

Put to the proof

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Richard Walker argues that effective enforcement of basement waterproofing standards is critical to building integrity

The current British Standard for waterproofing, [BS 8102](#), was revised in 2009 to allow for new understanding of principles and advances in technology.

Progressive companies were swift to respond to the standard and subsequent industry initiatives, integrating new technologies quickly and offering advice above and beyond the minimum required by the standard.

However, in recent years, we have seen a significant increase in substandard work causing major practical and financial difficulties, for both residential and commercial property owners.

One major housebuilding insurance organisation cited some ?21m worth of claims over an 8-year period. These numbers are significant and, in addition to poor work and a lack of expertise, we are also seeing other major factors have an impact on some buildings.

Changing trends

The increase in the number of people undertaking basement waterproofing has been driven by 3 key factors:

- climate changes are causing extreme weather and occasional peaks in water tables, leading to floods in existing cellars;
- lifestyle changes and the rise in property prices have resulted in more and deeper basement conversions; and
- new and more technically advanced products are being developed to cope with these changing demands.

Dealing with such demands day in and day out, we have a responsibility to ensure that our best practice responds to these trends.

Fixing failures

At [Peter Cox](#), we undertake a significant volume of rectification works when waterproofing fails. Some are on new-build projects where the housebuilding insurance market has had to step in to underwrite works; too often, they are the result of poor work, where the right materials may have been used but were installed incorrectly.

In particular, we see failures when external treatments have been damaged as they are backfilled. Incredibly, we also come across internal membranes that have been compromised

during fitting, nails used for fixing, or post-installation work by householders that has punctured the waterproofing.

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Other issues arise when the intended use of the building is not properly considered: for example, where a householder has created a basement gym but not allowed for the dispersal of humidity from occupants or a shower room. This is not a failure of the waterproofing system itself; rather, it is a failure to factor heating and ventilation into the planning stage.

Planning oversights also include situations where no contingency has been made for run-off. If water builds up behind a waterproofing layer on the exterior, this can create stress on the building.

This is a particular consideration in the renovation of old properties, which were simply not built to withstand such stress. Here again, the need for the right strategy at the earliest planning stage is key.

Belt and braces

Since 2013, the housebuilding insurance market has required that 2 waterproofing systems are installed in basement new-builds, depending on the intended use. Since then, we have seen a sea change in the industry, with most developers accepting that refurbishments also require 2 systems.

It can be a tricky for us when customers ask ?Why do we need a 2nd system? Are you expecting the 1st to fail?? However, the cost of rectifying the problem after the event means a belt and braces approach is usually desirable. It is important to provide sufficient protection from the outset.

Bear in mind that remedial repairs to a waterproofing installation are extremely expensive, disruptive and difficult ? if not impossible, in some cases. The best way to avoid the need for these is to call in a certificated surveyor in structural waterproofing (CSSW) at as early a stage as possible. Waiting until part-way through a project to do so can mean works may need to be halted, dismantled and redone.

It is important that all contractors and builders seek early advice from a CSSW on any project that might require waterproofing; we see this as the key to raising standards. To this end, we are investing heavily in our people, with a minimum 2-year programme of rigorous training and on-the-job coaching before they sit the industry-standard [Property Care Association exams for certification](#) .

Investing in prevention rather than cure is not just a sales message; it is more practical, requires less work and is considerably more cost-effective.

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Further information

- Related competencies include [Construction technology and environmental services](#)
- This feature is taken from the [RICS Building control journal](#) (February/March 2018)
- Related categories: [Water and drainage](#)