



Basements are a useful way of maximising floorspace, yet developers often cite costs as a prohibiting factor. Chris Windle

Bargain basement

Building below ground dropped out of fashion just after the First World War when land was abundant and basements were dark and damp. But in these days of high-density planning guidelines developers are being forced to consider basements once again.

"Over the last couple of years we have noticed an increasing interest," says Alan Tovey, director of The Basement Information Centre (TBIC). There are several reasons for this explains Tovey: "Increased densities related to higher land costs will influence the cost of basements and with a poorer quality of land, foundations are more expensive so builders want to get something for the extra cost."

living spaces

Basements have also evolved to become more than just storage areas. Developers and homeowners are looking to transform them into high quality living spaces. John Mullarkey, management consultant at Gemech, says: "Basements are now becoming sitting rooms, gyms, pools and games rooms. Whereas a room in the roof doesn't increase the footprint much, a basement is a blank canvas that rarely has planning issues." He adds: "If the developer has a reasonable amount of land it can batter down on one side and put windows in so that it becomes another level to the house."

But despite the fact that "virtually everyone wants a basement," according to Tovey, they continue to struggle when it comes to wooing the volume housebuilder. Michael Edwards, marketing director of Thermonex, says: "Most of our business is with small self builders. But the cost of land is going up so housebuilders will want to maximise what they have." Mullarkey adds: "We've noticed smaller developers doing bespoke jobs have started to use new build basements."

One housebuilder that took the plunge was Martin Grant. Thermonex carried out the design and installation of 35 basements on Martin Grant's 89-unit site on the banks of the river Cam on the outskirts of Cambridge. Four precasters were chosen for the different precast concrete works. Edwards says: "Some people are frightened of basements because they

haven't seen them before. Martin Grant thought they had made a mistake but came back and said they wish they had done them all that way."

A basement is undoubtedly an attractive feature for the potential buyer but larger housebuilders are still put off by the price and work involved. Ian Randall, md of Linden Homes south east says: "The additional space is always popular with homebuyers, but they are not usually prepared to swallow this cost."

He adds: "Basements are a great way of getting around land shortages. But the additional cost per square foot in a basement compared to a regular storey is considerable due to insulation and ventilation challenges. Consequently, we have not found basements cost effective in the mid market."

Basement enthusiasts would say much of the cost is cancelled out because expensive foundations are not needed. The TBIC says that basements can, in fact, increase margins by reducing the amount of land used. On a 129sq m house, TBIC calculates, a fully below ground basement will add 6.7% to the construction cost but will save 21% on land and increase margins by 9.3%. Margins on houses with a partially below ground basement grow to 15.7%. This is without the extra premium a house with a basement may command.

But housebuilders are still reluctant to introduce basements as standard and Edwards and Mullarkey concede that retrofits are far more popular as homeowners seek to improve rather than move. But enquiries are on the increase and smaller plots mean housebuilders will have to look to more innovative ways of creating space. So the future may well be underground. **hb**

BUILDING A BASEMENT

Basement construction has traditionally been about blockwork and conventional in-situ reinforced concrete construction, usually with a separate tanking system. In-situ concrete walls can also be constructed with insulated concrete permanent formwork. These systems typically consist of either tied expanded or extruded polystyrene panels or hollow polystyrene blocks, which are filled with concrete to form insulated structural walls.

The use of precast concrete wall panels, common in northern Europe, is on the increase in Britain. A number of precast walls are now available, and other systems, including box culverts, have also become more popular.

Waterproofing has improved as membranes become more durable. In Britain the traditional method of tanking is the use of bituminous membranes or asphalt. Alternatively enhanced waterproofing admixtures can give concrete walls and floors direct water resistance.

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