

Blue

THE WATER ISSUE

BUBBLE WRAP

PHILIP DREW ON BEIJING'S OLYMPIC AQUATIC CENTRE

QINGYUN MA
ON CHINA & THE FUTURE

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THE BLUE PAGES
WATER INNOVATIONS
FOR SUSTAINABILITY

WATERFRONT REVIVAL
WAITANGI PARK, WELLINGTON

BERLIN'S RIVER POOL

SCULPTURE UNDER THE SEA

EAMES' UNBUILT AQUARIUM



Sink or swim

Man-made accretions slide with the tide.

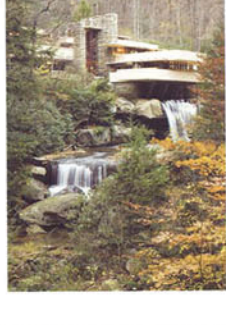
Comprising 70 per cent of our bodies, covering 70 per cent of our earth's surface, and providing more than 50 per cent of the world's 'renewable' energy, water is also the ultimate adaptor: evaporating, condensing, crystallising, icing, melting, flowing and filling, according to its environment.

The beauty of water, and its emotional power as a latent energy force, is celebrated throughout architecture, from the rainwater-pooled Roman atriums and trickling water gardens of the Alhambra and the Taj Mahal, to feng shui-directed streams, artificial English lakes, and reflecting ponds worldwide.

Fallingwater, Frank Lloyd Wright's built homage to the Bear Run waterfall, is one more recent icon to water. Tadao Ando's masterful

intensification of the calm and weight of water in his epic Awaji Island Water Temple is another. Parallel runs our history of water manipulation: water pouring through aqueducts, powering through windmills, pissing out of ornate Villa d'Este cupids and gargoyles, gushing over locks, pounding at levees and directed with intense precision to cut steel and glass.

To date, some of the most poetic odes to water have proven less than perfect in practical terms. But, climes they are a changin'; resources are diminishing, and a house can no longer be justified as folly. With fast-spreading biofuel plantations jostling with food crops and people for space, what is the appropriate built response for such epic change, and how and where do we build our houses?



There in a beautiful forest was a solid, high rock ledge rising beside a waterfall, and the natural thing seemed to be to cantilever the house from that rock bank over the falling water ... FRANK LLOYD WRIGHT TO HIGH CONCRETE IN AN INTERVIEW 1954



01 Adjacent to some of Sydney's most expensive real estate, one tenacious squatter, known to locals as Jimmy, trumps them all for extreme waterfront
02 A classic Haight Point original in the Sausalito (California) artists' community. This shackboat has been continuously occupied since the 1970s; its pontoon works equally well as a weight-bearing foundation
03 The Sausalito houseboats are permanently moored along secure, pilaster-lined piers with adjacent car parking and rubbish collection points
04 September 9, 2005. Flooded street in New Orleans post-Hurricane Katrina



The concept of the floating house is nothing new, but the genre just got a whole lot sexier with a raft of new technologies and forms. Koen Olthuis, a pioneer of modern floating structures, hails from waterlogged Holland. His firm Waterstudio.NL is dedicated to designing water-interactive houses using five main concepts:

- **lifted** – a dwelling on piles far above the highest water level.
- **waterproof** – resistant to the presence of water. (For example a garage with elevated services, built of concrete and tiles, will flood without damage).
- **sealed** – dwellings isolated with watertight doors and windows (as in a U-boat).
- **amphibious** – houses used in dry conditions with a foundation that will float if the land floods.
- **floating** – the familiar floating house.

Almost one-third of Holland consists of polders, an artificial landscape of reclaimed land below sea level protected by dykes and maintained by constant pumping. Olthuis says rising water levels are forcing Holland to 'depolderise', watering down the land available for building. Using patented foundations of foam and concrete, anchored on telescopic piers to eliminate horizontal movement and to allow interconnection for roads, gardens and housing zones, Waterstudio.NL is finalising a 1400-



strong floating settlement for a soon-to-be flooded polder. Fishing for answers, I grilled by email: Koen, is it a houseboat? "A houseboat is in fact a boat with a house-like unit on top. A water house is a house with a floating foundation, but with the exact same specifications as a normal house." Does the floating nature restrict its design? "Everything is technically possible, but not always economically feasible. We always refer to floating oil platforms on the ocean, with many people working and living on board. If that is possible, then a floating apartment beyond the waterfront is easy." How do floating structures and their piers affect existing aquiferous ecosystems? "We tell our clients about the environmental benefits of floating buildings compared to landfill projects. Landfill will permanently destroy the water life of the footprint. Floating buildings give only a shadow to the seabed. We have engineered a patent for a floating beach (www.dutchdocklands.com). It has the look of a beach ... but it keeps the seabed intact. This (3,000m²) beach will be built by the end of 2008 ... we expect a new ecosystem to develop on the underside of the structure. Exciting for divers!" What's on the drawing board? "We are preparing a dynamic development in which buildings can be moved during their life span. Normally a building will be demolished when its economical value is no longer in balance with the value of the land. In a floating city ... a building can be moved to another part that is in balance with its value and continue functioning. This will save a lot of energy and is much more sustainable. We [will] design now a floating school which will move every 10 years to a newer part of Amsterdam." >>

05 Conceived as a driver-in/float-in residence with submerged basement bedroom, the Rondje House by Waterstudio.NL is tethered on underwater piers and incorporates undercover access to the mandatory speedboat. Six of these houses are currently under construction, due for completion in late 2008

