

## Somerset SPONGE2020



### SuDS used

- *Bioretention system – Rain Garden*

### Benefits

- *Community engagement tools and techniques were used to create a raingarden in partnership with the residents. The community helped design plant the scheme and are involved in ongoing plant maintenance. Community resilience was a fundamental benefit*
- *Planting with seating designed to provide a species rich habitat for the residents to enjoy in their communal outdoor area, which was primarily mown grass in an urban area of Taunton. The mental wellbeing of all individuals is greatly enhanced by access to such blue/green spaces*

- *Diverts water from the roof of a block of sheltered housing flats helping relieve stress on a combined sewage zone prone to flooding*

## 1. Location

Churchill Way, Taunton TA1 3QU

## 2. Description

This was one of the Westcountry Rivers Trust numerous SuDS projects in the Taunton Pilot area as part of SPONGE2020 EU part funded project with ur Somerset County Council partners. This particular scheme is located in a sheltered housing area in Churchill Way is owned and managed by Somerset West and Taunton Council. They were instrumental in helping deliver the local engagement.

Local community meetings were held which dealt with the issues the flood issues in Taunton and the role SuDS could have in urban environments like theirs. Those discussions helped gain buy in and understand what the community itself would like to see installed in their location. This process is detailed further in 5. Below.

This scheme focussed on a very visual design, where the water can be seen flowing into the garden via channels into a bowl-shaped raingarden which consisted of a species rich micro habitat. With steppingstone logs, and a recycled plastic wood park bench, the aim was for a space that the senior, less mobile residents to enjoy nature in comfort on their doorsteps.

Having the community with us throughout was very important. As well as them being involved in design workshops, planting was turned into a fun 'celebration day'. Through the day, we had residents, local shopkeepers and even passers by helping with planting and enjoying tea and cake supplied by residents themselves.

## 3. Main SuDS components used

The main component is a rain garden fed directly via open channels from the community housing roof.

## 4. How it works

For this scheme, the rain goes from the downpipe along a concrete channel and under the path – which has a flush fitting grill over the water channel. The water flows over a pebble area at the head of the rain garden – this is to remove flow energy before water enters the planting area. The ground is bowl shaped, having been excavated to several meters, and backfilled with engineered material and layers to maximise its SuDS potential

Plant species were picked relevant to the area within the raingarden – for example peripheral plants are both water and drought tolerant. Species were also picked that would provide a good visual perspective and attract pollinating insects.

## 5. Specific project details

This rain garden was one of several small-scale climate resilience features installed across the Taunton area by the Westcountry Rivers Trust with our partners Somerset County Council. This is part of the SPONGE2020 project, which is an EU part funded 2 seas Interreg project with Dutch, British and Flemish partners. The aim of this project is:

- The creation and use of techniques to engage local people and organisations
- Pilot projects for engaging the public and creating water buffering options to increase water resilience in urban areas - hence the name 'sponge'
- Use the experiences gained from each of the pilots to create a set of engagement tools, guidance and techniques that would be freely available to all on the Internet:
- <https://www.urbangreenbluegrids.com/sponge/>

In the Somerset pilot, we work with stakeholders throughout the development and construction of each SuDS system. We take the following approach:

1. We work with stakeholders at a professional and local level to identify candidate sites in and around our target areas which will provide benefits for both flood prevention and other issues important to local people. This stage may include meetings, workshops, site visits, reviewing existing data & evidence and collaborative mapping.
2. The early stages of the project are often complemented by educational activities. Many people are not aware of how urban water is managed, and the issues associated with surface water runoff. School visits, talks, and attending community meetings or events can be a good way to share these messages and gain a greater support of the work.
3. We then hold co-creation events to gather ideas, thoughts and opinions to feed into the design of the SuDS features. Often, stakeholders will have thoughts on the materials used, the types of plants included, the accessibility and the maintenance requirements. At this stage we use engagement techniques such as design workshops, visiting the site, attending existing community meetings and events, school visits, demonstrations of possible design elements, and creating visualisations of different options.
4. We then use professional consultants and contractors to create the technical design and build the structure of the SuDS system. We keep stakeholders informed of progress.
5. The formal construction phase is followed up by action days and celebration events with local people to complete planting and other design features. By involving people in the creation of the SuDS system.
6. Throughout the process, we use social media, engagement videos and the [project website](#) to keep stakeholders up-to-date on the project.

## 6. Maintenance & operation

Maintenance primarily consists of regularly cleaning moss from the pathway channel and its entrance, and some grounds maintenance. The pathway grill is well secured, but easily removed for maintenance. The Project team went through the scheme with the local Council team to make sure maintenance and upkeep of the garden would be ongoing.

## 7. Monitoring and evaluation

The scheme has ongoing monitoring by the local Council community support and maintenance team. The scheme was evaluated after Storm Lorenzo, and the extreme weather during late 2019 and was working well. As part of the evaluation and talking to residents post construction, we undertook some minor modifications to the scheme. This included levelling up the grass area alongside the channel and creating a softer edge between the path and the channel. These were made as residents were walking across the water channel to reach the grass area, rather than going around.

## 8. Benefits and achievements

The benefits and achievements of this, and our other SuDS schemes in the Taunton Pilot have been really significant:

- Engagement of Taunton residents in the problems associated with extreme weather events and that they can be involved in the solutions.
- Increased resilience of the people involved in the schemes – actions and activity rather than dispondancy and unempowered
- Increased resilience and wellbeing of residents by having access to more natural diversity on their doorstep – SuDS should always be seen as an opportunity to improve the availability of blue/green habitats in urban spaces for this really important benefit
- Increased biodiversity itself
- Removal of some rainwater from the areas undersized combined sewer system
- The use of a local landscaper allowed them to increase their knowledge in raingarden construction

This project was one small part of a wider engagement programme in Taunton and the other pilot areas. The pilot outcomes, benefits and achievements are freely available on the website:

<https://www.urbangreenbluegrids.com/sponge/>

## 9. Lessons learnt

Retrofitting SuDS makes sense – the SPONGE project looked at retrofit costings and for many it was found cheaper per M3 diverted than expanding / increasing the local piped systems.

One area that this project has focussed on is how you engage and bring on board the local population. Too often with a scheme all locals see is disruption and authorities imposing their vision on them with minimal liaison. It is also important the engagement carries on after a scheme is

delivered. Great schemes are often seen as failures by locals for elements that could be easily remedied with closer liason post construction.

The project website is full of lessons learnt from the Taunton and other pilot projects.

## 10. Interaction with local authority

This scheme and others around Taunton were delivered by Westcountry Rivers Trust. Somerset County Council were partners in the SPONGE2020 project and worked closely with us throughout.

For this scheme, we also had great assistance from South West and Taunton Council who manage the housing and have active community officers. They were invaluable in getting engagement sessions set up and connecting us with enthusiastic residents.

## 11. Project details

**Construction completed:** June 2019

**Cost:** £7k

**Extent:** This scheme was focussed on m<sup>3</sup> rainfall removed pa = 77m<sup>3</sup>

## 12. Project team


|             |  |   |
|-------------|--|---|
| Funders     | <ul style="list-style-type: none"> <li>European Regional Development Fund</li> <li>Postcode Lottery</li> <li>Garfield Weston Foundation</li> </ul> |    |
| Clients     | <ul style="list-style-type: none"> <li>Churchill Way Residents</li> <li>Somerset West and Taunton Council</li> </ul>                               |   |
| Designers   | <ul style="list-style-type: none"> <li>Churchill way residents</li> <li>Westcountry Rivers Trust</li> <li>Whites Landscapes</li> </ul>             |   |
| Contractors | <ul style="list-style-type: none"> <li>Whites Landscapes</li> </ul>  |   |





Figure 1 The bare bones- awaiting the residents to plant up and seating



Figure 2 planting day - with tea and cake!





Figure 3 The rain garden 3 months on