



Steel can dam the flood of damage

With many still unable to return to their homes after the UK's summer of flooding, the benefits of steel-framed homes seem more pertinent than ever

It seems the UK is getting wetter and wetter. The English reputation for rain, rain and more rain has never been more accurate, but along with newspaper images of children jumping in puddles wearing bright yellow wellingtons there has been somewhat darker footage, as the country faces up to the costs of flooding.

And those costs are huge. Flooding in the quiet Cornish village of Boscastle in 2004 cost insurers £15million. Fifty-eight properties were flooded and four businesses destroyed. Three years on and life in the tourist spot is only just getting back to normal.

A similarly slow route back to normality will be faced by those hit by flooding this summer. Areas of South Yorkshire, the Midlands and the South East were all hit by torrential rain, leaving hundreds homeless. Insurers have estimated the cost of flood damage will be as much as £3billion, and reports have suggested many homeowners will be unable to return to their houses for up to 12 months.

The number of people unable to return to their homes and the cost to insurers is intrinsically linked. The cost of displacement – that is, putting homeless customers into hotels while their houses are repaired – is often the biggest cost to insurers in these situations.

The Government's plans to build three million additional homes across England by 2020, confirmed in the Queen's Speech in November, will see more and more houses built on potential flood plains – meaning the problem may only get worse. With that in mind, insurers are increasingly making noises about being unwilling to underwrite at-risk homes – leaving thousands of people helpless if the worst were to happen.

A saviour may be on the horizon, however, in the form of steel.

The key issue is the time (and money) it takes to dry out houses. In traditionally built properties, the bricks and block work both absorb flood water, and both take a long time to dry. Even using industrial drying techniques, the properties can take as long as a year to dry and that means massive costs to insurers.

But rather than see insurers simply avoid any homes with a risk of flooding, the construction industry could turn to steel homes. Here, the drying procedure is as simple as removing the plasterboards, treating the insulation if necessary, wiping down the steel frame and replacing the plasterboard. A house can be dried in as little as three days, massively reducing the time a family is forced to live away from their home – and keeping insurers onside.

The advantages of using a material that doesn't absorb water, like steel, are more than time. Floodwater tends to be contaminated with bacteria, chemicals and even sewage, and

materials such as timber frames absorb both the water and contaminants. The refurbishment process then has to not only dry the materials but decontaminate them, which is an additional slow and costly process. Steel is more hygienic, as the material is never itself contaminated, and any bacteria are simply cleaned from the surface.

Steel also withstands much higher pressure. While that may seem irrelevant given the nominal pressures caused by stagnant flood water, any flooding involving fast-flowing waters, as was seen in Boscastle, can put a real strain on a house. The engineered designs which see the steel frame bolted to the foundations stand up to considerably more stress than traditional homes – after all, when timber frames absorb flood water, the damp wood can warp and even collapse.

Dr Bassam Burgan is chair of the Steel Homes Group, an industry body formed to consider the advantages steel framed buildings can offer, with specific regard to the superior quality and sustainability benefits of off-site construction.

He believes that using steel frames could solve problems not just for homeowners, but for the Government too:

“Whether you blame global warming, town planning or just bad luck, there certainly has been a rise in flooding in recent years. There may be little sympathy with the insurers looking to pull-out of offering flood damage cover, but their point of view is clear: the Government cannot look to increase the housing supply by throwing up houses in flood-risk areas, and then expect the insurance industry to pick up the bill when something goes wrong.

“The Government believes the new homes it is approving are not at a high-risk of flooding, but the insurance companies are not willing to take the risk. Both sides seem quite insistent on their course of action, but steel-framed homes may offer a neutral ground for the two to agree. If a commitment was made to construct steel-framed homes, then insurance companies would be exposed to less risk, as any flooding costs would be substantially lower.

“The Government would be happy as they would be able to build their homes – and at no extra cost or inconvenience. Indeed, the homes would be improved as they would have the quality, cost and environmental benefits that off-site construction offers.”

Dr Burgan’s comments seem to be reflected in the statistics: more homes than ever were constructed with steel frames this year, following a 20 per cent rise in use in 2006 - and the structural strength of the material must surely be considered a factor in its renewed popularity.

Indeed, a recent survey commissioned by the Steel Homes Group found that 95 per cent of people aged over 45 felt that the strength and durability of the material used to build their house was important. Less experienced homebuyers were not as focussed on those factors, with 88 per cent of under 25s considering them key.

Crucial to steel’s increased popularity has been the backing offered by industry accreditations. All Steel Homes Group members have accreditation, be it BBA, BRE or Lloyds, and this means homebuyers are able to easily get mortgages.

For the steel homes industry, the next step is to demonstrate to the homebuyer that the improved strength, durability and withstanding of flooding does not come at a price. It is

only in recent years that myths have been dispelled, for instance, that steel-framed homes mean corrugated, unsightly structures.

Dr Burgan agrees, insisting the more benefits his group can illustrate to homeowners, the happier they'll be to have their preconceptions blown out the water.

“We do face an up-hill struggle because some people, even within the industry, insist on suggesting that the pay-off for having strong houses that stand-up better to flooding is to have a house that is more difficult to repair. Of course, the reality is that generic parts are readily available, and we need to get that message across to the public: that steel-framed homes are the way forward – especially in areas at risk of flooding.”