

# Coastal Management

A brief overview of hard and soft coastal management techniques

## Soft Engineering



Sand Dunes at Formby Point  
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### Dune Fencing

Built seaward of these natural barriers, fencing inhibits trampling by beach users allowing sand to settle and dune size to increase.



Dune stabilisation at Menie May 2010  
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### Dune Planting

Plants such as Lyme or Marram Grass trap sand, root systems are extensive and mat together, helping to stabilise the dunes.



Image: The Flood Hub

### Dune Thatching

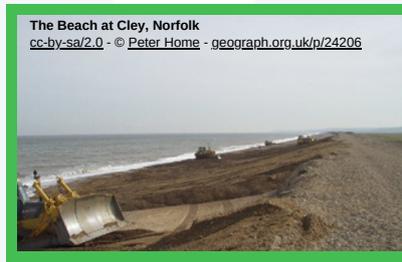
Covering the dune face with bundles of straw, branches in some areas, increases sand accretion and protects dune vegetation.



Ship to shore  
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### Beach Nourishment

Material is dredged from the sea bed and pumped to shore along with large amounts of water to replenish eroded material.



The Beach at Cley, Norfolk  
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### Beach Reprofilling

This involves the reshaping of the beach by moving material from areas of accretion to areas which have eroded.



Medmerry Managed Realignment Scheme  
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### Managed Realignment

Managed realignment is the planned breach or relocation of sea defences to allow previously defended land to flood.

## Hard Engineering



Sea wall - below Highcliffe Castle Golf Club  
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### Sea Walls

Deflect wave energy and stop the waves from high tides and storm surges reaching inland.



Image: The Flood Hub

### Revetments

Angled, stepped structure can be constructed from wood or concrete, to reduce erosion and wave energy.



Dovercourt groynes  
cc-by-sa/2.0 - © Bob Jones - [geograph.org.uk/p/748828](https://www.geograph.org.uk/p/748828)

### Groynes

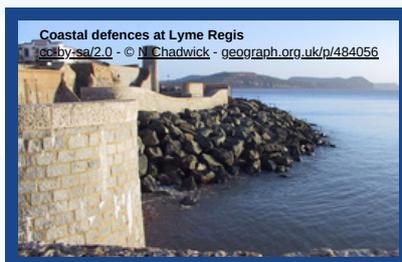
Wood, concrete or rock structure stretching out from the shoreline to the sea. Slow the migration of material along the coastline.



Gabion boxes, South Beach  
cc-by-sa/2.0 - © N Chadwick - [geograph.org.uk/p/3704649](https://www.geograph.org.uk/p/3704649)

### Gabions

Cages filled with rocks slow erosion and reduce wave energy.



Coastal defences at Lyme Regis  
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### Riprap / Rock Armour

Boulders or pre cast concrete blocks placed on the shore line dissipate wave energy, and slow erosion.



North Breakwater at Fishguard Harbour  
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### Breakwaters

Offshore structures usually made from concrete or large boulders which dissipate wave energy before it reaches the shore.