

SuDS in Schools

St Katherines School



Sustainable Drainage Schemes (SuDS) reduce flood risk using a natural approach to water management within the urban environment, combining green spaces and sustainable water management.

School estates provide an ideal opportunity for delivering SuDS, helping to protect the school infrastructure and deliver wider benefits to both pupils and community.

KCC Flood and Water management work closely with the schools to develop the design for the SuDS ensuring that features are fully integrated into the school environment.

Using green assets to manage water within the urban setting can create multifunctional spaces, providing many benefits such as:

- ◆ Reduced flood risk
- ◆ Recreational areas
- ◆ Increased biodiversity
- ◆ Educational spaces
- ◆ Increased resilience to climate change
- ◆ Improved liveability for the community

The Flood and Water Management team at Kent County Council have worked with St Katherines School to deliver a large SuDS project.

In June 2019, St Katherines School in Snodland, experienced extensive flooding causing damage to 18 classrooms, toilets, corridors and the library. The damage sustained resulted in the closure of the school for 2 days and the relocation of part of the school to the neighboring Holmesdale school whilst months of refurbishment were undertaken.



Overview of the project layout

Working closely with the school a scheme was developed which incorporates flood risk reduction with play and educational opportunities. The scheme intercepts the surface water run-off from the playing field, playground and car park. The designed features take the surface water and discharge it to the ground slowly.

The project has been part funded by the Department of Education's (DfE) decarbonization programme.

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A swale has been created which intercepts the playing field run-off and feeds the surface water to a large infiltration basin, where water can be stored whilst it soaks into the ground. The basin area, which will remain dry in all but large rainfall events, has been planted with a mixture of native trees to develop an outdoor classroom space.



Swale with bridge



Infiltration Basin

The spoil from the excavation has been used to create mounds for seating and play; bridges and boulders create crossing points along the swale. The area has been planted with trees and wildflowers to support local pollinators.

Pupils at the school were engaged in a planting day to sow wildflower seed, plant wildflower plug plants and decorate stones for the drainage channels.



Example of a rain garden . © Nigel Dunnett

Along the edge of the playground and the car park two rain gardens have been created, these will allow surface water to soak into the ground, preventing the drainage system from becoming overwhelmed during heavy rain.

The rain gardens have been planted with a wide selection of native species, including herbs which will support biodiversity and can be used by the school. *(Rain garden construction incomplete at time of publication)*