

WEATHER

Barry Walsh, A Fellow of Royal Meteorological Society for over 25 years, with real-life practical environmental experience.

During a long career in the Fleet Air Arm's Meteorological and Oceanographic Branch, I often worked in and later managed the Met Office on Portland Air Station (adjacent to the proposed incinerator site).

As concerns over **pollution** and **air quality** are central to this objection, I wish to briefly emphasise a couple of **important** meteorological points affecting these, as they affect the local area.

WIND

Locals that I have talked to about the wind in the area have said that it mainly blows from the south west, so what's the problem? Look at the direction bushes grow along the Fleet. Any 'nasty' stuff will blow away to the north east.

If only it was that simple.

If you look at a boulder in a river, the water passing downstream of the rock will 'eddy' into one or more pools. The same is true of the winds blowing round the Isle of Portland.

Winds from the south west will form eddies in the Lee (i.e. downwind) of the island keeping any pollutants in the air nearby (i.e. Over Portland Harbour).

Naturally, vertical changes in wind speed and direction will also have variable affects.

The wind data used in downwind dispersal calculations for this proposal is taken from Portland Bill (a completely different kettle of fish regarding topography and siting from the proposed site).

Interestingly, the topographical data used in downwind dispersal calculations for this proposal were taken from the American Lovell Power Plant on the Hudson River with rolling Terrain behind!

To make accurate downwind dispersal projections, wind data must be gathered by anemometers positioned at relevant locations and levels to the site.

When winds blow from the east, any trapped emissions will blow into Castletown, those from the north will drive emissions to the top of the island, whereas winds from the south west will affect Weymouth and Preston.

PRESSURE

In periods of high pressure (i.e. in settled weather) the air is descending.

Descending air is heated from above by compression. This gives rise to a phenomenon called an 'inversion'.

An inversion exists when temperature increases with height, forming a 'lid' that effectively prevents rising air from the surface from 'escaping' upwards. Any pollutants caught below such an inversion remain trapped.

In settled conditions round sunset an inversion can be seen as a reddish/ brown line in the sky, where pollutants from many sources are held.

With time an inversion will drop closer to the surface, resulting in even higher concentrations of pollutants.

The longer any inversion lasts, the worse the air quality in the local area below it becomes.

High pressure conditions will therefore 'trap' and concentrate pollutants which when combined with onshore sea breezes in summer, will make surface pollution levels locally, 'high' to 'extremely high' along the Dorset coast.

The resultant air quality may become extremely poor, sometimes becoming a serious health hazard to those within the local area, especially those with pre-existing health conditions.

IN CONCLUSION

These brief points explain our local weather and why such an incinerator should not be located here, with people living and working so close by and at elevations above the top of the proposed chimney.

Finally, this can be an extremely windy location where once litter becomes loose it is quickly lost into the sea.

Bringing waste here – generating 40,000 tonnes of ash here, every year, would create unnecessary problems we could well do without.

This is understood by those who understand our winds.

Wind blown noise, pollution, toxic ash dust and escaped litter blown about from the Port are unacceptable.

Emissions of 202,000 tonnes of Carbon Dioxide and the use of 56 million litres of clean water a year for 30 years are unacceptable.

Finally, with concerns over Global Warming, increased greenhouse gases and other emissions and their effect on the environment, it is to me inconceivable that approval for such a facility be considered at this time.

Thank you for your attention.