

## Briefing Note: Why “Holding the Line” Often Fails on East Lothian’s Coasts

**Key Message:** Beaches and dunes are dynamic systems. Trying to “hold the line” with rock, concrete, or fencing is usually a waste of money and damages the very habitats that protect us. The smarter, cheaper option is to **give the sea space**.

### Case Study 1: Eroding Dunes (Broad Sands / Yellowcraig)

- Problem: Dunes erode in storms; golf greens and farmland feel threatened.
- Typical response: Rock, rubble, fencing, sand planting.
- SMP finding: Hard defences here starve adjacent shores of sand and damage SSSI/SPA habitats.
- Better option: Accept natural erosion/accretion cycles; use light visitor management only.

### Case Study 2: Vanishing Beaches (East Dunbar & Golf Courses)

- Problem: Sand supply cut off by reclamation, golf expansion, and hard defences.
- Typical response: Dumped rubble and revetments to “save” greens.
- SMP finding: These defences were ‘unsightly, unnatural’ and worsened erosion.
- Better option: No active intervention; remove failed rubble; restore natural sediment pathways.

### Why Defending the Line Backfires

- Sediment starvation: Defences block sand drift, shifting erosion elsewhere.
- False security: Encourages building too close to the edge, locking in future costs.
- Ecological loss: Concrete replaces wrack, dunes, and nesting sites.
- Escalating costs: SMP (2002) estimated £2.35m capital works; costs now far higher, with little long-term benefit.

### What Works Instead


- Strategic non-intervention: Monitor, but let dunes and beaches evolve.
- Managed retreat: Move assets inland (greens, paths, farmland margins).
- Restore sediment pathways: Remove failed rubble and barriers.
- Nature-based buffers: Retain kelp and wrack, allow dune vegetation to grow naturally.

### Policy Context

- SMP (2002) warned against ‘holding the line’ where no assets at risk.
- Dynamic Coast (2017, 2021) shows erosion accelerating with sea-level rise (5–6 mm/yr by 2050).
- UK Biodiversity Action Plan lists sand dunes and beaches as priority habitats.

### Recommendation for Decision-Makers

- Stop funding hard defences for farmland, golf, or caravan parks.
- Redirect resources into monitoring, adaptation, and retreat.
- Frame 'do nothing' not as neglect, but as the most cost-effective and ecologically sound policy.

 Bottom line: **You can't control the sea. Every pound spent trying to hold eroding dunes or vanished beaches is wasted. The rational choice: leave that beach alone.**

#### **Aside: Why In-Sea Barriers and Groynes Fail**

Structures like offshore reefs, groynes, and in-sea barriers are often promoted as “soft” alternatives to hard defences, but the science and local experience show otherwise. They interrupt natural longshore drift, starving some stretches of coast while dumping excess sediment elsewhere. Removing kelp and wrack has the same effect: it cuts off natural sand trapping and nutrient cycling. The paradox is that these interventions rarely achieve their goal — instead of building up sand, they usually prevent its natural accumulation. Placing heavy stone directly on sandy beaches can even accelerate scour and loss, a phenomenon already observed on parts of the East Lothian coast. The result is the same: high costs, poor outcomes, and a coastline less resilient than before.