

Empowering resilience

*Flood risk consultant **Liz Gent** discusses how community engagement and the right support can help local authorities better protect and bring peace of mind to communities at risk of flooding.*



The full effects of flooding on a community are often hard to quantify, and hard to forget. The most recent widespread floods, in the winter of 2013 to 2014, flooded more than 10,000 properties across the UK, forcing some families to move out of their homes, leaving entire communities anxious and distressed.

Lessons learned from past floods have seen local authorities, the Environment Agency and water companies look to build and strengthen existing infrastructure, including traditional defences, such as floodwalls and embankments to help protect vulnerable communities.

But installing and maintaining large-scale flood defences and infrastructure are not always possible. Funding and space to include them in new urban developments and existing towns are not always available. Nor might a large-scale flood defence be appropriate.

Despite the challenges and perceived barriers in building local flood resilience, and because climate change and urbanisation are likely to make flooding worse, developing more sustainable flood risk management strategies that help communities understand and live with the risk of flooding, so they can better prepare for and recover from them, is becoming increasingly important.

Depending on the level of risk and source of flooding, effective long-term resilience strategies might include retrofitting green infrastructure into existing towns to reduce the risk of surface water flooding, or Property Level Protection (PLP) schemes to limit flood damage to individual properties, on a community scale.



Victoria Road flooding,
Southend-on-Sea, 2013

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Perhaps the biggest consideration in building local flood resilience is educating communities on what it means to live with the risk of flooding, and engaging tenants and landlords with local authorities, planners, contractors and business owners, to become more resilient, together.

In partnership with Southend-on-Sea Borough Council, we helped local property owners install PLP measures into their homes, to build local flood resilience, across a whole community.

Protecting Southend

Extreme rainfall from climate change, overburdened drainage systems and seafront sewers that can become tide-locked, have led to surface water flooding in hundreds of homes in Southend-on-Sea in the past three years alone.

Environment Agency figures also estimate that up to 1062 properties in the borough could be at high risk of surface water flooding in the future.

Through our work with the council in developing their local flood risk management plan, it became clear that PLP was the best option to protect the local community, mostly because a larger scheme would be ineffective in the local built environment and because PLP is one of the best ways to reduce the risk of surface water flooding from extreme rainfall.



But a piecemeal approach to installing PLP can be daunting for local authorities; often they simply don't have enough resources to identify, offer and deliver PLP to individual property owners on a neighborhood or community scale. Likewise, homeowners may not know which measures are suitable for their homes, or can't afford them.

Working with the council's emergency planning team, we identified property owners who could apply for Defra's Repair and Renew Grant, which gave up to £5,000 to individual homeowners and businesses across the UK who experienced flooding in the 2013 to 2014 financial year.

Instead of expecting individual homeowners to apply for funding themselves, a process that can be daunting for members of the community such as the elderly, Southend applied for the funding at a borough level. While taking the pain out of the application process, it also ensured as many homes as possible would benefit from the scheme.

Support on the ground

Our team knocked on front doors, spoke to individual property owners and sent out funding application packs for residents to complete, which we submitted to Defra on their behalf. We also wrote letters to homeowners explaining how the grant would work, and published notifications on the local council website to let them know when we would be conducting property appraisals, and what the next steps were.

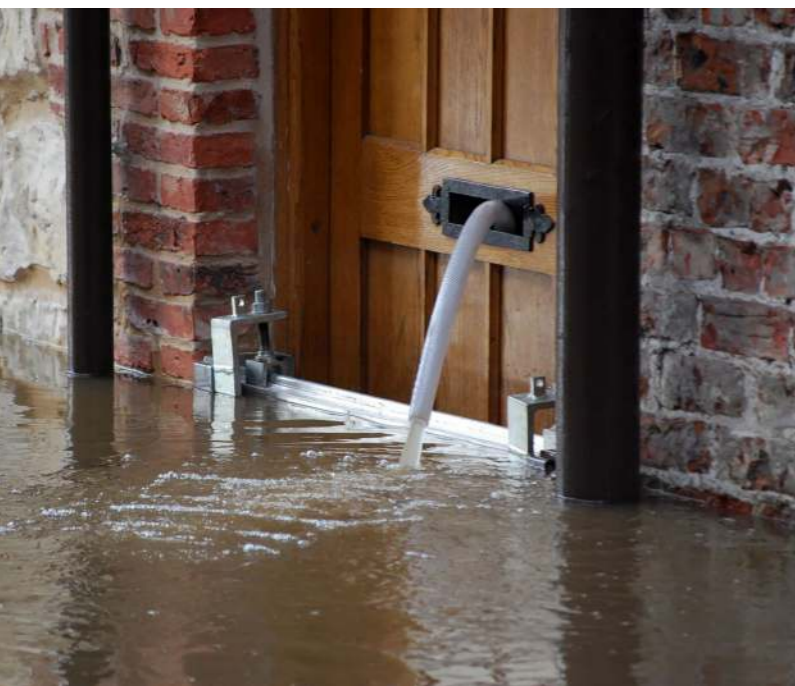


Bespoke PLP measures have been fitted in to properties across Southend, including door flood barriers (bottom) and airbricks (top).





Resilience measures such as raised internal wiring, will help limit any potential, significant damage.



We also engaged with a single contractor, UK Flood Barriers, who surveyed hundreds of homes to assess previous flood damage and determine which protection measures best suited each property depending on their flood risk. This took the worry out of choosing the right PLP measures for the owners; it was a bespoke solution that they could trust would work for them.

Within five months, we'd helped fit 150 properties across the borough with bespoke PLP measures, including flood-proof doors, automatic airbricks, raising of internal wiring, and waterproofing of walls — something that, prior to our partnership with the council, would not have happened under any other grant in aid or large scheme development.

While resistance measures such as flood resistance doors will keep floodwater out of properties, resilience measures such as raised internal wiring, will help limit any potential, significant damage.

Peace of mind

It was only through our conversations with the community before and after we installed PLP that we could fully appreciate the difference we were making to people's lives.



Before the programme, entire neighbourhoods were living in fear of the next rainfall, while some were waking in the middle of the night, worried their house was flooding. Now, homeowners in Southend feel reassured that they can protect their own homes when a flood happens. They know what to do next time and that their property is going to be okay. They feel empowered knowing they have their local council's support, and the ability to help themselves.

Now we're working with the homeowners to help them maintain the protective measures and coordinating community dry runs to ensure they work, giving extra peace of mind to residents.

Living with the risk

Flood resilience always makes sense; there is no other side to the coin. But local authorities rarely have enough resources to coordinate a project like the Southend scheme. That's why it's important to pull on consultancy support from those who have done it before and understand the pitfalls, strengths and benefits they can bring to entire communities.

Ultimately, creating more flood resilient towns will require a change in flood risk management thinking to include more innovative, community-wide strategies that are proactive, rather than simply reacting to floods when they happen, so that people can live with the risk of flooding, instead of in fear of floods happening.



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Funding opportunities

Funding for local flood resilience schemes can be one of the biggest hurdles in getting projects like Southend's PLP programme off the ground. However, opportunities such as Defra's Repair and Renew Grant are available — seeking out and securing funding is something AECOM can help with. Some of the potential routes to funding include:



Local levy

Local authorities within the boundary of each Regional Flood and Coastal Committee (RFCC) can use a local levy, with the committee's approval, to support flood risk management projects that aren't considered national priorities and don't attract full national funding through the Flood and Coastal Risk Management Grant in Aid (FCRM GiA).

Water company investment

This kind of investment is heavily regulated by water services regulator, Ofwat. However, water companies may wish to contribute to area-wide projects that benefit their customers, for example, if they address sewer under-capacity problems.

Community Infrastructure Levy (CIL)

This allows local authorities to raise funds from developers working on new building projects within the area. The funds can be used to mitigate the effects of the development on local built and natural environments, including flood defences.

Local resilience

Communities can be more effective in managing flood risk in local areas through a range of 'helping hand' schemes from private residents.

< SWIPE TO VIEW >