

GRAND DESIGNS

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GOING DUTCH

BRITISH ARCHITECTS ARE FOLLOWING HOLLAND'S
EXAMPLE - BUILDING EXCITING NEW HOMES THAT
WILL WITHSTAND RISING TIDES

SUBMARINE DREAMS

architect Koen Olthuis (waterstudio.nl)

what A two-storey floating home - with one storey submerged beneath the water

where Aalsmeer, the Netherlands

When the Snel family bought their lakeside plot of land in Aalsmeer in Holland, they had no intention of living in a floating house.

But when planning permission was refused all was not lost, as there was a licence for a floating home - though the detailed consent stipulated it couldn't be more than 6m x 25m, and no more than 4m high.

It was up to specialist floating homes architect Koen Olthuis to give the family the 300sqm home they

wanted. 'There was a limit on how high we could go, but not how deep under the water,' he remembers. So he built a two-storey floating home - with one storey completely submerged, contained within the floating concrete foundation. As the family didn't want to sleep underwater, Koen had to cram as much into the main floor as possible. The basement is used for storage and to house a home cinema. A roof terrace gives the Snels space to enjoy the views of the lake.

This floating house has travelled a long way. It was built at a dry dock 110km from Aalsmeer, and navigated along the canals to its new home.

The 600,000kg weight of the house prevents it from rocking like a boat, so it doesn't feel as if you're on water, even when the lake rises or drops.

140 / MAY 2008 / GRAND DESIGNS



above The Snel family have extra space and the perfect place to watch the water with this decked outdoor area

right The reflected light from the water gives the home a special quality and atmosphere

God created the world, but the Dutch created Holland - or so the saying goes. It's certainly true that large tracts of the Netherlands are below sea level, and without the dykes, polders and pumping systems the Dutch have created, these areas would disappear beneath the waves. So it's unsurprising that when it comes to living with water, they're the world leaders.

There have always been houseboats in Holland, but recent decades have seen the invention of floating homes - full-size houses with the same mod cons as any other, just on water rather than land.

Architectural practice Waterstudio specialises in floating homes, and is planning whole developments where not only the houses float, but also the roads and gardens. 'In Dubai, we're even designing floating islands,' says Koen Olthuis of Waterstudio.

'Instead of creating beaches which will be constantly eroded by the sea, we can make concrete and foam foundations with white sand and palm trees on top.'

They're also building amphibious houses that sit on foundations and can float in the event of a flood. These exist in Holland already, but Waterstudio is also about to build a one-off amphibious house in the UK, in Maidenhead.

British architects are becoming experts at designing with floods in mind, too. London-based design

firm Baca, which specialises in flood-resistant architecture, has been commissioned to design a whole flood-proof development for Dordrecht, where a combination of floating, amphibious and flood-resilient homes are located in a community designed around water.

'The idea is to allow people to enjoy living by the water,' architect Robert Barker explains. 'There are hard landscaped recreational areas on the banks which, if flooded, can then be washed down easily afterwards. Life goes back to normal.'

Dutch design principles have also been a major influence on a proposed new development of 26 floating luxury homes in Liverpool's Princes Dock. Designed by local Architects KKA to jut out over the water like enormous yachts, the 171sqm houses will sit on stilts that allow them to float during unusually high tides.

Baca is working on a DEFRA-funded project looking at how to implement different flood-sensitive building techniques in the UK. The Life Project is examining three riverside test sites in detail, each prone to different levels of flooding.

This summer they will publish a guidebook showing different methods and what types of flood-risk area they are best suited to, and how these can be built into sustainable homes with high-quality architecture. The guide will be available on Baca's website (baca.uk.com).



Henk and Margo Bergschneider's amphibious house provides the best of both worlds - standing on land, but with the ability to float on water when needed



GO WITH THE FLOW

architect Koen Olthuis (waterstudio.nl)

what A house that looks land-bound - but that floats when necessary

where Utrecht, the Netherlands

This chic white house, home to TV executives Henk and Margo Bergschneider, doesn't immediately look as if it's going to float - it's surrounded by land on three sides. But when it becomes necessary, it can float like a cork.

The ground it's sitting on is only kept dry by human effort. It's in a polder - a piece of land with dykes and canals which is kept water-free by constantly running pumps. There are over 3,000 polders in the low-lying Netherlands, and houses built on them can be in danger of flooding. This area of Utrecht is likely to flood once every 50 years, so the level of risk is high

enough to make it worthwhile taking steps to build protection into the homes located there.

But the Bergschneiders didn't want to live in a home that looked like it was floating. They wanted to live in a beautifully designed home on dry land, with a garden, and this is where Koen's knowledge and expertise came in handy. He calls the solution an amphibious home - one that is built on a plinth like that of a floating home, but sits on land most of the time. When the water rises to a certain level, the plinth floats, keeping the inside of the house safe and dry. The house can keep running normally, as all its essential connections to services are flexible and can extend to cope with the change in level.

But most of the time this timber- and steel-framed home with its white stucco walls and large windows seems just like any other modern, stylish, architect-designed home.

