

Dales Brow Green Sustainable Drainage Systems

City of Trees



Main swale and check dam flow control feature, showing wetland planting and boulders placed to remove energy from circulating flows.

Date carried out

November 2019 – August 2020

Location

Dales Brow and Folly Lane

Background

The site was identified by City of Trees in 2017 as part of a partnership project with the Environment Agency, looking to identify opportunities to improve Water Framework Directive outcomes in the Folly/ Salteye catchment.

This informal greenspace is adjacent to the junction of Dales Brow and Folly Lane.

Detailed proposals were developed over the next two years with close involvement of Salford City Council, to utilise informal green space at Dales Brow in Salford, which is vulnerable to flooding.

The idea is to demonstrate how natural solutions have multiple benefits, by addressing issues not only of surface water flooding, but also pollution from road and potentially, from intermittent sewer discharges too.

Project

Between March and August 2020, the space was transformed with the installation of two swales (a sunken, marshy ditch), the creation of a new 64sqm wetland area, a 40m long beech hedge, as well as

Partners

City of Trees, Salford City Council, Environment Agency, United Utilities, and University of Salford



planting of a wildflower meadow, wetland plants, and 15 new standard trees.

The system is designed to intercept rainwater that runs off the Dales Brow and Folly Lane road surfaces, diverting it away from highways drainage and combined sewer into the swales.

In heavy rainfall events the rainwater travels along the swales and into a temporary wetland area, providing emergency storage. Water moving around the swale system is slowed by series of checkdams, cleaned by biofiltration, before being allowed to return to the Deans Brook via a pipe connection.

The swales and the wetland area now contain a variety of different vegetation types able to cope with wet conditions. Microbes in the soil and vegetation will trap and help to break down pollutants into harmless compounds.





Lower swale with check dam and boulder flow-control arrangement

The project has been designed to deliver a number of benefits. It not only helps to reduce surface water flooding at a local level, it also eases pressure on the sewer infrastructure – as well as providing costs savings with respect to water treatment, and reduces the likelihood of pollution incidents in watercourses from overflowing sewers.

Alongside these nature-based interventions, other measures include a new footpath, tree planting, and the creation of low maintenance 'biodiverse' planting areas which greatly enhance the site for the benefit of both residents and wildlife.

Outcomes

- Education sessions with local children focus on sustainable drainage systems and water
- Enhanced biodiversity of site through introduction of varied habitats, trees and wildflowers
- Improved amenity of previously low quality space
- Reduced incidence/extent of standing water on highway
- Reduced volumes of water entering sewer system – potentially reduced incidence of spills from local sewer overflow into Deans brook
- Improved quality of water entering Deans brook
- Useable data on changes to volume and quality of water passing through the scheme

Learning

Establishing a collaborative partnership was the key to the success of this project. Occasional surface water flooding has been a known issue at this site for some years, but it was by bringing partners together that the team were able to deliver a scheme that not only tackles the surface water, but also improves quality of runoff entering the local brook, enhances the biodiversity of an otherwise species poor site, and provides an amenity asset for residents in an area with relatively low levels of public open space, ensuring their support for the project.

Next Steps

- Education sessions with children
- Install interpretation panel
- Monitoring of volumes and quality of water moving
- through the scheme
- Monitoring of biodiversity benefits

Derek Antrobus, Lead Member for Planning and Sustainable Development said:

"Climate change poses the biggest threat to our future and so we must act now to increase our resilience to further extreme weather events. This project shows how we can manage our water sustainably whilst improving green spaces for local people – which is especially crucial at this time".

For more information 🖂 info@naturalcourse.co.uk













This project has been made possible with the support of EU Life Integrated Project Funding. Project number LIFE14 IPE/UK/027