Designing SuDS to manage water quality
Theo Thomas

We have a right to healthy rivers and clean water

98% of London’s rivers fail the Water Framework Directive, almost 75% across England. They should be rated as Good, too many are Poor
We pollute our rivers every day – perfect design

Misconnections

In places where there are separate pipes for sewage and rainwater, an average of 8-10% homes are polluting rivers

SuDS improve water quality but they also expose water pollution. By putting the water from our roofs and roads on the surface instead of pipes its condition is easily monitored.
People care about rivers and see water pollution as unacceptable
Lamb Drove housing estate, Cambourne, Cambridgeshire

Comparison of vehicle pollution between the site at Cambourne with SuDS and without

Hydrocarbons

Concentration (ug/l)

- Benzo (CH) Perylene
- Benzo (K) Perylene
- Benzo (B) Fluoranthene
- Benzo (K) Fluoranthene
- Indeno (1,2,3- CD) Pyrene
- Polynuclear Hydrocarbons Sum

- Study Site
- Control Site

23/10/2014

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London Borough of Enfield has many rivers, most of which run in daylight, not in pipes. They are plagued by pollution.

£361,000 from Defra’s Catchment Restoration Fund is being used to create 6 river-protecting SuDS.

Once LB Enfield knew the scale of the pollution problem they became willing and creative partners. The Environment Agency has been a key collaborator too. An additional £400,000 SuDS creation and river restoration is underway.
Grovelands Park

Catchment size: 11 hectares

Cost: Approximately £20,000 (predominantly pipe and chamber works)
Susdrain – SuDS not duds – getting the basics right

SuDS with a message

Understanding how the Urban Water Cycle works

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Making connections between our actions, our rivers and our health

The final basin at the end of the Grovelands Park SuDS train
Making connections between our actions, our rivers and our health

We’ve just secured another £238,000 from Thames Water to create permanent ways to help people understand what the SuDS do, why they are needed and how they can care for them.

They will be designed in concert with the people that use Grovelands Park and Glenbrook.

The Glenbrook
Glenbrook SuDS designs

Catchment size: 42 hectares
Cost: £41,000
Basin filled to test for leaks

SuDS Creation
Volunteers planted the aquatic vegetation

Reed Sweet Grass
Challenges

Reinforcements
Diverter weir and stepping stones

Good weather helps
A more natural river

Pollution still occurs
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