

# Retrofitting SuDS

George V Park



**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.**

Existing highways drainage and sewer networks are increasingly being exceeded during periods of heavy rainfall. Exceedance of a combined sewer network, can lead to flooding containing sewage, therefore posing a risk of pollution to watercourses and coastlines.

Retrofitting SuDS can create greater attenuation and slow the flow of water, before water enters the existing drainage system.

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

- ◆ Reduced flood risk
- ◆ Increased biodiversity
- ◆ Recreational areas
- ◆ Improved water quality
- ◆ Increased resilience to climate change
- ◆ Improved groundwater recharge
- ◆ Improved liveability for the community
- ◆ Enhanced educational areas

All Saints Avenue, Margate experienced flooding following heavy rainfall due to the combined sewer network reaching capacity. The rainfall that falls around George V Park and surrounding roads is collected by the same sewer that passes through All Saints Avenue.

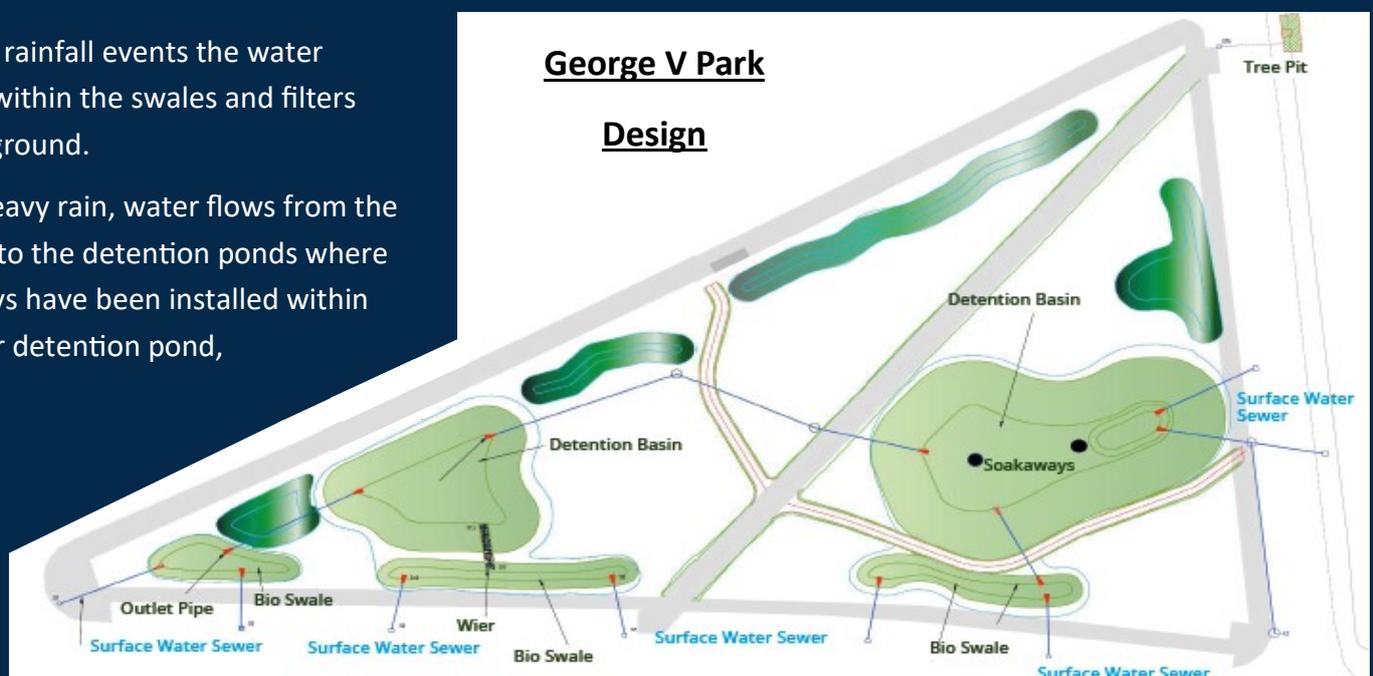
To reduce flood risk, improve amenity, increase biodiversity, reduce street temperatures and increase resilience to the effects of climate change a scheme in George V Park and two of the surrounding roads was completed.



In George V Park surface water is diverted from the surrounding roads into the park through swales into attenuation basins to allow water to naturally filter into the chalk below.

For small rainfall events the water remains within the swales and filters into the ground.

During heavy rain, water flows from the swales into the detention ponds where soakaways have been installed within the larger detention pond, to help that wa



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Construction of tree pits

Completed tree pits

Over 30 trees have been planted along two roads surrounding George V Park, 11 of which are installed in tree pits which collect surface water to infiltrate slowly into the ground.

The urban trees can reduce air temperature, provide shade and manage surface water flood risk whilst creating attractive spaces for residents.

The completed SuDS project in George V Park manages surface water flooding while reducing the impacts of climate change and created an attractive space with multiple uses.



The grass lined swales will help to improve the water quality by removing pollutants putting clean water back into the environment.

The plants within the detention ponds have been chosen to provide essential food and habitat for local wildlife.



Attenuation basin

The project was carried out in partnership the Isle of Thanet Tree and Woodland Initiative who planted numerous trees in the park, and was part funded by the Interreg Europe BEGIN programme and the EU funded Cool Towns Project.



BEGIN (Blue Green Infrastructure through Social Innovation) proposes an approach to climate resilience for cities that mimics nature's potential to deal with flooding.



The EU funded Cool Towns Project to mitigate the impact of climate change in urban areas by increasing awareness and use of green and blue infrastructure, to reduce heat stress through urban design.

