

Building climate and environmental resilience

In the past decade, the UK has seen a rise in major flood events, disrupting communities and local economies. Climate change is intensifying these risks—especially along our coastlines, where heavier rainfall, rising sea levels, and more frequent storm surges are driving coastal erosion and flooding.



Haskoning supports you every step of the way in developing sustainable policies, plans, and solutions for flooding and coastal change to keep communities safe now and in the future.

Core Capabilities and Services

Haskoning is dedicated to helping the UK region address the challenges of coastal changes and enhancing resilience.

Our approach to providing our clients with the best solutions is founded on:

- i) a good understanding of the client's challenge,
- ii) deep knowledge of the relevant physics, and
- iii) familiarity with numerous modelling and analysis tools.

Together with our clients, we strive for sustainable solutions for coastal issues.

1. Coastal Assessments

Our coastal assessment services involve detailed analysis of coastal processes, including hydrodynamics, morphology, and water quality.

We utilise advanced modelling tools to predict the effects of coastal interventions and natural processes.

Our assessments help clients understand the dynamics of their coastal environments and make informed decisions.

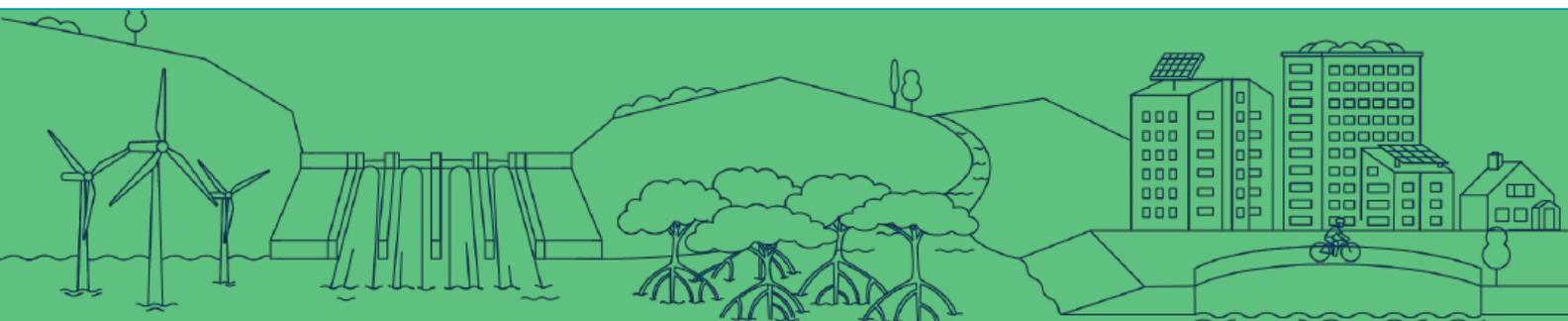
- Hydrodynamics and morphology modelling
- Coastal processes & system analysis
- Coastal erosion & flood modelling
- Flood risk assessment & management
- Monitoring, forecasting and early warning systems
- Environmental impact assessments & studies
- Habitat and species surveys
- Environmental appraisal and assessment

2. Coastal Design

Haskoning excels in designing sustainable coastal infrastructure that balances protection, development, and environmental preservation.

Our designs incorporate nature-based solutions to enhance resilience and reduce environmental impact.

- Scheme design (feasibility through detailed design)
- Coastal resilience
- Nature based solutions
- Managed realignment schemes
- Habitat creation and restoration schemes
- Waterfront development
- Construction support & supervision



Core Capabilities and Services

3. Coastal Management and Planning

Effective coastal management is crucial for maintaining the balance between human activities and natural processes.

We offer comprehensive management strategies that integrate engineering, environmental, and social considerations.

- Shoreline Management Plans and Strategies
- Feasibility Studies
- Beach Management Plans
- Coastal Change Management Plans
- Business cases and economics
- Coastal Change Transitions and Adaptation Planning
- Funding, Policy and R&D support
- Stakeholder and community engagement
- Consent and licencing
- Supporting private landowners
- Managing historic coastal landfills

On the next page, we have highlighted several examples of where we have supplied our coastal services to support our clients in managing the various challenges which they faced. We look forward to also partnering with you to create a safer and more sustainable future.



Key Project Examples



Shoreline Management Plans (SMPs) for England and Wales

Shoreline Management Plans (SMPs) have guided coastal management since the 1990s, developed through local partnerships to consider all interests and functions of the coast and longshore interactions.

Haskoning is a leading contributor, having produced half of the 22 SMPs and co-led the 2021 national Refresh, which included updated guidance and health checks. SMPs offer clear direction for flood and erosion management, helping planners, businesses, landowners, and communities prepare for the future.



National Coastal Erosion Risk Mapping (NCERM2)

The latest National Coastal Erosion Risk Mapping dataset provides an updated, consistent prediction of coastal recession across England, using cutting-edge science and coastal monitoring data.

Haskoning led key aspects including defence failure modelling, climate change impacts, semi-probabilistic forecasting, and coastline digitisation. The project was Highly Commended for Innovation in Climate Resilience at the 2025 Flood & Coast Excellence Awards.



Northey Island Managed Realignment

The project at Northey Island, Blackwater Estuary, Essex, delivered coastal adaptation works in response to rising sea levels. It included constructing new tidal flood embankments, enhancing existing ones, the managed realignment of tidal flood embankments to create intertidal habitats (saltmarsh, mudflat and saline lagoon), and the creation of new freshwater habitats. The scheme has received multiple awards for engineering excellence and sustainability at local, national, and international levels.



Bacton 'Sandscaping' Coastal Protection

The project addressed coastal erosion and storm surge risks along North Norfolk's coastline, protecting the Bacton gas terminal and nearby villages. This "sandscaping" approach placed 1.8 million cubic metres of sand along a 6.5 km stretch, enhancing beach height and width. The Digital Twin monitors and predicts the sandscaping's long-term viability, aiding future defence decisions. The project safeguards infrastructure and communities, boosts local tourism, and engages the public through community involvement and educational initiatives.

Key Project Examples



Southsea Coastal Scheme

The Southsea Coastal Scheme is a £185 million project to reduce flooding and erosion along 4.5 km of coastline. As the UK's largest local authority-led coastal defence initiative, it will protect heritage, improve public spaces, and enhance the environment using seawalls, revetments, raised promenades, embankments, rock armour, and shingle beaches, alongside highway and public realm upgrades. The scheme has won several local and national awards, including the Environment Agency Flood and Coast Excellence Award in 2024 and the ICE South East Best Infrastructure Project for 2024 & 2025.



Golf Course 2030 – Coastal Change Management Plans

Coastal golf courses face growing challenges from climate change while offering social, economic, and environmental value. Haskoning partnered with The R&A through the Golf Course 2030 initiative to create a toolbox supporting sustainable coastal management. It includes a Coastal Change Plan template, a technical solution catalogue, and an ecosystem benefit assessment tool, successfully piloted and now in use across the British Isles.



Lynemouth Coastal Landfill Remediation

Lynemouth Bay was heavily impacted by colliery spoil and mixed waste tipping throughout the 20th century, posing risks to public health and the environment. Haskoning partnered with Northumberland County Council to deliver a pollution prevention solution. Our work involved a feasibility study, ground investigation, surface water and groundwater monitoring, detailed design, consenting, and technical support during and post-construction. The project was completed in 2025 and won the Institution of Civil Engineers' North East Robert Stephenson Award for Best Medium-Scale Project.



Millport Coastal Flood Protection Scheme

Located on Great Cumbrae Island, the site faces significant coastal flood and erosion risks, with potential losses of £70m over 100 years. Haskoning supported a £40m scheme from concept to construction, protecting infrastructure and enhancing the seafront for tourism. Key features include an offshore rock breakwater, stepped revetment, floodwalls, and environmental improvements

About Haskoning

Haskoning is an independent international consultancy that combines engineering, design and consultancy services with software and technology. Based on our mission Enhancing Society Together, we take responsibility for having a positive impact on the world and contributing to the United Nations Sustainable Development Goals.

Our 6,800 employees are spread across offices in more than 25 countries worldwide – working together with clients on future-proof solutions. As of 1981 we are a Royal company, as designated by the Royal House of The Netherlands.

www.haskoning.com

Get in touch

If you'd like to make smarter, more cost-effective climate adaptation decisions – contact our coastal and catchment planning specialists today.

Want to know more about our expertise?



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