

# Broomhill Sands sea defences

*This is the second newsletter for the Broomhill Sands sea defences scheme. This provides an update on the work we have done so far under this stage of scheme development. We also look forward to the main activities over the next three months. The newsletters will be published roughly quarterly, linked to news on the scheme development.*



**Maintaining the existing defences**

## **ABOUT THE SCHEME...**

**Broomhill Sands** is the first scheme to come out of the Folkestone to Cliff End Flood and Erosion Management Strategy. The improved sea defences will be a rock revetment along most of the frontage with a timber groyne and shingle beach in the western end.

We are in the 'Business Case' stage of the project. This involves tasks such as site surveys, environmental assessment, modelling and design, to support the approval for funding.

We are working with specialists from outside the Environment Agency to undertake this work. The largest input is provided by our consultants Halcrow.

Once we receive approval, the scheme moves to the detailed design and planning permission stage before progressing to construction.

## **Ground investigation**

Ground investigation work started on site on 2 September 2009 and was completed in the first week of October. A total of 14 boreholes, 17 trial pits, 12 trenches and 12 penetration tests were completed on site.

Based on the results of the investigation, the frontage has been classified into different 'behaviour zones'. These behaviour zones will be used in the design process. One key outcome of the investigation was confirmation of the position of the buried seawall at key locations. This will improve our accuracy when estimating the quantity of materials needed for construction.

We have installed a number of standpipes along the frontage to measure variations in the water table. These will be in place until at least the end of this year.



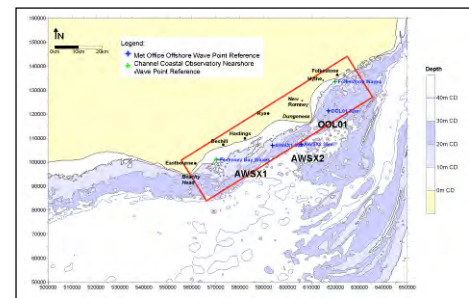
**One of the standpipes**

## **Sediment sampling**

We have undertaken a sediment sampling exercise. This involved collecting sediment samples from the beach and the seabed in order to provide data to calibrate the numerical model. Following a number of bad weather delays, this was undertaken successfully during three days in August.

## ***Numerical modelling***

We are carrying out numerical modelling to inform the design of the scheme. This includes looking at extreme wave and water level conditions close to shore plus sediment transport modelling. The sediment transport modelling will help us to predict how the coastline will behave once the scheme is constructed. This will allow us to refine both the initial scheme design and the subsequent maintenance requirements of the sea defences. The modelling results confirm many of the base assumptions used during the Strategy and can help to refine the interim beach management until the Broomhill and Lydd Ranges schemes are complete.



***Regional wave model***

## ***Habitat survey***

We undertook a habitat survey of the frontage and the surrounding area to help us identify the habitats that could potentially be affected by the proposed scheme. This involved visiting the frontage and carrying out a visual assessment of habitat types. We were able to combine this visit with a survey on the Lydd Ranges during the summer shutdown in order to save money.

## ***Wintering birds survey***

We have started a wintering birds survey at the site. This will involve five monthly visits to the frontage between November and March (inclusive) to record the birds interest on the beach. We are taking advantage of local experience and have commissioned staff at Rye Harbour Nature Reserve to undertake the survey. The information gathered during the survey will help us to complete the environmental impact assessment of the proposed works. It will also help confirm whether the proposed scheme could adversely affect the areas designated for nature conservation including the Dungeness, Romney Marsh and Rye Bay Special Site of Scientific Interest, Dungeness Special Area of Conservation or the Dungeness to Pett Level Special Protection Area

## ***What's next?***

In addition to the wintering birds survey (above), we will be continuing our discussions with Natural England about the predicted impacts of the scheme on the designated sites in the area.

We have now completed the data collection stage of the business case and can start the outline design process in earnest. This will allow us to determine how large the structure will need to be and how we can accommodate the suggestions from the Design Board and Interest Group workshops we held in May 2009 (see Newsletter 1 for details). It is unlikely that we will be able to include all of the suggestions but we will work to achieve the best outcomes possible. Once the design work is completed we will then refine the cost estimate taken from the Folkestone to Cliff End Flood and Erosion Strategy and undertake the economic analysis required to support the justification for the scheme.

## ***How you can comment...***

We will be consulting formally on the scheme in spring 2010, when we will hold an exhibition. In the meantime, if you have any questions or have information that you think will be useful, please contact us.

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