

Mansfield Sustainable Flood Resilience



The Greening of Mansfield

Severn Trent are investing £76 million in Mansfield on a range of nature-based solutions to protect communities from flooding.

Working alongside Mansfield District Council and Nottinghamshire County Council, this is the largest project of its kind ever to be attempted in the country.

When it's complete, the scheme will be able to store over 58 million litres of surface water – that's about 23 Olympic-sized swimming pools. In real terms this means reduced flood risk for 90,000 people and the creation of 390 jobs locally, too.

We think it'll be the blueprint for how we manage flooding in the future. And at the same time, it makes Mansfield an even fresher, greener place to live for our customers and communities.



Severn Trent is looking to install around 15,000 green interventions across the district

Find out more about SuDS (Sustainable Drainage Systems) such as rain gardens, planters and permeable paving, on page 26.



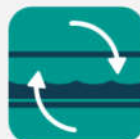
Say hello to SuDS

SuDS are Sustainable Drainage Systems, and over the next few years we're going to be putting in more than 20,000 of them across Mansfield.

They work by diverting surface water away from sewers, slowing it down and helping our drains to cope.

The great thing about SuDS is that they combine some of the latest water drainage technology with Mother Nature. So at the same time as reducing flood risk, they cut pollution and bring more plant and animal species into the places where we live.

Part of our 7 Green Recovery Initiatives



What solutions are being used



Basins, Planters and Swales

These catch rainwater and water runoff from roads and roofs. They're filled with plants that help to filter and hold the water.

Swales – shallow channels with sloping sides – are really useful at storing the water and releasing it more slowly into the ground.



Permeable Paving

Permeable paving – used for car parks, walkways, and other hard surfaces, contains lots of tiny holes.

These holes allow water to pass through and soak slowly into the ground beneath.

So we can make our streets more flood-resilient while keeping the parking that residents need so much.



Rain Gardens

Rain gardens use plants and soil to retain and slow the flow of rainwater from surrounding hard surfaces.

They also help cool urban areas in the summer, so even when it's not raining, they make a positive difference.

What is SEL's involvement

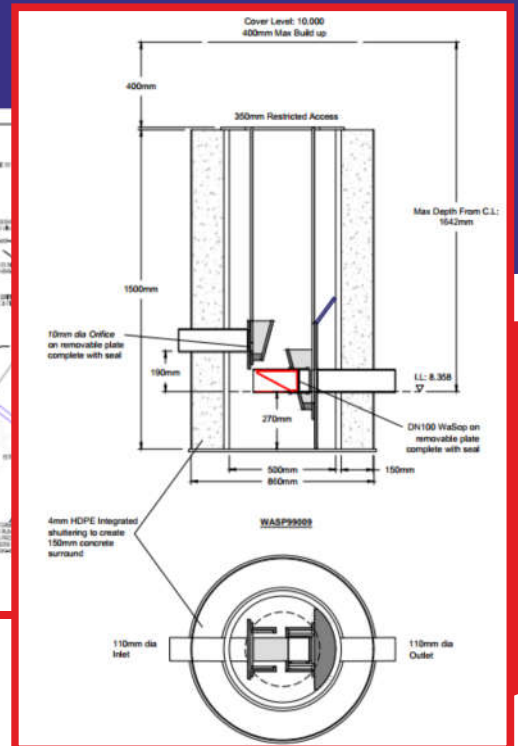
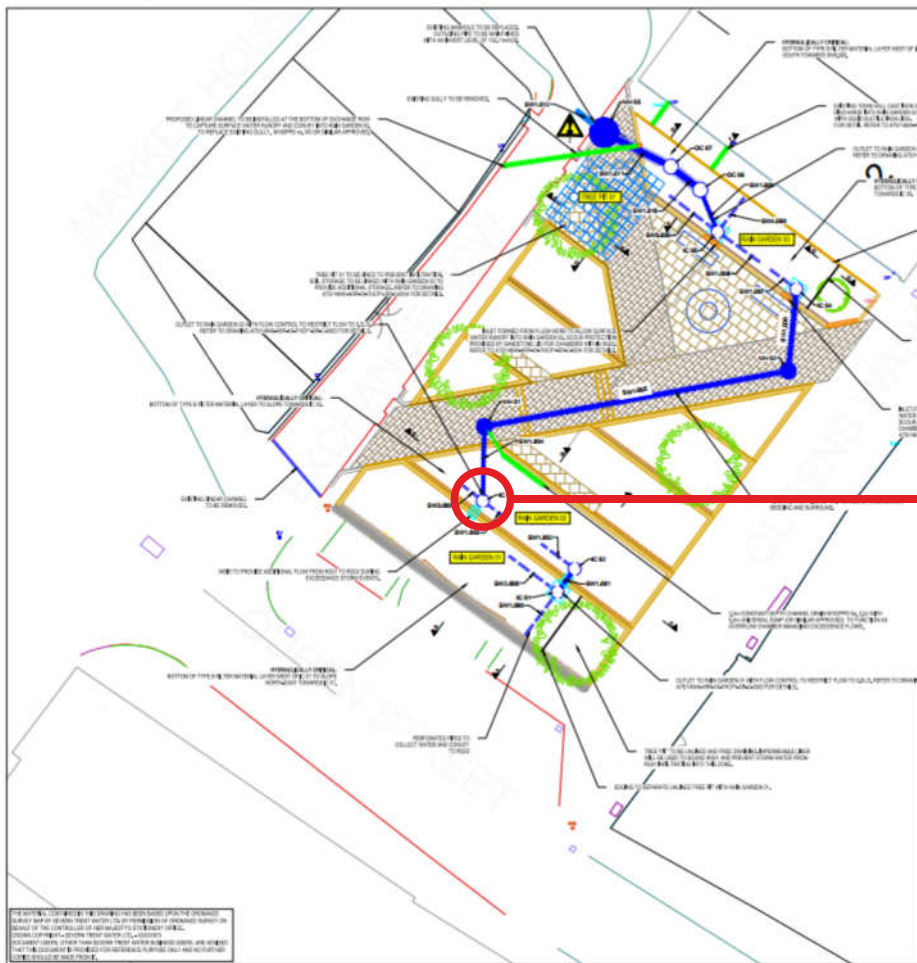
SEL were contacted by Severn Trent while the details for the pilot schemes were being put together to provide input for the flow control chambers that would be required within each intervention.

Following discussions it was realised a new type of flow control chamber would be required that would provide flow restriction from the interventions, that would have simple maintenance, and would prevent odour as the majority of interventions would drain into a combined sewer.

That flow control chamber has been developed and has undergone independent testing at Sheffield University.

Whilst the above was taking place, our contracting division was contacted by Gallifordtry to look at the membrane lining options for the initial pilot schemes. SEL were able to support Gallifordtry with a flexible approach to the works and access to our 20+ years of experience in developing solutions to overcome unforeseen in ground issues.





LEVEL IN TRENCH	
MANSFIELD TOWN HALL CAR PARK	
SITE WIDE DRAINAGE PLAN	
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1:100	A1



Membrane selection is critical. It needs to be flexible and very robust to deal with the challenges of a brownfield site. Image shows liner to raingarden and position of flow control chamber at the far end, with close up to the left.

Contact SEL or 01254 589987 or email sales@selenvironmental.com