

Channel Coast News

Issue 38 - February 2011

The newsletter for the Southeast Strategic Regional Coastal Monitoring Programme www.channelcoast.org

Regional News

South East Coastal Group

Spring profile surveys are currently being conducted along the whole frontage, with the area from Hastings to Winchelsea completed and the remainder scheduled to be finished by the end of March. Beach Management Plan Reports are undergoing final peer review and will be released in early March.

NetSurvey Ltd have completed the multibeam bathymetry from Dungeness to Ramsgate, with the data due to be signed off by UKHO later this month. Fathoms Ltd have also completed the stretch from Ramsgate to Minnis Bay; the data are in the processes of quality-control. The final stretch from Beachy Head to Dungeness is due to be completed by the end of March.

Problems still exist with the Herne Bay wave/tide gauge. Etrometa visited at the end of January for meetings with Canterbury CC, EMU Ltd and CCO. On the whole these meetings were productive and should help resolve the outstanding issues.

South Downs Coastal Group

All of the spring 2011 interim profile surveys are planned and scheduled to start at Elmer on 2 March 2011. Post-storm surveys will be carried out as required.

Work is ongoing to assess the different technological options that may be available to use in Phase III from April 2012. A technical trial of a mobile laser scanning system called Dynascan was undertaken recently by Worthing BC, in collaboration with



Havant BC and 3dSitscene Ltd. The MDL Dynascan is a pod-based system which includes a GPS receiver, Inertial Movement Unit (IMU) and Laser Scanner in one unit. Initial findings show that this system that collects 36,000 points per second and can be mounted on any vehicle. The validity of the results are being analysed and early indications are that data will at least be comparable in accuracy to the ATV method of surveying that has been used extensively this Phase.

SCOPAC

Christchurch Bay multibeam bathymetry data has received final approval from the UKHO, although the Report of Survey must be completed before the data can be loaded to the website. Since the bathymetry survey was carried out

jointly with the MCA, it forms part of the UK's Civil Hydrography Programme and the Report of Survey has a number of additional items, such as coastal images and check on position of navigational aids. It is usual, therefore, for the full Report of Survey to follow once the survey data has been accepted.

Environment Agency (Southern Region)

All lidar flying for the 2010/11 programme has been completed and approximately 80% of the data has been received. Data delivery this year has been via FTP, which has worked well both in speeding up delivery and removing the need to distribute data on CDs. Another change this year was to include additional information on tide and wave conditions in the survey reports.

As of 1 April, EA Southern Region will become EA South East following the merger of the Southern and Thames Regions.

Channel Coastal Observatory

Following the server upgrade, work has begun to improve the ease of use of the website, and the data download procedure in particular. The real-time graphs have been updated and the Photo Gallery has recently seen an influx of interesting images.

Contacts

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RINEX and real-time GPS data

On the Real-time Data section of the website you may have noticed that GPS data can now be downloaded from various sites on the south coast. "What is this data used for" I hear you ask? Well, this article aims to answer that question...

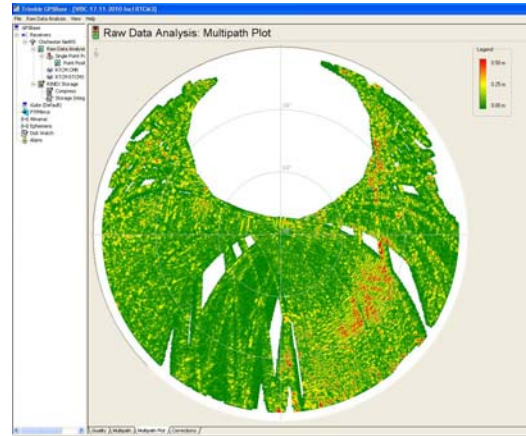
Two Continually Operating Reference Stations (CORS) currently exist as part of this programme at Chichester (below) and at Newhaven.



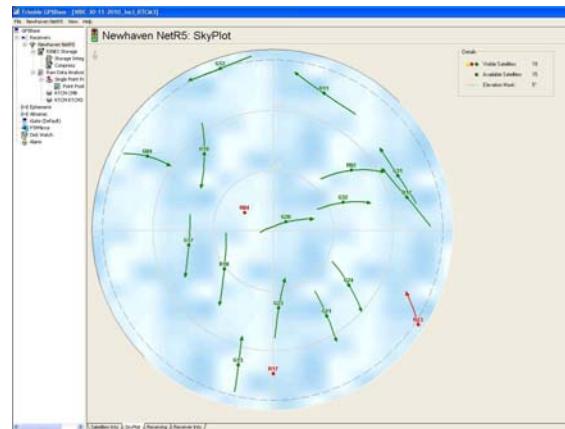
These fixed base stations are surveyed to the Environment Agency's E1 standard and tied in to the Ordnance Survey network of active stations. They provide GPS corrections, across the internet, for Real Time Kinematic (RTK) surveys, resulting in horizontal and vertical accuracies of +/- 30mm, anywhere within about 30km of these stations. In practical terms, this covers all the beaches between Bexhill-on-Sea, Kent and Lee-on-Solent, Hampshire.

GPS data is also streamed to remote PC's at Worthing BC and recorded at 15 second intervals. This data is uploaded to the real-time pages of the www.channelcoast.org website as zipped, daily RINEX (**R**eceiver **I**ndependent **E**Xchange) files, together with associated XML data quality reports, just after midnight each day. The data are archived by the website and can be downloaded by users in a similar manner and format to the OS RINEX data files. The RINEX files can be used by surveyors undertaking static surveys for new control points, for example, or Post Process Kinematic (PPK) surveys when a real-time solution is unavailable.

Various parameters are available to the system operators, including the operational status of the station and in-built QC checks, such as a



multi-path plot (shown above) and a sky plot of the visible and available satellites (below).



There are some disadvantages to the system, most notably the reliance on internet connections and, in some cases, mobile phone-based internet connectivity; accordingly, there are times when the GPS data is unavailable. When these outages occur, automated email alerts are sent to the station operators.

The advantages, however, are considerable: the chief benefit of using "always on" stations is that there is no need to use a base station, which saves time but more importantly removes the concern about the base station being interfered with by passers-by or even potential theft. It also allows small survey teams to be deployed to beaches well spaced apart, without the need for separate base stations. Furthermore, the corrections are available to anyone operating survey equipment in the area, such as for tide corrections for bathymetric surveys.

The two systems have been operated by Worthing BC, for just over a year now and have proved an invaluable operational tool for all users.