

## Works Completed during the last week.

**Week 176: Monday 6 April to Thursday 9 April 2009**

- In order to deal with the aggressive environment and last the 50 year design life, the new sea defences must be founded on suitable ground. Early site investigation revealed that the ground conditions between the existing structure and toe of the proposed structure for this latest phase of works was not suitable, and as a result 683 stone column piles were installed in this area to strengthen the ground. Due to the nature of the pile material, if the new revetment were to be placed directly on the piles as they are, then over time, the ground beneath will settle, to the detriment of the new defences. To prevent this from happening, prior to placing of the permanent works the piles are loaded and 'forced' to settle over a relatively short period of time. Once the piles have settled to 95% of the anticipated total settlement then the loading is removed and the permanent works placed.
- This week saw the placing of the first section of fill and loading material between the two diaphragm walls placed last week. Graded imported fill material which will form part of the permanent works is placed and compacted between the diaphragm walls. Additional temporary loading of beach material is placed on top of the fill material. This is then covered in rock which acts both as a loading material but also protects the fill from tidal action and the elements.



Graded fill being placed between diaphragm walls.



Beach material being placed on the fill material.

- It is anticipated that in order to achieve the required 95% settlement, the stone column piles must be loaded with the design loading for up to a possible 16 weeks. To determine how much settlement has taken place and how much remains, a number of monitoring stations are installed within the fill material, two having been installed within the fill placed this week. These stations are measured regularly and the results compared with the design calculations. These results will determine how long the piles are ultimately loaded for. Whilst the piles are loaded it is important that the material is constantly monitored and topped up if necessary.



Completed bay.



Settlement monitoring stations.

Further information about the scheme can be viewed at  
[www.wyrebc.gov.uk](http://www.wyrebc.gov.uk)  
[www.cleveleys-seawall.co.uk](http://www.cleveleys-seawall.co.uk)

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