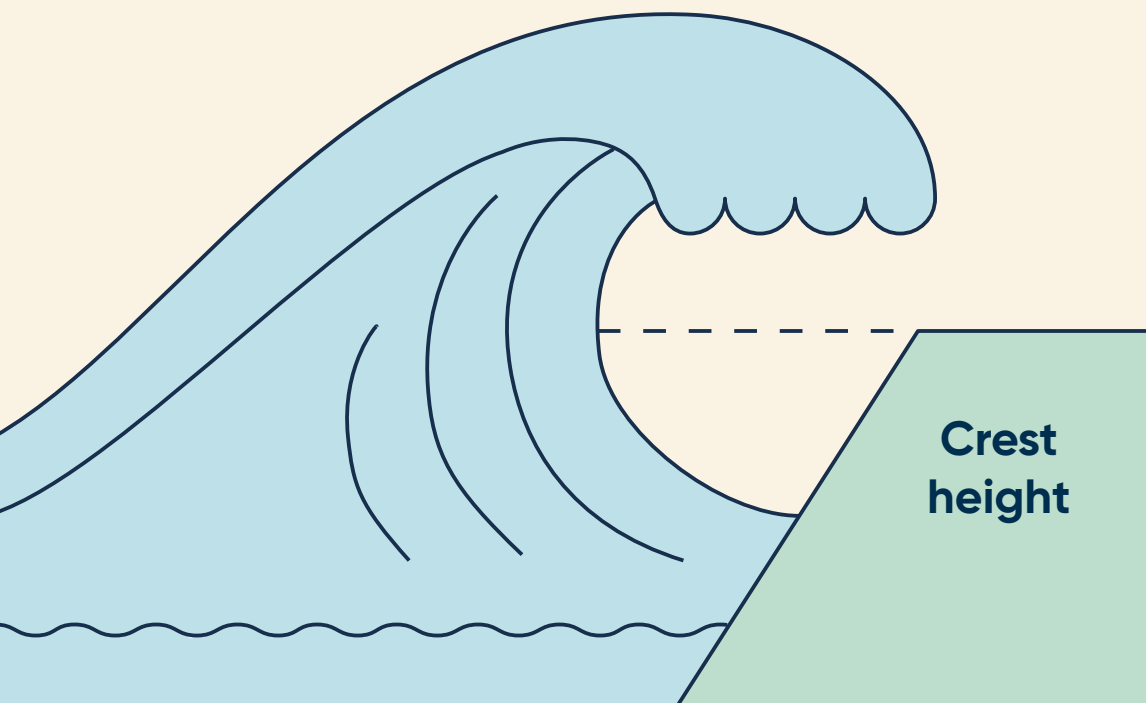


# Wave Overtopping Modelling

Choosing between EurOtop, AMAZON and CFD



## What is wave overtopping?

- Occurs when wave run exceeds crest height
- Major source of UK coastal flooding
- Highly variable and event-driven



### Use for:

- ✓ Standard designs
- ✓ Quick assessments



### EA requirements for design-level assessments

- ✓ EurOtop neural network method
- ✓ Or EA approved alternative: AMAZON

## Modelling options compared

EurOtop	AMAZON	CFD (CoastalFOAM)
<ul style="list-style-type: none"> <li>• Fast</li> <li>• Widely accepted</li> </ul>	<ul style="list-style-type: none"> <li>• Design-level projects</li> <li>• Long-period waves</li> <li>• Complex structures</li> </ul>	<ul style="list-style-type: none"> <li>• High-risk assessments</li> <li>• Recurved / stepped walls</li> <li>• Wind-blown overtopping</li> </ul>
<ul style="list-style-type: none"> <li>• EA approved</li> <li>• Physically based</li> <li>• Ideal middle ground</li> </ul>	<ul style="list-style-type: none"> <li>• EA approved</li> <li>• Physically based</li> <li>• Ideal middle ground</li> </ul>	<ul style="list-style-type: none"> <li>• Most accurate</li> <li>• Detailed physics</li> </ul>
Limitations	More computational time than EurOtop	Highest computational cost

## Types of wave overtopping



## When to use AMAZON

- EurOtop falls outside validity limits
- Geometry is complex or non-standard
- Long-period waves drive overtopping
- EA requires a physically based method
- Planning risk is high

## Haskoning provides:

- EurOtop modelling
- AMAZON modelling
- CFD modelling



Need EA-compliant wave overtopping modelling?  
Haskoning can help.



Get in touch if you'd like to learn more about our coastal modelling services, contact:

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