

# SelfBuild

THE PRACTICAL MAGAZINE FOR DESIGNING AND BUILDING A HOME OF YOUR OWN

## TOWERING SUCCESS

One woman's feat of turning a derelict water tower into a stunning home

### PLUS DIY DESIGN

Software to help you plan your house

#### ■ DESIGN DIGEST

Seven pages of pure inspiration

#### ■ THE ZERO ENERGY HOME

How to save on those fuel bills

#### ■ SEVEN PAGES OF PLOTS

Plus our unique land-finding guide



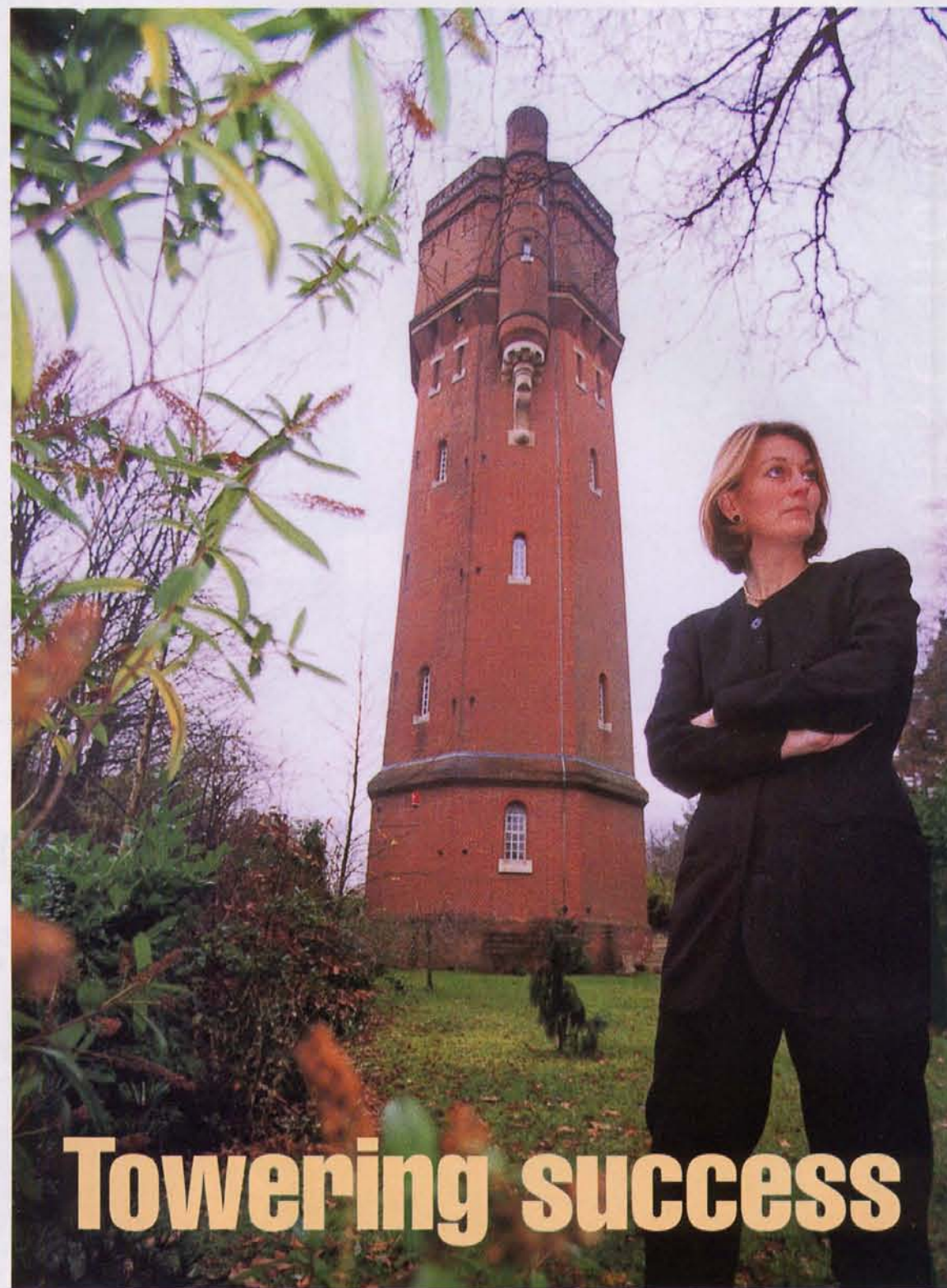
**THE MILL'S TALE**  
The couple who made their dream come true

FEBRUARY 1999 £2.50



9 771368 283121

02



# Towering success

Photography by Stewart White

**E**lspeth Beard would have to grow seriously long hair if ever she wanted to escape from the top of her home Rapunzel-style, for she and her seven year old son, Tom, live in Munstead Water Tower which is 130 feet high.

Elspeth, an architect, had converted unusual listed buildings before, but never for herself.

## 1 Elspeth Beard Converted water tower

"I lived in London in rented properties prior to this project," she recalls, "and began looking for somewhere to buy. Preferably something which had never been lived in as a house, as this

would give me the freedom to design living spaces without the usual restraints of ready-made kitchens and bedrooms. I like strong, powerful industrial buildings."

When a friend cycled past the derelict tower and saw a for sale sign he immediately told Elspeth, whose first reaction was less than positive.

Finding herself in the area some

weeks later she decided to seek out the property, however, and realised it was such an amazing place that she immediately wanted to live there.

The grade II listed octagonal building is situated four miles from Guildford, and was constructed in 1898 and used for around seventy years. Four cast iron pipes running from ground to fifth floor level supplied the 30 foot diameter steel riveted tank, which held approximately 40,000 gallons to provide water to the houses in Munstead and the neighbouring villages.

"Munstead Water Tower was sold as part of Thames Water's privatisation, and sealed bids were initially sought," Elspeth explains. "A stressful auction followed in October 1988, with four other people intent on purchasing the building, but I eventually bought it for £121,000 - with no planning permission."

The main problem associated with converting the tower was the building regulations for means of escape in case of fire. For such a tall building two staircases were necessary, but this would have ensured there was no room left for accommodation.

After a year, planning and listed building consent were granted, with Elspeth having won an appeal to secure a relaxation from the fire protection and means of escape regulations. The building is fitted with a fire alarm system, linked to smoke detectors on each level, and magnetic door holders are fixed to the main doors of each room.

The building was in a very poor state of repair, and consisted originally of six floors, with timber stairs bolted to the external walls on three sides and quarter landings at each level. A twenty foot Victorian spiral staircase in the turret provided access to the roof.



Elspeth decided to keep the existing levels, adding mezzanines and galleries to four of the floors. The accommodation now comprises a ground floor reception hall, with two bedrooms and an office making up the first three floors, and a kitchen/dining room on the fourth floor. The living room is situated within the old tank room on the fifth floor with a roof terrace above.

"Originally I was going to design it like a normal house, with living rooms below and bedrooms above," says Elspeth, "but for means of escape the kitchen needed to be above the bedrooms in case of fire, and I decided that the views would be better appreciated by having a living room at the top of the tower. Now, having lived in it, I realise that this is the way it should be."

Elspeth can mark the progress of

**Elspeth decided to keep the existing levels, adding mezzanines and galleries to four of the floors**

each stage of conversion in years. In order to keep costs down to approximately £115,000 she undertook much of the work herself over a five year period, financing each stage as she could afford to and parcelling up other tasks which she tendered out.

Initially, the whole idea was exciting but, by year six, with a young son to look after in addition to a full time job, she was having serious second thoughts.

During year one, Elspeth had been busy clearing out the tower, in which birds had lived for twenty years, and removing the old pipes and steel tank situated on the top floor. The base of this was retained to provide the curved, riveted steel kitchen ceiling and the valve and float now stand in the living room.

Year two was spent securing the main fabric of the tower. There was extensive water penetration through the roof and large cracks had developed within the brickwork. With the building fully scaffolded all cracks

Elspeth Beard outside her water tower home which took six years to convert (left) and (above) on the mezzanine of one of the bedrooms which she uses as a home office



The spectacular living room as it looks today (above and right) and as it was when Elspeth started the renovation (below). The fifth floor originally housed the water tank. The bottom of the tank now provides an unusual ceiling for the kitchen below while the float is retained in the living room and can be seen in the main picture (right). The glassed roof creates a light airy feel. The spiral staircase leads to the terrace which offers spectacular 360 degree views over Surrey and the surrounding counties, all the way to the coast

were cut out and restitched before complete repointing began. This was undertaken by a local builder and took nine months to complete.

The brickwork was sprayed with silicone to prevent further water penetration through the one metre thick walls although, being situated in an exposed hillside location, it has proved difficult to keep water out of the lofty tower.

Elspeth rescreeded and asphalted the concrete roof, changing the position of the rainwater pipe. Then sixty-two double glazed metal windows, purpose-made by Clement Brothers in Surrey, were fitted into the original openings.

"Because the windows needed to be quite small I decided on metal rather than timber units, as the steel is far



thinner and allows maximum light," explains Elspeth. "The living room alone has twenty-seven small windows, and it is a difficult building to make energy efficient. Two gas boilers on the ground floor run the central heating radiators."

Next, new steel stairs were installed and steel beams fixed at each level to support these and the existing beams, before galleries and mezzanines were built. Engineer, Chris Wise, designed and sized the beams and, in year four, Elspeth began to build the floors.

By this time she had moved into the property, and was undertaking much of the finishing off, including laying paving slabs, undertaking plumbing and electrics, building internal walls and tackling the drainage in the garden, putting in her own septic tank and building a septagonal brick garage



with a small bedsit in the roof space, which is designed to look like a little pumping station for the tower. Each task was new and untested, and Elspeth picked things up as she went along.

The stairs, which run around the property like a helix, she enclosed with four layers of plasterboard, which gives a one hour fire rating, and fitted emergency lighting.

"Throughout the project, passers-by have shown a keen interest and often knocked on the door," laughs Elspeth, "but the funniest incident happened when I was busy working on the fourth floor and three Japanese armed with cameras walked in!"

Living in such a building is bound to create more than a few problems, and Elspeth now wishes she had included a dumb waiter on an electric hoist —

**The scale of these buildings is often difficult to comprehend, although the amount of space and light is phenomenal."**



especially when she is lugging shopping up the stairs and bags of rubbish down.

Intercoms and door buzzers are fitted on each floor which are linked to the front door, and there are five toilets as Elspeth learnt a salutary lesson early on when working at the top of the tower, with the Portaloo 142 steps down.

"I tend to buy four or five of everything, and have three hoovers and cleaning products on each floor," she says.

"I wouldn't want to put anyone off such a conversion — the views alone are worth the effort — but they must be aware that such a project can't be taken on lightly. The scale of these buildings is often difficult to comprehend, although the amount of space and light is phenomenal."

**Contacts**

Architect: Elspeth Beard, 01483 860342  
Elspeth welcomes any similar projects converting unusual buildings, and is happy to offer advice.

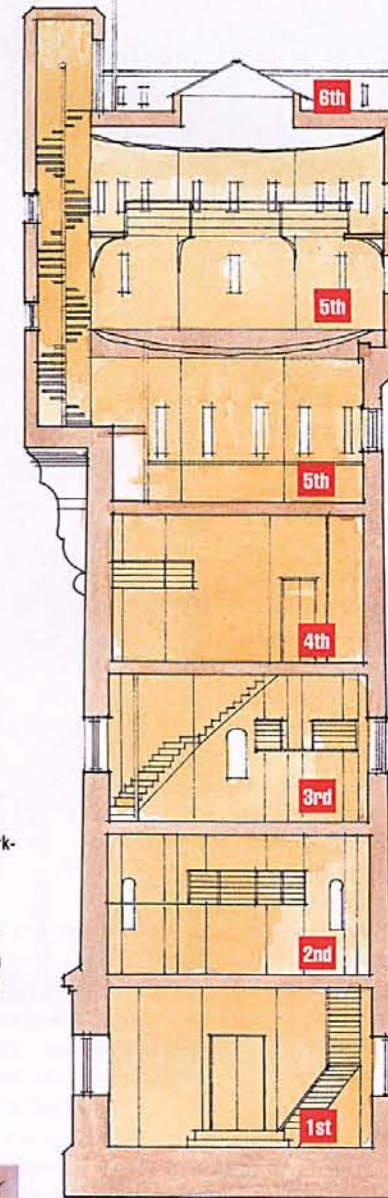
One large octagonal room now occupies each floor, varying from 25–30 feet across, with suspended hanging bathrooms to the bedroom levels and a gallery within the living room.

The interior has been designed to retain as much of the original building as practically possible, with brickwork simply painted, and succeeds in maintaining its industrial character.

All in all, it can only be described as a towering success.



- Ground. Hall
- 1st. Bedroom
- 2nd. Study/office
- 3rd. Bedroom
- 4th. Kitchen/dining
- 5th. Living area
- 6th. Terrace



ABOVE: Elspeth working on the roof terrace during the renovation. To keep costs down, Elspeth did a lot of the work herself  
BELOW: The main bedroom with bath and toilet on the mezzanine

