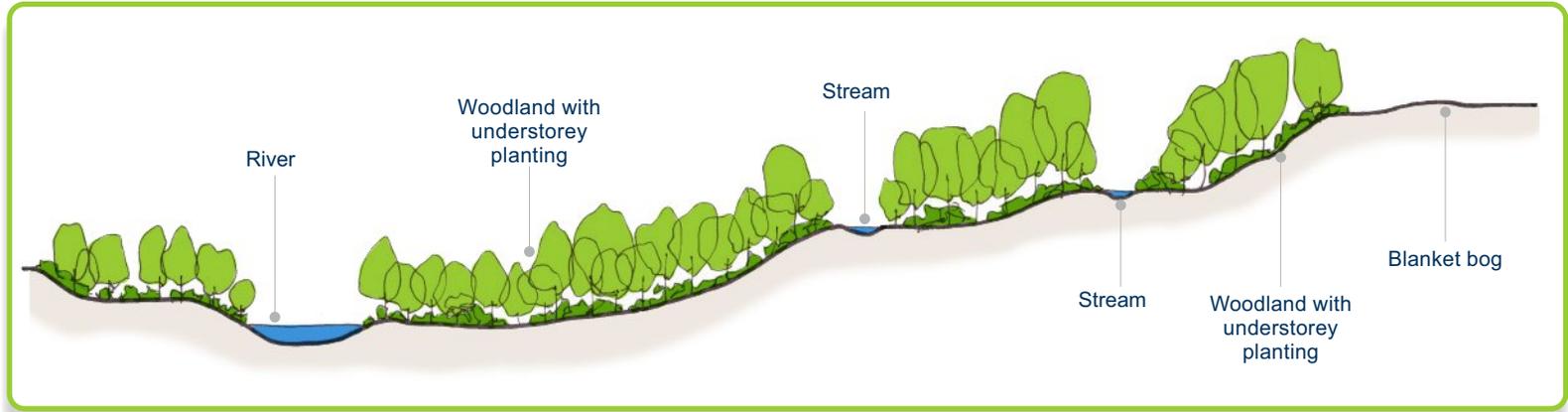


# Slow The Flow: You Can! - general principles of urban SuDS (Suustainable Drainage Systems)

If our valley was

**Natural**

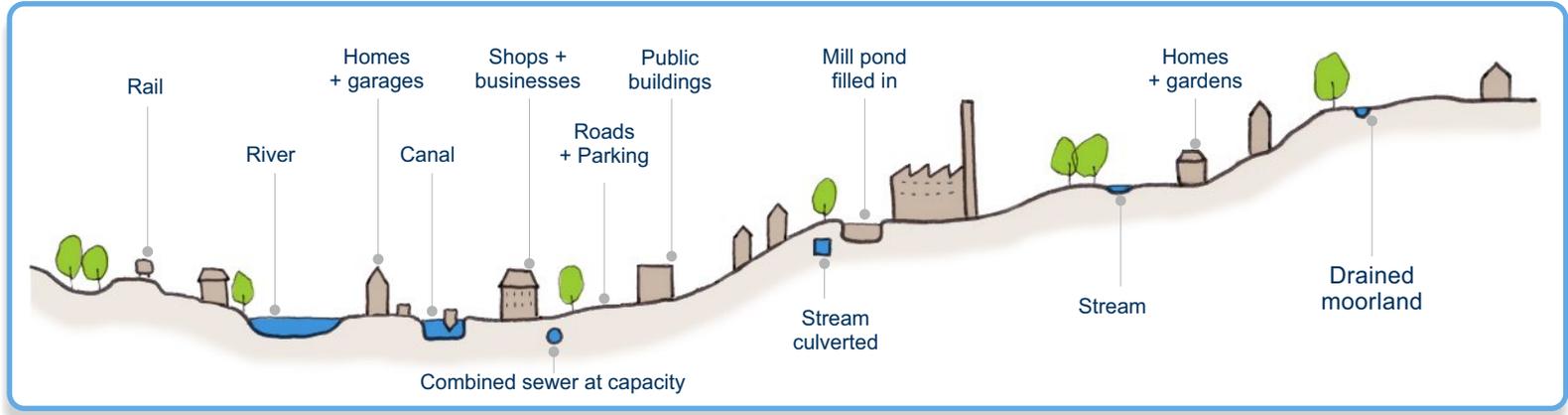
it would maintain a balance of water circulation through the processes of rainfall, evaporation, leaf interception and **absorption by plants**, surface runoff, and **infiltration to free draining ground**.



Due to human

**Development**

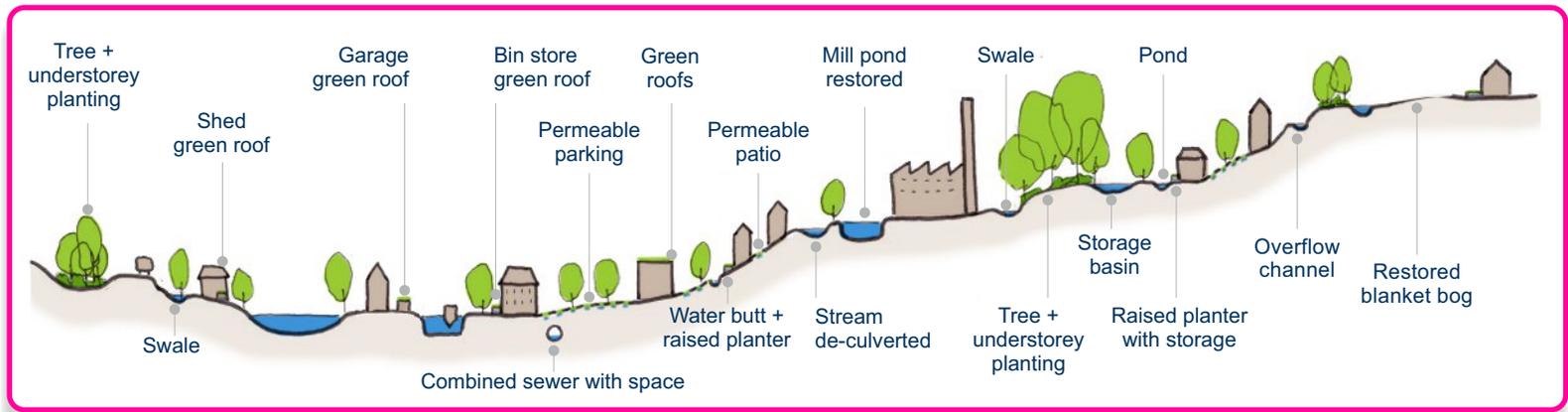
replacing plants and soils with **hard surfaces** such as roofs, roads, patios and car parking, **rainfall runs off much more quickly**, causing surface water and combined sewer flooding, and higher river levels.



Using SuDS to

**Slow The Flow**

in our urban areas, as well as upstream, we can **mimic natural water management**. Many small changes can have a big combined effect on **reducing flood water quantity and quality**.



# Slow The Flow: You Can! - general principles of urban SuDS (Sustainable Drainage Systems)

Think about the space available and where rain water goes - **where are the puddles?**  
How does water behave in a storm?

**'Soft' areas** (planting, grass, earth):

Can you create surface depressions (swales/basins) that will temporarily **store water**, and then soak away?

Consider plants that take up moisture, but don't mind dry spells.

**Plant trees!** They prevent rain reaching the ground, use water as they grow, and break apart the ground with their roots.

**'Hard' areas** (paving, roofs, walls):

Can you **break up the surface** to allow infiltration? (e.g. replace tarmac with gravel + paved tyre tracks)

Could you construct **water storage planters** on top of hard areas?

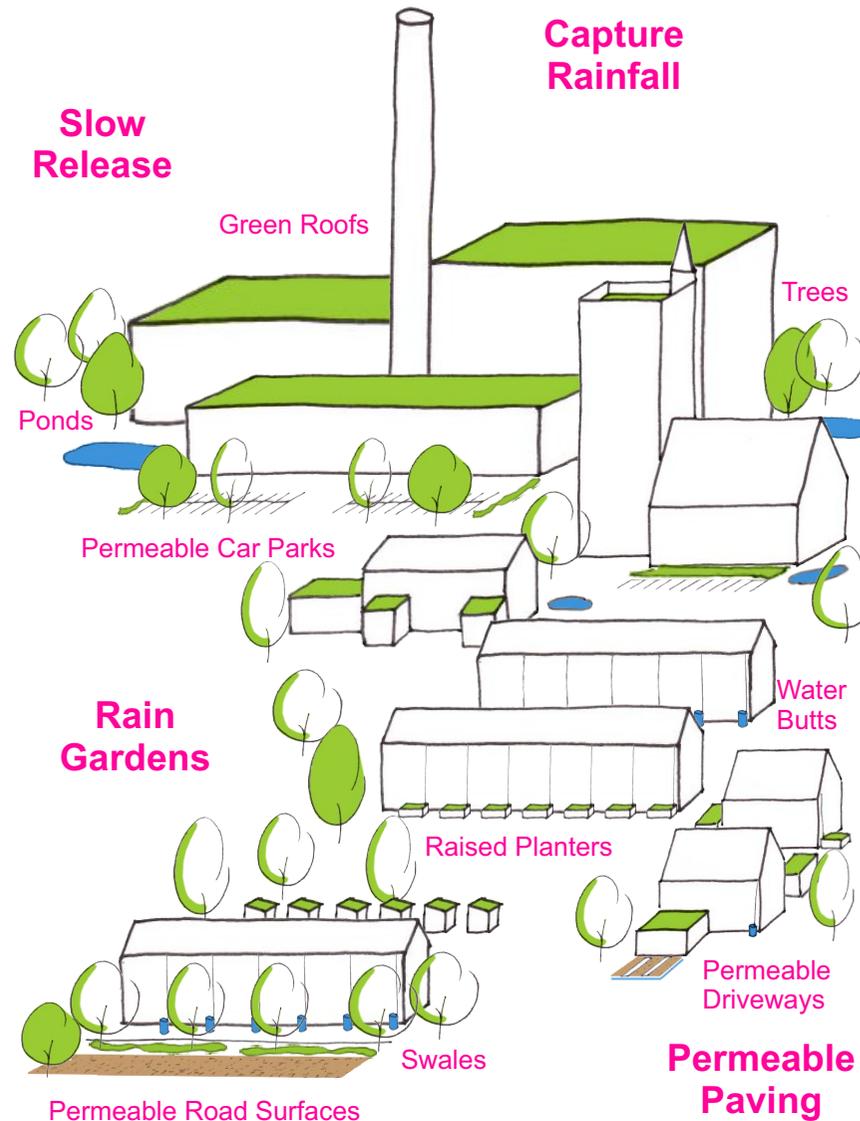
**Divert drainpipes**, so that instead of going straight into the sewer, the water is temporarily stored / filtered and cleaned, through Slow the Flow methods (known as SuDS elements - see central box)

DIY is OK if changes are small-scale and simple, but get professional advice if you intend to:

- increase the volume at any outfall point
- work very close to a permanent river or stream ( $\approx 10\text{m}$ )
- make change to a listed building or in a conservation area
- create a green roof
- re-use grey water in buildings
- do anything that could affect your neighbours

NB. Remember we have a varied geology, i.e. water runs through sand, but if you are working with clay, it may puddle rather than soak in.

## Ways to Slow The Flow



The Calder Valley is great at holistic thinking. SuDS can also benefit **water quality, wildlife, health and attractiveness.**

Slow The Flow combines well with other **Green Infrastructure**: local resources include *Incredible Edible*, *TOUCH* (biodiversity for wildlife), & *Treesponsibility*

## Quick Wins

Sign up to receive *Environment Agency Flood Warnings* (even if you're not in a flood zone)

Make *water butts* into 'mini leaky dams' in winter! Leave the tap open slightly.

**Be a Water Hoarder!**

Help to prevent combined sewer overflows by altering your actions during flood events to discharge less water into drains (as you might in drought - e.g. shower rather than bath, wait to use the washing machine...) *Yorkshire Water* provide *tips* and *free water saving packs*.

We hope you are able to be proactive and start right away!

However, **you may not have resources to do anything right now**. If so, next time you repair or refurbish property, please consider SuDS.