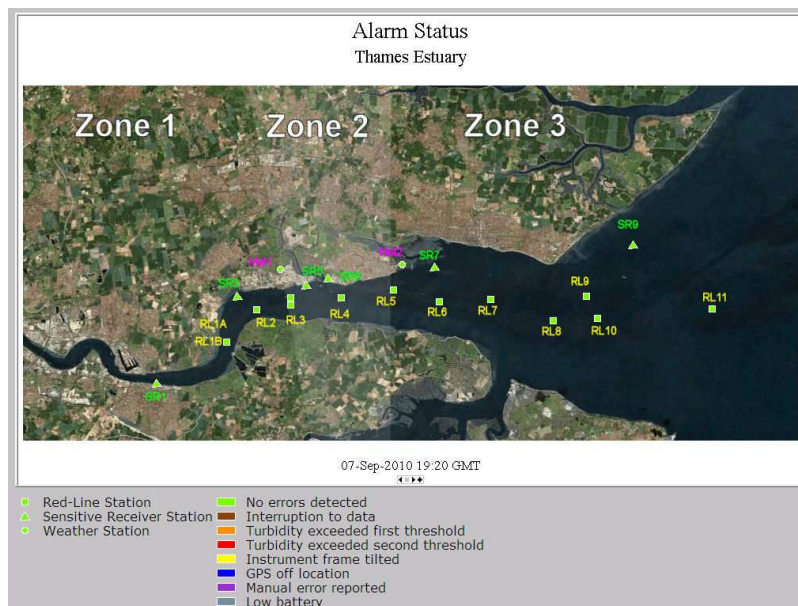


## ARTEMeS ENSURES ENVIRONMENTAL COMPLIANCE DURING MAJOR PORT DEVELOPMENT

9 September 2010

Alphecca Systems have provided an ambitious Internet-based real-time measuring system as part of the major London Gateway port development. The system, known as ARTEMeS, allows environmental measurements to be acquired and accessed using the Internet. Data from instruments at eighteen different locations are used to monitor water quality and ensure environmental compliance during dredging and reclamation work on the Thames estuary.

Measurements are transmitted in real time using the mobile phone network to a server on the Internet, where the data may be viewed on secure web pages using interactive graphics components or downloaded as spreadsheets for further processing. In addition to the acquisition and display of measurements, ARTEMeS performs automatic quality control tests that provide notification by SMS and email of potential non-compliance with environmental criteria.



Instrumentation is provided and managed by the UK-based GEMS Survey Limited, and comprises about thirty instruments of nine different types, including one that has never before been used in a real time application. Each instrument communicates with the ARTEMeS server through a common hardware interface that minimises equipment costs and ensures the rapid development and deployment of new systems.

This technology, which was developed by Alphecca Systems, has been

successfully used in other GEMS' projects in France, Nigeria, Malaysia, Indonesia and elsewhere in the UK. Recent enhancements that allow the remote control of attached instruments using an embedded web server and Internet browser have reduced the number of service visits to remote locations.



Environmental data acquisition for the global network

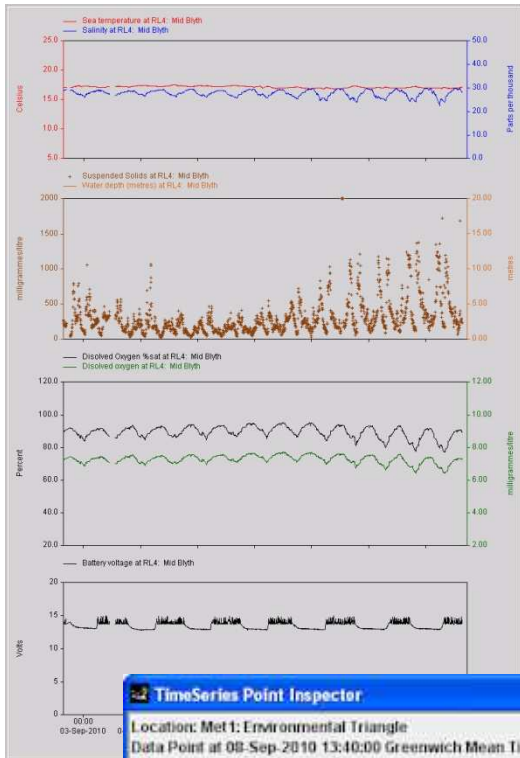
Instruments on the London Gateway project are deployed from a variety of platforms including land, buoys, jetties and submerged systems on intertidal mud flats.

Instrumentation is expected to be deployed for a further three years.

**Data Displays**

Measurements are available to authorised parties and dredging contractors as display components on web pages, controlled by a relational database central to the ARTEMeS server.

All displays are interactive; scales can be changed and details examined by simple mouse clicks.

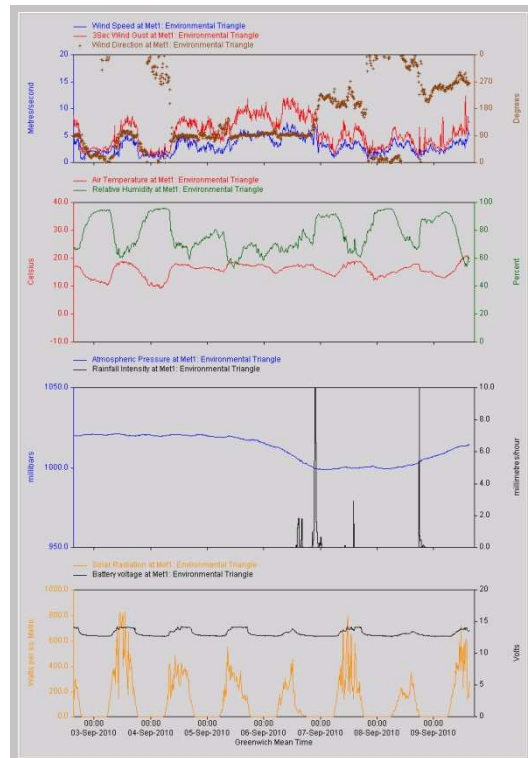


**TimeSeries Point Inspector**

Location: Met1: Environmental Triangle  
 Data Point at 08-Sep-2010 13:40:00 Greenwich Mean Time

Wind Speed	3.8 Metres/second
Wind Direction	312 Degrees
3Sec Wind Gust	5.4 Metres/second
Atmospheric Pressure	1001.8 millibars
Air Temperature	17.0 Celsius
Relative Humidity	76 Percent
Rainfall Intensity	0.0 millimetres/hour
Hail Intensity	0.000 hits/square centimetre per hou
Solar Radiation	194.4 Watts per sq. Metre
Battery voltage	13.2 Volts

Java Applet Window



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