Noise from wind turbines

The Facts

Prepared with assistance from the Hayes McKenzie Partnership,
Consultants in Acoustics, Southampton and Machynlleth.

Virtually everything with moving parts will make some sound, and wind turbines are no exception. Well designed wind turbines are generally quiet in operation, and compared to the noise of road traffic, trains, aircraft and construction activities, to name but a few, the noise from wind turbines is very low. Outside the nearest houses, which are at least 300 metres away, and more often further, the sound of a wind turbine generating electricity is likely to be about the same level as noise from a flowing stream about 50-100 metres away or the noise of leaves rustling in a gentle breeze. This is similar to the sound level inside a typical living room with a gas fire switched on, or the reading room of a library or in an unoccupied, quiet, air-conditioned office.

Source/Activity	**Indicative noise level aB (A)**
Threshold of hearing	0
Rural night-time background	20-40
Quiet bedroom	35
Wind farm at 350m	35-45
Car at 40mph at 100m	55
Busy general office	60
Truck at 30mph at 100m	65
Pneumatic drill at 7m	95
Jet aircraft at 250m	105
Threshold of pain	140

Information taken from The Scottish Office, Environment Department, Planning Advice Note, PAN 45, Annes A: Wind Power, A.27. Renewable Energy Technologies, August 1994

As the table shows, the sound of a working wind farm is actually less than normal road traffic or an office. Even when wind speed increases, it is difficult to detect any increase in turbine sound above the increase in normal background sound, such as the noise the wind itself makes and the rustling of trees.

The best test is always to experience the noise from a turbine for yourself. You will find that it is perfectly possible to stand underneath a turbine and have a normal conversation, without raising your voice.