Devon County Council appointed Hydro-Logic Services LLP as a key partner in the delivery of the Pathfinder project on community flood resilience. The project, funded by DEFRA, was developed to investigate innovative ways of improving resilience to flooding at the community level. Devon councils including Torbay and Plymouth piloted one of the largest of a number of schemes undertaken nationally under the Pathfinder initiative.

Devon County Council identified 22 communities where property owners were affected by flooding, many of which had an active flood group in place. Alongside the development of a community flood action plan, each community received a threshold water level or rainfall intensity gauge as a trigger mechanism.

**Devon County Councils project manager Doe Fitzsimmons**

"Thanks to Hydro-Logic Services technical expertise, as well as experience of community led projects, Devon communities are now equipped with tailored flood warning systems that suit their specific needs. Each community was engaged from the beginning and were involved in siting their local flood warning system. Hydro-Logic Services flexible and dynamic approach were key in the success of this project."

A typical rainfall alarm system

The systems installed are built around tipping bucket raingauges and pressure sensors to provide a reliable and low cost solution. Each community had an initial meeting with one of Hydro-Logic's senior staff members to assess flooding issues and work out the most appropriate warning solution and monitoring location.

Following installation each of the communities received a training session on how to actively manage the gauges including adjustment of alarm levels and basic maintenance. This helped the communities manage their response to flooding and take ownership of the associated flood plan.
Hydro-Logics flood warning systems are built around the Timeview Telemetry (www.timeview.net) web hosting solution. Data is received and managed on this website and alarms forwarded based on key threshold triggers, which can be water levels or rainfall intensities i.e. 10 mm in fifteen minutes. Alarm levels are fully configurable by the end user enabling them to be adjusted for factors such as catchment wetness. When alarm thresholds are passed messages are sent by text and email to predefined contacts and can be accessed at council level.

Many of our systems are installed at trash screens as these are often key flooding locations. Alarms from upstream or differential levels can provide valuable data for council maintenance teams, directing them to screens with blockage issues and minimising the risk of flooding.

At key sites the standard systems have been enhanced with a camera to provide an image when the flood alarm is triggered. A Ford crossing has also been incorporated into the scheme where LED signs warn drivers of unsafe water levels.

Units are battery powered with the website updated once per day. In alarm condition the website can update every five minutes to provide a valuable source of information during a flooding incident. Site locations can be overlayed on mapping platforms, which allows users to track sites in alarm condition and identify developing flooding problems. Data can also be accessed by the Environment Agency and other partner organisations.

This scheme is one of many flood warning systems that Hydro-Logic Services have installed throughout the UK. To date, we work for over 65 local authorities as well as private clients and operate over 650 sites. If you are affected by flooding, and require further information about the systems that we can offer, please contact Martin Dibley on 07917156132 or mdibley@hydro-logic.co.uk