



Photography: Webb Aviation

COMBINATION OF FLOOD RESILIENCE MEASURES BRING PEACE OF MIND TO RIVERSIDE LIVING

Determined not to sell the flood-prone riverside property he loved, the owner turned to Triton for the specification and supply of effective flood resilience measures. The property, built on the banks of the River Sever in Worcester, had consistently been the victim of flooding since its construction and, just before renovation works which began in 2007, severe flooding caused the water level to rise above the ground floor window sills. Prior to renovation, the original floor slab was cracked and the dpm had failed. There was constant water ingress into the ground floor whenever the river levels rose or during heavy rain.

Triton specified a system comprising Aqua Pumps and Aqua Channel conduit, installed in conjunction with a sealed system of Platon Cavity Drain Membranes – more normally specified in basement waterproofing applications. The system is designed to direct any water entering from behind the profiled membrane into the Aqua Channel conduit around the perimeter of the property to either of two sumps fitted into the floor. Flushing points were incorporated within the Aqua Channel to enable ongoing maintenance of the system and flushing through with Triton's X5 Sanitiser if required after ingress of contaminated water.



The property is built facing on to the river. The lower half of this terraced garden is lost under water during Winter

In view of the high risk of severe flooding of this property, Triton recommended two pumps were installed in each sump chamber to guard against mechanical failure of the first pump and to provide additional pumping capacity when required. Because the success of this system depends entirely on the performance of the pumps, audio and visual high water alarms have also been installed to each sump chamber to ensure the owner can respond to any power failure by the operation of a stand by generator.

The Aqua Channel conduit was installed into a channel preformed by shuttering before the new slab was poured. The slab was then lined with high capacity Platon P20 membrane, followed by a reinforced screed and insulation layer, before an underfloor heating system was installed throughout the ground floor. (Triton's TT Super Admix is often specified as a waterproofer within the floor slab mix in this type of application.) Timber floors have since been laid to the living and dining rooms and ceramic tiles in the kitchen. Platon Plasterbase and P5 membranes were fitted to the external and party walls before direct plastering or dry lining as required.

NO MORE DRYING OUT

This system was tried and tested even before renovation works were complete when heavy rain caused the neighbouring property to flood and ground seepage water entered through the party wall. All water remained behind the membranes and was pumped away from the property which, for the first time after a flooding episode, remained dry. Previously the property owner would vacate the ground floor after a flood, and wait for it to dry out before redecorating.

External steel flood barriers have also been purchased for the property as a measure against very high water levels and are fitted when required in front of ground floor windows and doors, and at each end of the pathway between the terraces. It takes around half an hour to install the barriers and normally householders are given around three to four hours notice by the local authority before they are required. However flood warnings are normally in place two to three days before this. The owners of the properties in the terrace help each other out by installing barriers for anyone who is away.

The owners of some neighbouring properties have decided to sell their homes (at vastly reduced prices) due to their vulnerability to flooding and the consequential damage and upheaval. But, the combination of the flood resilience measures supplied by Triton, suitable flood defence barriers and non return valves to service entry pipes, has brought peace of mind to the owner of this property. The risk of future flooding has been dramatically reduced and, should water enter behind the membrane system, there will no longer be the need to vacate the property and endure a long drying out period.



The Platon sealed system ready for dry lining



A channel was formed to take the Aqua Channel conduit



Two sump chambers were set in the floor from where water is pumped away from the property

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