

Editorial

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With increasing pressure on the budgets available to continue to hold existing defence lines, requirements to provide compensatory habitat to address coastal squeeze and a need to create more space for water to reduce flood risk during storm surge events, we can expect to see an increase in the development of 'managed realignment' sites. Although it is now over 20 years since these began to be implemented in the UK, with a growing body of knowledge on their design over that time, there is still much more to understand to develop these schemes appropriately.

The first paper in this issue (Pontee, 2015) is therefore welcome as it delivers some new knowledge on the impacts of managed realignment sites from design of a recently constructed scheme. Past work had identified effects upon water levels elsewhere within an estuary could differ depending upon the location of a site and its breach. However, this new work explains how the breach location in relation to the interior layout of the site itself can also be significant, and illustrates the potential consequences of not appreciating that for a large site. The paper provides compelling evidence for the need to conduct modelling to establish how realignments will affect the hydrodynamic regimes in surrounding areas, without which the consequences for flood risk to other locations could be considerable.

Our second paper (Hamill *et al.*, 2015) touches on the interesting topic of erosion due to marine propeller jets and follows a series of papers in past issues looking at the issue of associated scour (see Townend, 2012). This latest paper presents improvements on efflux velocity computation, position of maximum efflux velocity and rotational velocity. Noting limitations of previous equations, it provides a new equation for design engineers to use.

The final three papers in this issue conclude the sets of papers, received following our call last year, on the subject of dredging. The response to this call was overwhelming and underlined the vital role that dredging has with respect to many maritime projects, and the importance of continuous research to improve efficiencies and productivity further.

Weegenaar *et al.* (2015) present new experiments on sand-bed erosion by moving point jets, and compare results with a formula originally proposed by Vlasblom. This will be useful to those dealing with soil-loosening aspects, with applications to dredging and jet trenching.

Next, van Rhee (2015), addresses the problem of stability of submarine slopes and the failure of slopes by unstable breaching which, as the author notes, is not to be confused with static liquefaction. The paper describes the breaching process in relation to suction dredging and provides an approach to understand better how unstable situations can be predicted.

In the last paper of this issue, Matousek *et al.* (2015) explore the hydraulic transport of coarse materials through pipelines, with a study designed to help improve understanding of the flow processes and energy losses. The conclusions will be useful to practitioners and researchers in this field.

To discuss proposals for other papers or future collections, please contact the editorial coordinator: Craig Schaper (tel: +44 207 665 2240; craig.shaper@ice.org.uk).

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