

Improved Coastal Flood Boundary Conditions for the UK mainland and islands

Successful risk-based flood and coastal risk management requires the best available information on coastal flood boundary conditions. Current information on design sea level conditions is not consistent around the country and is becoming out of date.

Working in partnership with the Scottish Environment Protection Agency, this project provided an up-to-date scientifically robust national evidence base and practical guidance on appropriate design sea level and swell wave conditions around the country and how to use them.

It produced:

- Consistent set of design sea levels, uncertainty data and design surge curves around England, Wales and Scotland
- Consistent set of design swell wave conditions around England, Wales and Scotland
- Practical Guidance on applying these datasets

We were able to make use of longer records of observed tide levels from the strategic UKCMF tide gauge network and improved analysis techniques compared to previous studies. In particular, we used the Skew Surge Joint Probability Method (SSJPM) as a more robust method for estimating design sea levels.

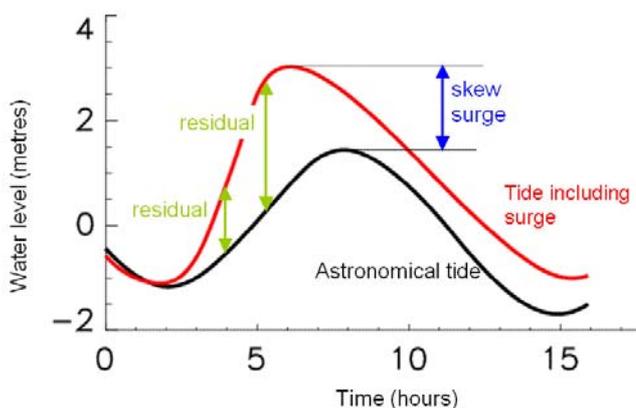


Figure 1: Illustration of the skew surge approach.

Please note that this new information shows present day conditions only. It does not include the effects of future sea level rise which needs to be considered separately.

Where can I access this information?

This summary relates to outputs from R&D project no. **SC060064 'Coastal Flood Boundary Conditions'**.

Report – R&D SC060064/TR3 Design sea levels

Report – R&D SC060064/TR3 Design swell waves

Report – R&D SC060064/TR4 Practical guidance design sea levels

Report – R&D SC060064/TR5 Practical guidance swell waves

Internal Status: Released to all regions

External Status: Publicly available

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This project was commissioned by the Environment Agency's Evidence Directorate, as part of the joint Environment Agency/Defra Flood and Coastal Erosion Risk Management Research and Development Programme.

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