CL:AIRE

SUB 12
(April 2009)

subr:im bulletin

CL:AIRE's SUBR:IM bulletins present practical outcomes of research by the SUBR:IM consortium which have direct application to the brownfield and contaminated land communities. This bulletin provides an overview of the SUBR:IM project.

SUBR:IM (Sustainable Urban Brownfield Regeneration: Integrated Management) - An Overview

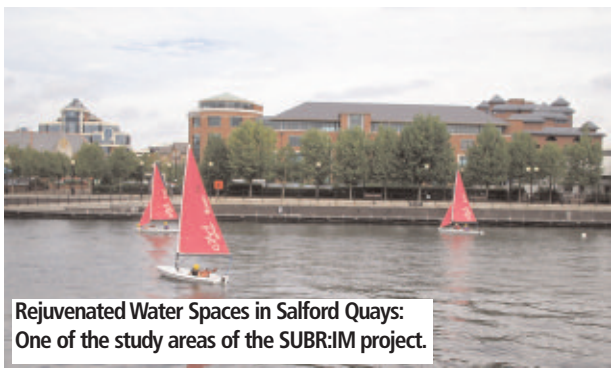
1. INTRODUCTION

In July 2003, the SUBR:IM (Sustainable Urban Brownfield Regeneration: Integrated Management) consortium began its research into brownfield regeneration in the aftermath of the UK government's publication of its Sustainable Communities Plan (2003). With the completion of the project in 2007, brownfield regeneration now occupies even greater importance in national policy debates. However, while society has become attuned to the necessity of re-using brownfield land for urban development, unless this is done in a way that recognises the all-embracing concepts of sustainable development, the agenda will fall short of its ambitious objectives. For instance, brownfield (re)development that does not meet the aspirations of existing and potential communities cannot be considered truly sustainable. Furthermore, development which is not technically sound in the face of future trends such as climate change is also unsustainable. Hence, the objectives we set for the SUBR:IM project were:

1. To enhance the robustness of technical solutions and tools for the restoration of brownfield land and its infrastructure in urban areas.
2. To increase the knowledge base of investors, developers, planning agencies, local authorities, the public, scientists and other stakeholders involved in brownfield development, to integrate their needs within a sustainable framework and seek to encourage investment.
3. To establish best environmental practice in the development of brownfield land in urban areas, which will extend existing knowledge and set benchmarks and sustainability indicators.

2. SUBR:IM BULLETINS

Despite being an academically-based research project, we worked closely with many in the brownfield community and were keen to put the research outcomes into forms more accessible to practitioners. To this end, we have produced a series of 12 bulletins, published and circulated by CL:AIRE. These are summarised in the table below.



Rejuvenated Water Spaces in Salford Quays: One of the study areas of the SUBR:IM project.

3. OVERALL CONCLUSIONS

3.1 Role of government in brownfield redevelopment

Better governance structures, policies and forms of regulation are required to deal more effectively with the multi-faceted issues raised by brownfield regeneration. A plethora of public agencies has evolved, each with its own policies, targets, resources and priorities, creating regulatory confusion and hindering development. However, local government often plays an important role in shaping successful redevelopment schemes by setting out a 'vision' for the area, assembling sites and cultivating developer confidence. Our findings also indicate that further public sector funding and improved grant regimes will be needed to tackle 'hardcore' sites now that limited gap funding is available for development. Our research highlights the need for government to provide better quality guidance on technical issues such as Soil Guideline Values (SGVs). As Defra's SGV Taskforce noted, the range of SGVs fail to minimise confusion, consistency and uncertainty at local levels; they were subsequently withdrawn while a new approach was worked out. Indeed, we have shown that the drawn-out debate on SGVs has delayed the treatment of a number of contaminated sites.

SUB1	The Role of the UK Development Industry in Brownfield Regeneration
SUB2	Uncovering the True Impacts of Remediation
SUB3	Climate Change, Pollutant Linkage and Brownfield Regeneration
SUB4	Measuring Sustainability: What's in a number?
SUB5	Avoiding Future Brownfield Sites through Design for Deconstruction and the Reuse of Building Components
SUB6	Communicating Risk on Contaminated Sites: How Best to Engage with Local Residents
SUB7	Acid Tar Lagoons
SUB8	Community Engagement, Urban Regeneration, and Sustainability
SUB9	Quality in Land Remediation: Indicators and Protocols for Brownfield Land
SUB10	The Use of Compost in the Regeneration of Brownfield Land
SUB11	Integrated Remediation, Reclamation and Greenspace Creation on Brownfield Land
SUB12	SUBR:IM (Sustainable Urban Brownfield Regeneration: Integrated Management) – An Overview

Hitherto, relatively little was known about the attitudes of developers and investors to brownfield regeneration. Our research demonstrates that institutional investors, while having limited direct involvement in brownfield governance, can influence development negotiations and agreements through their position as eventual long term owners. In addition, a select but growing group of investors and developers is pursuing brownfield projects as the potentially high returns from such activity become more evident. This emergent network can be facilitated by financial and policy levers and sensitive orchestration of relations using partnership arrangements, targeted workshops and social networking. Private developers still see contamination as a challenge, but consider infrastructure constraints, density and governance issues to be more important obstacles to development. In many instances, the rhetoric of sustainability from this group does not match the practical, with some notable exceptions which we have highlighted.

3.2 Social equity and participation

There was little evidence from the case studies that public participation had had any significant impact on the technical processes and practices of brownfield development. Public participation was often seen as something to be brought in at a later stage to provide some guidance on how established regeneration programmes could be adapted and modified, rather than fundamentally changed. Similarly, our fieldwork suggests that the practice of incorporating lay communities in contaminated land risk management processes is highly uneven. While some local authorities operate open and democratic processes, others remain suspicious of the role of lay communities in what is viewed as mainly a technical exercise. Survey work confirms that an open approach to risk management is effective in winning local support for potentially controversial decisions, but only if it is undertaken in a sensitive and appropriate manner. The research also highlighted the on-going importance of local government, in shaping development agendas, creating partnerships, and pressurising developers into supporting socially-oriented community projects. In some cases local government took a direct, interventionist role in managing social and community funds and organising training and employment programmes. Public participation through formal elections, therefore, continues to be a significant, and underestimated, form of participation that requires greater attention from researchers and policy-makers. We also found that the process of participation has been made increasingly complex as urban communities undergo change in the wake of regeneration projects and often become more polarised. Rather than regeneration acting as a catalyst for participation, it sometimes led to increasing feelings of alienation in communities living in regeneration areas.

3.3 Climate change

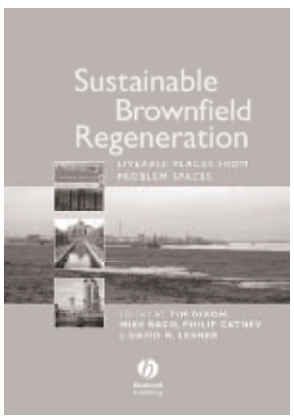
Three principal findings that have relevance for further research on climate change and sustainable urban brownfield development have been identified. First, scientists and technical experts should develop new ways of monitoring and measuring the effects of change on physical processes and containment technologies, and also develop new modes of communication and knowledge transfer. The project has gone some way towards this end by developing models of risk assessment and analysis but future work could examine new modes of working and develop new vocabularies and knowledge-sets to encourage better communication. Second, the work has indicated that multi-disciplinary research can provide new insights into the processes underpinning sustainable brownfield development, particularly in a context where political, social, economic, and environmental influences are subject to significant change and variation over time. The investigators have demonstrated the limited awareness that policy-makers, developers, and others have of the longer term impacts of climate change on contaminated urban sites. Third, this work has also shown that multiple understandings and interpretations of urban sustainability, risk, and climate change exist amongst different stakeholders. The pre-eminence of short-term perspectives that prioritise profit-making and political popularity could undermine the longer-term sustainability of remediation and renewal investments. New ways of thinking about risk and planning are urgently needed if climates continue to change as predicted.

3.4 Remediation of contaminated sites

In line with our first objective, we experimentally researched one problem contaminant (acid tars), three remediation techniques (stabilisation/solidification, compost and charcoal), and one outcome (greening), as well as researching sustainability assessments of remediation and climate change issues. Our work is summarised in the bulletins listed above and in more formal research papers. Inevitably, it has led to further basic and applied research, with major projects started on:

- URSULA (**U**rban **R**iver corridors and **Su**stainable **L**iving **A**gendas) is about discovering and delivering ecological, social and economic benefits when urban river corridors (and their brownfields) are being (re)developed. It is based at the University of Sheffield; more information at www.ursula.ac.uk.
- In SMiRT (**S**oil **Mi**x **R**emediation **T**echnology), Cambridge University is working with 10 industrial partners. They will develop and apply an integrated remediation and ground improvement technique based on soil mix technology through extensive laboratory treatability studies and field trials; more information at www.smirt.org.uk.

An important outcome of the interaction between the technical and social science work packages was that remediation costs were not usually a critical issue for typical brownfield development. That is, for housing and other high value land-uses, remediation of contaminated land might only be 5% of the site value. Cost savings in remediation, while always welcome, are not often essential to bring sites into use. Developers are more interested in speed and robustness of the technology, and non-contamination issues of infrastructure constraints, density and governance. We focussed our technical research on some exceptions where the costs of remediation are high relative to value. For example, particular pollutants such as acid tars have high costs associated, and our work has significantly advanced the understanding of these materials and how to handle them. In cases where widespread low-level contamination is present, or low financial value end-uses are planned, techniques such as compost addition, charcoal admixture and greening have great potential, enhanced by the new knowledge generated in SUBR:IM.



Footnote

- A SUBR:IM book called Sustainable Brownfield Regeneration: Liveable Places from Problem Spaces was published by Blackwells in Sept 2007, with a foreword by Dr Paul Syms, then Head of Brownfield Strategy at English Partnerships.
- With almost no public domain information on acid tar lagoons available, our website www.acidtarlagoons.org.uk has became a worldwide focus of interest and contacts.

Acknowledgements

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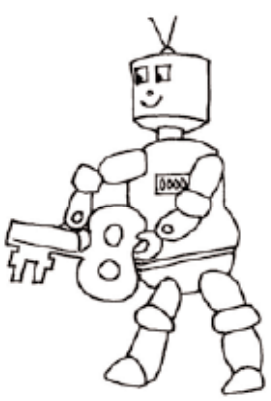

Does Captain SUBR:IM have the key? Captain SUBR:IM was the project mascot which featured in a series of discussion papers produced by the team.

For further information please contact David Lerner at the University of Sheffield by email at d.n.lerner@shef.ac.uk or of course any of the authors of the bulletins listed above.

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