

## **COAST: A CHANGING GEOGRAPHY**

This is a one hour special, aimed at KS3 and KS4 Geography students, of selected edited items taken from the 13 part Coast series that transmitted on BBC2 last year. It is divided into four sections and listed below is a breakdown of each section, the items used and details of the programmes that they first appeared in. The programme looks at evidence that proves how the location, shape and size of Britain has changed over the years and looks at coastal processes that ensure Britain is still changing. In addition to the physical geography the programme looks at coastal management, both effective and disastrous and examines some of the issues that affect our coast today, throwing up important questions for the future.

### **1. PAST COASTS**

#### **RED LADY OF PAVILAND.**

Originally shown in Programme 3 of Coast: Bristol to Cardigan Bay

Paviland cave is home to a hugely important archaeological find. In 1823 the Rev William Buckland discovered the ancient remains of a body stained with red ochre and elaborately buried with artefacts at Paviland on the Gower. Buckland misinterpreted the find as that of a young female prostitute who serviced Roman soldiers from a nearby camp. In fact the body turned out to be that of a young man 26,000 years old who was buried with great dignity and ritual. We discover that when the "Red Lady" lived, the surrounding environment was very very different.

#### **BORTH TREES/SUBMERGED FORESTS**

Originally shown in Programme 4 of Coast: Aberystwyth to the Dee

Neil Oliver discovered more evidence of how the coastline has moved with the help of dendochronologist Nigel Nayling in Cardigan Bay. He visits Borth Sands where the remains of an ancient forest are revealed at low tide. Another cluster of ancient tree stumps is located in the mouth of the Dovey Estuary.

#### **SEFTON SANDS; PREHISTORIC FOOTPRINTS**

Originally shown in Programme 5 of Coast: Liverpool to Carlisle

In 1987 Gordon Roberts discovered an unusual trail of footprints on an exposed patch of silt on the Sefton coast. His curiosity aroused, he began to take notes, then pictures, then plaster casts and careful measurements. Soon he found that the prints were thousands of years old and were of tracks of deer, extinct wild cattle, large birds and people - in particular children. Alice Roberts meets Gordon to investigate what these footprints tell us about the people and communities that inhabited our coastline. Along with a team of experts, they uncover life 5,000 years ago to help paint a picture of the people and the local environment to reveal more about the life of our ancestors.

#### **LANDBRIDGE**

Originally shown in Programme 12 of Coast: Hunstanton to Dover

Over the last 700,000 years Britain has been completely transformed by the Ice Age, a series of deep-freeze cold periods in our climate, when sheets of ice up to two and half kilometres thick covered Britain. Water from the world's oceans was locked up in the ice caps and our sea levels were up to 120m lower. As a result Britain was

connected to Europe by marshland known as a 'landbridge'. Geologist Peter Balson discusses the evidence for the landbridge under the bed of the North Sea.

Further evidence is provided by the animal bones dredged up from the North Sea: exotic-sounding animals including hyenas, elephants, hippos and rhinos. Alice Roberts joins Nigel Larkin at Gressenhall Museum in Norfolk where bones of these animals are kept.

## **2. COASTAL PROCESSES**

Deposition

### **MERTHYR MOWER (Sand formation)**

Originally shown in Programme 3 of Coast: Severn Estuary to Aberystwyth

We often think of sand is an ever replenishing or growing substance, but it is actually finite. Sand is washed up cyclically from the seabed onto the shore, and can create great dune systems like the one that once would have stretched from Ogmere by Sea round to Swansea. Archaeologist Mark Horton found out more about what sand is with the help of scientist Nicky Rimmington.

### **BLAKENEY SPIT** (Longshore Drift)

Nicholas Crane explains what Longshore Drift is and we see images of Blakeney Spit.

### **SPURN HEAD SPIT**

Shots of Spurn Head on the Holderness Coast in Humberside with new voice over to explain what a spit is.

### **SLAPTON SANDS**

Shots of Slapton Sands in Devon with new voice over to explain what a barrier beach is.

### **CHESIL BEACH**

Shots of Chesil Beach with new voice over that shows that Chesil Beach is a tombolo as it is connected to the Isle of Portland.

### **EROSION**

The programme has put together a montage of some of the best aerial shots from the Coast series to explain erosion and its effect. Images show bays; headlands; caves; arches; stacks and stumps.

### **3. COASTAL MANAGEMENT**

#### **HALLSANDS, DEVON**

Originally shown in Programme 2 of Coast: Exmouth to Bristol

The once thriving fishing community of Hallsands on the south Devon coast was washed away one night in 1917. It wasn't decades of erosion that led to the end of this village, but just one spectacular storm. It had been withstanding weather of this force for centuries, but in its final decades Hallsands had been robbed of its beach and left defenceless by intensive dredging.

#### **PETER BOGGIS**

Originally shown in Programme 12 of Coast: Hunstanton to Dover

Beneath the cheery veneer of beach huts and holiday makers, Southwold is home to a modern-day King Canute and the story of one man's personal battle with the sea. Unlike the famous misguided king, retired engineer Peter Boggis is taking things rather more into his own hands. Over the past two years, he's almost singlehandedly been building his own sea defences to prevent his and neighbouring homes from falling into the sea. The defences are now 500 metres long and incorporate 100,000 tonnes of soil. But this is not good news for everybody. The cliffs he is protecting actually provide beach replenishment for Southwold beach, whereas Peter feels that the concrete sea defences that have been put in to protect the coast in the town have increased coastal erosion for him.

#### **1953 FLOODS**

Originally shown in Programme 12 of Coast: Hunstanton to Dover

A freak tidal surge in 1953 breached much of the east coast claiming the lives of 307 people, damaging or destroying 24,000 homes and causing around 40,000 householders to be evacuated. Canvey Island in Essex suffered a dreadful loss when the sea burst through the defences, killing 58 people and flooding 11,000 homes. Joan Liddiard and Graham Manser lived through that fateful night and share their memories of the floods with Nick Crane.

Following the 1953 floods, 250 miles of sea wall were repaired or replaced in the hope that a tragedy of this scale would be prevented in the future.

#### **FENS – COASTAL RECLAMATION**

Originally shown in Programme 11 of Coast: Robin Hood's Bay to Hunstanton

No other part of the UK coastline has been as extensively altered by human intervention. In 1216 King John's baggage train was caught out by the tide as it crossed the Wash and his treasure was sucked down into the quicksand. Where they crossed now lies about 10 miles inland. Nick Crane gets to the bottom of this puzzle, and finds out how the draining of the fens inland influenced the shape of our coast.

## **4. COASTAL INDUSTRY**

### **OIL EXTRACTION**

Originally shown in Programme 9 of Coast: Wick to Berwick

Something very surprising is happening underneath the tranquil, golden sands of Cruden Bay in the north east of Scotland. Every day of the year, underneath your feet, 2.5 million gallons of oil are pumped ashore along an unseen umbilical cord. The Forties pipeline was a major engineering feat when it was built by a workforce of over 20,000 people in the 1970s and it is still integral to our oil supply today.

The hunt for North Sea oil in the 1970s was a huge economic gamble for the companies involved: they spent millions of pounds prospecting beneath the seabed. For several years it seemed like their educated "hunch" was not going to pay off. But it did - we hear from the drillers themselves about what happened when they finally struck black gold.

That find transformed not only the City of Aberdeen but the country's whole economy. 100,000 people are employed by the industry and £200 billion has been paid from it to the UK exchequer. But UK oil production is now in decline. We visit the Elgin-Franklin platform to find out what the industry's plans are for the future.

### **SHIPBUILDING/SHIPBREAKING**

Originally shown in Programme 10 of Coast: Berwick to Robin Hood's Bay

Sunderland was once the largest shipbuilding town in the world. The yards produced 1.5 million tonnes of shipping for World War II. Shipbuilding was the lifeblood of Sunderland's prosperity and defined the very identity of the town and its people.

By the 1950s, orders for ships were falling as competitors abroad built faster and cheaper. Using mass-production techniques Japanese and Korean yards turned out ships by their hundreds, while Sunderland was still crafting bespoke but expensive one-offs. And that lack of competitiveness told. During the 60s and 70s Sunderland's shipyards closed one by one.

Recently the area's attention has switched away from shipbuilding towards shipbreaking. Sounds simple enough - use the disused shipbuilding infrastructure to offer a lifeline to the local heavy industry - but just 20 miles south of Sunderland in Hartlepool, people are beginning to discover just how difficult and dangerous shipbreaking can be. The item examines what the impact on the coast could be.

### **TOURISM – THE GIANT'S CAUSEWAY (Northern Ireland)**

Originally shown in Programme 6 of Coast: Northern Ireland.

50 million years ago the Giant's Causeway's hexagonal rocks and columns were created by huge lakes of molten lava cooling slowly and evenly. 300 years ago scientists, arguing over whether they were man-made or natural, began the modern science of geology. The myth that the causeway was built by the giant Finn MacCool was invented by locals to attract visitors in the 18th century.

Today the Giant's Causeway remains Northern Ireland's most important tourist attraction, with over 750,000 visitors each year. It is now an UNESCO World Heritage site. But that enduring popularity is putting enormous pressure on the Causeway site. Northern Ireland is struggling to find a way to maximise the tourist potential without destroying the Causeway's magnificent setting.