

# Teaching Guidance notes

The aim of this activity is to get the children thinking about the good and bad impacts on rivers and streams. Below is a list of the good and bad impacts for each applicant:

## Farmer Bill:

### Good:

- Removal of weir, which allows animals to move around more easily and for water to flow more naturally.

### Bad:

- Straightening of the river reduces available habitats for river wildlife and can create flooding.
- Keeping and using pesticides and fertilisers near the river can result in them washing into the river, causing high nutrient loads entering the watercourse.
- Leaving no space between crops and the riverbed can lead to erosion and fertilisers washing into the river.
- The constant use of land for crops can accelerate surface water runoff and soil erosion as well as the loss of fertile soil.

## Farmer Abdul:

### Good:

- Extending the woodland and adding a wildflower garden creates an important buffer zone, reducing the amount of run-off that directly enters the river, trees can stabilise riverbanks and reduce bank erosion.
- Removing weir or adding fish passage to allow aquatic life to migrate.
- Providing livestock with an alternative drinking source helps to prevent animals entering and defecating in the watercourse.

### Bad:

- Building and construction debris from the holiday cottage development could result in toxic substances and litter entering the watercourse.
- Building a car park near a river, which is an impermeable surface, could increase the risk of flooding and result in car related pollutants entering the watercourse.
- Farm may not be very productive which could be a 'waste' of farmland.

## Farmer Jane:

### Good:

- Keeping sheep in farm buildings for part of the year will reduce the amount of time livestock are near the river.

### Bad:

- Cutting down trees and bushes can increase local flooding and destroy important habitats.
- Livestock pollution is caused through animals drinking and walking through parts of rivers.
- Burning wood can contribute to smog, acid rain and other air pollution problems.
- Removing the footpath could cause damage to the riverbanks.