

## Causes of river flooding

### Causes of flooding

- **A steep-sided channel** - a river channel surrounded by steep slopes causes fast surface run-off.
- A drainage basin, consisting of mainly **impermeable rock** - this will mean that water cannot percolate through the rock layer, and so will run faster over the surface.
- A **drainage basin in an urban** area - these consist largely of impermeable concrete, which encourages overland flow. Drains and sewers take water quickly and directly to the river channel.
- **A lack of vegetation or woodland** - trees and plants intercept precipitation (ie they catch or drink water).
- **Very wet soil** – soil that is already saturated allows water to build up on the surface
- **Very dry soil** – this prevents water from sinking in

1. Explain using a diagram one cause of flooding.

### Causes of flooding at Boscastle 16th August 2004

- One month's rain fell in two hours
  - Boscastle is surrounded by steep sided valleys
  - Two rivers join at Boscastle
  - Bridges
  - Trees and vegetation had been cleared from the valley
  - Small drainage basin
2. Explain one cause of flooding at Boscastle.

### Short term responses to Boscastle flood

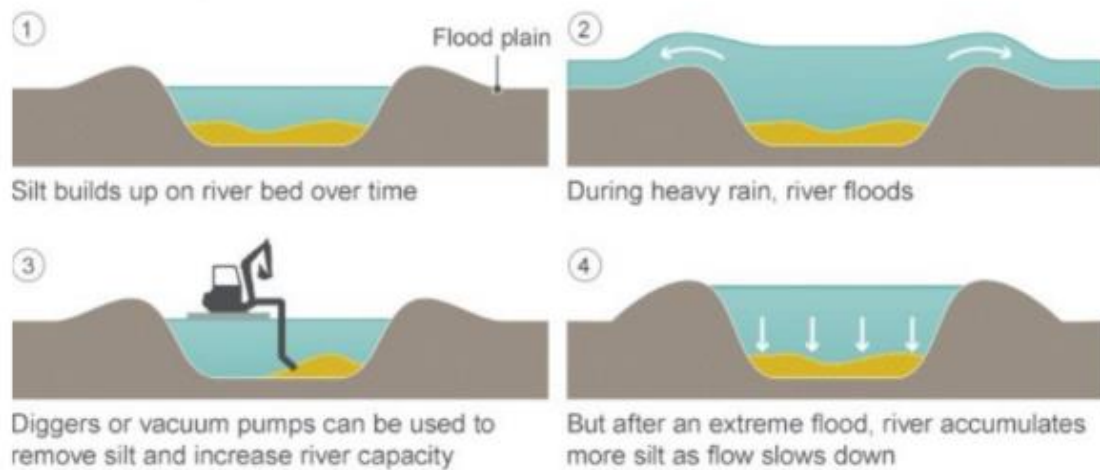
- Debris and silt was cleared from buildings (1850 tonnes in total)
- Rescue helicopters sent in and saved 150 people.
- People worked together to clear the destruction.
- People were put up in temporary accommodation.
- Sand bags put down.
- People donated money to the red- cross appeal.

### Long term responses

- The relief channel for the river Jordan was made wider.
- River banks and flood walls were raised.
- Height of the bridge raised.
- Damaged roads and bridges restored.

3. What is the difference between short term and long term responses to Boscastle floods?

### How dredging works



### Stakeholder views on dredging.

- Dredging will make the rivers 90% more effective at flushing out the water.
- Dredging programmes will create more jobs

### Stakeholder views on dredging.

- Rivers should be allowed to flood naturally. Nature needs to come before economics and people.
- People object to paying more tax due to the cost of dredging programmes.
- It is a waste of money because climate change could create more issues anyway.
- Dredging has a negative impact on habitats and fish are severely disturbed.

4. Dredging is controversial. Why do people disagree about dredging?