

Waterproofing a basement flat

Background

This house is a Large Victorian property converted into flats. The basement of this flat was used as the bedroom. After heavy rainfall the basement flooded due to the failure of the existing waterproofing system. Water pooled to a depth of 5cm throughout the basement area. The tenant had to vacate the property whilst the landlord allowed the area to dry out and subsequently improve the living condition of the bedroom.



Water pooling after heavy rain

The Work Required



In order to improve the conditions in the basement (Classed as a Grade 3 area by the Code of Practice for Protection of Structures against Water from the Ground (BS8102)) it was necessary to install an effective waterproofing system. A Delta Cavity Drain Membrane System was used.

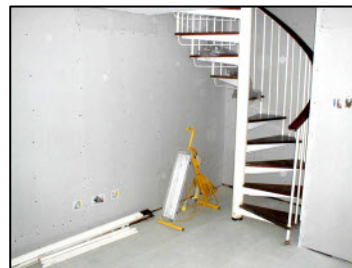


Studded membrane

One of the main advantages of a cavity drain membrane system is that it does not stop water at the point of entry. As its name implies it allows moisture to drain into a cavity and as a result, hydrostatic pressure is no greater than it would be without a waterproofing system. This means the building does not suffer from additional stresses which could cause movement or structural failure. The use of the Delta system is normally welcomed by the Local Authority Conservation Officers as it makes few changes to the structure of the building and if it is removed the building "as was" is revealed, which is an advantage when working in listed buildings.

Carrying out the work

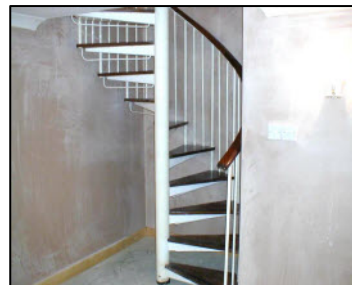
Floor and wall surfaces were prepared including the removal of electrical fittings. A sump pump was supplied and fitted. The sump collects the moisture that has drained via the cavity. When the water reaches a predetermined level the pump is triggered and the water is removed. An alarm that sounds in the event of an excessively high water level was fitted to the sump. To prevent flooding to the completed conversion in the event of a power failure, a battery backup unit was supplied and fitted.



White Delta membrane applied to walls

Delta cavity drain membrane was supplied and fixed to the walls and floors by qualified installers. Battens and plasterboard were then fixed to provide a surface for the applications of a smooth skim plaster finish. A new chipboard floor was laid. Electrical fittings were then reinstated and the property was left ready for redecoration.

Ready for redecoration



Benefits

The main benefit of course, is that the flat no longer floods after heavy rain, and can now be let once again. The area is warm and dry and an attractive proposition to tenants. From the Landlords' point of view the Delta system is a more secure method of waterproofing as it is far less susceptible to damage from tenants who (experience shows) often forget the prohibition on nailing fixings into basement walls!

