

## Site 19 – Nottingham



This turbine is being monitored by Nottingham University. It is mounted on their purpose built turbine monitoring platform. The site is ideal for experimentation as it has a clear approach in one direction, buildings of the same height in another direction and tree obstacles in the last, enabling different types of upwind conditions to be assessed. It is important to note that the annual expected energy yield will be reduced as a result of the obstacles in two of the directions.

The turbine is mounted 3 meters above a flat roof and is approximately 13m above ground level.

The wind speed is being monitored at hub height using a combined anemometer and wind vane. The power data is logged using an SMA Sunny WebBox. Ten minute averages are recorded and analyzed monthly.

<b>NOABL wind speed estimate</b>	4.7ms <sup>-1</sup> at 10m
<b>Planning permission</b>	October 2006
<b>Turbine installation</b>	July 2007
<b>Full data available from</b>	30 <sup>th</sup> October 2007
<b>Mounting type</b>	Pole at edge of flat roof
<b>Turbine</b>	Zephyr Air Dolphin
<b>Inverter</b>	SMA Windy Boy 1100LV
<b>Anemometer</b>	RM Young Wind Monitor (05103)
<b>Data logger</b>	SMA Sunny WebBox
<b>Watt meter</b>	

Warwick Wind Trials

<b>Time Interval</b>	<b>Measured Average Wind Speed (ms<sup>-1</sup>)</b>	<b>Total Energy Exported (kWh)</b>	<b>Average Energy Exported per Day (Wh)</b>
30 <sup>th</sup> October 2007 to 31 <sup>st</sup> August 2008	1.80		
November 2007	1.93		
December 2007	1.76		
January 2008	2.03		
February 2008	1.63		
March 2008	2.72		
April 2008	1.98		
May 2008	1.88		
June 2008	1.18		
July 2008	1.21		
August 2008	0.80		

This turbine has a different installation arrangement and different data logging equipment to all other turbines on the trial and so energy data is not directly comparable. Therefore only wind speed data has been published.