



## BRITISH PRACTICE BACA BEATS THE DUTCH IN THEIR OWN WATERS

London-based practice BACA has won a 20 million euro (£15 million) project to design flood-resistant homes in Dordrecht, the Netherlands, seeing off a host of Dutch hopefuls.

Kees Christiaanse Architects and Mecanoo were among the runners up in the competition to design 80-100 floating, amphibious and flood-resilient homes.

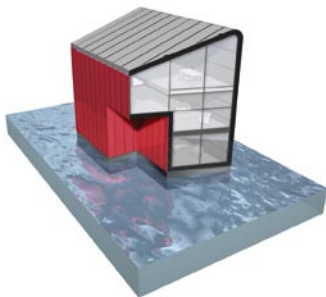
The floating units are single lightweight timber-frame houses

built on buoyant platforms while the amphibious three-storey units rest on 'concrete buoyancy decks' which rise with flood water.

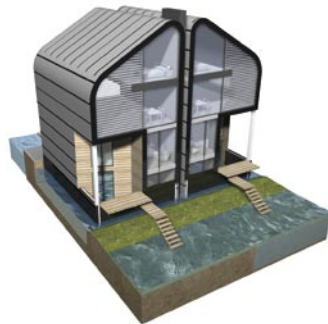
The resilient units have secondary decks above ground level that allow for escape during floods.

The scheme is due to complete in 2009. *Max Thompson*

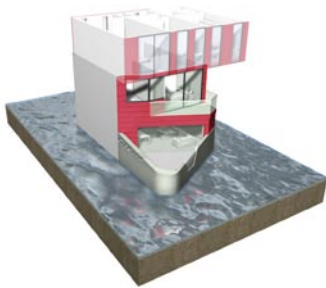
Read BACA partner Robert Barker's comment on flood-resistant design on page 19



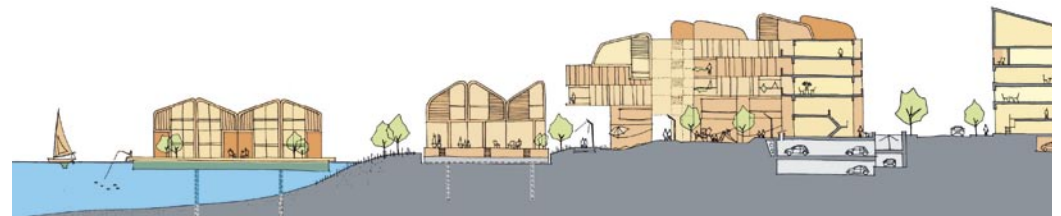
Floating home



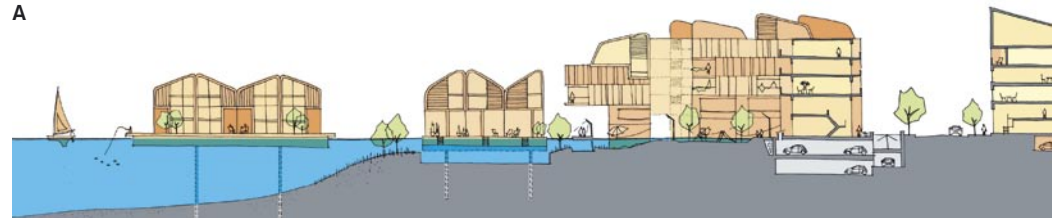
Amphibious home



Flood-resilient home



A



B

Top BACA's proposal for flood-resistant homes in the Netherlands

Right Sections showing normal conditions (A) and one-in-1,000-year flooding (B)



## Opinion Modern flood management is about living with rising water, not blocking it out, writes *Robert Barker*

When one thinks of flood defence, the story of the little Dutch boy with his finger in the dyke to keep the town safe from the rising waters comes to mind. This story demonstrates the awareness that every Dutch person supposedly has of their fragile relationship with water and the importance of collective vigilance. Yet this is not particularly evident in Dutch culture today, in which the public often complacently believes it has mastered the water. But Dutch ministers and policy-makers realise that the days of the great Delta Works, which followed the devastating floods of 1953 and saw the extensive construction of dykes and dams, are now over. A reformed approach to flood management is developing, with programmes like 'Living with Water' and 'Room for the River' promoting a collaborative approach between water management and development on land.

Similar changes have occurred here in the UK, and too often we forget that we have a pretty good pedigree of water management in this country. After all, in 1984 we completed the Thames Barrier, one of the most reliable flood defences in the world. It is still seen as pivotal in London's defences for the next 100 years. As a nation we reclaimed most of the natural wetlands, such as the Somerset Levels and the Fens, turning them into fertile agricultural land. We tamed the rivers, linked them with man-made canals, and built warehouses, mills, factories and power plants along them – all in the name of trade and industry. Unfortunately, these innovations and interventions have changed the natural control mechanisms of the rivers, leaving an inflexible system that is showing signs of strain from the increasingly variable British weather.

But the tide has changed and 'flood defence' is no longer the policy line – now we call it 'flood management'. The Environment Agency has more influence in refusing

Floodproof homes planned for Dordrecht, the Netherlands, by BACA Architects with the Dura Vermeer



irresponsible development, or at least some of it (13 major developments were still permitted against Environment Agency advice in 2006/7). This is as much out of a greater environmental sensitivity, typical of post-industrialised nations, as it is a response to the improved understanding and respect for natural systems that we have developed.

Modern flood management is about working with and understanding natural systems rather than seeking to control them. Our planning and architecture needs to do the same if it is to co-exist with changing waterways. But modern flood management need not prohibit development. Around the world one can think of numerous examples of communities that have lived with regular flooding and others that have chosen to live on or over the water. The great Tonlé Sap lake in Cambodia hosts a whole floating community, which depends on the water for its livelihood. A number of floating homes have made the headlines recently, such as Art Zaaier's floating homes for the IJburg development in Amsterdam.

However, designing floodproof developments is more complicated than just specifying floating homes and raised walkways. We need a whole plethora of tools – from fast-recovery landscaping to flood-resilient lamp

posts and bins – if we are to learn to cope with floods and still carry on our daily business. One of our projects at BACA Architects, for a floodproof development in Dordrecht, Holland (*pictured above*), will go part of the way towards this, offering high-density, water-compatible housing and space.

The British government's LIFE (Long-term Initiatives for Flood Risk Environments) scheme, which seeks to combine ecological flood mitigation with zero-carbon development, should also help provide a few solutions. It is a project developed in the UK

### **We too often forget that we have a pretty good pedigree of water management in the UK**

to explore solutions for UK river courses. But much more needs to be done by designers and developers if we are to create a greater synergy between development systems and natural systems, especially when we factor in the uncertainty of climate change. LIFE will hopefully make people aware of the options available when it is released later in the year. But in the meantime, it is still the Dutch we must look to for built innovation.

Robert Barker is a founding partner of BACA Architects