

# Channel Coast News

Issue 8 - December 2003

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

## Regional News

### South East Coastal Group

Baseline topographic surveys are now complete, with the majority of data received and being validated. Requests for data have been received from Dover District Council and Environment Agency (Bulverhythe and Flood Mapping). All data has been supplied in the required formats for onward transmission to Consultants working on those projects.

Baseline bathymetric surveys of South Kent and Sussex are 90% complete, but weather conditions have forced the Consultants to withdraw until more favourable conditions return. Surveys on the North Kent coast are continuing when weather permits.

### South Downs Coastal Group

Gardline Environmental have completed the baseline hydrographic survey of the SDCG frontage, except for 30 profile lines in MU12 (which will be surveyed in mid December). Gardline are currently levelling in their tide gauges. Processing the data will then commence, with delivery expected sometime in February 2004.

Four tenders for Post Storm and Beach Management Plan Surveys were returned on 21 November. The contract will be run as three separate packages from: Selsey to the River Arun; Rivers Arun to Adur and from River Adur to Birling Gap. The tender evaluation process is now underway.

Preparation has also been ongoing regarding trigger levels for calling Post Storm Surveys. The criteria are based on  $H_s$  (Rustington Wave Buoy) exceeding the 1:1 year wave height for 6 hours, from specific directions. Text message alerts will notify the SDCG project team when these conditions are met. Local Authority knowledge together with EA flood warnings will also play a part in this decision making process. If any project partner's staff require the text message alert facility, please contact Dan Amos, via the usual channels.

SANDS software and SDCG database have now been distributed to the project partners that had requested it – training for this software will be arranged during early 2004. Work to create GIS-based structural datasets

from the 2001 orthophotos to cover the entire SDCG frontage is nearing completion.

### SCOPAC

Topographic surveys have continued whenever tides and daylight permit. No further bathymetric surveying has taken place.

A 3-day RTK GPS course for Trimble equipment is being arranged at the CCO. No firm dates have been fixed yet, but early/mid January is likely. If any project partners have staff who would like to do the surveying course, please contact the CCO as soon as possible.

### Environment Agency (Southern Region)

Kampsax have processed and delivered the first set of contact prints from the October aerial photography flights. In addition to a hard copy, we have also received the prints in a digital format. The historical data from BKS has also been received, processed and forwarded to Kampsax. Discussions are ongoing with SDCG with respect to the scope of the photogrammetric analysis from the 1:3000 flights. A meeting with Kampsax has been arranged for 16 December to discuss this further.

Work is ongoing with the LiDAR contract and the identification of the Environment Agency's biodiversity requirements.

### Channel Coastal Observatory

A data analysis workshop was held at the CCO on 2 December, to discuss and agree methods of analysing survey data. A series of standard formats for filenames and templates/map legends is being distributed for final consideration. This is to ensure consistency across the region.

Historical tidal data (from 1991 to 2002) from the region's National Network tide gauges have been prepared for loading into SANDS. Quality control checks for the data from the Directional WaveRiders, based on similar criteria applied to the WaveNet buoys, have been completed. Wave parameter files have been prepared for the archive database. The data are now being prepared for input into SANDS and, thereafter, will be provided to Lead Authorities monthly.

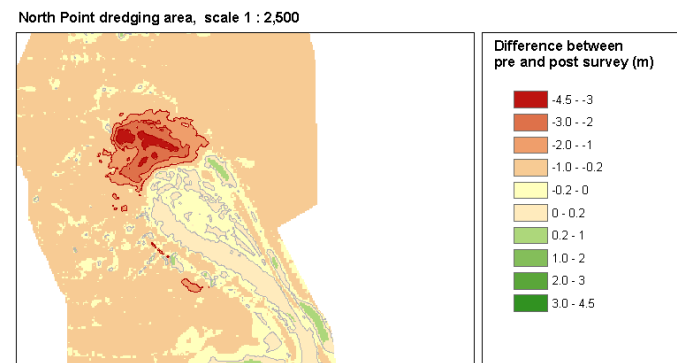
## Terrain modelling using GIS

Topographic baseline surveys are carried out along most of the coastline at 5 year intervals and annually at Beach Management Plan sites. Geographical Information Systems (GIS) software such as ArcView and MapInfo can then be used to generate a ground model of the surface. Each survey point represents a location where the elevation has been measured. The values in between these measured points are predicted by interpolation. The result is a surface model stored in grid format. This grid can be used to calculate total beach volumes, or the volume above/below a specific level.

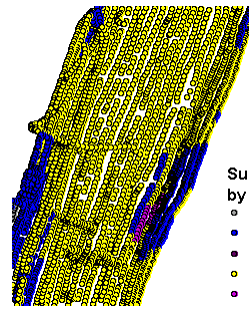


If two surface models are created using baseline surveys collected on two different dates, a difference grid can be created simply by subtracting one grid from the other. This produces a map identifying areas of change. The locations of erosion and deposition can be shown and the quantities of change can also be calculated.

To achieve a consistent approach across the area of the Regional Monitoring Programme, a set of criteria and procedures have been produced which include grid spacing, interpolation method, mathematical subtraction of grids and contour intervals, as well as standard colour schemes for all the grids.



Topographic surveyors also record the surface type observed on site. Each surface type is logged in a standardised manner using a feature code e.g. 'S' for

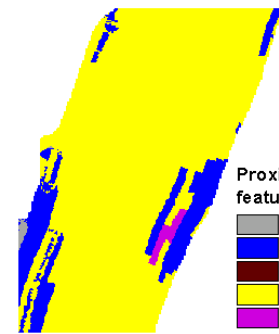


Survey points plotted by feature type

- Gravel
- Gravel and Sand
- Rock
- Sand
- Mixture

Sand, 'M' for Mud or 'SM' for Vegetated Saltmarsh. This sort of information is useful for coastal engineers and is increasingly of interest for habitat mapping.

Although most of the ground modelling will be done in ArcView and MapInfo, all the data sets can be converted in some shape or form to any other GIS, to ensure that as many interested parties as possible can benefit from this work.



Proximity map of feature type

- Gravel
- Gravel and Sand
- Rock
- Sand
- Mixture

## What's New?

GIS training in MapInfo and ArcView is available in January/early February. Please contact your area representative if you wish to take part.

## 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  
[tem@soc.soton.ac.uk](mailto:tem@soc.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@soc.soton.ac.uk](mailto:Andy.Bradbury@soc.soton.ac.uk)

or contact the regional data management centre:

Channel Coastal Observatory  
 Southampton Oceanography Centre  
 European Way, Southampton  
 SO14 3ZH  
 Tel: 02380 598467  
[cco@channelcoast.org](mailto:cco@channelcoast.org)