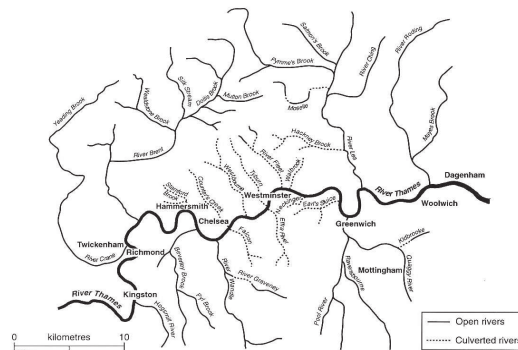


## URBAN ENVIRONMENTS

Dr Andrew Brookes  
*United Kingdom*

### 1. "LOST RIVERS OF LONDON"

- Rivers culverted, lined or enlarged
- Fauna and flora affected by poor water quality
- Loss of riparian vegetation
- Erosion of banks, leading to bank protection
- Negative views of watercourses



### 2. IMPORTANCE OF RIVER CORRIDORS

- Provide natural refuges and corridors for wildlife
- Improve flood storage capacity
- Connect communities
- Public open space provides an escape (healthy environment)
- Important for education



### Drivers for change

- Last 10 years+:-
  - Land use planning
  - Legal consents and licences
  - The Water Framework Directive
  - The Habitats Directive
  - Miscellaneous policies
  - Available funding



River Channel Types in the Wandle Catchment

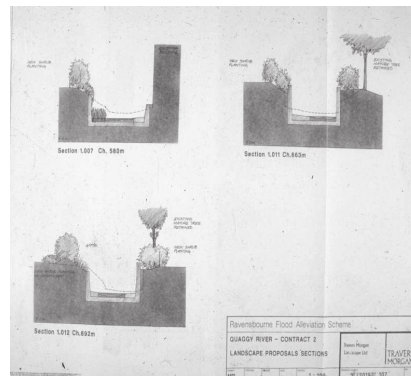


Figure 1. London Plan 2004: Blue Ribbon Network

- Unique policy
  - Resist development if loss of biodiversity
  - Design new waterside developments to increase habitats
  - Take opportunities to open culverts and naturalise river channels

### 3. CONTINUUM: EXAMPLE 1

- **River Quaggy (south London);  
Early 1990s**
  - Enhancement opportunities
  - Options evaluation
  - Public involvement
  - Detailed appraisal issues *eg groundwater*
  - Other examples: 1950's football pitches in parks



### 4. CONTINUUM: EXAMPLE 2

- **River Blackwater, Surrey and Hampshire;  
Early 1990's**
  - Developers meet cost
  - Opportunity for re-naturalisation
  - Two stage channel
  - Wildlife corridors (in channel and on adjacent floodplains)

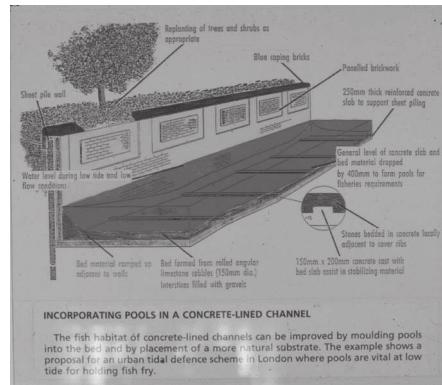




### 5. CONTINUUM: EXAMPLE 3

- **River Crane, Twickenham, London; Early 1990's**

- Flood control driven
- Constrained river corridor
- Involvement of riparian owners in bankside treatment
- Unique '*in channel*' corridor
- Notion of *Creation*



### 6. CONTINUUM: EXAMPLE 4

- **Airport; Built 2003/04**

- Purpose of 'Twin Rivers'
- £40 million from developer
- Alternative options
- Issues with chosen option
- Sustainable development?

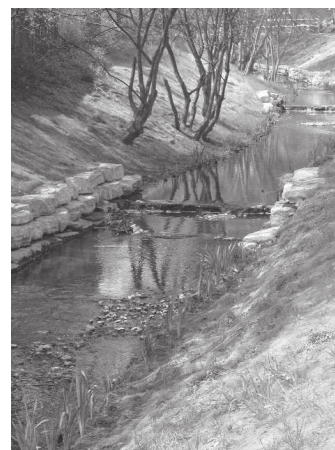
- **Where are the boundaries?**

- Deculverting/ artificial watercourses;
- poor water quality



### 7. SOME CONSTRAINTS

- Lack of space leading to 'harder solutions'
- '*Creation*' rather than re-naturalisation (eg low-flow width; substrate)
- Water quality remains poor; reed bed treatment
- Vandalism/ arson of 'softer' solutions causes problems
- Need for adaptive management



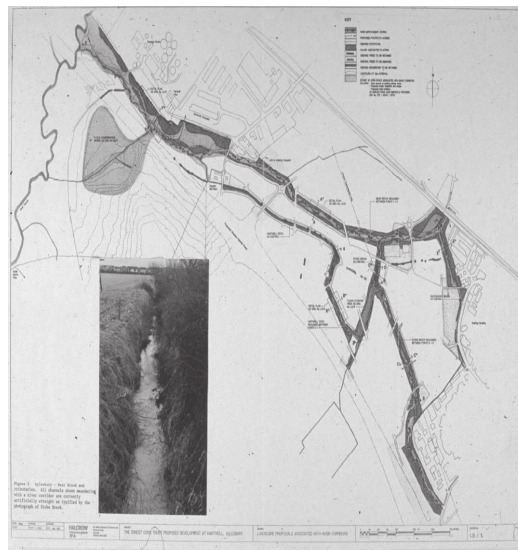
## 8. THE OPPORTUNITIES

- **Coldharbour Farm – a new development; Late 1980's**

- Major re-design of 7 kilometres of watercourse
- Enhanced house prices

- **Tilmore Brook, Hampshire; Built 2003**

- Highly valued by the public
- New issues – acoustics and crayfish



## 9. OVERALL CONCLUSIONS

- Aesthetics and other social issues as well as ecological criteria
- A '*Horse for a course*' – there is a continuum of approaches
- Processes
  - Sustainable development involves negotiation
  - Consultation *ie* involve local people
  - Adaptive Management is needed to deal with uncertainties

