

# Wind Technologies

**Stuart Morrow**  
*South West College*



## ***The Practicalities for Installing a Small Scale Wind Turbine - Stuart Morrow***

**Making Money  
and Saving carbon**

***“People like the idea of generating there  
own electricity reducing there bills and  
helping the environment.”***

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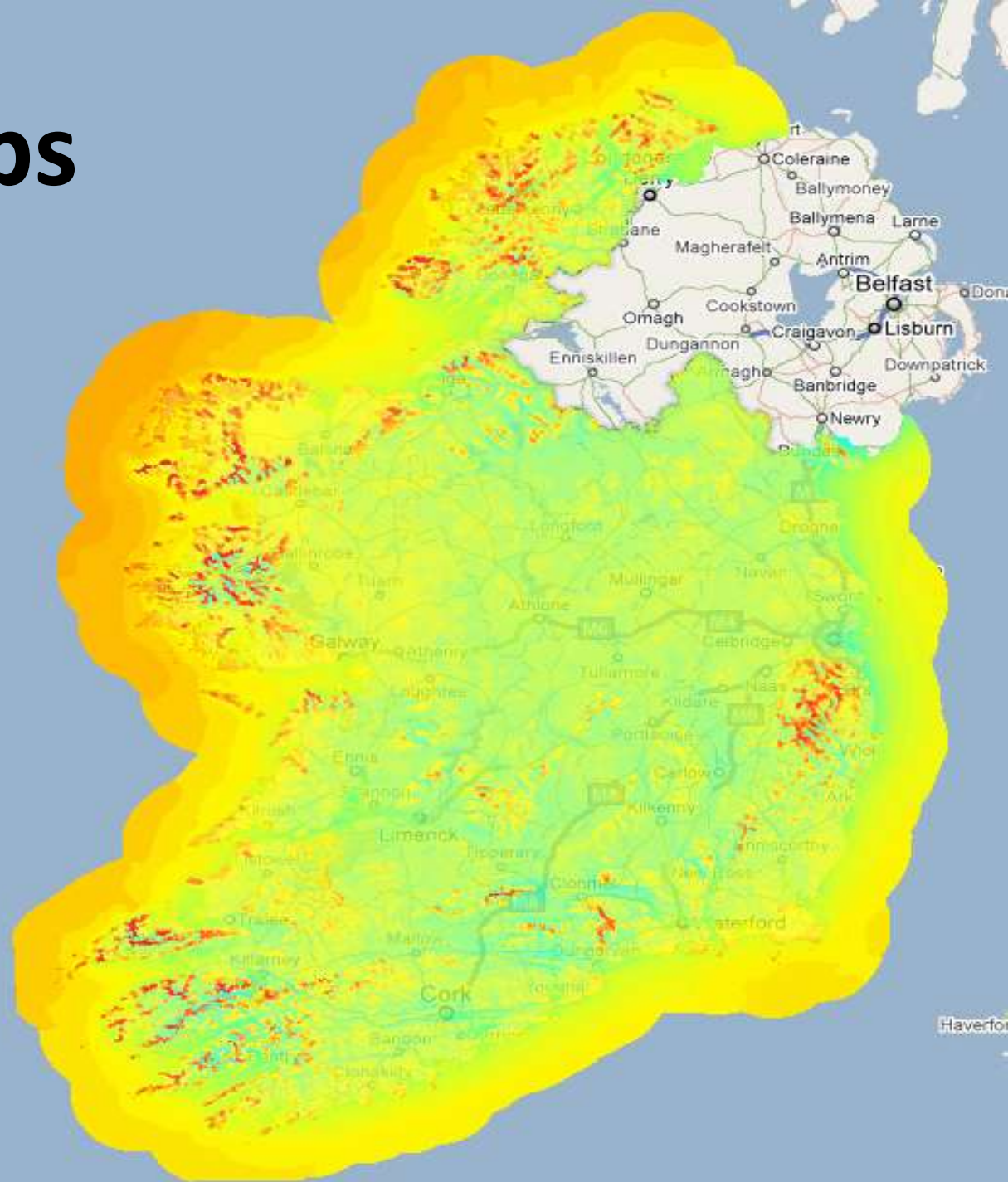
Is It Windy?



# Searching for Wind



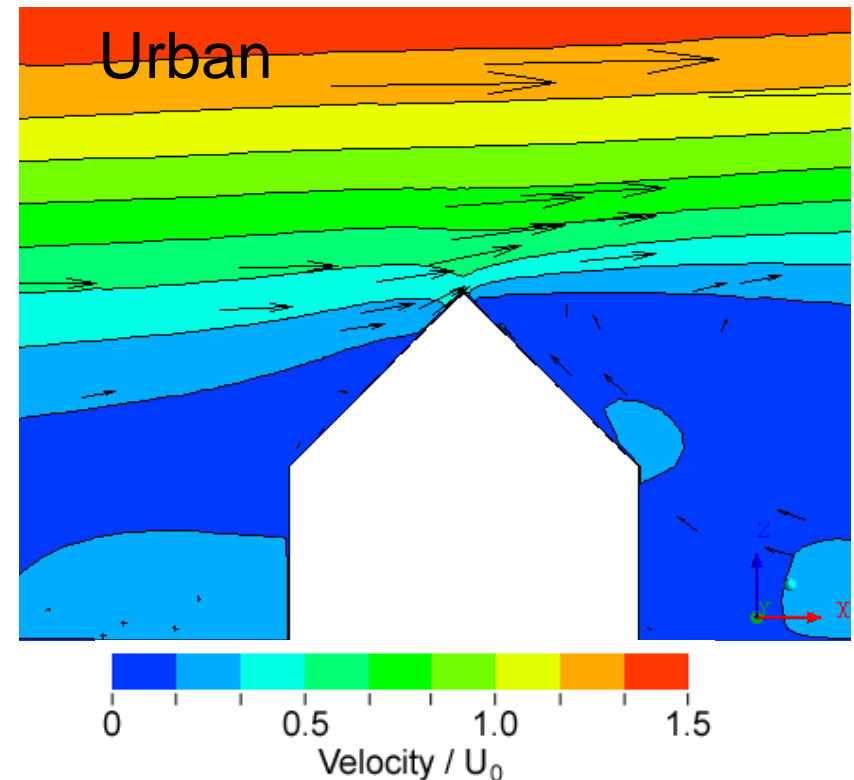
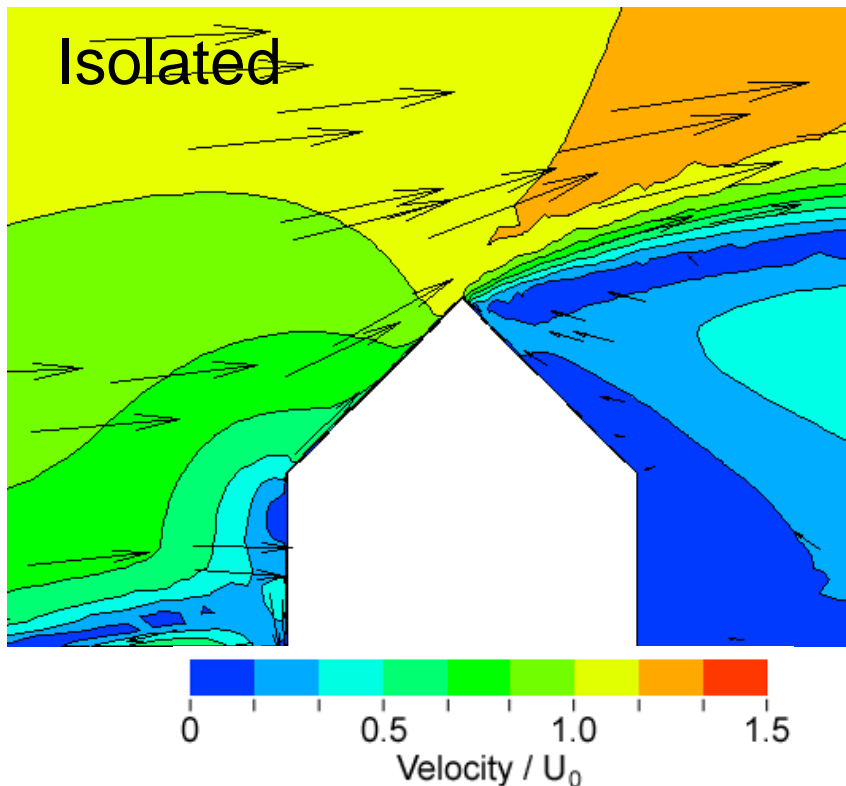
# Wind Maps



# Wind Measurement



# Local effects of the Wind



- Pitched roof of isolated house causes wind speed-up
- This speed-up is *reduced* when embedded in a urban area (depending on building spacing)

What size is a small wind turbine?



# Upwind



**Downwind**



# Vertical



# Grid Connection

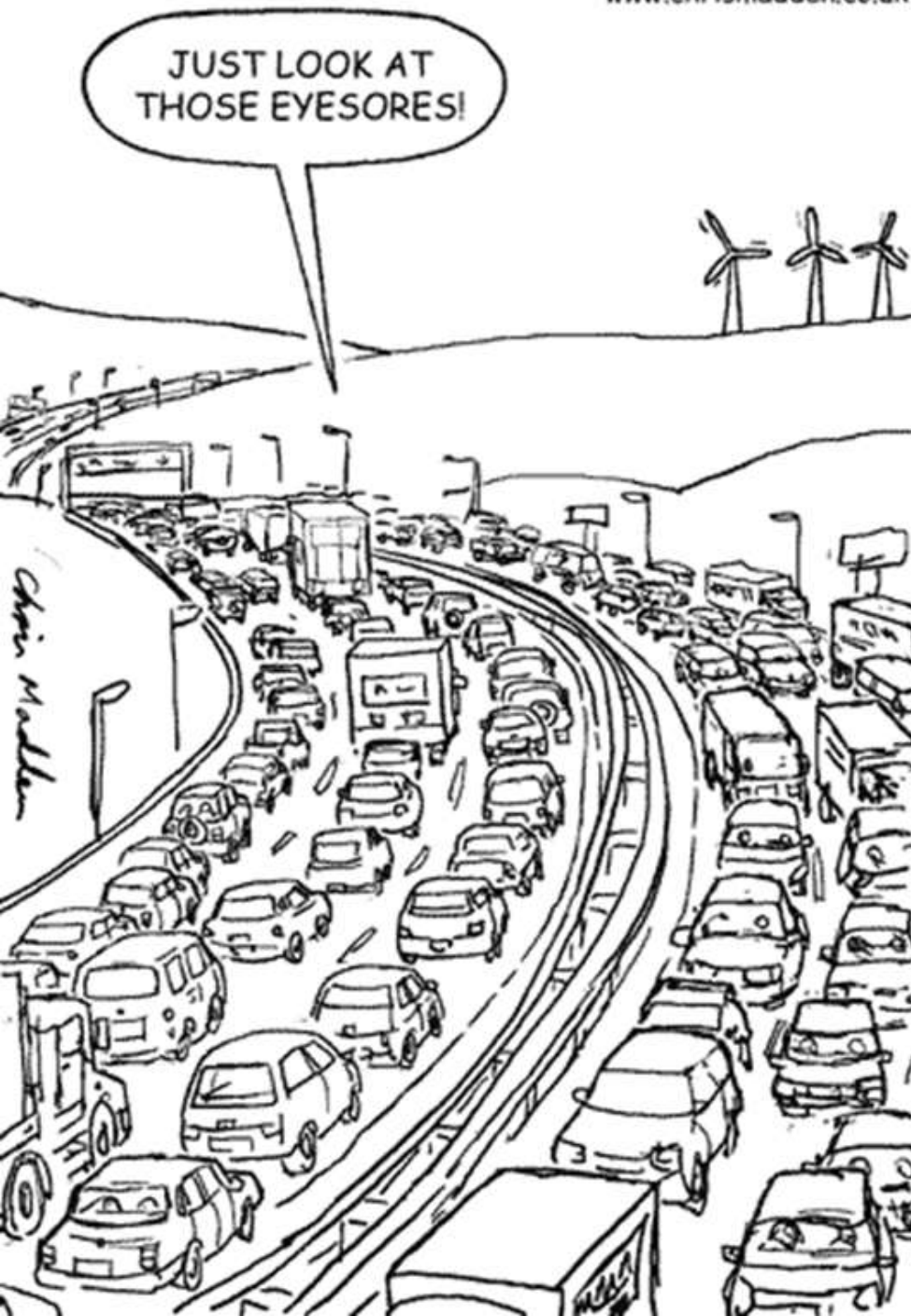


# Battery Systems



# Water Heating





# Environmental Considerations

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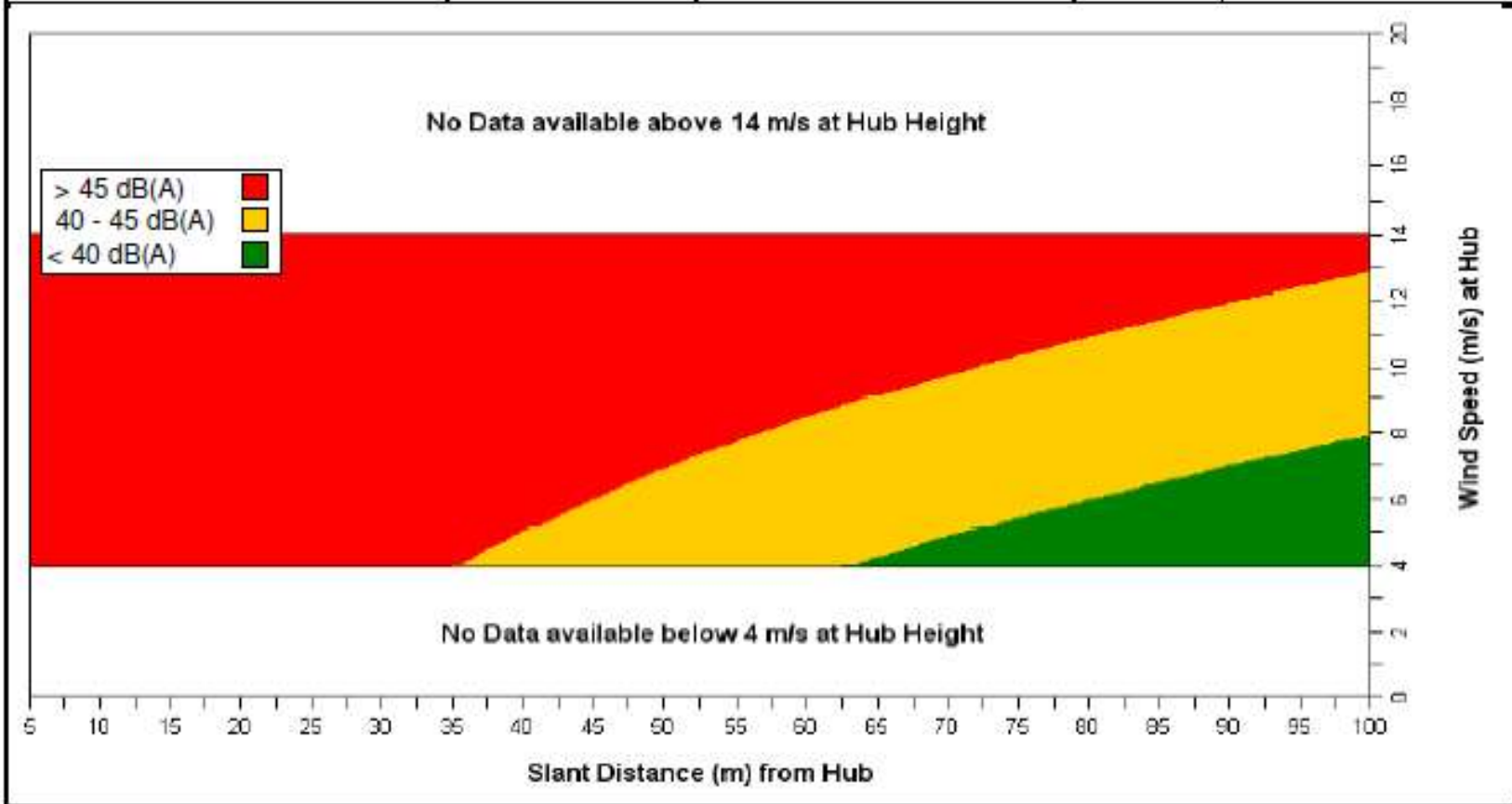


the European Agricultural Fund for Rural Development: Europe investing in rural areas.



## Acoustic Noise Levels

<b>Turbine Make:</b>	Gaia-Wind Ltd	<b>Model:</b>	GW 11
<b>NOISE EMISSION LEVEL</b>			<b>NOISE PENALTY</b>
<b>Sound Power <math>L_{Wd,8m/s}</math></b>	<b>88.1 dB(A)</b>	<b>Noise Slope, SdB (dB/m/s)</b>	<b>1.015</b>
			<b>NO</b>



HM: 2064/R1  
Melton Mowbray Turbine Test

Tested and Issued by:  
Hayes McKenzie Partnership Ltd.  
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