

Property resilience for new and existing homes: SuDS & green infrastructure

10.10-12.00, Tuesday 10th March 2020

Top Lines

- **Updates to the National Planning Policy Framework since publication of the WSBF's *Bricks and Water* inquiry are welcome.** However, Sustainable Drainage Systems (SuDS) are still not being delivered that manage water quantity, water quality, promote biodiversity and create proper amenity.
- **SuDS have to compete with other facets of development, which has an impact on land-value.** However, by considering requirements for SuDS as part of Building Regulations and Local Plans, developers can factor-in space for SuDS prior to site acquisition.
- **SuDS play a key role in integrated water management.** They can be used to make homes more water efficient by cleaning and recycling water and they mitigate flood risk by limiting the amount of runoff entering the system following storm events.
- **Retrofit of SuDS at the property-level can have significant benefits.** However, getting buy-in from homeowners is likely to be more challenging than for water efficiency and flood resilience as the benefits are less acute and property-specific.

Recommendations

- **The Government should end the automatic right to connect new developments to public sewers.** This was recommended within the Pitt Review, which is now more than ten years old.
- **SuDS should be considered at all scales, including at the catchment, development, and property level.** From reducing compaction and increasing the organic matter of soils at the catchment scale, to homeowner action such as introducing rain gardens, there is action that can be taken at every level.
- **The mandatory use of SuDS should replace the existing drainage hierarchy within Building Regulations** and the scope of the Future Homes Standard should be broadened to include water and drainage.
- **Non-Statutory Technical Standards for SuDS – currently under review by DEFRA should incorporate the multi-functional benefits of SuDS as set out within the SuDS Manual.** This would give Local Planning Authorities the confidence to specify high-quality SuDS within their Local Plans and enforce associated planning policies through building control.

Introduction

In June 2018 the [Westminster Sustainable Business Forum](#) (WSBF) published its inquiry: *Bricks and Water*, chaired by former Liberal Democrat MP Angela Smith and Conservative Peer Baroness McIntosh of Pickering. The report comprised an evidence-based assessment of the challenges associated with sustainable housebuilding and water management in England. Building on the recommendations set out in this report, the WSBF is embarking on a follow-up project, which will explore property resilience for new and existing homes, to feed into the Government's Future Homes Standard and related legislative changes during this Parliament.

This discussion formed the second evidence session to support the forthcoming inquiry and focussed on the topic of water Sustainable Drainage Systems (SuDS) and green infrastructure. The roundtable was kindly chaired by Baroness McIntosh of Pickering.

Inquiry co-sponsors



Speakers

Baroness McIntosh of Pickering (Chair)

- The 2008 Pitt Review drew attention to surface water as a significant source of flooding and much of current policy is based on this inquiry. However, there are still recommendations that have not been implemented more than ten years on, including ending the automatic right to connect new developments to public sewers.
- Inadequate drainage is a key source of flooding and although the FloodRe scheme provides insurance cover for some, it excludes business premises and properties built after 1st Jan 2009. We must therefore stop building on floodplains or provide better insurance options for vulnerable communities.
- The Pickering Slow the Flow scheme incorporates natural green infrastructure to slow the flow of water through the upper catchment, whilst providing other benefits to the environment and the local community. Harnessing support from the Private Sector (including water companies) will be crucial in leveraging funding to roll-out these kind of schemes on a larger scale.
- Water companies should be more routinely consulted on drainage arrangements for new development as part of the planning process, so that SuDS can be designed and managed appropriately.

Abby Crisostomo, SuDS and Water Reuse Policy Leadership Group

- The SuDS and Water Reuse Policy Leadership group was formed in 2019 to better enable and implement SuDS and water reuse as part of an integrated water management approach. The group comprises a wide variety of stakeholders including water companies, planning practitioners, academics, the development sector, and regulators. Its work-plan includes:
- Elevating the multiple benefits of SuDS beyond flood risk – learning from the approaches adopted in Wales and Scotland, understanding links between SuDS and water efficiency, promoting better spatial targeting for SuDS programmes, and advocating for wider benefits including biodiversity and cooling.
- Better collaboration between stakeholders – promoting consistency in planning, encouraging engagement, and facilitating collaboration in forthcoming drainage and Wastewater Management Plans (WMPs).
- Understanding and clarifying adoption models – especially with regard to the forthcoming Design and Construction guidance (formerly Sewers for Adoption).
- Exploring and enabling alternative financing models for SuDS retrofit – incentivising programmes such as the scheme recently adopted in Manchester, based on existing area-based charging.
- Providing clarity on policy and standards – including the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), Non-statutory Technical Standards, Building Regulations and Future Homes Standard amongst others.
- Exploring SuDS retrofit at the household scale – considering the most effective ways to engage with tenants and homeowners.

Dr. Sim Reaney, Durham University

- Catchment-based approaches are important for managing water quality and quantity. We need to consider how land use can be managed to reduce the generation of surface runoff, and where we place mitigation measures for optimal benefit.
- The role of soil compaction plays a key part in the volume of water entering the drainage system (as seen recently with storms Ciara and Dennis) which can exacerbate the flood risks to downstream communities.
- We learn from other countries around the world, such as Nepal, which experiences monsoonal rains and has steep, sparsely vegetated catchments. Innovative insurance schemes in these areas pay out automatically based on measurement tools rather than individual surveys, which can drive up premiums.

- Not every location is equally important, which makes spatial targeting crucial. Creating water storage capacity in key parts of the catchment (such as supplementing soils with organic matter) can create large amounts of storage compared with individual attenuation ponds.

Sue Illman, Illman Young Landscape Design

- Sue's 2019 review into SuDS delivery by Lead Local Flood Authorities: [Achieving Sustainable Drainage](#) identified that while SuDS schemes often achieve the objective of managing water quantity, they are poor at managing water quality, enhancing biodiversity and delivering amenity benefits for residents.
- Hard engineered solutions such as sub-surface storage and deep attenuation ponds miss opportunities for integration with ecology, heritage, topography, and landscape character.
- Often a reasonable scheme is proposed at the outline planning stage, but this gets watered down through the planning application process as alterations are proposed. Typically, swales and lagoons get replaced with tanks and pipes etc.
- LLFA's currently don't consider measures that homeowners can take to reduce surface water runoff (such as rainwater storage and re-use or installation of permeable paving) against a development's overall storage requirements, which creates a disincentive for action.

Discussion

- Urgent action is required to address the current climate crisis. It is more than a decade on from the 2007 floods and subsequent Pitt Review and many issues have gone un-resolved.
- We must utilise digital tools in determining where water will go and we should harness technology to deploy SuDS in the places that they will be most effective.
- Non-Statutory Technical Standards for SuDS currently under review by DEFRA should follow the system currently adopted in Wales and make reference to new requirements for water companies to adopt SuDS for new development, if it meets their standards. This should give LPAs the confidence to insist on their use and incorporate requirements for good quality SuDS within their Local Plans. This would also give developers the confidence to incorporate them in the knowledge that water companies will adopt them.
- SuDS should form a key part of integrated water management at the development scale so that they can contribute to treatment and recycling of water to aid property-level water efficiency.
- In light of the Government's preference to simplify the planning system to make housebuilding easier, building regulations could be an appropriate vehicle to mandate the uptake of SuDS.
- SuDS have to compete with other facets of development (such as areas required for car-parking), which has an impact on land-value. These problems can often be overcome, but they need to be

addressed early enough in the application process - even the pre-application stage can often be too late.

- Engagement with water companies at the planning stage is important to ensure that wastewater is managed appropriately. Water companies could act as statutory consultees to the planning process on sites above a certain size to facilitate this.
- Previous discussions with MHCLG have encouraged exhaustion of all non-statutory options before incorporation of the requirement for SuDS into building regulations. The scope of the Future Homes Standard should be broadened to include water and drainage.
- Buy-in from homeowners will be crucial for reduction of surface water runoff at the property level. This is likely to be more challenging than for water efficiency and flood resilience as the benefits (reduced bills and insurance premiums respectively) are less financially acute and property-specific.
- LPAs rely on building control to check that SuDS have been installed appropriately and these inspections are often not detailed enough or lack the opportunity for proper dialogue.

About the Westminster Sustainable Business Forum

The Westminster Sustainable Business Forum (WSBF) is Policy Connect's coalition of high-level stakeholders informing better policy-making on sustainability issues for the built environment.

The WSBF's members include key UK businesses, Parliamentarians, Civil Servants, academics and third sector organisations. Providing a politically neutral environment for knowledge sharing and discussion on sustainability policy, we help to impact the agenda in government and are a trusted source of independent information and advice for policymakers.

We publish authoritative research reports; impact on government policy through our in-depth round table policy discussions and outputs; and inform the wider sustainability debate by convening key stakeholders at our larger policy events and seminars. The WSBF works in the policy areas of construction, infrastructure, water, sustainable planning, green finance and natural capital. We are cross-party, independent and not-for-profit. For more information on our activities, please visit: www.policyconnect.org.uk/wsbf