



11 February 2010

## **Future of Morecambe's weather station: Met Office case for maintaining the existing service (Option 1)**

The Met Office submits the information below in response to the Cabinet Report concerning the future of Morecambe's weather station.

### Climatological value of the weather data

The site at Morecambe has excellent exposure and a long history back to 1915. As such the site is recognised by the Met Office as having significant climatological value.

The Council's continued cooperation provides data that is extremely useful in supporting the Met Office's ongoing monitoring and studies of climate change. As the UK's foremost climate research centre, the Met Office Hadley Centre plays a key role in the Intergovernmental Panel on Climate Change (IPCC). Indeed, within the Fourth IPCC Assessment Report we were the single most influential scientific contributor to the Working Group I report on The Physical Science Basis of Climate Change; a significant contributor to the Working Group II report on impacts, adaptation and vulnerability; and our scientists were lead authors on the summary report.

By supporting the work of the Met Office, the Council is itself contributing to this important Intergovernmental research on Climate Change.

### Planned automation of the weather station

The Met Office can confirm that funding is already in place to automate the station at Morecambe between 1 Apr 2010 and 31 Mar 2011.

All the costs of the installation of automatic equipment and provision of electrical supply would be met by the Met Office. The automatic weather station in front of the town hall would be powered using a solar panel; only the sunshine sensor on the roof would require a low voltage electricity supply. Data would most likely be transmitted to the Met Office using a GSM mobile phone antenna. The Met Office would meet the ongoing costs of the electrical supply (estimated at less than £100 per annum) and the cost of phone calls to transmit the data. An example of a similar installation is shown in Annex A.

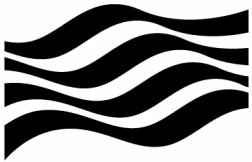
Once automated, there would be no requirement for the Council to take any weather readings. The Council would only need to ensure that the grass inside the enclosure continues to be cut regularly during the growing season.

### How the data is used to improve Met Office weather forecasts

Currently, the data from Morecambe's weather station is routinely used to verify our weather forecasts. Once automated, data would be used in real time to aid our forecasters in times of severe weather and readings would be mentioned in Met Office press releases and TV broadcasts.

### How data will be made available to the Council

Once the station is automated, the collected data would be sent automatically to the Council using a standard e-mail message. Messages could be sent to the Council twice per day at around 09:30 and 16:30 with hourly data from the previous 24 hours including maximum/minimum temperatures and rainfall/sunshine totals for the period. It would be straightforward for the Council to set up an auto-



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forward of the e-mails to a third-party, e.g. newspaper, subject to a written agreement between the Council and the Met Office.

Wider benefits to Morecambe of maintaining an official weather station

The Met Office Public Weather Service (PWS) has just begun a programme to make more of its weather data available on its website and other mobile platforms e.g. Apple's iPhone. The Met Office website has considerable reach and regularly gets over 10 million hits per month. It's new iPhone application (<http://www.metoffice.gov.uk/media/iphone.html>) was downloaded 54,000 times in the first week of it's launch. In the near future, latest observations and five-day forecasts from many more Met Office weather stations (like Morecambe) will be made available on all the various platforms.

An early success has been our "Weather Widgets", a freely available tool showing 5-day weather forecasts for 390 locations that webmasters can download onto their website (including the Council's website). This has had considerable interest, an example of it's use is shown in Annex B.

Continuing cooperation with the Met Office to collect weather data would ensure that official data and forecasts for Morecambe are made widely available to the public as more applications and tools (like the Weather Widget) are developed.

Tim Allott  
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Met Office



### **Annex A. A recently upgraded automatic weather station in Preston.**

The thermometers and storage raingauge are replaced with sensors of a similar size. A pole with a solar panel, small GSM antenna and cabinet for a data logger are added to the enclosure.

Met Office weather stations use the highest quality instruments available and are inspected regularly to ensure standards are maintained. All the data is archived and rigorously quality controlled by specialist staff in our Edinburgh office. Only data from official Met Office weather stations meets agreed national and international standards.



**Annex B. An official Met Office 5-day weather forecast for Bakewell displayed on a third party website.**

Weather Widgets, like this example for Bakewell, are available now, for free, from <http://www.metoffice.gov.uk/public/pws/components/>. Before the end of the 2010, more towns and cities will be added to the list of available locations, and could include Morecambe.



The screenshot shows a website for the Peak District & Derbyshire. The header includes the logo, navigation links like 'My Peak District & Derbyshire', 'Plan My Visit | E-Shop', and a search bar. A secondary navigation bar contains 'Home', 'Be Inspired', 'Where to Stay', 'Places to See', 'Things to Do', 'What's On', 'Visitor Information', 'Map', and 'Downloads'. Below this is a sub-menu with 'Getting Here', 'Getting Around', 'Tourist Information Centres', 'Weather', 'Visitor Guide', 'Green Tourism', and 'Accessibility'. The main content area is titled 'Weather in the Peak District & Derbyshire' and includes a sub-header 'The British love to talk about the weather – and there's plenty of it to talk about in the Peak District & Derbyshire!'. The text describes the localized weather in the region and provides a link to the BBC's weather pages. A photograph of a landscape with a rainbow is shown. The Met Office website is mentioned as a source for comprehensive weather information. A 5-day weather forecast for Bakewell is displayed on the right, showing temperatures and wind speeds. The forecast is as follows:

Day	Weather	Temperature	Wind Speed
Today	Sunny	3°C	15 mph
Thu	Sunny	3°C	7 mph
Fri	Cloudy	4°C	8 mph
Sat	Cloudy with rain	4°C	12 mph
Sun	Sunny	4°C	10 mph

The weather widget also includes a 'UK Weather Warnings Issued' alert and a 'More details' link.