

How do we fund 21st Century Stormwater Management?

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Stormwater Shepherds UK



We are a UK Charity created to reduce pollution from urban surfaces, with a focus on microplastics and plastic litter





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This presentation contains lots of questions but very few answers, so please let me know what you think.



Photo: forumbusinesstraining.co.uk

Why must we manage stormwater better?



- Stormwater causes surface water flooding and that is already getting more frequent and more damaging
- Stormwater causes pollution
 - It causes pollution itself when it washes into rivers, streams & groundwater, taking with it the pollutants from urban surfaces
 - And it causes pollution by overwhelming sewers and causing CSO & storm overflow discharges



We all know how to reduce CSO spills to acceptable levels, but how can we pay for it?



“In eliminating storm overflows, we are talking about transforming a system which has operated since the Victorian era, the preliminary cost of which is estimated to be anywhere between £150 billion and £650 billion. I have spoken to Welsh Water and their estimate for the work in Wales alone is around £40 billion.” Environment Bill Statement from Saturday 23rd October 2021, Fay Jones, MP for Brecon and Radnorshire.



Hold your horses ...

We don't need to eliminate all the CSOs though. Some spills can be tolerated by the receiving environment when it is in spate, especially from rural catchments with little Trade Effluent in the sewage. So we need to work out which CSOs need to be improved, which ones need to be removed and which ones are OK. This means the overall cost may be lower than expected.



How will we afford it?

- Thames Tideway Tunnel is costing £4.13b
- *“Thames Water customers will pay for the tunnel through their water and sewerage bills, and Thames Water customers can expect their bills to increase by up to £80 per year by 2020. That includes customers who don't live in London.”*
- So if we all paid more to our Wastewater Company, that would create a ‘fund’ to remove stormwater from combined sewers and to reduce CSO spills (amongst other techniques)




Photo: poverty.ac.uk

- *“Part of your water bill pays for us to take away the rainwater that falls onto your home- including your roof, your driveway, and your path – and also the public highways. You’ll find this charge itemised on your bill, under the heading ‘Rainwater removal’”* United Utilities website

- So maybe Ofwat and the Water Companies can agree to significantly increase this component of the water bills?

Wastewater

£46.48



↓

| | | |
|-----------------------------------|--|---|
| <p style="margin: 0;">🔒 Fixed</p> | <p style="margin: 0;">Your annual charge (£54 x 1.689) adjusted for 186 days</p> | <p style="margin: 0; text-align: right;">= £46.48</p> |
|-----------------------------------|--|---|

The Environment Bill should help



The Environment Bill will be further strengthened with an amendment that will see a duty enshrined in law to ensure water companies secure a progressive reduction in the adverse impacts of discharges from storm overflows.

DEFRA 26th October 2021



Photo: sas.org.uk



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So stormwater in sewers is a recognised problem and the Bill should ensure that the Water Companies will be able to include CSO solutions in their Business Plans and it is likely that Ofwat will approve many of those solutions

But how will that work if the stormwater entering the sewer is under the 'control' of the Local Authority or a private landowner? Should the Water Company pay (and pass on the cost to their customers) if it isn't their fault that the stormwater is entering the sewer?



16% tax on Water Company pre-tax profits

Lib Dems call for sewage Tax on water companies to raise £340 million for rivers

The Leader of the Liberal Democrats has called for a “Sewage Tax” on water companies to prevent raw sewage polluting rivers and lakes.

Today MPs will vote again on the Environment Bill which includes new rules on sewage being dumped into rivers.

Water companies pumped polluting and harmful raw sewage in national water sources over 400,000 times last year. The River Trust reveals more than half of



Should a Stormwater Utility Levy be fragmented?

- Water Companies
- Local Highway Authorities
- Local Authorities
- Private Landowners
- SuDS Management Companies

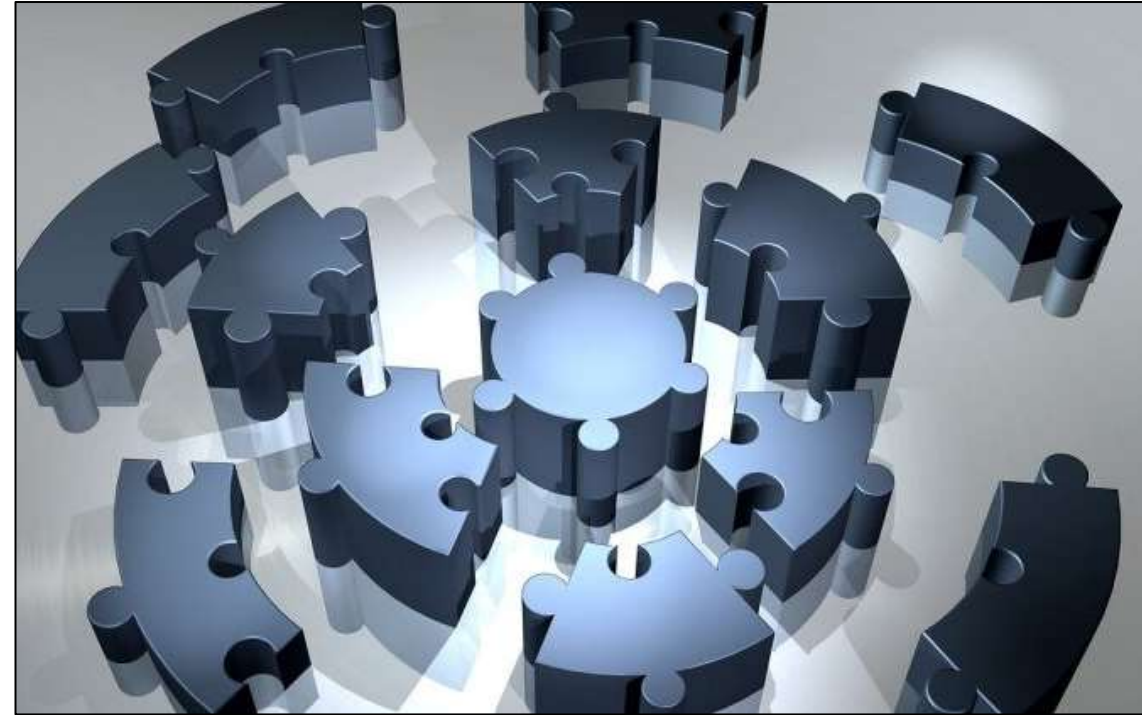


Photo: td.org

What about a Stormwater component included in Council Tax bills?

- If we are going to create a stormwater fund by allowing a stormwater charge to be levied, is it better for that fund to be managed and spent by Local Authorities rather than our private Water Companies? Will that be more palatable to homeowners?
- Local Authorities could work with the Water Companies to identify problem areas and then to take surface water out of the sewer.
- Or maybe both levies could be applied for different elements of the work?

How about using CIL and S106 agreements

- Community Infrastructure Levies and S106 agreements can be used for site specific schemes, although CIL can't be given to Water Companies for stormwater separation, so sometimes it's not easy to use the money for water management of any kind.
- These two funding streams will continue to play a small part in improving stormwater and surface water management, but it will be 'small fry' compared to the more strategic National investment that is needed.

Are there other options to fund stormwater management?

- Levies targeted at specific pollutants & their manufacturers
 - Tyre levy
 - Fuel levy
 - Pharmaceutical levy
- Levies targeted at specific activities
 - Road tax/road tolls
- Levies targeted at specific people
 - The customers in a particular sewer catchment
 - Homeowners with paved front gardens



If we use retro-fit SuDS, should the benefactors pay?

- Downstream flood risk reduction?
- Water quality improvements – fisheries, outdoor swimmers, water sports, agricultural abstractions?
- Local health authority?
- Local education authority?
- But then do we all end up paying again ...



Maybe Green Finance can help

- Can Green Bonds provide an income stream to pay for this work?
- Or Private Finance?
- And if that can work, would we create an entirely new entity to manage stormwater?



Where do we redirect all this separated stormwater to?

Ideally we will redirect the stormwater to rivers, streams and groundwater via well-designed SuDS with adequate treatment to reduce the pollution to an acceptable level.

Road runoff must be considered carefully because of the level of pollution it conveys and the microplastic tyre-wear particles. But we know how to treat it; we just need enough money.



And that just fixes existing problems. How do we stop creating new ones?

- Wouldn't it be lovely if we could have Schedule 3 of the Floods & Water management Act in England, just like they do in Wales?
- Mandatory SuDS on all developments.
- Hierarchy of discharge routes



Photo: highwaysindustry.com

Mandatory SuDS and the right to connect

- If the automatic right to connect was removed from the Water Industries Act, then each development would have to consider the management of the stormwater more closely.
- Mandatory SuDS would be excellent, but only if it came with an associated, funded SuDS Approval Body or similar.



Photo: Camley Street SuDS Alistair Bayford

In the end we'll all have to pay

- Regardless of whether the charges are levied by the Local Authority, or the Water Companies, or via more expensive products/fuels, or by land-based charges, we'll all end up paying for this investment in better stormwater management.
- But it **MUST** be equitable.
 - Should people who live in catchments with no CSO pollution contribute?
 - Should Trade Effluent charges go up?
 - Protect low-income households from additional costs

But we all benefit too

- Retro-fit SuDS will deliver
 - Reduced flood risk
 - Better water quality
 - Nicer places to live
 - Cooling of urban environments
 - Opportunities to grow food in urban & suburban communities
 - Connected, meaningful habitats for wildlife
 - Drought resilience
 - Damp environments for wildlife, and open soil surfaces
 - Carbon capture



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Stormwater management professionals



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- By creating the need for stormwater professionals to design, install, maintain and operate retro-fit SuDS devices across towns & cities, we can create long-term jobs for local people.
- There is an excellent example run by the Philadelphia Water Department called Soak It Up Adoption
- <https://water.phila.gov/adoption/about/>



Isn't it time that
Stormwater Management
took its rightful place
alongside Wastewater
Management and Clean
Water Management as a
discipline in its own right?



Conclusion



- We need to reduce CSO spills
- To do this, we need to manage stormwater more effectively, and that requires a large amount of money
- But good stormwater management provides benefits too
- We just need to work out how to raise the funds to deliver this improved management
- It isn't clear how to do that – whether it should be through water company bills, Council Tax, product/usage levies or another route
- We need to start now.

- Feel free to call me if you have any questions
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- If you are interested in supporting Stormwater Shepherds with a donation, please get in touch.