



# NATURE-BASED SUSTAINABLE URBAN DRAINAGE SOLUTIONS

## Rain Water Management Solutions for Schools

### Rain Gardens

#### Rain Garden Planter



#### Rain Gardens:

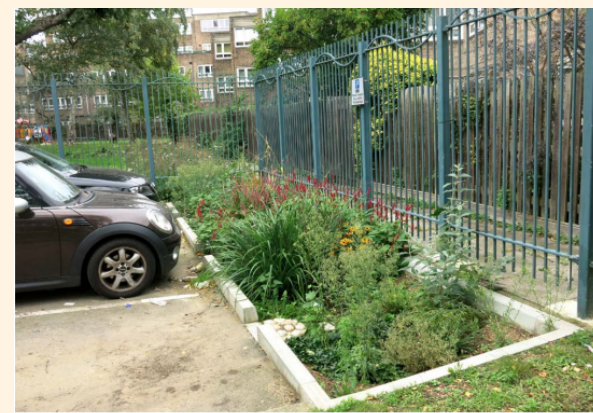
- 1) Collect and absorb rainwater
- 2) Filter out pollutants and clean stormwater
- 3) Support pollinators and biodiversity

#### Rain Garden- Bioswale



Bioswales are often placed alongside roads, curbs, or cycle lanes

### Carpark Solutions



Raised curbs in carparks must have small gaps at low points regularly, to allow water to enter the rain garden.

### Permeable Pavement



### Mini Ponds

Hold water. Improve biodiversity. Cool down hot days

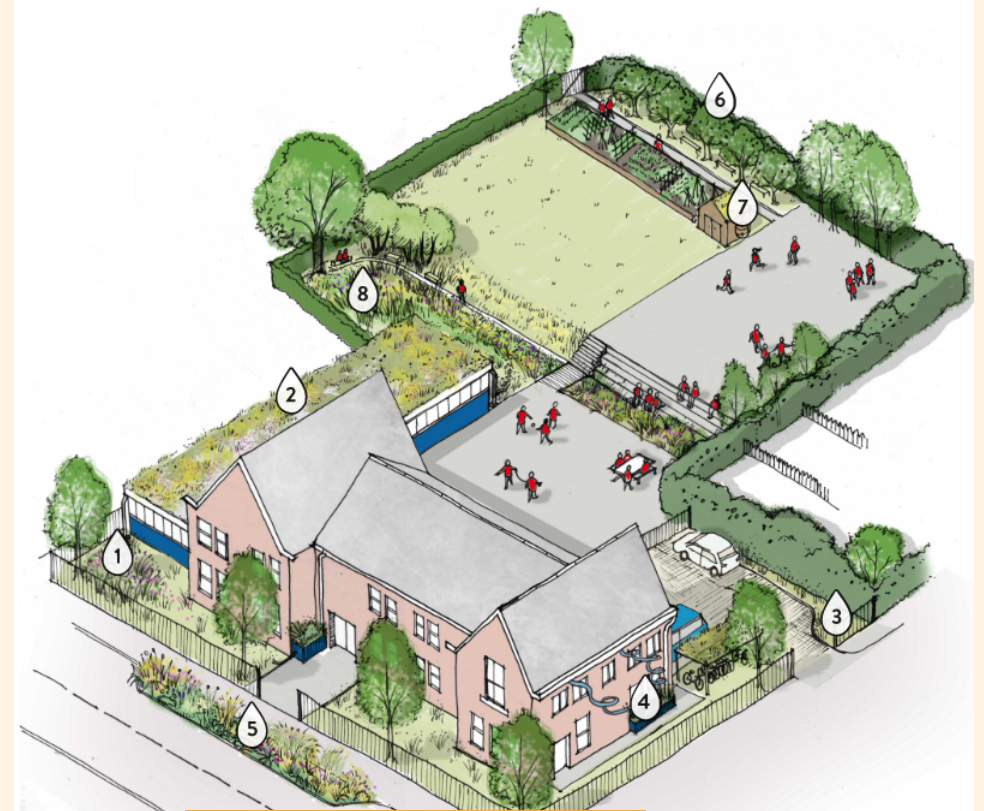


### Green Roofs Help Soak Up Water



### Challenge: Design your Dream 'Spongy' School for Rainfall Resilience! What Nature-Based Solutions Suit Your School? Why? Where? How?

- 1) Create a map of your school's puddle and rainfall risk areas
- 2) Draw examples of where solutions could be placed.
- 3) Model a rain garden and create a timeline, what would you do first?



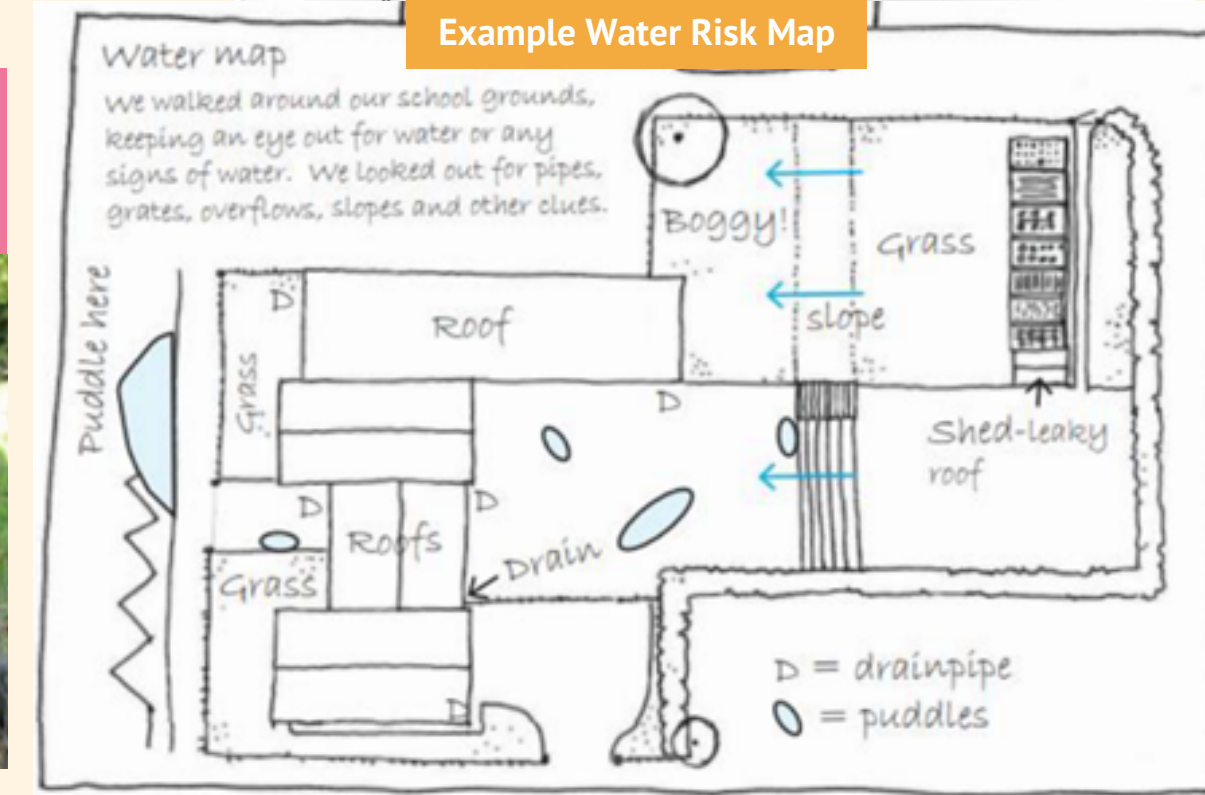
Example Water Risk Map

Breaking up paved spaces gives more space for rainwater absorption

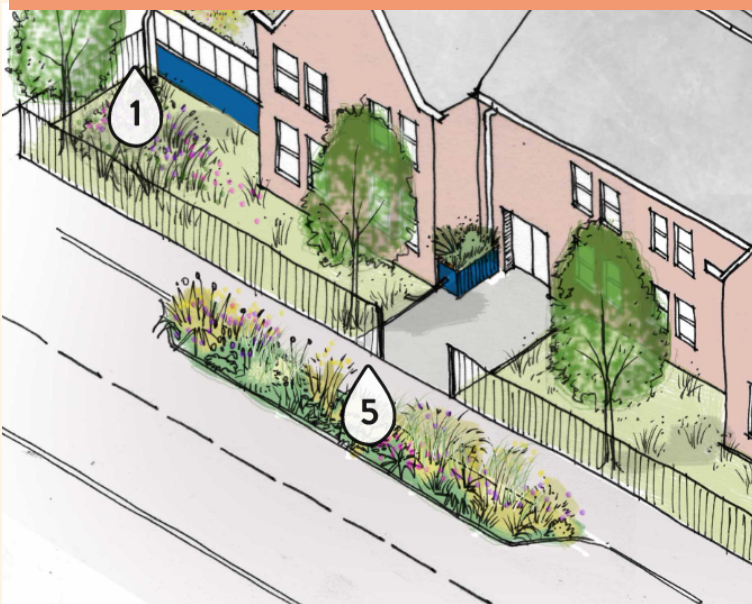


### Rain Barrels

Collect and store rainwater from the roof. Water re-use.

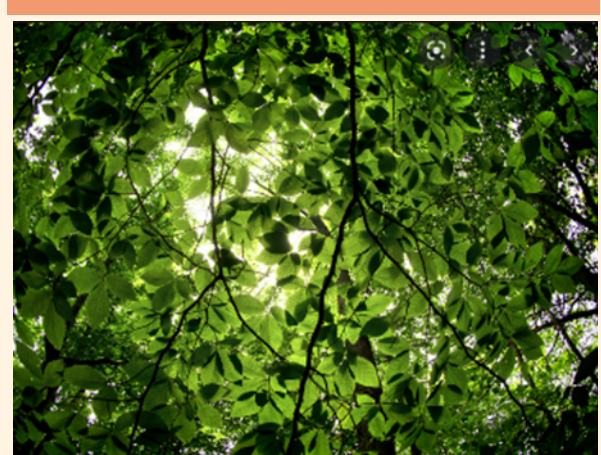


### Other City Nature-Based Solutions



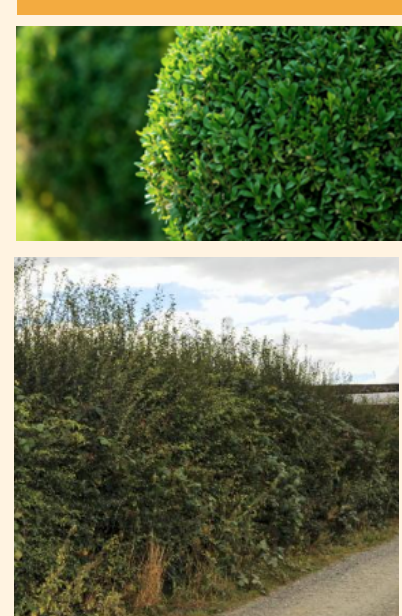
### Canopy Cover

Slows Rain Drop Fall Rate = more time for the soil to absorb rainwater



### Native Hedgerow

Soaks and slows rain drop fall rate



### Green roof bin store



### Helpful Native Plants and Trees



Willow Tree



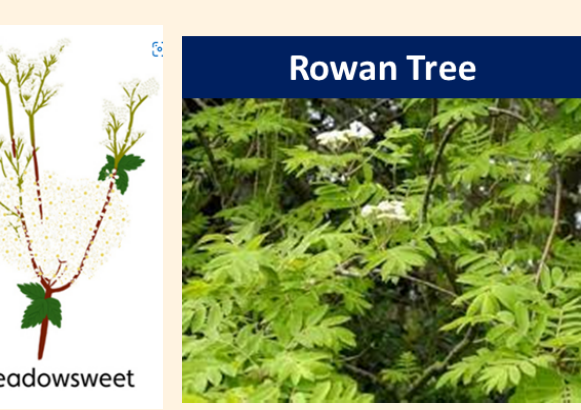
Birch Tree



Oak Tree



Yellow Flag Iris



Purple Loosestrife



Meadowsweet



Rowan Tree



Holly Tree

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