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**Western Joint Branch**

**Technical Lecture**

# Coastal Erosion and Port Structures

**Speaker:** Dr Jane Smallman CSci CMarSci FIMarEST FICE

**Date:** 16<sup>th</sup> November 2020  
**Time:** Webinar begins at 19:00  
**Venue:** This lecture will be delivered through IMarEST Webinar.

**Summary:**

The design of any port (new or re-developed) provides a number of challenges. The port needs to be effective for the entry and exit, and mooring of vessels. Large ships need sufficient depth, which may require dredging. Many cargo operations, including container ships, cruise liners and LNG carriers, impose tight limits on vessel motions at the berth. The construction of large breakwaters and/or dredging activities, both expensive operations, may have significant environmental impacts. Factors such as these result in the designer balancing several conflicting requirements. These difficulties are compounded by the wide range of meteorological, ocean and geological conditions.

These challenges apply to new ports and existing facilities. In all cases the port design will need to be optimised to minimise cost, whilst considering the requirements for safe operation. The design also needs to be sustainable under climate change, and minimise any adverse impacts on the environment. A range of techniques can be used to evaluate and optimise the design of the port and address these challenges. This webinar will explore some of these techniques, and give examples from port developments across the world.



Image: Image courtesy of HR Wallingford Ltd. [<https://www.hrwallingford.com>]

**Speaker:**

Dr Jane Smallman was the 114th President of the IMarEST and is a former Member of the Board of Trustees. Jane now sits on the Finance & Investment Committee and is a Trustee and Chair of the IMarEST Retirement Benefits Scheme. Jane is also a Non-Executive Director of the Ports of Jersey, and a Trustee of the John Muir Trust. She is an Honorary Visiting Professor at the School of Engineering, University of Edinburgh.

Jane worked at HR Wallingford Ltd from 1984 to 2015, and was Managing Director from 2006 to 2014. As Managing Director she was responsible for a £27m turnover business employing about 270 staff in the areas of civil engineering and environmental hydraulics. HR Wallingford is a world leading company in this field. As Managing Director she had specific responsibility for the development of business in India and the Asia Pacific Region, and therefore has significant experience in International markets. Jane retired from HR Wallingford in January 2015.



**CPD Certificates will be sent out to the email address used to register to the Eventbrite.**

**Next event:** Low Carbon Shipping

**Date:** Mon 07/12/2020    **Time:** Webinar to start at 19:00    **Venue:** Webinar hosted on IMarEST TV

**International HQ:** 1 Birdcage Walk, London SW1H 9JJ • **Tel:** +44 (0) 20 7382 2600

**Asia-Pacific Office:** #03-01 GSM Building, 141 Middle Road, Singapore, 188976 • **Tel:** +65 6472 0096

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# Webinar Joining Instructions

Our Webinars will be hosted through IMarEST TV live-streams, where you will be able to see and listen to the presenter and their slides and ask questions via Slido. The speaker will monitor questions raised during the lecture and answer as many of these as possible during the Q&A session.

As with our face-to-face lectures we will adopt the following format:

1. Introductions and Parish Notices from the WJB Chair and Lecture Sponsor
2. Lecture
3. Q&A
4. Details of Next Lecture and Close

Following the meeting, a recording will then be made available on IMarEST TV (for members) and, if permission is granted, on YouTube as well (for wider audiences).

A recording of last month's lecture is available to watch on [IMarEST TV](#).

**To join the Webinar please sign up to the Eventbrite:**

<https://www.eventbrite.co.uk/e/webinar-challenges-in-the-design-of-ports-and-ways-to-solve-them-tickets-126531151079>