedure to be used to determine your review and may at any time during the review process require that further information or representations be made to enable them to determine the review. Further information may be required by one or a combination of procedures, such as: written submissions; the holding of one or more hearing sessions and/or inspecting the land which is the subject of the review case.

Please indicate what procedure (or combination of procedures) you think is most appropriate for the handling of your review. You may tick more than one box if you wish the review to be conducted by a combination of procedures.

- 1. Further written submissions
- 2. One or more hearing sessions
- 3. Site inspection
- 4. Assessment of review documents only, with no further procedure

If you have marked box 1 or 2, please explain here which of the matters (as set out in your statement below) you believe ought to be subject of that procedure, and why you consider further submissions or a hearing are necessary:

*We do not believe the planning authority has considered the type of noise or the contribution it makes to the farming operations*

**Site inspection**

In the event that the Local Review Body decides to inspect the review site, in your opinion:

- |  | Yes                      | No                                  |
|--|--------------------------|-------------------------------------|
| 1. Can the site be viewed entirely from public land?                                 | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Is it possible for the site to be accessed safely, and without barriers to entry? | <input type="checkbox"/> | <input type="checkbox"/>            |

If there are reasons why you think the Local Review Body would be unable to undertake an unaccompanied site inspection, please explain here:

*the site is located behind a farm, to access the field livestock may be in the field.*

**Statement**

You must state, in full, why you are seeking a review on your application. Your statement must set out all matters you consider require to be taken into account in determining your review. Note: you may not have a further opportunity to add to your statement of review at a later date. It is therefore essential that you submit with your notice of review, all necessary information and evidence that you rely on and wish the Local Review Body to consider as part of your review.

If the Local Review Body issues a notice requesting further information from any other person or body, you will have a period of 14 days in which to comment on any additional matter which has been raised by that person or body.

State here the reasons for your notice of review and all matters you wish to raise. If necessary, this can be continued or provided in full in a separate document. You may also submit additional documentation with this form.

*Reasons attached —*

Have you raised any matters which were not before the appointed officer at the time the determination on your application was made?

Yes  No

If yes, you should explain in the box below, why you are raising new material, why it was not raised with the appointed officer before your application was determined and why you consider it should now be considered in your review.

**List of documents and evidence**

Please provide a list of all supporting documents, materials and evidence which you wish to submit with your notice of review and intend to rely on in support of your review.

Reason to review . application- design and access statement location plan . block plan elevations Acoustic report . Land ownership certificate .	} All documents emailed .
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Note. The planning authority will make a copy of the notice of review, the review documents and any notice of the procedure of the review available for inspection at an office of the planning authority until such time as the review is determined. It may also be available on the planning authority website.

**Checklist**

Please mark the appropriate boxes to confirm you have provided all supporting documents and evidence relevant to your review:

- Full completion of all parts of this form
- Statement of your reasons for requiring a review
- All documents, materials and evidence which you intend to rely on (e.g. plans and drawings or other documents) which are now the subject of this review.

Note. Where the review relates to a further application e.g. renewal of planning permission or modification, variation or removal of a planning condition or where it relates to an application for approval of matters specified in conditions, it is advisable to provide the application reference number, approved plans and decision notice from that earlier consent.

**Declaration**

I the applicant/agent [delete as appropriate] hereby serve notice on the planning authority to review the application as set out on this form and in the supporting documents.

Signed 

Date 29 July 2013.

## Reason for the Review

The main reasons for the application is to reduce dependence on the national grid, secure energy prices for the future, reduce the farms carbon footprint and provide an additional income stream to the farm. The height of the proposed turbine is not detrimental to the area and is located behind the farm buildings thereby reducing the overall visual impact.

Both Scottish and National government policy supports small scale renewable energy projects that directly contribute and support rural businesses.

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);

Delivering sustainable development – Building a strong, competitive economy, the government is committed to securing economic growth in order to create jobs and prosperity, building on the country's inherent strengths, and to meeting the twin challenges of global competition and of a low carbon future. Again Scotland sets out a clear economic vision and strategy for their area which positively and proactively encourages sustainable economic growth;

Support existing business sectors, taking account of whether they are expanding or contracting and, where possible, identify and plan for new emerging sectors likely to locate in their area. Policies should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances.

Meeting the challenge of climate change, flooding and coastal change

Planning plays a key role in helping shape places 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. This is central to the economic, social and environmental dimensions of sustainable development.

This project helps to help increase the supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. They 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 indentifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources.



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