

# Channel Coast News

Issue 27 - June 2006

The newsletter for the Southeast Strategic Regional Coastal Monitoring Programme [www.channelcoast.org](http://www.channelcoast.org)

## Regional News

### South East Coastal Group

All the spring profiles have been surveyed and the data validated. Annual Reports are under preparation and will be dispatched by late June. The remaining BMP reports are nearing completion and will be issued for comments. The re-survey of the nearshore bathymetry has started on the Sussex coast, with the North Kent coast due to commence shortly.

### SCOPAC

The spring profiles have been completed and the summer baseline surveys are now underway, as is the bathymetric survey of the Isle of Wight and the East Solent.

Trials have been taking place using a laser scanner to survey the cliffs at Barton, aided by a new mounting on an All Terrain Vehicle, for rapid transit across the beach.

### South Downs Coastal Group

The 2006 Beach Management Plan Report for Seaford has been drafted and is awaiting delivery of the latest dataset to allow analysis to cover the previous three years.

The hydro data from MU15A (Newhaven Harbour) has been approved. MU's 13A to 18B have been surveyed and are currently being processed. An additional vessel will be used for the survey to make up for earlier weather and mechanical difficulties.

Preparations for Phase 2 have continued including a review of survey techniques, project programme, future resource requirements and costings.

### Environment Agency (Southern Region)

BKS have completed all of the flights for the 2006/07 Summer Survey. We anticipate receiving the first batch of contact prints for QA by the end of the month, followed by a phased delivery of the photogrammetry data on a priority basis. QA has been completed for all the 2005/06 photogrammetry and the data are being loaded to the website archive. All data collected under the 2005/06 LiDAR programme has now been

received, covering the Isle of Wight, Christchurch Bay, Lymington and parts of Dorset including Swanage and Studland. Preliminary QA is underway.

### Channel Coastal Observatory

The lengthy round of deep servicing of the Directional Waveriders is now complete. Each buoy has been returned to Datawell for servicing and battery change. The receivers have been upgraded to type RX-C, which means they can be used across all the buoy frequencies. Accordingly, the spare Waverider can be deployed anywhere in the region, since the RX-C can be tuned to any of the frequencies.

## What's New?

**The 2006 Annual Partners Meeting will be held at 1030 on Tuesday 17 October at Field Place, Worthing.**

Tanja Cooper is leaving the CCO shortly. She has provided GIS training and advice to many of the partners since the start of the programme, and we wish her well in her new appointment. Future GIS enquiries should be directed initially to area representatives.

## Contacts

If you have any queries about the Strategic Regional Coastal Monitoring Programme, or would like a personal copy of this newsletter by email, please contact your area representative:

South East Coastal Group: Chris Longmire  
[Strategic.Monitoring@Canterbury.gov.uk](mailto:Strategic.Monitoring@Canterbury.gov.uk)

South Downs Coastal Group: Dan Amos  
[Strategic.Monitoring@Worthing.gov.uk](mailto:Strategic.Monitoring@Worthing.gov.uk)

SCOPAC: Travis Mason  
[Travis.Mason@noc.soton.ac.uk](mailto:Travis.Mason@noc.soton.ac.uk)

Environment Agency: Helen Dalton  
[Strategic.Monitoring@environment-agency.gov.uk](mailto:Strategic.Monitoring@environment-agency.gov.uk)

Regional Co-ordinator: Andy Bradbury  
[Andy.Bradbury@noc.soton.ac.uk](mailto:Andy.Bradbury@noc.soton.ac.uk)

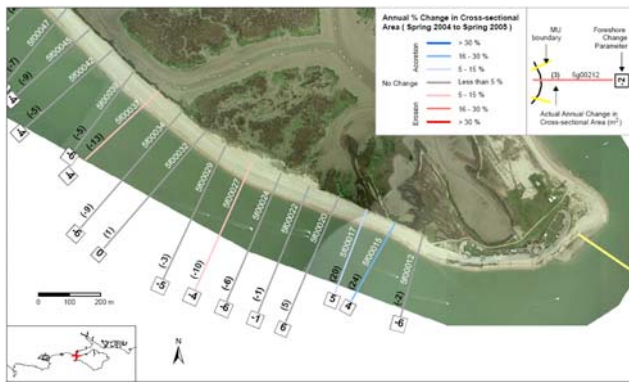
or contact the regional data management centre:  
Channel Coastal Observatory  
National Oceanography Centre  
European Way, Southampton, SO14 3ZH  
Tel: 02380 598467  
[cco@channelcoast.org](mailto:cco@channelcoast.org)

## GIS and Coastal Monitoring

GIS (Geographical Information System) can be utilised in many ways to aid coastal monitoring. Not only can it be used as a visualisation tool to present information to the end user, but it also offers powerful analysis tools. Here are a few examples:

### Beach Change Analysis

The results of the beach change analysis, undertaken as part of the annual reporting, can be summarized for each profile line by assigning 2 key values to it: the Foreshore Change Parameter (an indicator for beach evolution trends) and the change in cross-sectional area can both be shown as text labels for each profile. In order to provide information 'at a glance', each profile is colour coded to show erosion and accretion. All the profile information is stored in a spreadsheet which is linked to the mapping. This is a real plus-point, since it enables non-GIS users to update information easily.

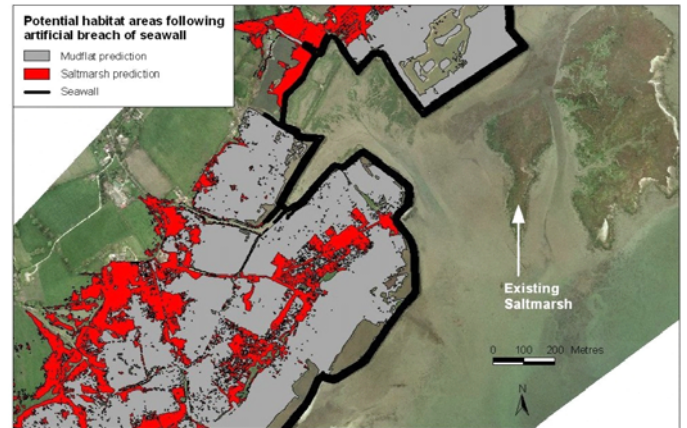


### Ecology

A combination of aerial photography and LiDAR has been used in a Solent-wide project which aims to quantify coastal squeeze and to identify potential sites of managed realignment for habitat creation. GIS is used first to geo-rectify the aerial photography, if necessary, then to digitize saltmarsh coverage. These data sets can be analysed in order to quantify, as well as visualise the saltmarsh loss/gain.



LIDAR elevation data can be analysed together with tidal elevations, in a GIS, to identify the depth and frequency of inundation and the theoretical area extent of mudflat and saltmarsh behind a seawall.



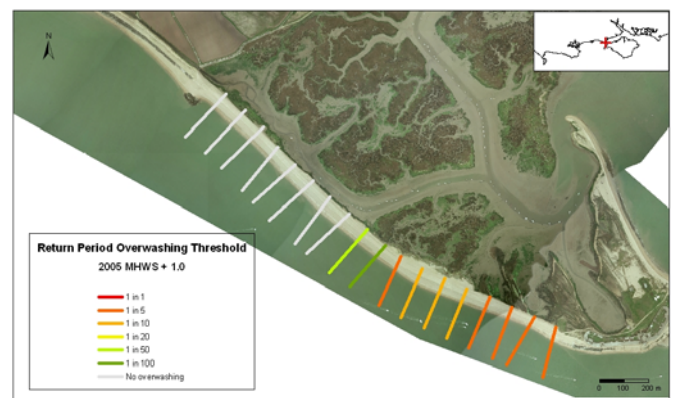
### Hydrographic Difference plots

In order to identify changes in the nearshore bathymetry, GIS has been used to create difference models using hydrographic survey data from two years. The changes can be classified to show areas of erosion and accretion.



### Overwashing Threshold of Barrier Beaches

GIS can also be used to depict thresholds of overwashing. In the following diagram, the profile lines are colour coded according to the nearshore wave return period that will cause overwashing for a water level of MHWS +1.0m. This provides a useful visual tool for coastal managers.



GIS is increasingly being used in coastal management as a tool for storing, interrogating, analysing and presenting multiple datasets, and the examples presented here only scratch the surface of the analytical and display capabilities.