



Royal Holloway Geography for Schools Lecture Series

Fairlight Cove: Managing the coastline in the context of natural processes and human activity

Dr Peter French

A-Level Syllabus:

- **AQA Coasts as natural systems, Coastal management, Case study**
- **OCR Human activity and coastal change, Case study**

Coastlines have long-fascinated people who have been drawn to them as areas of to live, to work and for recreation. Coastlines are, however, dynamic and constantly responding to a range of processes acting upon them. Such change often produces conflict between this sense of dynamic equilibrium and the fixed nature of the coastline demanded by human activities.

The 'health' of a coastline depends on a range of things, such as energy levels, coastal geology and the quantity of sediment. This latter point is important because depending on how much sediment a beach has, determines how much wave energy reaches the land. Sediment can reach the beach from 3 main areas, from off shore, along shore (drift), or through input from terrestrial sources (erosion). It can also be lost offshore and along shore. The balance of gains and losses is critical because greater gains than losses would mean the coast accretes and can resist waves for longer. Conversely, greater losses than inputs mean the beach becomes net erosional, and may start to disappear.

Erosion is important, however. It is not a bad thing, but is a process vital for the health of the beach. The problem comes where that erosion comes into conflict with development. A decision has to be made whether to let it continue, in which case property could be lost; or stop it, protecting property but upsetting the sediment budget. This decision puts in line potential changes to long term coastal functioning.

Eroding coasts pose a risk to development, and understanding how this risk is perceived by users and residents is important because it drives their motivations for staying at, or leaving, the coast. In reality, therefore, coastal management has become a complex process. It is not just the need to understand physical processes and how they work with morphology and geology; but it is also understanding behaviour - why people make the decisions to live in at risk areas, such as the coast.

For more information about Geography at Royal Holloway visit: www.royalholloway.ac.uk/geography

Follow us: @RHULGeography     YouTube