

Channel Coast News

Issue 14 - June 2004

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

Regional News

South East Coastal Group

Beach management plan (repeat Baseline) surveys are well underway for most of the coastline. Eastbourne – MU 1 & 2 should be completed by the end of the month, Deal to Sandwich Bay – Unit 9A complete, 8C half done. Shepway Frontage – 95% complete (MU16 – MU 18). Canterbury Frontage – Surveyors on Site (Unit 4A-5E). Most data should be processed, quality checked and available by the end of next month.

Gardline Environmental have completed 90% of the North Kent bathymetric work, units 1A to 7B. The complete package has an anticipated delivery date of September 2004.

South Downs Coastal Group

Following some software problems, Gardline Environmental were scheduled to deliver the data from the hydrographic survey of the SDCG frontage, that was undertaken late last year, by 28 May. Unfortunately, during this processing, major errors were found in the data for the MU2 and MU6 frontages and these areas are therefore being re-surveyed. Gardline are doing their best to provide this data ASAP, but a realistic delivery date has so far not been given.

Halcrow have now submitted the completed Beach Management Plan Survey data for the entire MU2 & 2A (Pagham) frontages. Checking of this data is ongoing and will be provided to the CCO and Project Partners in the next few weeks. An extensive re-organisation of the SDCG SANDS database has been undertaken and should be ready for the delivery to project partners soon.

Environment Agency (Southern Region)

There have been no further aerial flights during May, as tidal windows and weather conditions were predominantly unsuitable. Unfortunately the contractor has experienced technical problems on the couple of occasions that flights looked possible. These problems are related to the navigation system, which has been sent back to the supplier for investigation. In the meantime, a replacement unit has been installed, tested and appears to be functioning correctly.

The photogrammetrical analysis of the flights that were undertaken in October is underway. A progress

meeting is being held with the contractor where the programme and data delivery will be discussed.

SCOPAC

Solstice tides have put a brake on topographic surveys recently, but purchase of an ATV is making inroads into the backlog of extensive baseline surveys on the Isle of Wight. The ATV is proving of particular use on macro-tidal sandy beaches and is being tested for use on steeper, coarse-grained beaches also.



Channel Coastal Observatory

Staff from the Channel Coastal Observatory joined other partners at the first SANDS User Group meeting at Halcrow's. Also present were a number of representatives from Local Authorities across England, who expressed much interest in the way SANDS is being used by the Regional Monitoring Programme. A further User Group meeting is planned, probably in December, at the CCO.

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:

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Use of aerial photography for Coastal Defence Strategies

New Forest District Council (NFDC) are currently undertaking the West Solent Coastal Defence Strategy Study for the 30 km stretch of coastline between Hurst and Calshot Spit. In order to investigate the “Do Nothing” scenario, aerial photography was purchased from the National Monuments Record centre in Swindon for the 1940’s, 1950’s and 1960’s and obtained from the Environment Agency for 1980.

All photography was scanned at 600 dpi and geo-rectified using ER MAPPER at the Channel Coast Observatory. The geo-rectified aerial photography and ortho-rectified 2001 colour aerial photography (EA) were then imported into ARCVIEW where the beaches, saltmarsh cheniers, low-lying cliffs and coastal defences were digitised to identify accretion/erosion rates and the influence of coastal defences on the geomorphology. The Keyhaven, Pennington, Lymington, Pitts Deep, Sowley, Beaulieu and Calshot salt marshes were also digitised to identify annual accretion/erosion rates.

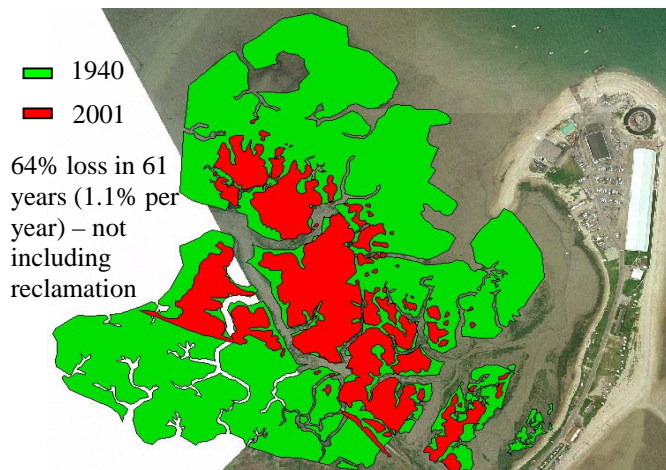


Figure 1- Calshot

The accretion/erosion rates for the beaches, salt marsh cheniers and low-lying cliffs were analysed using all available aerial photography along the ABMS transects.

The most prominent findings were:

- Rollback of Hurst Spit
- Erosion of the Lymington salt marshes
- Stability of Calshot Spit but erosion of the salt marshes (see Figure 1)
- Erosion of the Pitts Deep salt marshes and breaching and development of the Sowley spits (Figure 2)
- Accretion of Warren Farm Spit (Figure 3)

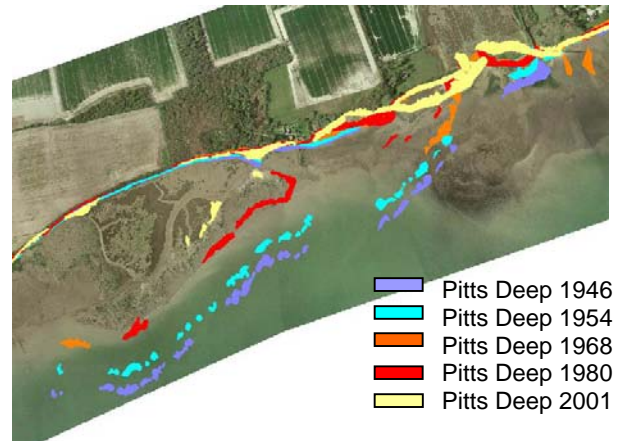


Figure 2 – Pitts Deep

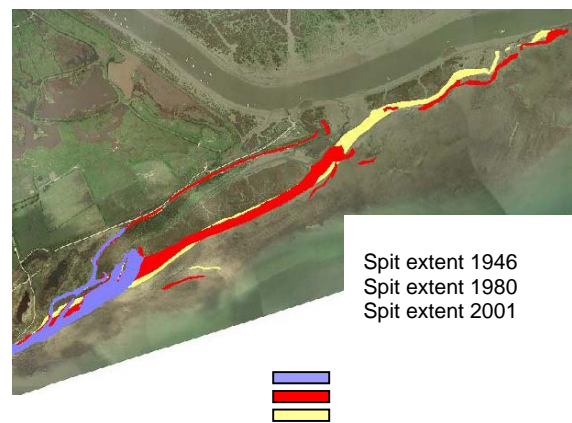


Figure 3 – Warren Farm Spit

The average of the annual accretion/erosion rates for each transect was extrapolated to identify the predicted coastline under a “Do Nothing” scenario. The annual salt marsh erosion rates were also extrapolated to predict future salt marsh loss.

Coastal systems do not erode or accrete consistently on an annual basis, therefore extrapolation must be applied with caution. Nevertheless, analysis of the aerial photography has provided an excellent tool for identifying past plan-view coastal change. The results, combined with topographic and hydrodynamic data collected by the Regional Monitoring Programme, permit better modelling and prediction for future coastal management.

For more information on the accretion/erosion rates identified from the aerial photography, please visit the New Forest District Council website (<http://www.nfdc.gov.uk/index.cfm?articleid=2660>) or contact Dr Samantha Cope (Samantha.Cope@soc.soton.ac.uk) or Andrew Colenutt (Andrew.Colenutt@NFDC.gov.uk) on 02380 285818.