

Drawing showing outline of Phase IV works

# Lyme Regis Phase IV

## Environmental Improvements



Lyme Regis sits on an actively eroding stretch of coast and faces challenges from coastal erosion and land slips.

The Phase IV scheme is a multi-million pound project to protect homes, roads and infrastructure from the effects of coastal erosion in Lyme Regis.

The works have secured approximately 390 metres of coastline between Church Cliff and East Cliff for the next 50 years.

Up to 480 homes have been saved from damage or loss of access.

Major utility pipes and cables that would otherwise be destroyed by ground movement have also been protected.

West Dorset District Council led the scheme and appointed contractor Dean and Dyball Civil Engineering to carry out the works.

Major construction work began in early April 2013 and took about two years to complete.

Preliminary works involved ecological surveys, ground investigations and the stripping of vegetation and treatment of Japanese Knotweed.

"The Lyme Regis Phase IV East Cliff scheme is one of the largest and most complex coastal stabilisation

schemes attempted in the UK. Thirty years in planning, the ground engineering, environmental, community and financial challenges of the scheme provide an exemplar that will be followed by the industry for decades to come." *Neil Watson, Environment Agency*

Defra funding of £14.6million was secured in March 2012 when the Environment Agency approved the scheme.

West Dorset District Council has contributed £600,000 to the works and Dorset County Council up to £4.27million.

The district council's land stabilisation and coastal protection programme has offered security for the town and safeguarded against the risk of destructive landsliding.

Phase I was completed in 1995 and won Civic Trust and British Construction Industry awards. It also was a key feature of the council's beacon award for quality of the built environment.

The district council carried out emergency works to address some urgent instability issues in certain areas of the town in 2003/04.

Phase II began in spring 2005 and was completed in 2007 to protect the area from Cobb Gate to the harbour from landslides and coastal erosion.



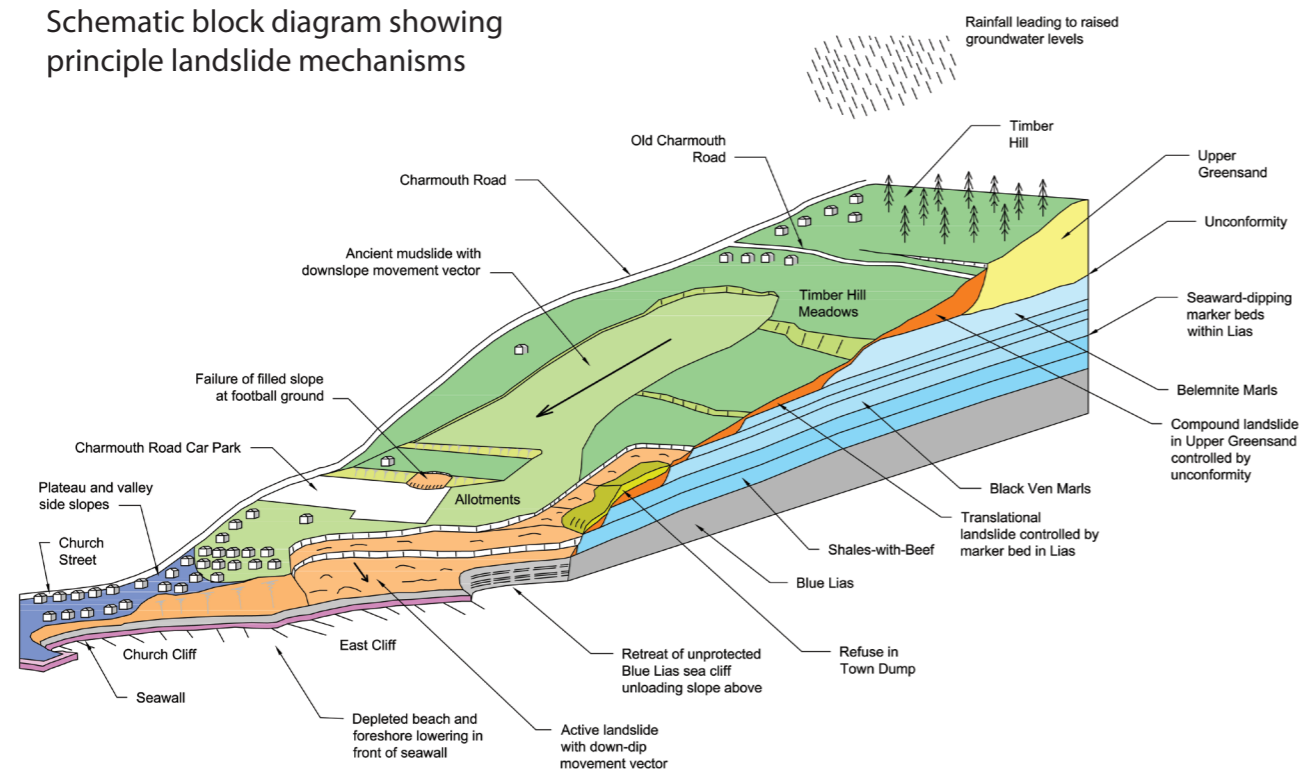


## World Heritage Site

Much of the Phase IV work is within the Dorset and East Devon Coast World Heritage Site as well as a Site of Special Scientific Interest and a Special Area of Conservation. The scheme has been designed to keep environmental impacts to a minimum. Invasive plant species that were growing on the coastal slopes have been removed and natural vegetation and habitat restored.

## Why a scheme was needed

Schematic block diagram showing principle landslide mechanisms



This diagram shows the forces at work on the eastern side of the town.

Over the past 10 years there has been high rainfall and parts of the landslide systems to the east of the town have advanced rapidly.

Studies showed that if nothing was done the seawall would fail and over the next 50 years, housing, Charmouth Road Car Park, the football ground, sections of Charmouth Road and important underground pipes and cables would be lost.

## Phase IV works

Phase IV was the last major part of the coast protection and coastal slope stabilisation work under Lyme Regis Environmental Improvements Scheme. It was devised in the early 1990s by West Dorset District Council working in cooperation with the town council and local groups.

The overall scheme provides long-term coast protection through a major programme of engineering works. Earlier phases, funded mainly by Defra, saw the construction of sea walls and promenades. Beaches were also replenished and slope stabilisation works carried out. Sewage treatment was provided in partnership with South West Water. Cobb Road was stabilised and improved by working with Dorset County Council.

## Phase IV works

The full scheme for the east of the town cost approximately £19million. The works have focussed on three main areas:

- The foreshore - immediately in front of the existing sea wall
- Lower coastal slopes immediately east of housing on East Cliff and Ferndown Road
- Middle slopes including Charmouth Road car park, the football club and allotments

The scheme aims to strike a balance between environmental and ecological effects, achieving the engineering objectives and funding.

- 390 tonnes of rock armour was used during the construction works
- 6,800 cubic metres of concrete was used to construct the new sea wall
- 34km of soil nails, 3.5km of ground anchors and 2.3km of bored piles were used to stabilise the cliff

