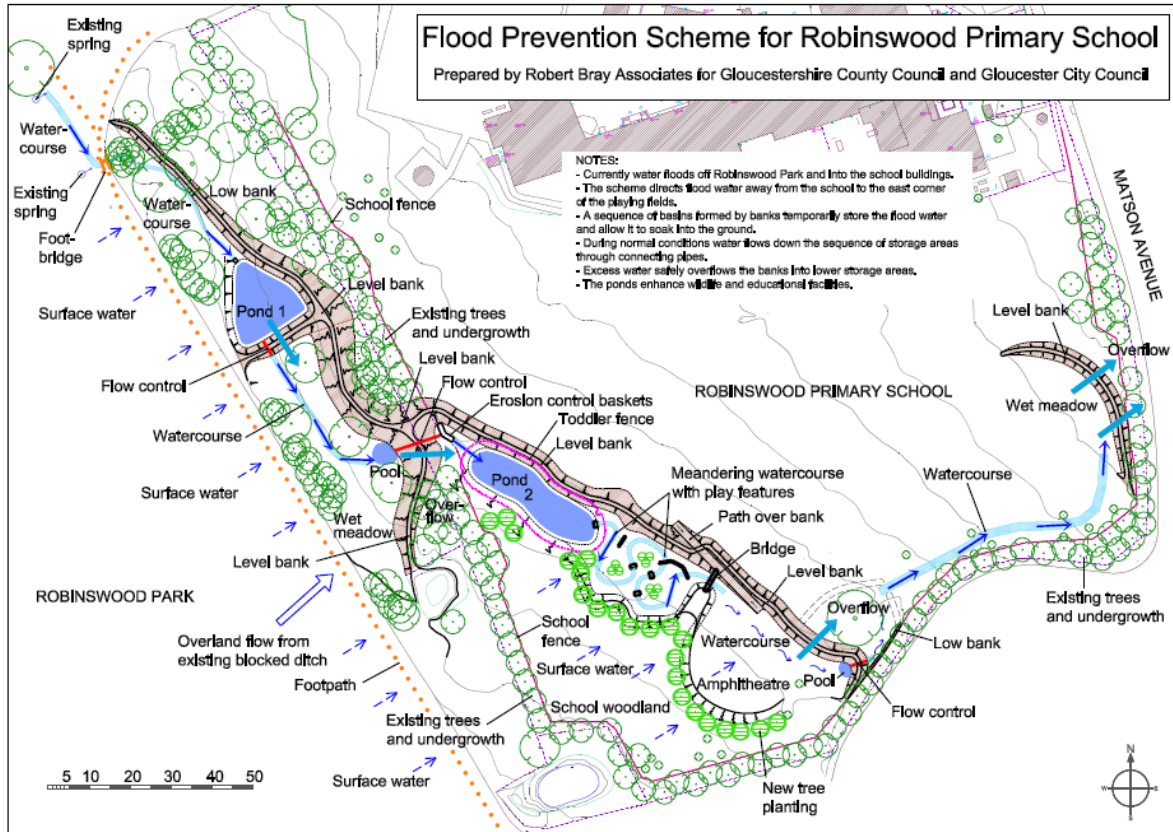


Case study – Sustainable Drainage System (SUDS)

Location:

Robinswood Hill Primary School, Gloucestershire.



Lead Organisations:

Gloucestershire County Council, Robinswood Primary School and SUDS consultants Robert Bray Associates.

Main issues raised and highlighted:

Children's safety
Flood prevention

Project aims:

- Provide flood protection for the school
- Provide a valuable learning resource – teaching children about the value of biodiversity and to enjoy playing in and around water.

Description of project

'SUDS is an environmentally friendly way to manage rainfall. It uses landscape features to manage surface water'.

The SUD system at Robinswood was designed to prevent flooding of the school and to control water from a nearby spring in Matson Park. Since its installation it has successfully stopped flood water coming into the building and has redirected unpredictable flows into a manageable low flow route.

The system has been designed for easy maintenance and will be managed by the school. The section of the system that runs from the park is managed by Gloucestershire County Council.

Water from the spring in Matson Park is directed along a new stream into a new wildlife pond and this manages the onward flow into the school grounds. The bund and space within the park controls the first rush of water from Robinswood Hill with a flow route around the school campus. The school wildlife pond provides wildlife education and an understanding of water.

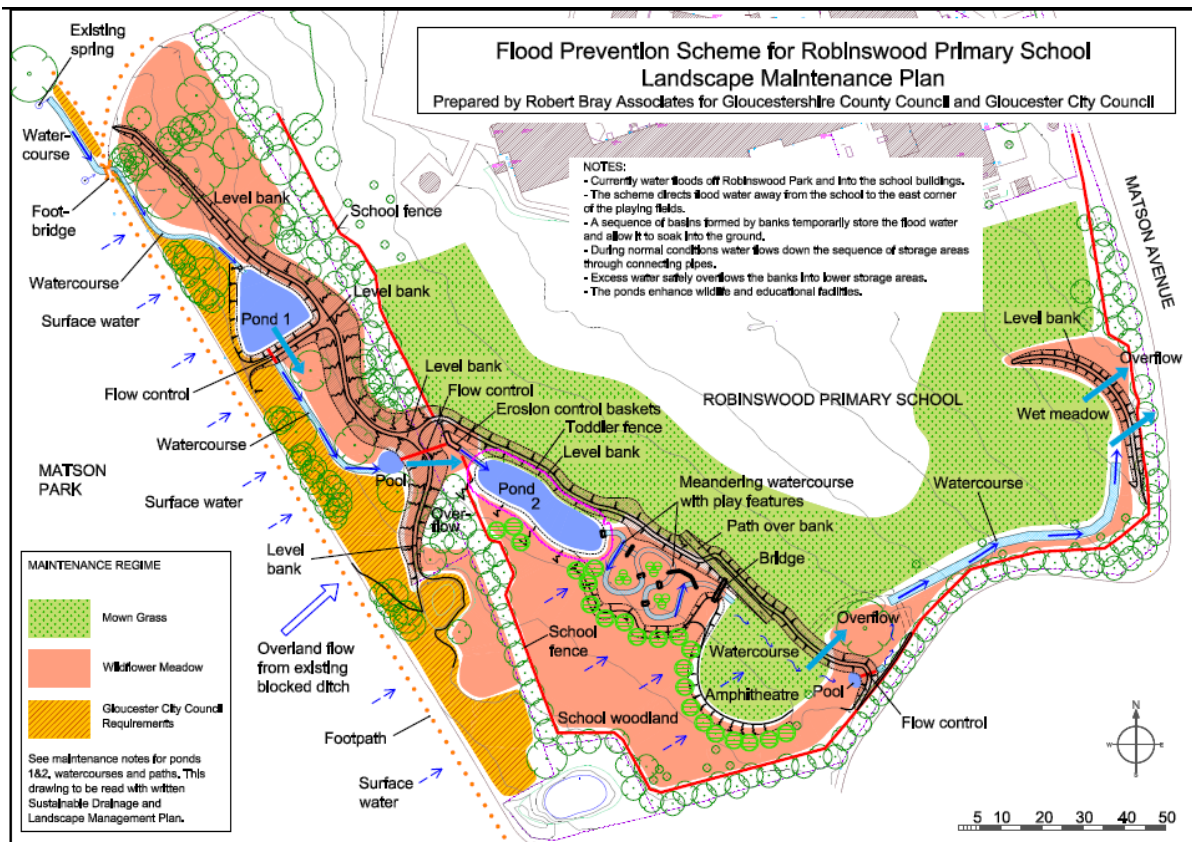
The water flows into a green space at the top of the school playing field. This is retained by a low bank, which acts as a dam during heavy rain to provide further storage and to protect the school.

The SUD system is broken down into:

- The Wildlife pond – The water supply for the pond will flow from Matson Park. A low ridge at the top of a gentle sloping bank acts as a dam during heavy rain and provides a dry area. The slope provides safe access down into the wetland area. The marginal planting provides visual interest and encourages wildlife.
- Floodplain and swale maze – This is located after the pond and is 'wild meadow' habitat with a wetland channel through it. Small bridges have been placed across the channel to provide easy access and to create a natural play area.
- 'The arena' – The arena is an open space for an 'outdoor classroom' or play opportunity.
- The 'forest school' – a boundary space which runs along the fence and into the park. This is a supportive learning area planted with trees, such as hazel, which can be coppiced and the sticks used in school projects.



Long term management of project



Outputs/outcomes/benefits

- Biodiversity – increasing the variety of wildlife by creating and enhancing valuable habitats
- Encouraging Natural Play – A multi-functional open space for physical activities and learning
- Outdoor Education – creating the opportunities to learn about wildlife and water safety
- Visual amenity – an attractive and useable feature
- Cost effective water management and flood prevention
- Preservation of Green Infrastructure
- The use of public open space and school grounds to control run off and prevent flooding
- Multifunctional space; flood protection, biodiversity, amenity, education and play

Resources

Robert Bray Associates, <http://www.sustainabledrainage.co.uk/>.