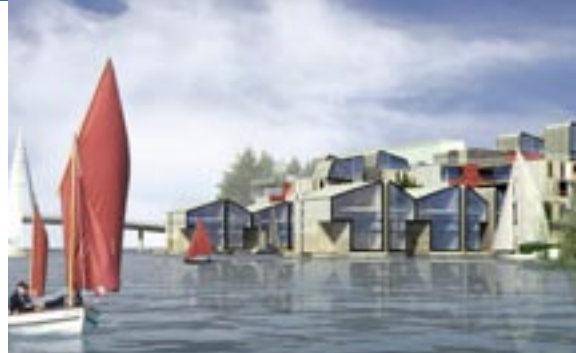
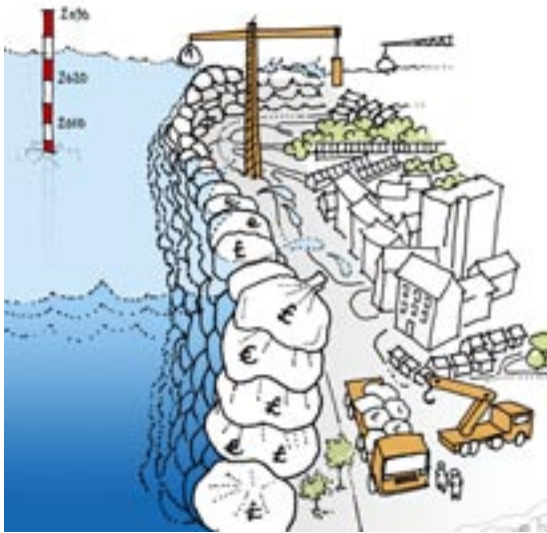




**baca** ARCHITECTURE  
STRATEGIC PLANNING  
ENVIRONMENTAL DESIGN

# WORKING WITH WATER





CONTINUAL IMPROVEMENT OF FLOOD DEFENCES COMES AT A COST AND STILL FACES RISK OF POTENTIAL FAILURE.

### Opening the floodgates

With few obvious sites available for new development and existing towns hemmed in by protected Green Belt land, pressure to build new homes on floodplains is greater than ever. However, floodplains are expanding. Rising sea levels and stormier weather, caused by climate change, are putting more land at risk of flooding. Compounding this problem, each new home built results in more greenhouse gases emitted, leading to further global warming.

In recent times flood protection has been concerned with keeping water out, defending property from water and living on dry land. Globally, there has been a change in attitude towards flood protection in response to the growing risk and uncertainty generated by climate change. The future of flood protection is in part a return to that of the past. Focus has shifted to more traditional flood management techniques that allow land to be sacrificially flooded.

“These changes [in attitude] are required because traditional water management methods are reaching their limits: technical measures alone are insufficient.” [www.levenmetwater.nl](http://www.levenmetwater.nl)

Barker and Coutts Architects (Baca) developed the LiFE project (Long-term Initiatives for Flood-risk Environments) to explore how to resolve the conflicting ambition for new development and making space for water. This initiative is based on 3 key principles.

### An Integrated Solution

The solution is to combine ‘natural’ ecological flood management and sustainable construction. Land and water assets become multi functional, integrating selective and innovative development with land for recreation, renewable energy production, local food production, water storage and flood alleviation.

### Longevity & Adaptability

A versatile and adaptable flood alleviation strategy is required, which through a multifarious response to risk and vulnerability, can cope with the increasing unpredictability and severity caused by climate change. Secondary and tertiary mechanisms to cope with flooding need to be integrated into design and planning so that protection is not just reliant on a singular fallible line of defence.

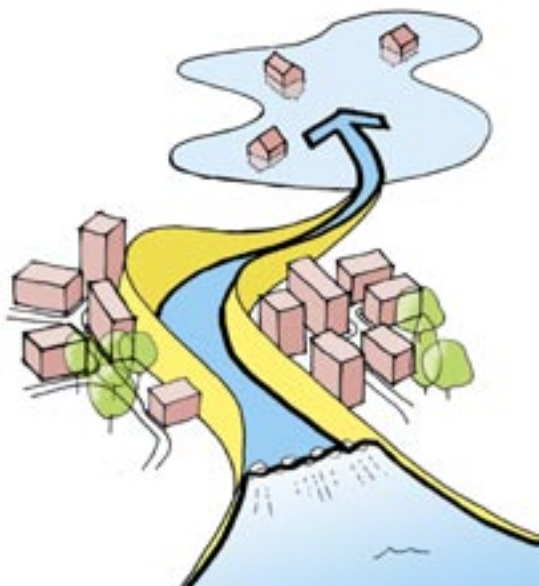
### Continuity of Life

A further shift in concept is that increased flood occurrences should not disrupt life and business. Design should be based on providing ‘continuity of daily life’ - before, during and after a flood, to avoid the detrimental economic and social impacts that would otherwise result. A development that intrinsically provides flood resilience, through intelligent design and planning, should give insurers and financiers the confidence to offer affordable, long-term policies and investment.

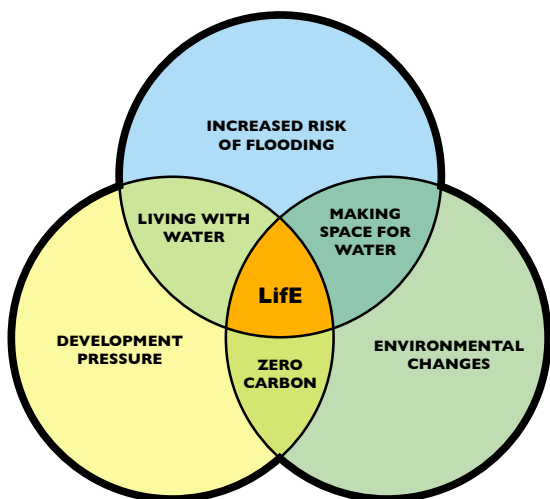
This holistic approach could potentially release land for development that would not otherwise be available, allowing urban growth without creating urban sprawl, and improving links with existing communities.

The principles of BACA’s approach are illustrated in the adjacent diagram.

this document expresses the views of Baca Architects



HOLISTIC DESIGN IDEAS ARE REQUIRED TO AVOID DEFERRING PROBLEMS TO OTHER AREAS.



DESIGN APPROACH TO THE LiFE PROJECT





## WORK IN PROGRESS

- HIGH DENSITY FLOOD RESILIENT DEVELOPMENT
- DYNAMIC MASTERPLANNING
- INTEGRATED AMENITY & FLOOD STORAGE
- CONVEYANCE ENERGY CORRIDORS
- SEA LEVEL RISE LINKED PLANNING AND TRANSITIONAL GROWTH
- MULTI-FUNCTIONAL INTERTIDAL LAGOONS
- MODULAR ADAPTABLE CONSTRUCTION

Clockwise from top left  
 Architecture Week 2007. Baca designed the graphic installation at City Hall to raise awareness about flooding.  
 Baca presented the LiFE project as part of the public consultation for Hackbridge Week 2008. The Dordrecht floodproof pilot project demonstrates high density water compatible floodproof development. Floodplain conveyance paths and drainage routes are used as the basis for a new approach to spatial planning in Peterborough. London docks are reanimated by the new Venture Xtreme surf centre at Silvertown Quays.



Baca is an award winning research led design practice specialising in integrated environmental and high quality design.

The practice has a diverse array of projects that includes, one off houses, social housing, master planning, memorials and commercial projects.

Baca is internationally recognised for innovation in flood resilient and adaptable architecture and spatial planning.

Baca are the project leaders of the LiFE project, exploring innovative ways to tackle flooding and climate change through the built environment.

**baca**

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