



# CROCUS

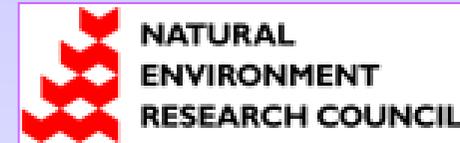
Channel Restoration in Contaminated Urban Settings

***“...balancing amenity and aesthetics with public health risks...”***





**The CROCUS Transdisciplinary Seminar Scheme is supported by the Economic and Social Research Council, and the Natural Environment Research Council.**



The objective of the ESRC/NERC scheme is.

- **To support the development of research across social and natural sciences;**
- **To address social, economic and environmental influences, processes and outcomes.**
- **Involve academic researchers and postgraduate students from both the natural and social sciences, together with users of research relevant to the research area;**
- **To meet regularly (usually at least three times per year over 2 years) to exchange information and ideas, and develop research proposals for further funding**

NERC has identified **urbanisation as one of the most significant challenges** facing society today, and a key issue associated with this challenge is how to sustainably manage the increasing volumes of urban runoff (associated with current patterns of development) in a way that minimises its effects on urban receiving waters. Simultaneously, a key part of ESRC's mission statement is to **improve the quality of life in the UK**, and one of its four core strategic objectives is to **increase its impact on policy and practice**. This proposal aims to jointly address all these issues by investigating the concept of rehabilitated / restored rivers urban rivers as recreational areas (with the benefits traditionally associated with parks) which can potentially be maintained.

The topical context of the current **Water Framework Directive** debates concerning sediment quality, and the rush to enhance residents' engagement with channels in urban settings means that CROCUS will be exploring a key and vital contemporary issue with a very interesting role in the culture-nature debate.

Several government reports have emphasized the contribution and value of high-quality green spaces in improving the quality of life for local communities (e.g. Urban Green Spaces Taskforce, 2002). As well as offering social and amenity benefits, these reports additionally note the value of green spaces in improving the quality of the area for local businesses, as well as fostering feelings of social inclusiveness and local pride

# organisers



**Dr Lian Scholes**  
Urban sediments  
SUDS



**Dr Hazel Faulkner**  
Urban Sediment quality



**Sylvia Tunstall**  
river restoration and public  
amenity



**Dr Kate Spencer**  
River & Estuarine  
contamination



**Dr Geraldene Wharton**  
Fluvial Geomorphology  
and Hydrology

In association with:

**Dr Angela Boitsidis**

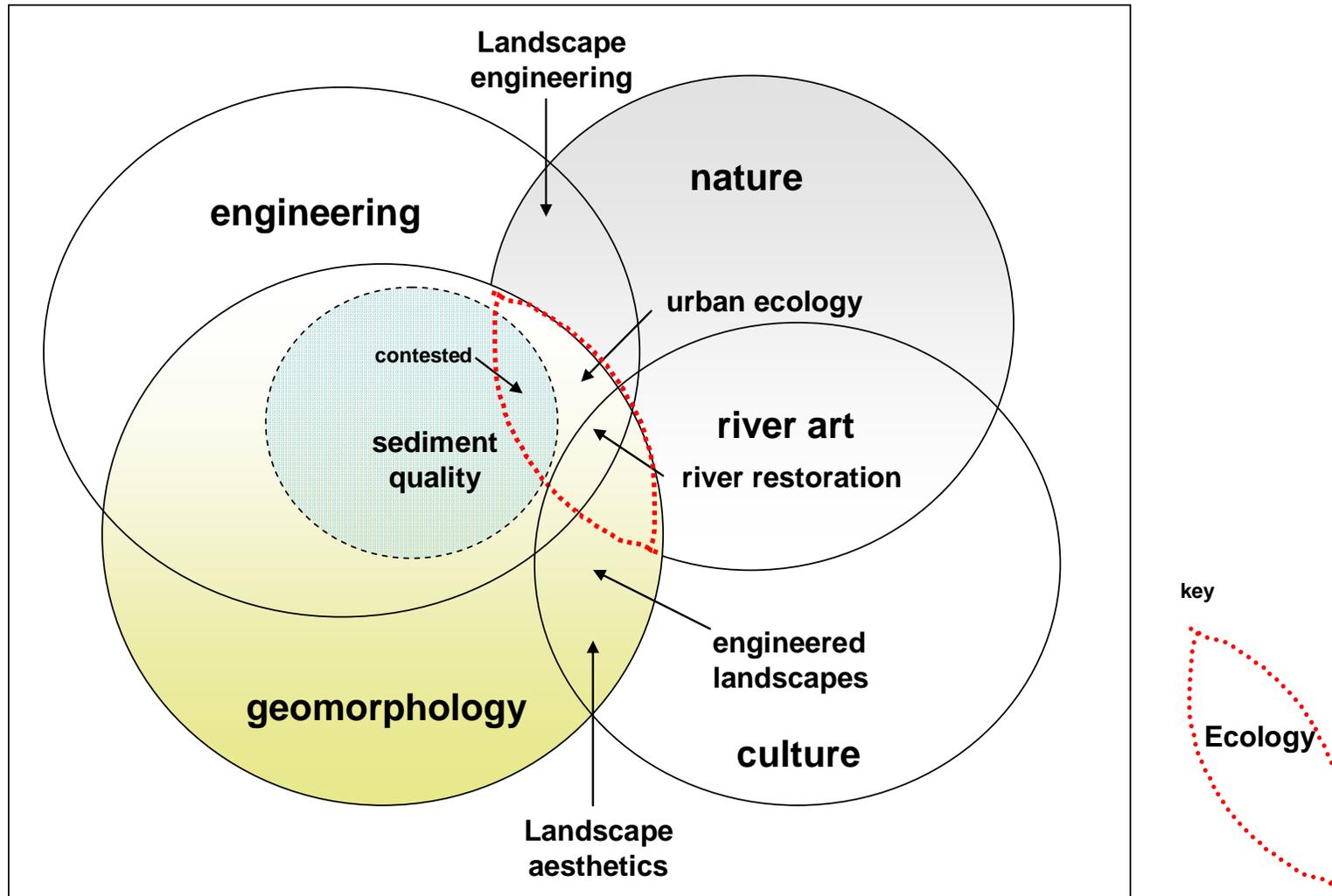
Urban Geoecology &  
engineering  
Babtie

**Dr Stuart Downward**

Fluvial geomorphology  
Kingston University

## BACKGROUND

We found in discussions between ourselves that **sediment quality issues** appear to be intellectually disconnected from the 'culture' and 'nature' debate which encourages user engagement with watercourses.



**Spheres of perceptual and practical influence in the river restoration debate**

## MINDSET A

Cultural geographers : engineered systems can be viewed in an exciting way :as cultural reference and/or as 'translated nature'

Society is excessively risk-averse; risk is socially amplified by science

Unproven link between exposure and bioavailability of contaminants

Health and amenity benefits proven when public engages with 'nature' in urban areas

TENSION



STAND-OFF

## MINDSET B

Pollution scientists and engineers : contaminated rivers are to be viewed as nature to be tamed/ controlled (?)

public health :public should be concerned and made aware of the frequently "invisible" toxic or organic contamination in sediments, and that it is frequently unassessed

Restoration in contaminated settings is foolhardy and irresponsible

Notions of 'restoring London's lost rivers', is excessively 'neo-romantic'

The CROCUS programme designed to:

- contrast the *public health concern to protect the public from toxic or contaminated sites* on the one hand, with the ideal of *cultural appreciation of, and engagement with rivers* on the other;
- look at the points of **tension** created by trying to optimise these apparently conflicting concerns;
- develop methods for their **resolution** through the **identification of multi-benefit solutions**;

➤ Retain the *sense of direction* that the restoration movement has initiated in our inner cities, but also to *refresh* our concept of ‘restored’ rivers;

➤ find *a cost-beneficial effective risk assessment* offering away forward to policy and management for ALL risks in urban river settings

➤ *grasp a nettle*: the effective and safe management of complicated settings;



# OUTPUTS

1. Build **teams** that can put **successful bids** together;
2. Work towards solutions by identifying **transdisciplinary approaches to public health concerns**;

e.g.

- **risk assessment schedules**
- **multi-criteria tools for hazard zonation of riverine sites**
- **institutional maps and addressing issues of **good governance** with a view to developing a framework to ensure the safe recreational use of urban rivers.**
- **practical tools: mixture of sediment remediation, the sustainable management of stormwater.**

3. Since key social and environmental science issues should emerge as theoretical constructs from our debates we will **write theoretical papers - to be published in a special volume of a peer-reviewed journal.**

## FUTURE PROGRAMME



**Seminar 1:** Restored rivers as culture, Kingston University, 19-20 January 2006.

**Seminar 2:** Restored rivers as contested nature: engineered components of urban lifestyles, Cranfield University, May 2006.

**Seminar 3:** River Restoration and public health (i) Problems and issues, University of Wales, 18-19 July 2006.

**Seminar 4:** River restoration and public health (ii) Methodologies and tools, venue and *date TBC*.

**Seminar 5:** Policy, governance and the management of restored rivers as 'risk-prone environments', University of Abertay, *date TBC*.

**Seminar 6:** Communicating and managing risk in urban river settings: towards solutions, Queen Mary University London, October 2007.