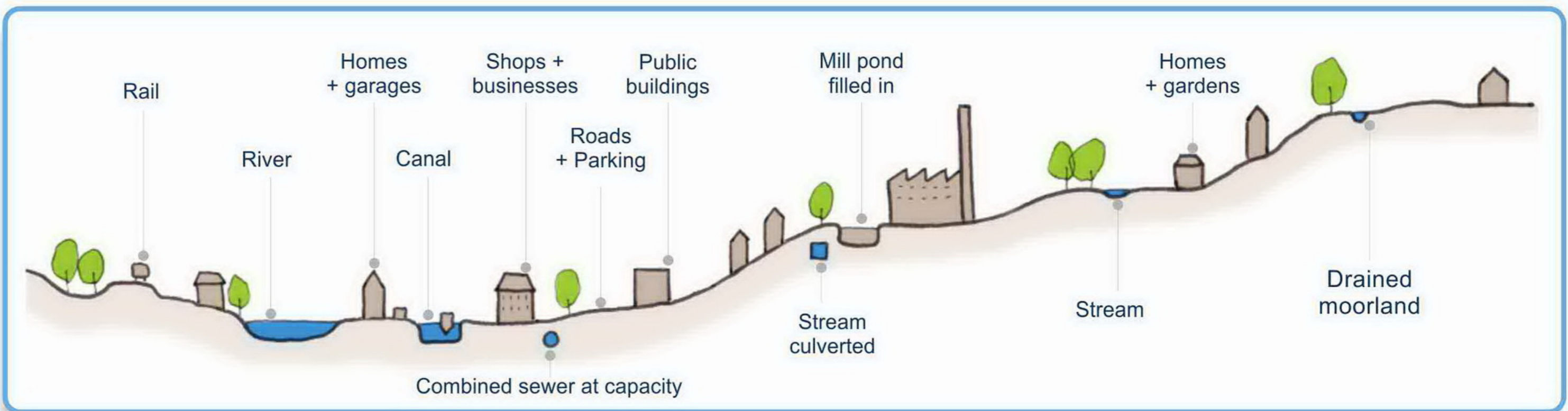If our valley was **Natural** it would maintain a balance of water circulation through the processes of rainfall, evaporation, leaf interception and **absorption by plants**, surface runoff, and **infiltration to free draining ground.**

River | Woodland with understorey planting | Stream | Stream | Woodland with understorey planting | Blanket bog
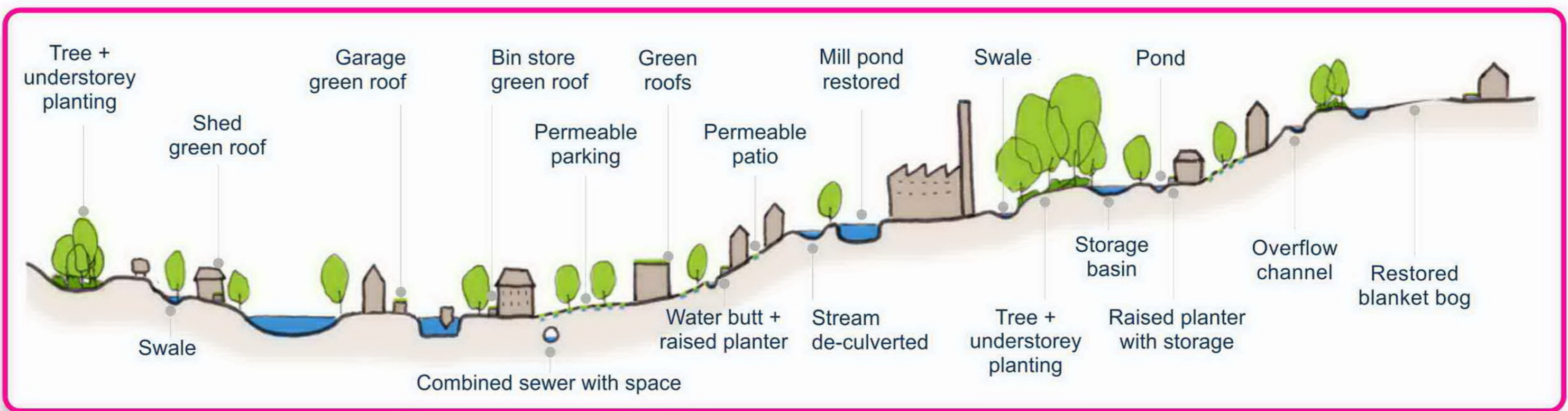
Due to human **Development** replacing plants and soils with **hard surfaces** such as roofs, roads, patios and car parking, **rainfall runs off much more quickly**, causing surface water and combined sewer flooding, and higher river levels.

Rail | River | Canal | Homes + garages | Shops + businesses | Roads + Parking | Public buildings | Mill pond filled in | Stream culverted | Combined sewer at capacity | Homes + gardens | Stream | Drained moorland

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.**

Tree + understorey planting | Shed green roof | Garage green roof | Bin store green roof | Permeable parking | Green roofs | Permeable patio | Mill pond restored | Swale | Pond | Swale | Combined sewer with space | Water butt + raised planter | Stream de-culverted | Tree + understorey planting | Storage basin | Raised planter with storage | Overflow channel | Restored blanket bog

www.slowtheflow.net

SLOW THE FLOW CALDERDALE

Over Christmas and Boxing Day 2015, Pennine areas in the North of England had over 60mm of rain fall in 24 hours and some locations had over 100 mm. During this time, the Calder Valley suffered the most significant flooding event in recent times. 2,781 homes and 4,416 businesses were flooded all along the Calder Valley causing unparalleled and significant damage. Recorded flooding events in the Calder Valley go back as far as 1615. **Slow The Flow Calderdale** was set up to look at why and how the Calder Valley floods and to look at natural flood prevention measures and solutions to slow the volume of water entering into the River Calder. We are a group of dedicated engineers, scientists, landscape experts, and those working in land management. Working with the National Trust, Environment Agency, Calderdale Council and Moors for the Future, using volunteers and Nathan - our working horse we have created over 100 woody debris dams which are subject to ongoing monitoring.

SLOW THE FLOW CALDERDALE

What do we do ?
We carry out river surveys to support modelling by universities and the Environment Agency.
We communicate through workshops.
We disseminate and champion Natural Flood Management and Sustainable Urban Drainage.
We implement 'Natural Flood Management' schemes with willing landowners (For example, Hardcastle Crags Pilot Project working with the National Trust).

south pennines **local nature** partnership | MOORS FOR THE FUTURE PARTNERSHIP | Environment Agency | National Trust | Calderdale Council | NATURA 2000 | Life