

## Wind Turbine

Very quietly and without fanfare the wind turbine was erected in the Grounds of Carrington School and set in motion. It is not very noticeable in summer as it rises slightly above the trees but if you want to see it you would best approach it along Chapel Road from the direction of Sedgemore and the Scout Hut. And the turbine does not make much noise – on a windy day you have to get within 20 meters of it to hear it.

Each year the Proven WT 6000 turbine will save 6.8 metric tonnes of carbon being poured in to the atmosphere from fossil fuel power stations. For those of us who cannot imagine what this looks like it is roughly the equivalent of 130 of the 1cwt bags of coal your coalman used to deliver or just over two builders' lorries loaded with gravel.

The 6 kW turbine is mounted 15 meters above the ground and 2 meters above any obstruction that may shelter it from the wind. The rotors are 5.5 meters in diameter. Output depends on wind speed and constancy. It is designed to provide enough power for six 1kW (one bar) electric fires. The expected output of the turbine is 16 000 kilowatt hours per year and the school uses about 100 000 kWh per year. So the turbine provides for about 16% of the schools needs. Bucks County Council are negotiating with their electricity suppliers to be paid for unused power to be sold to the grid. Being a green kilowatt it would attract a small premium because of pressure from Kyoto.

The total cost of the turbine was £25 500 of which the Government paid half. It should save the Council about £1100 each year so it will pay for itself in under ten years – as electricity prices increase over the years the saving will increase because the fuel the turbine runs on is free.

As a bonus the turbine is a very relevant teaching resource. As the Bucks Benefit Assessment puts it, it offers “good potential for linking into the existing educational programme focussed on environmental topics ... a useful practical resource for the school demonstrating renewable energy in action, enabling pupils to examine and understand technology at first hand”.