15/12/03

Jo Davies MBE,
DART
Winterborne Zelston,
Blandford,
DT11 9ES

Dear Miss Davies,

Wind Farm, Lower Winterborne

REVISED 04.01.04 (Material for 9 turbines)

Further to your Circular of 23 September, for which I thank you, I've been looking at the engineering implications of the scheme, although a recent operation has delayed things somewhat.

What follows may well have been taken into consideration already but, if not, I would like add it to the argument against the wind farm.

The foundations for the turbines would be octagonal in shape, 17m across and probably 2.5m deep, heavily reinforced.

Each foundation would have a volume of 595 cub.m, weighing 595 x 2,2 (tonne per cub m.) = 1309 tonne

plus, say 10% for reinforcement, say 130 tonne of steel bar.

Material for 9 turbines :

9 x 1309 = 11,781 tonne of concrete, plus ancillary structures and roads, say 13,000tonne.

9 x 130 = 1170 tonne of reinforcement " " " " " , " 1,200tonne.

If the concrete is to be mixed off site, the number of **14** tonne mixer lorries required would be 13,000 ÷ **14** = **930** (resulting in **1860** journeys to and from site). Note that each foundation would necessitate a continuous stream of approx **95** lorries until the foundation was completed.

And, using 20 tonne lorries for the reinforcement, 1,200 ÷ 20 = 60 large lorries (120 journeys).

If the concrete is to be mixed on site, using a large mobile mixer plant, the number of 20 tonne aggregate lorries would be 13,000 ÷ 20 = 650 (1,300 journeys).

I wonder if anyone has calculated the energy involved in excavating the aggregate, converting it into concrete, manufacturing the steel and making it into reinforcement, and transporting all these materials to site, **and then** offset this energy against the miserable amount these turbines will produce based on a 30% generating time ? I realise it's only a 'one-off' expenditure of energy, but must be considerable.

And that's only taking the civils into account. The cost in energy and materials used in the manufacture of the turbines themselves must also be considered and offset, as the existing power stations will continue to operate with or without wind power.

To the potential chaos and disturbance caused by the lorries above mentioned must also be added that to be caused by the exceptionally long loads enumerated in the planning documents. Do people really understand what they're in for?

From conversations I have had I also get the feeling that the majority of people do not appreciate the size of the machines, and I think it is a mistake to compare them with something miles away, such as Salisbury Cathedral which can only be imagined in the mind's eye when away from the city. Much better comparisons, and which most local people would find easier to visualise because they see them most days, would be the larger radio mast on Bulbarrow, and Hardy's Monument.

The Bulbarrow mast is 55m high. Ask them to add another 10m to it and imagine a generator pod nearly the size of a bus on top, and then another 40m of blade above that!

Hardy's Monument is only 22m high and visible from over half Dorset. Imagine a structure of similar diameter **three times as high** plus the pod and blades. Frightening.

How does one join DART?

Yours sincerely,

Cyril Stocks