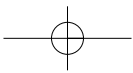
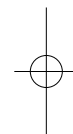
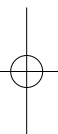


Part 1

Introduction



1

Introduction

Tim Dixon and Mike Raco

1.1 Background

Brownfield regeneration has become a major policy driver in the UK and other developed countries. It is estimated that there are 64 000 hectares of brownfield land in England, much of which presents severe environmental challenges and lies alongside some of the most deprived communities in the country.

Brownfields have been defined by CABERNET¹ as sites that

- have been affected by former uses of the site or surrounding land
- are derelict or underused
- are mainly in fully or partly developed urban areas
- require intervention to bring them back to beneficial use, and
- may have real or perceived contamination problems

In the UK, land that has been 'previously developed' is commonly known as brownfield land. Previously developed land is defined in Planning Policy Guidance Document 3: *Housing* (2000) PPG3 as land that 'is or was occupied by a permanent structure (excluding agricultural or forestry buildings), and associated fixed surface infrastructure'. In practice, this means brownfield land comprises the following categories:

- Land type A – previously developed land now vacant
- Land type B – vacant buildings
- Land type C – derelict land and buildings
- Land type D – land or buildings currently in use and allocated in the local plan and/or having planning permission
- Land type E – land or buildings currently in use with redevelopment potential

4 Sustainable Brownfield Regeneration

Bringing such land back into active use has taken on a new urgency among policy makers, developers and other stakeholders in the development process. Frequently, however, policy thinking and practice has been underpinned by 'silo' mentalities, in which integrated and multidisciplinary approaches to problem-solving have been limited. Important issues such as the technical identification of forms of contamination and appropriate remediation techniques, the creation of interactive and inclusive systems of governance and policy-making, and mechanisms to encourage the mobilisation of important stakeholders such as the development industry and local communities have often been dealt with in isolation. As a consequence, those applying technologies in cleaning up contaminated brownfield land have often done so in a deterministic way, without fully incorporating an understanding of the impact on communities and other stakeholders. Similarly, some policy makers and local communities have tried to adopt ambitious approaches with little appreciation of the technical processes involved in site clearance, remediation and development.

To overcome these discontinuities, and to develop more integrated approaches, a new research consortium called SUBR:IM (Sustainable Brownfield Regeneration: Integrated Management) was formed in 2003. With more than £1.9 million of initial funding over four years, SUBR:IM (www.subrim.org.uk) brought together ten major research institutions to work on 18 inter-related projects.² SUBR:IM's researchers were drawn from across the science and social science disciplines and had experience of working in fields such as engineering, construction management, property and real estate, and development planning. The research also included support from stakeholders, including industry, civic associations, and national, regional and local government, and SUBR:IM's work focused on sites in Greater Manchester and the Thames Gateway, which have some of the largest concentrations of brownfield land and deprived communities in the UK.

This book systematically and comprehensively documents the core evidence and findings from SUBR:IM's research programme. It adopts an integrated approach to the subject by drawing on the lessons learned from the research, not only from the individual projects themselves, but also from the synergies established through the process of working together in a multidisciplinary team. It is intended to provide a highly original and innovative account of the processes and practices of brownfield regeneration in the UK and how different types of knowledge can be brought to bear to develop a more holistic, and ultimately effective, urban policy. It also establishes wider lessons for multidisciplinary and cross-subject research, something that is likely to become more and more significant across the social and technical sciences as the value of such work in tackling multiple urban problems becomes more apparent.

1.2 Aims and objectives

The book has two principal aims. The first is to examine the ways in which science and social science research disciplines can be brought together to help solve important brownfield regeneration issues, with a focus on the UK. The second is to assess the efficiency and effectiveness of different types of regeneration policy and practice, and to show how 'liveable spaces' can be produced from 'problem places'.

In order to address these aims the research projects within SUBR:IM have covered four principal themes (reflected diagrammatically in Figure 1.1):

- (1) the property development and investment industries and their role in brownfield regeneration
- (2) the processes of governance and multi-level decision-making relating to brownfield regeneration, including institutional structures and community engagement as well as risk, trust and systems of democratic representation
- (3) the development of robust technical solutions to contamination and examination of the impact of climate change within this
- (4) the ways in which integrated solutions to brownfield renewal can be developed, including how the greening of former brownfield spaces can open up new opportunities for urban regeneration

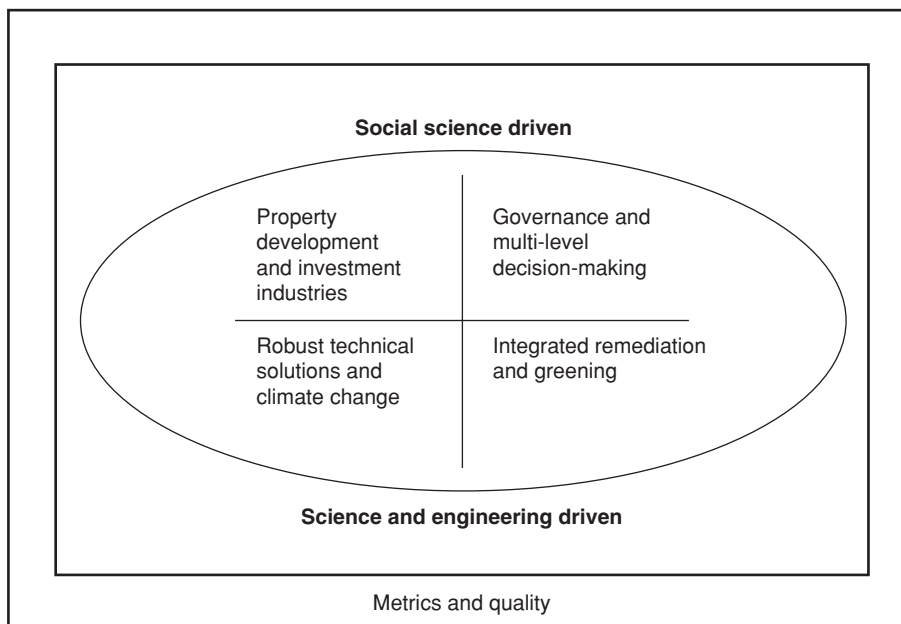


Figure 1.1 Conceptual diagram of SUBR:IM.

Themes (1) and (2) primarily related to the 'social science' disciplines, whereas themes (3) and (4) leaned more towards the environmental and engineering sciences (see Chapter 2 for a broader discussion).

All the SUBR:IM projects sought to develop cross-cutting methodologies and approaches. Some projects were also developed that were designed to weave together the project's broader research findings; for example, the 'metrics' project in SUBR:IM developed a more holistic view of the brownfield development process and questions of sustainability (see Chapter 12).

A large part of SUBR:IM's work has also focused on two major sub-regions where brownfield development is of particular significance: the Thames Gateway and Greater Manchester. This shared empirical focus was essential for the coherence of the research programme. The Thames Gateway in the south of England represented a site of core regional and national significance, and extends for approximately 60 kilometres along the River Thames from the London Docklands to Southend in Essex and Sheerness in Kent. Regional Planning Guidance for the South East (RPG 9) and the *Sustainable Communities Plan* had already identified it as a priority for regeneration and growth. It is also one of the four target areas for new housing in the South East.

Similarly in Greater Manchester, Manchester and Salford have both received an increased amount of government and media attention not only as a result of the Northern Way strategy and the broader sustainable communities agenda, but also because the 'Manchester model' of regeneration encapsulates much of what many commentators consider best practice in British post-war regeneration, particularly in relation to joint venture schemes for redevelopment.

1.3 Structure of the book

In order to address its aims the book is divided into four interrelated parts. These sections are designed to ensure that the contributions do not simply become a collection of research papers. Instead, they are designed to provide a framework within which the various chapters can be integrated and developed in a theoretically focused and robust manner.

Part 1 ('Introduction') comprises the current chapter (Chapter 1) and Chapter 2. It outlines the structures of the SUBR:IM consortium, the processes through which it emerged, and the problems and opportunities associated with these new, increasingly popular, academic working practices. In Chapter 2 Mike Raco and Tim Dixon examine broader conceptions of multidisciplinary and how the SUBR:IM portfolio of work has fitted together. They assess the ways in which integrated, 'socio-technical' approaches were applied to the brownfield regeneration 'problem' under SUBR:IM and the lessons for future research in this field and beyond.

Part 2 deals with processes of *regeneration*, exploring socio-technical problems and solutions, and the role of actors/stakeholders in the regeneration process, together with governance issues. It consists of four chapters, each of which explores different dimensions associated with brownfield regeneration. In Chapter 3 Philip Catney *et al.* examine questions of 'Democracy, Trust and Risk Related to Contaminated Sites in the UK'. The authors examine the relationships between democracy, trust and risk and draw on two case studies of risk assessment and communication to explore how these issues relate to contaminated brownfield sites in England. The results show how different approaches to risk contamination affect the degree to which local residents trust their councils. Chapter 4 goes on to examine what Joe Doak and Nikos Karadimitriou term 'Actor Networks and the Brownfield Merry-Go-Round'. The chapter explores the relationships between property investors and high-profile development projects. The authors argue that we need to understand the development process through a form of complex and contextual network analysis. Examples from London and Manchester are used to examine this framework. In Chapter 5, entitled 'Heroes or Villains? The Role of the Development Industry in Brownfield Regeneration', Tim Dixon examines the nature and challenge of brownfield development in the UK, and the role of the development industry and its attitudes towards brownfield development through case study-based work in Thames Gateway and Greater Manchester. This chapter is closely integrated with Chapter 6, 'Delivering Brownfield Regeneration – Sustainable Community-Building in London and Manchester', in which Mike Raco *et al.* look at high-profile examples from London and Manchester and broader questions concerning brownfield regeneration processes and their wider sustainability. In both chapters the authors argue, from differing perspectives, that policy makers and others need to be more open to the possibility that brownfield development may represent only one part of a broader set of sustainable development policies.

Part 3 contains four chapters that focus on broader processes of *remediation* with an emphasis on the relationships between scientific 'problems' and 'solutions' in particular brownfields. Chapter 7, by Andy Moffat and Tony Hutchings, addresses the theme of 'Greening Brownfield Land' and examines the challenges of establishing and maintaining greenspace on brownfield land in a sustainable way. The chapter draws on work from the SUBR:IM projects and beyond. It is closely linked to Chapter 8 and its focus on 'Novel Special-Purpose Composts for Sustainable Remediation', where the researchers (Sabeha Ouki *et al.*) give an overview of the major results obtained during experimental investigations in testing composts combined with naturally occurring minerals (clays and zeolites) for their ability to reduce plant availability and leachability of heavy metals when applied to contaminated soils. Technical innovation and knowledge such as this is

often essential to the remediation process. Other remediation techniques are examined in Chapter 9 in which Abir Al-Tabbaa *et al.* concentrate on the appropriateness of 'Robust Technical Solutions'. The discussion focuses on the assessment of sustainability in relation to containment and clean-up methods of remediation and how improvements can be made to specific technical solutions based on sustainability assessment and experimental investigations. Chapter 10 (Simon Talbot *et al.*) focuses on a particularly challenging example of brownfield remediation, that of 'acid tar lagoons'. It examines the scale of the problem, the particular difficulties associated with tar remediation, and provides examples of such remediation 'in practice'.

The concluding section, Part 4, is focused on what might be termed 'Joined-up solutions'. It draws on SUBR:IM projects that have adopted a cross-cutting methodology and provides conclusions to the book. In Chapter 11 Abir Al-Tabbaa *et al.* examine the theme of 'Climate Change, Pollutant Linkage and Brownfield Regeneration'. The research examines the impact that climate change could have on pollutant linkages in the soil and the extent to which stakeholders are developing adaptation strategies to account for this impact. Chapter 12 provides an overview of the work carried out by Walter Wehrmeyer and Kalliope Padiaditi on 'Evaluating the Sustainability of Brownfield Redevelopment Projects'. The chapter describes a particular framework, named the Redevelopment Assessment Framework (or RAF), used to assess and monitor the long-term sustainability of brownfield redevelopment projects. This is followed by a concluding chapter by Philip Catney, David Lerner, Tim Dixon and Mike Raco entitled 'Is Brown the New Green?', which summarises and synthesises the key messages and findings that have emerged from the SUBR:IM research and assesses their significance for wider debates over urban regeneration, environmental remediation and sustainable urban redevelopment. The chapter also highlights the wider lessons concerning the research process, the contested nature of the concept of sustainable development, and the value added by this type of multidisciplinary and integrated research.

Notes

1. CABERNET (Concerted Action on Brownfield and Economic Regeneration Network), is a multidisciplinary network comprising six expert Working Groups that aims to facilitate new practical solutions for urban brownfields (see www.cabernet.org.uk).
2. The ten institutions are the University of Sheffield, Oxford Brookes University, King's College London, Forest Research, the University of Reading, the University of Cambridge, the University of Surrey, the Building Research Establishment, the University of Manchester and the Greater Manchester Geological Unit. The website is at www.subrim.org.uk