



read

Coastal Landscapes

Soft Engineering

quiz



The Big Picture



Soft Engineering

Soft engineering coastal management involves adapting to a river and learning to live with it. The strategy involves working with nature. It is cheaper, but often less effective than hard engineering strategies.



Beach Nourishment

Benefits

- This approach is relatively cheap.
- It retains the natural appearance of the beach.
- Beaches are a natural defence against erosion.

Costs

- Offshore dredging increases erosion in other areas and affects the marine ecosystem.
- Large storms require beach replenishment.



Reprofiling

Benefits

- A cheap approach to coastal management.
- Simple and reduces the energy of waves.
- Maintains the natural appearance of the beach.

Costs

- Only works when wave energy is low.
- Reprofiling needs to be continuously repeated.



Dune Regeneration

Benefits

- Dune regeneration provides a barrier between land and sea, absorbs wave energy, and cheap stabilisation.
- It maintains a natural-looking coastline.

Costs

- During regeneration, the land must be carefully managed so any new vegetation is protected from trampling.



Managed Retreat

Benefits

- Managed retreat retains the natural balance of the coastal system.
- Eroded material encourages the development of beaches and salt marshes.

Costs

- People lose their livelihood, e.g. farmers.
- Communities and businesses need to be compensated.