Channel Coast News

Issue 23 – July 2005

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

Regional News

South East Coastal Group

The summer campaign of topographic surveys is now well underway. Data are beginning to arrive for verification and analysis. The support framework for the Deal Pier Tide gauge has been delivered and erected. EMU will be attending shortly to install and commission the equipment.

A new version of SANDS has been delivered for distribution and installation. Users will be contacted individually to arrange for updating. Canterbury City Council has now established a computer training suite capable of training 8 people at a time. It is proposed to hold a SANDS training day in late August/early September. Details to follow.

Environment Agency (Southern Region)

BKS have flown the whole coastal area with the exception of Southampton Water and Christchurch to Selsey Bill and the harbours. BKS will also fly additional areas for the habitat surveys. Within the habitat monitoring programme, all habitat interpretation has been undertaken for existing photography in Hampshire and delivered to the Agency by KCC.

A total of 8 Agency staff from Southern Region, including staff from all 3 Areas, have now completed a one day training course in SANDS run by the CCO.

SCOPAC

Permission has kindly been granted permission by the owners of Sandown Pier for installation of a WaveRex wave/tide gauge and weather station. Surveys continue apace, including this recent survey of Highcliffe Beach.

Photo: R Webbon

South Downs Coastal Group

Kampsax surveyed the frontage between Selsey Bill and East Worthing on 22 April. The digital scans of the contact prints have been received and distributed to LA project partners. The profile data is currently being produced by BKS.

The January 2005 LiDAR survey from Brighton Marina to Beachy Head has now been checked, processed and loaded into SANDS. The May 2005 survey of the eastern frontage from Lancing to Birling Gap (undertaken due to problems with mobilising the aerial flight) has recently been received and is currently being checked and loaded into SANDS.

Channel Coastal Observatory

There has been a noticeable reduction in the number of telephone requests for data since the new combined Browse/Download facility on the website has become available. To date, nearly 800 data files or photographs have been downloaded by users.

What's New?

The Annual Meeting for programme partners will take place on Wednesday 9 November 2005 at Field Place in Worthing, starting at 1030. Further details to follow via the usual channels.

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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Here today, gone today, …

Beach Lowering & Recovery During a Tide

Introduction

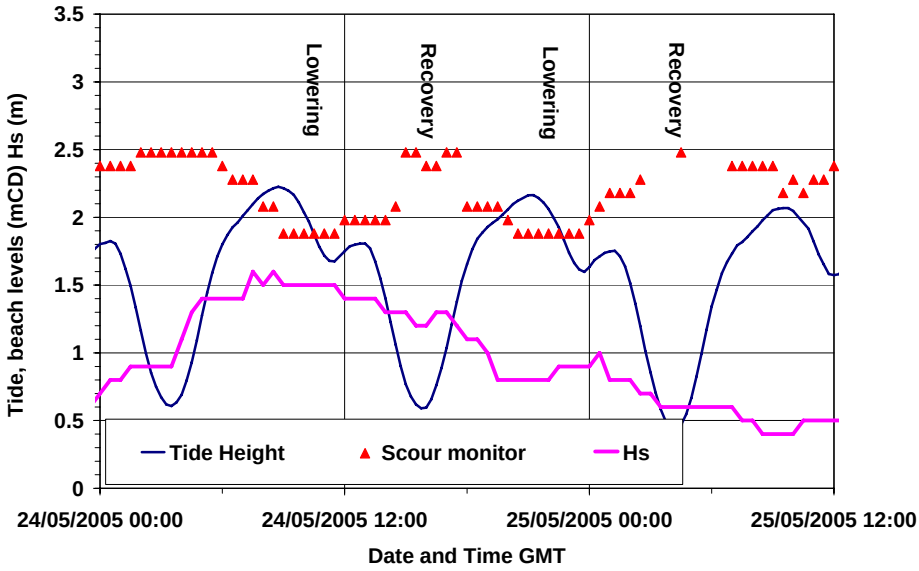
Beach Lowering at seawalls has long been recognised as one of the main reasons for seawall failure, but the process of scour is difficult to observe during storms. Post-storm surveys have often failed to detect much scour and it has long been surmised that scour holes can fill in quickly as wave heights and water levels drop. This idea has just been tested at Southbourne beach near Bournemouth by a team consisting of HR Wallingford, and the University of Southampton, with the support of Bournemouth Borough Council, data from the Channel Coastal Observatory and funding from Defra (project FD 1927).

Field Tests

Two HR Wallingford tell-tail scour monitors were installed in Southbourne beach in front of a 1:2 sloping seawall, as shown on the left. The monitors have 8 motion detectors on flexible arms at different heights. When they are in the seabed no pulses are detected, but when the beach lowers they become exposed and start to vibrate. The number of pulses from each motion detector was recorded every 30 minutes, allowing the lowest exposed motion detector to be identified. This provides an upper limit on beach level, as shown below.

Results

A subset of the results is shown on the right. This shows that as the wave height and water level rose during the morning of the 24th, the beach level dropped by at least 0.60m. The bottom monitor became exposed, so nobody knows exactly how far the beach level lowered. However, as water levels fell during the afternoon, the beach recovered to its previous low-tide level.



The beach level fell again as water levels rose during the afternoon of the 24th, even though wave heights were lower. The bottom scour monitor again became exposed so nobody knows exactly how far the beach level fell, but it recovered fully by low tide. There was only a small change in bed level during the next high tide as water levels and wave heights were lower.

Implications

These results, from a limited period of monitoring, show that significant levels of beach lowering and recovery can occur within a tide. This activity would not be picked up by post-storm surveys performed at low tide. Short term beach lowering, *increases the risk of seawall failure* through undermining or overtopping. Improvements in prediction methods are to be developed and guidance on scour and its mitigation will be produced in the remainder of this project (FD 1927).

HR Wallingford
Working with water

University of Southampton

defra
Department for Environment Food and Rural Affairs

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