

# Ambiental Sky News 11 August 2008



## **Fine-Tuned Weather Technology**

A system used to predict potential flood areas claims to be so precise that it's able to identify individual buildings at risk, such as Wembley stadium.

Flowroute, which uses the latest technology in flood risk assessment, has also identified more than 135 towns and cities in Britain at risk.

Summer 2007 was a wash-out for many thousands of people, and the floods which affected Hull and other regions cost around £3bn.

There is a growing awareness that homes don't need to be adjacent to coasts or rivers for flooding to occur.

Justin Butler realised there was a need to map areas at risk of flooding, and so he developed Flowroute with his company Ambiental.

Flowroute uses high resolution digital elevation models, plus computer software to predict where water will flow.

Information of precise buildings at risk of flooding is useful for businesses and homeowners who want to know the 'real' risk to their properties, even if they're located nowhere near water.

It also imperative for companies such as insurers, town and emergency planners so that they can mitigate against loss.

Weather forecasting has come a long way from the days of hanging seaweed outside your front door to see how much it swells. Technology is the backbone to this improved precision and will continue to be.

Why is British and Irish weather so hard to predict? Well, for a start, we're a small set of islands with the Atlantic to the west of us.

Not many people live in the Atlantic and until satellite systems improved, the only observations obtainable were from a few ships and buoys, so it was difficult to build up a picture of what the atmosphere to the west of us was doing, and this is the direction from which most of our weather arrives.

John Harmer, a meteorologist with the Met Office explained how satellite use is now integral to weather forecasting

"One of the big improvements that we have seen over the last 10 years, is more and better use of satellite data.

"Getting more information from satellites has really improved the accuracy of the forecast."

Mr Harmer added that the second great development for weather forecasting, is the Met Office's supercomputer, which can process a unified global model.

This model simulates how the atmosphere changes and moves over time. It not only delivers weather forecasts for the next few days, but also incorporates seasonal variations and so the same model is used for climate change predictions.

Increased supercomputer power will lead to higher resolution forecasts and so the Met Office should be able to increase lead and warning time to their customers.

With increased supercomputing power it will be possible to complete more model runs, which would lead to a range of outcomes, and the probability of certain outcomes will be displayed.

Mr Harmer believes that the Met Office will continue to be at the cutting edge of climatic research and forecasting, with an increased reliance on technology.

