

## What is Soft Engineering?

Soft Engineering is a term used to describe measures taken to prevent the impact of a hazard (in this case flooding) by means of non-physical or non-built structures.

Technique	Weaknesses	Example
<p><b>River Restoration</b></p> <p>Removing any form of hard engineering and returning the river to its natural state by (for example) reintroducing meanders.</p> 	<p>Restoration that involves the reintroduction of meanders and rolling river banks can prevent the development of riverside homes or other uses and industries that may require the water the river provides.</p>	<p><b>River Cole, Swindon</b></p>
<p><b>Reforestation</b></p> <p>'Greening' the banks and slipways next to the river in order to slow the flow of water after a heavy rain episode.</p> 	<p>On its own, reforestation is unlikely to have a deep impact on flood waters, especially if they are large in volume and frequency. Very large numbers of trees, as well as removing concrete and other hard surfaces from the vicinity of the river may be needed.</p>	<p><b>River Avon, East Chisenbury</b></p>
<p><b>Water Meadows</b></p> <p>Designating an undeveloped greenspace near to the river as a 'holding point' (a temporary reservoir) for flood waters.</p> 	<p>Many towns will only be able to release a small amount of land (which may be expensive to leave idle) for this purpose, restricting the size and intensity of flood for which it can offer protection.</p>	<p><b>River Severn, Worcester</b></p>
<p><b>Land Use Zoning</b></p> <p>Placing important public amenities (such as hospitals) away from potential flood sites and making it more difficult to gain permission to build on high risk flood plains.</p> 	<p>While this approach can be very useful for new developments along a new stretch of a river, for towns that have seen their development build up over hundreds of years it is difficult to replace well established land use patterns.</p>	<p><b>River Uck, Uckfield</b></p>
<p><b>Warning Systems</b></p> <p>Using up to date meteorological data and land use information to predict where and when a flood will occur, allowing people to prepare their homes.</p> 	<p>The Environment Agency aims to provide flood warnings (in eligible areas) at least two hours before an event. These warnings rely on people having the means and willingness to act upon a warning.</p>	<p><b>Met Office and Environment Agency Nationwide</b></p>
<p><b>Insurance Guarantees</b></p> <p>Assurances from governments that insurance companies will be able to pay out to flood victims without significant rises in insurance premiums.</p> 	<p>The UK Government has been consulting on the Flood Reinsurance Scheme ('Flood Re') which aims to provide insurance for domestic properties 'without placing unsustainable costs on wider policyholders or the taxpayer.' Currently, insurance is only available to some UK residents and only then if they can prove they have flood proofed their homes to a high standard.</p>	