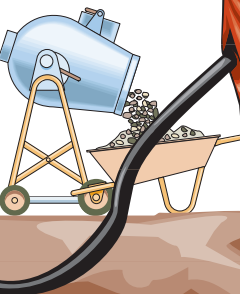


The fight on the beaches

When 70,000 tonnes of crude oil spilled from the *Sea Empress*, polluting the islands and beaches of Pembrokeshire last February, estimates of the time taken for the Welsh coast to return to normal ranged from three to 20 years. Since the disaster, 250 people from the Coast Guard Agency's Marine Pollution Unit, along with scores more from other environmental agencies, have mounted a massive operation to clean up the beaches in time for the summer holidays

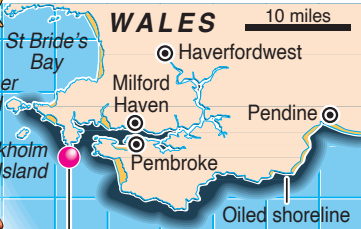
Shingle beach:

Oiled shingle rinsed clean in cement mixers before being returned to beach



Rocks:

High-pressure hoses flush oil towards sea for collection by skimmers



February 15, 1996:
Sea Empress runs aground at St Ann's Head

Cliffs:

Abseilers descend into inaccessible coves to mop up oil with pompoms made of polypropylene strips



Hard sand:

Scraper boards used on compacted sand to scrape oil into trenches



Detergent sprays:

Chemical detergents used to break up oil into droplets, which then sink

Booms: Floating inflatable tubes trap oil on surface and prevent slicks from spreading – oil then collected

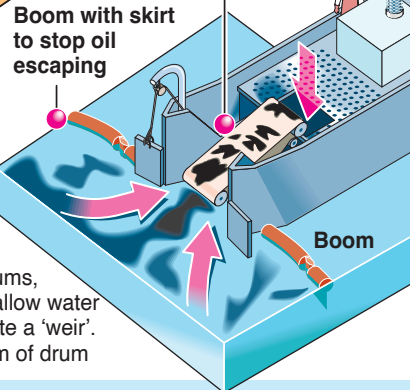
Spotter plane detects slicks and directs spray planes

Dispersants must be sprayed before oil becomes viscous and forms an emulsion resistant to chemical attack. **Marine Pollution Control Unit has 7 Dakota aircraft. Each can spray 20 tonnes of dispersant per hour**

Weir skimmers: Open-topped oil drums, weighted with stones, are placed in shallow water with rims just below the surface to create a 'weir'. Oil which flows over rim drops to bottom of drum

Shoreline skimmer:

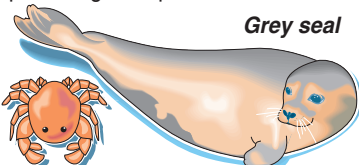
Oil is drawn up an absorbent conveyor belt. Rollers scrape and squeeze oil into collecting tank



The toll on local wildlife

Seabirds found dead	4,979
Oiled birds rescued	2,103
Oiled seals rescued	60-70

Seals: Oil affects eyes, mouth and lungs. Contaminated shellfish could pose long-term problems



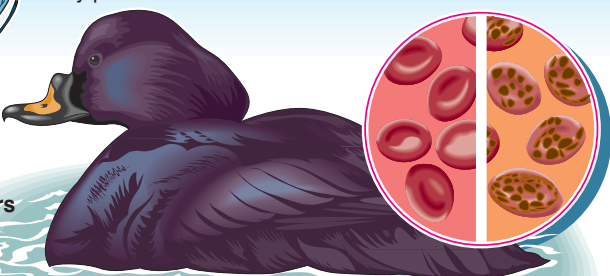
Grey seal



Seabirds: Breast feathers form an interlocking watertight seal. Oiled feathers lose shape and insulating properties

Common scoter

2,920 killed by pollution



Oil degrades seabirds' red blood cells, creating wrinkled, pitted cells that cause a form of anaemia

