

In recent years, the United Kingdom has experienced serious flooding in many parts of the country. There are several steps we can take to prevent or reduce flooding, or at least to lessen its impact.

These steps can be classified into two groups: hard engineering and soft engineering. Hard engineering is the construction or placement of physical barriers like embankments, walls, levees, dams, groynes and large rock boulders. These can prevent the rising water from flooding onto the surrounding areas. But, these constructions are expensive and take time to implement.

They can also be damaging to the natural environment, and sometimes they fail - like here in New Orleans, during Hurricane Katrina in 2005. Soft engineering works with the environment, using techniques that allow floodwater to interact with the land in a way that reduces pressure on the built environment and the local population.

This can include the creation of flood plains on land upstream from urban areas, to allow flooding to occur naturally with minimum damage to property. On the shoreline, natural sand dunes can be encouraged to form on beaches. These absorb floodwater and the force of the waves.

Soft engineering strategies may cost less and be less destructive to the natural environment, but they often cannot offer the same level of protection from flooding that hard engineering techniques can. It's usually a combination of hard and soft engineering strategies that is most effective in protecting humans, property and the environment from flooding.

However, even with several responses in place, flooding can occur, sometimes causing serious destruction and threat to human life.