

# Project Update:



Acoustics performance:  
C&F Green Energy, Ireland – CF20

## Small Wind Turbine Testing, Ireland

This note provides a brief summary of the acoustics performance of a CF20 (20kW) turbine installed at C&F Green Energy's own test site in Southern Ireland. All test work has been supervised by Intertek staff from the UK (Leatherhead and Milton Keynes) and the Intertek Small Wind Team based in Cortland, NY, USA.

The scope of the work covers the following standards:

*BWEA Small Wind Turbine Performance and Safety Standard. 29 Feb 2008*  
*61400-11 Wind turbine generator systems –Part 11:Acoustic noise measurement techniques Second edition + Am 1 Nov 2006*

**All test results reproduced here are subject to review and final sign off by the Intertek Small Wind Team in Cortland, NY, USA.**

### 1) Acoustic Test Results

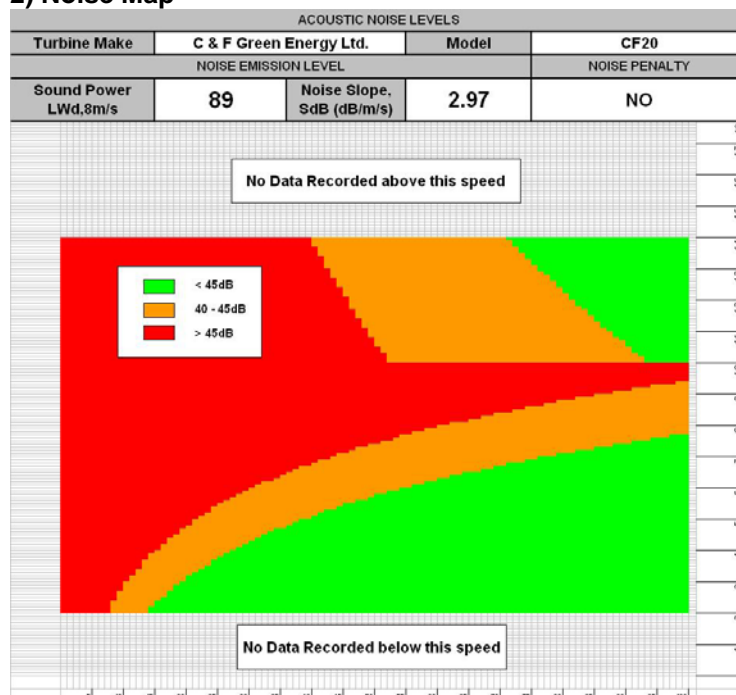
This is a summary the evaluation of the CF20 wind turbine noise over a range of wind speeds and directions. Characterizations of the turbines apparent sound power level, 1/3 octave bands, and tonality are made.

Acoustic noise data was gathered on three separate days in the months of January 2012. Meteorological and wind turbine data has been gathered continuously since commissioning of the CF20 on February 9th, 2011.

The resulting acoustic performance for normal operation in accordance with the BWEA standard is as follows:

Wind speed dependence	2.97 dB/m/s
Imission Sound Pressure Level at 60m Lp60	45 dBA
Imission Sound Pressure Level at 25m Lp25	53 dBA

### 2) Noise Map



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**Intertek**

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### About Intertek

Intertek is a leading provider of quality and safety solutions serving a wide range of industries around the world. From auditing and inspection, to testing, quality assurance and certification, Intertek people are dedicated to adding value to customers' products and processes, supporting their success in the global marketplace. Intertek has the expertise, resources and global reach to support its customers through its network of more than 1,000 laboratories and offices and 30,000 people in over 100 countries around the world. Intertek Group plc (LSE: ITRK) is listed on the London Stock Exchange and is a constituent of the FTSE 100 index. Visit: [www.intertek.com](http://www.intertek.com)

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### About C&F

C&F Manufacturing Group is a leading indigenous manufacturing company which is owned and managed by John Flaherty, the 2008 Ernst & Young Entrepreneur of the Year. C&F Tooling was established in 1989 and is now a global sub-supply partner and solutions provider in the sheet metal industry. The C&F Manufacturing Group employs over 1100 people worldwide (Germany, Czech Republic, the Philippines & China) and 500 people in Athenry and Mullingar (Iralco). C&F Manufacturing Group operates in an number of sectors including tool design/manufacturing, automotive (Iralco), refrigeration (mobile and fixed), IT hardware and renewable energy.

C&F Green Energy Limited was established within the C&F Manufacturing Group in 2006 when the company identified that the market for small wind turbines was well-matched with its core competencies. Since then, considerable development work was undertaken by the company resulting in a new range of free-standing small wind turbines for generation of home-produced electricity, ranging from 6kw to 50kw. The company already has a number of orders for the home UK and European market.

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