

Sustainable Brownfield Regeneration: CABERNET Network Report

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CABERNET (Concerted Action on Brownfield and Economic Regeneration Network) is the European multi-stakeholder network that focuses on the complex issues that are raised by brownfield regeneration. The Network is a forum that allows a diverse group of stakeholders to share experiences from across Europe. It provides new management strategies, innovative tools, and a framework for coordinated research activities. The Network, established in 2002 through support from EC DG Research, is a self-funded independent multi-stakeholder Network.

For further information on CABERNET, please visit:
www.cabernet.org.uk or e-mail cabernet@nottingham.ac.uk

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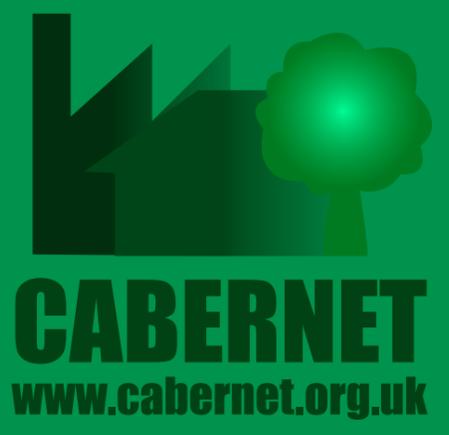
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Sustainable Brownfield Regeneration: CABERNET Network Report

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Preface

CABERNET (Concerted Action on Brownfield and Economic Regeneration Network) is the European multi-stakeholder Network that focuses on the complex issues that are raised by brownfield regeneration. The Network is a forum that allows a diverse group of stakeholders to share experiences from across Europe. It provides new management strategies, innovative tools, and a framework for coordinated research activities. The Network, established in 2002 through support from EC DG Research (2002-2005), is a self-funded independent multi-stakeholder Network.

CABERNET provides one of the few forums for the interaction of different Stakeholder Groups at a European level, allowing practitioners to discuss and exchange practices, experiences and aspirations. This report is one of the products of the Network's EC funded project work.

As well as the information that we hope you will gain from this report, CABERNET also organises meetings and events, in particular a Conference Series. The conference series is designed to highlight current thinking and future trends in innovative land management, the outcomes of which feed into European research deliberations, as well as national and local practice.

We hope that this report will not be your only experience of CABERNET and that you will engage with Members of the CABERNET Network. In particular, we hope you will consider joining CABERNET 2007: 2nd International Conference on Managing Urban Land, in Stuttgart, Germany and other subsequent events.

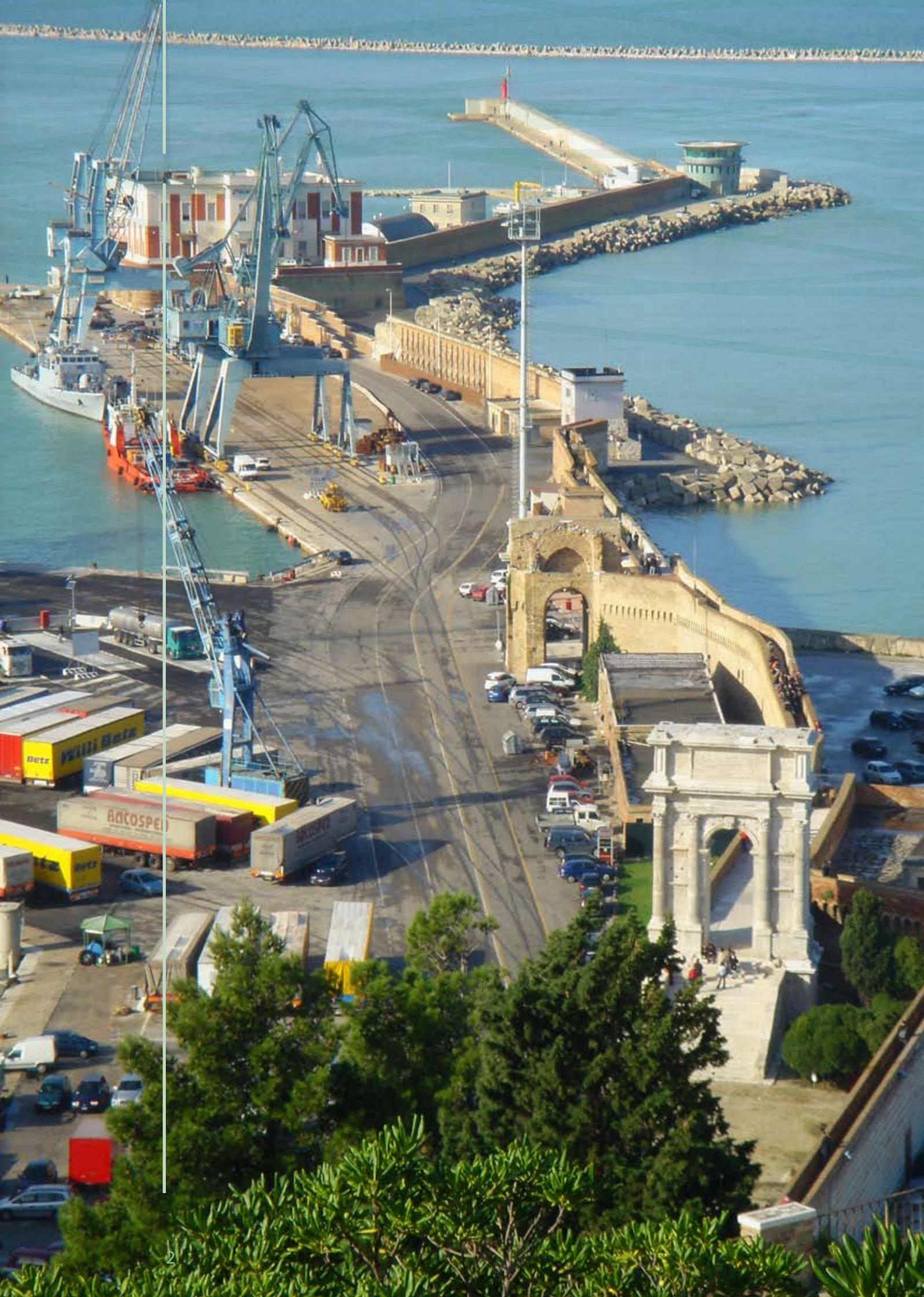
It is not possible to individually thank all CABERNET Members and external partners who have been, and are, involved in the CABERNET Network. However, we would like to take this opportunity to warmly thank the Team Leaders and Members for their very hard work, input and innovation during the project.

A full list of CABERNET Members and further information on Network activities, including details of the conference series, can be obtained from: cabernet@nottingham.ac.uk or visit: www.cabernet.org.uk

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The CABERNET research project was supported by the European Commission under the Fifth Framework Programme, contributing to the implementation of the Key Action "The City of Tomorrow and Cultural Heritage" within the Energy, Environment and Sustainable Development Thematic Programme (<http://www.cordis.lu/eesd/>)



Executive Summary

Brownfields are sites that: have been affected by the former uses of the site and surrounding land • are derelict and underused • may have real or perceived contamination problems • are mainly in developed urban areas • and require intervention to bring them back to beneficial use'¹

Brownfield Problem: Effective urban land use is central to Europe's current and prospective strategies to achieve sustainable development during the 21st Century. An important component of the European land use problem is the increase in, and persistence of, brownfield sites and the difficulties in effectively regenerating these sites. Land use changes over the last fifty years have resulted in swift wide scale dereliction in some areas and slow decline elsewhere. Overall these changes have left Europe with a significant legacy of brownfield sites. During this time of land use change, rather than addressing the problem, cases of poor land management practices have led to urban decay, deprivation and social conflicts. Tackling the roots of the pan-European problem that relate to unsustainable land management, manifest in persistent brownfields, requires concerted action at the local, national and EU level.

Brownfield land is both a lost opportunity and a problem. Brownfields can have a negative impact on the surrounding area and community, and hinder effective regeneration. Regenerating brownfields can stimulate opportunities at numerous levels to improve urban quality of life, enhancing urban competitiveness, and reducing urban sprawl. Although there are numerous urban challenges, such as identifying solutions for transportation pressures etc, the beneficial re-use of brownfields is significant, pervading and impacting on so many other urban issues, that it warrants a high level of both technical and political attention. Finding solutions for brownfield sites is an increasingly important part of the search for effective policies that are aimed at ensuring a sustainable future for land, and cities in particular. The brownfield agenda is therefore an essential component of the work taking forward the "Sustainable Urban Development in the European Union"² and the 6th Environmental Action programme of the European Community.

CABERNET Approach: Regenerating brownfields is a significant challenge due to the complexity of the problem. Sophisticated multifaceted approaches are required to tackle this pan-European problem. Some of the key aspects of the brownfield problem relate to the diversity of stakeholders involved in the process. Problem-oriented solutions for brownfields will need to focus on multi-stakeholder approaches that respect the range of perspectives as well as the diversity of stakeholder values. CABERNET (Concerted Action on Brownfield and Economic Regeneration Network) is the European network that is tackling the complex issues that are raised by brownfield regeneration from a multi-stakeholder perspective.

In order to enhance the regeneration of brownfield sites, CABERNET aims to share experiences from across Europe, and provide new management strategies, innovative

Sustainable Brownfield Regeneration: CABERNET Network Report

tools, and a framework for coordinated research activities. The Network, was established in 2002 and supported by EC DG Research through until June 2005. Due to the need for multi-stakeholder dialogue the Network continues in a self-funded form.

CABERNET has provided one of the few forums for the interaction of diverse Stakeholder Groups at a European level. CABERNET consists of stakeholders from groups such as landowners, municipalities, researchers, developers, national regulators, representatives of community groups, consultants and professional advisors. These groups meet to discuss and exchange practices, experiences and aspirations relating to brownfields and the wider issues of urban regeneration. The Network has successfully found and exchanged practical sustainable solutions to both strategic and site specific urban brownfield problems.

CABERNET Outcomes: CABERNET has focused on strategic approaches, exploring solutions for a number of the key economic, environmental and social issues that impact on brownfield regeneration.



¹CABERNET development of the CLARINET definition. CLARINET (2003) Brownfields and Redevelopment of Urban Areas. CLARINET Project Report, UBA, Austria

²Sustainable Urban Development in the European Union: A Framework for Action (COM(98)605)

Executive Summary

As a result of the Network's activities, CABERNET has agreed a number of position statements that relate to specific dimensions of the brownfield problem in Europe:

Message	Title	Position Statement
1	Specific Brownfield Dimension in Emerging EC Policy Initiatives	CABERNET believes that incorporating a specific brownfield dimension in emerging EC thematic strategies and policy initiatives would enhance sustainability and therefore enhance European competitiveness
2	Effective Public-Private Partnerships	CABERNET believes effective public-private partnerships, designed to bridge the cost-value gap that often prevents the commercial regeneration of many marginally non-viable brownfield sites, should be exempt from EU competition policy
3	Evaluate Role of Dedicated Agencies	CABERNET believes it is important to critically evaluate the role of dedicated agencies to better understand their potential impact
4	Emphasise Social and Cultural Objectives	CABERNET believes that when regenerating brownfield sites, a set of key social and cultural objectives should be considered
5	Citizen Participation	CABERNET believes that effective citizen participation in decision-making enhances the sustainability of brownfield regeneration projects
6	Local Regeneration Strategies	CABERNET believes there is a need for a specific strategic approach to brownfield regeneration at the local government level if the objective of competitive urban environments is to be achieved
7	Financial Strategies for Commercially Non-viable Sites	CABERNET believes that EU and Member State funding is necessary for, and should be used, to return non-viable sites to beneficial use (e.g. permanent or transitional low-intensity activities)
8	Brownfield Process Manager	CABERNET believes that the type of skills base that is currently needed is represented by a 'Brownfield Process Manager'
9	Environmental Issues	CABERNET believes that environmental issues can catalyse brownfield regeneration raising environmental, social and economic benefits when targeted at sustainability in a balanced and integrated approach. However, a simplistic sectorial regulatory approach hinders regeneration
10	Streamline Decision-making in Regeneration	CABERNET believes it is essential to streamline the decision-making process in order to make brownfield redevelopment competitive with greenfield development

Commentary

The regeneration of the growing number of brownfields in Europe is an essential part of improving European global competitiveness in a sustainable way. The role of sectoral, cross-cutting or thematic approaches should be assessed

The cost-value gap prevents the development and regeneration of many marginally commercially non-viable brownfield sites (B sites) across the European territory. EU competition policy has the unintended effect of restricting the ability of Member States to develop public-private partnerships to facilitate the regeneration of commercially non-viable sites, other than where the private sector partner is an SME, and / or the site is located in an assisted region

Dedicated Regeneration Agencies can potentially offer a range of benefits in delivering sustainable solutions to the brownfields problem. It is vital that these relationships are understood now so that institutions can further improve attempts to empty the 'brownfield bath' in the future

For brownfield regeneration schemes to fully realise sustainability goals, more attention needs to be paid to achieving social and cultural benefits

There is a well-developed knowledge base relating to the inclusion of citizen participation in decision-making within brownfield regeneration. However, this is commonly undervalued or misunderstood. Much broader discussion and dissemination of tools and good practice is therefore required

Municipalities influence the manner and pace at which brownfield land is brought back into use. Municipalities address brownfield land issues as part of their wider strategic responsibilities and objectives, e.g. the achievement of sustainable development leading to competitive cities

A significant proportion of brownfield land is not commercially viable in the foreseeable future (C sites). Such persistently unused brownfields often have adverse effects on sustainability including the competitiveness of European regions and cities

There is a need for a new professional to develop and deliver opportunity plans for the sustainable regeneration of brownfield sites and ensure these contribute to the comprehensive regeneration of a wider area by delivering environmental protection, local economic and social benefit

Environmental aspects are not always given a balanced consideration e.g. contamination issues can be over emphasised in brownfield regeneration

One of the major obstacles in brownfield redevelopment is the complexity and the multitude of factors that are influencing the decision-making process. Planning and permission procedures result in a time consuming and complex process

Executive Summary

The Network has developed a series of conceptual models of brownfield, identified tools that encourage good practice, set out research needs that could be addressed in future EC research programmes (i.e. in the Seventh Framework Programme and beyond).

In particular, the CABERNET work has produced key recommendations on:

1. Priority EU Policy Issues
2. Research Recommendations (at EU and Member State level)
3. Training Priorities
4. Knowledge Transfer and Stakeholder Dialogue

CABERNET has focused on bringing together ideas and information, as well as stimulating the development of new initiatives. The challenge of achieving value-driven sustainable brownfield regeneration should not be underestimated, but in order to ensure a cohesive urban society this challenge must be met. There is an important role for CABERNET in partnership with other related professional networks, to facilitate the development of brownfield solutions that are acceptable to a multi-stakeholder community of decision-makers and affected parties.

The Network has acted as a valuable information resource and as a 'tool' in itself for stimulating innovative topic debate and highlighting the importance of this issue for our collective European future. CABERNET 2005: The International Conference on Urban Land Management (held on 13-15 April 2005 at the Belfast Waterfront Hall) was the first conference of a series. CABERNET 2007: The 2nd International Conference will be held in 2007 in Stuttgart (www.cabernet.org.uk). One of the main goals of the conference series, and the Network activities, is to establish multi-stakeholder dialogue and wider engagement to ensure that truly sustainable urban regeneration is our legacy to future generations.

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1

Regenerating Brownfields: A European Issue



Chapter 1: Summary Message

- Land is a finite resource and Europe is not consistently managing its urban land in a sustainable way
- Poor land use hinders sustainable urban regeneration. Not utilising land to its full potential, in terms of its development options, is a lost opportunity
- Brownfields occur widely and are persistent in many European regions
- Brownfields are a land use problem caused by the failure of our historical land management strategies
- Regenerating brownfields is a complex process
- There are straightforward solutions currently available and others are being, or can be, developed
- In order to create successful European cities, brownfield regeneration must be at the heart of local, national and European land use policies and practice
- Brownfields are sites that:
 - have been affected by the former uses of the site and surrounding land
 - are derelict or underused
 - may have real or perceived contamination problems
 - are mainly in developed urban areas
 - require intervention to bring them back to beneficial use
- CABERNET, (European expert network on brownfields) was funded by the EC to examine land use problems from a multi-stakeholder perspective and as result has set out a number of key recommendations that relate to policy, good practice and research programmes

1

Regenerating Brownfields: A European Issue

1.1

Unsustainable Land Use: A European Problem

Valuing Land as a Scarce Resource

Land is a scarce and valuable resource³. Over 80% of the EU's 377 million citizens are living in urban areas (cities and towns)⁴.

Although many European cities have undergone a form of urban renaissance in recent years, urban governors and city developers are increasingly criticised for their current practices and challenged to manage urban land more sustainably. For example, many cities are suffering from growing problems of urban sprawl, persistent areas of dereliction and deprivation, transport congestion, pollution and environmental degradation. This is putting pressure on the urban system and its citizens, in turn affecting economic performance and quality of life. If the EC is to succeed in its objective of becoming the most competitive global knowledge-based society⁵, urban land management strategies will need to be a central part of the strategic policy initiatives.

Land Use Changes and Brownfields in Europe

The European landscape has changed significantly over the last fifty years. The ongoing restructuring of European business and the increasingly pervasive influence of globalisation has led to considerable changes in European industrial activities. In particular, significant impacts are seen in the downsizing of enterprises and the loss of a number of historical industries. Growth in other service industries and transformations in the urban lifestyle have also led to significant changes in land use.

These drivers of land use change have influenced the creation of brownfields in urban areas. The current dynamics of the urban system have resulted in swift wide scale dereliction in some areas and scattered temporal declines in other regions. Overall these changes have left Europe with a significant legacy of brownfield sites. The persistence and distribution of brownfield sites represents a significant trans-European urban management problem.

³McGlade (2004) Speech to EU Conference 'Changing Land Use in Europe – Getting in the Picture'. Kasteel Groeneveld, The Netherlands, 9-12 November 2004

⁴Towards a Thematic Strategy on the Urban Environment', Communication COM (2004) 60, European Commission, February 2004

⁵The Lisbon Strategy - Making Change Happen, Communication from the Commission to the Spring European Council in Barcelona, COM (2002) 14 final, 15.1.2004

There is no standard definition for brownfields across Europe. However, in common usage the term refers to previously developed land, encompassing a range of sites in terms of size and location. Specifically in this report CABERNET applies the definition, brownfields are sites: 'that have been affected by the former uses of the site and surrounding land; are derelict and underused; may have real or perceived contamination problems; are mainly in developed urban areas; and require intervention to bring them back to beneficial use'⁶.

The Significance of Brownfield Regeneration for Sustainable Urban Development

During this time of land use change, the creation of brownfields and poor land management practices have led to urban decay, deprivation and social conflicts⁷. Tackling the roots of the problem that relate to unsustainable land management and in particular brownfields is a challenge, and the importance of this task should not be underestimated. The economic, social and environmental burden of getting Europe's land use strategy wrong could be catastrophic.

Poorly integrated and unsystematic land use policies will increase land-related conflicts in densely urbanised regions. This could undermine the social coherence and competitiveness of all European cities and regions, including the new Member States.

As well as reducing negative impacts (e.g. reducing urban sprawl), revitalising these areas can also facilitate opportunities at numerous levels by improving urban quality of life and enhancing urban competitiveness. Although urban 'governors' face numerous challenges, for example in the areas of transportation and urban health the beneficial re-use of brownfields pervades and impacts on so many other urban issues that it requires a high level of both technical and political attention.

Finding solutions for brownfield sites is an increasingly important part of the search for effective policies that are aimed at ensuring a sustainable future for land and cities in particular. The brownfield agenda is therefore an essential component of the work taking forward the "Sustainable Urban Development in the European Union: A Framework for Action"⁸ and the 6th Environment Action programme of the European Community.

⁶Modified CLARINET definition: CLARINET (2003) Brownfields and Redevelopment of Urban Areas. CLARINET Project Report, UBA, Austria

⁷EEA (1999) Environment in the European Union at the Turn of the Century. European Environment Agency, Copenhagen;

⁸EC (1998) Sustainable Urban Development in the European Union: A Framework for Action COM(98)605

1

Regenerating Brownfields: A European Issue

1.2

The Complexity of the Brownfield Problem

Complex Urban Systems

Cities are extremely complex systems made up of many intricate sub-systems. It is increasingly felt by both researchers and practitioners that urban sub-systems, and the problems related to these sub-systems, can now only be fully understood in the context of the whole city (in terms of the notion of a 'whole system'). This concept is particularly applicable to brownfields. The most significant brownfield challenges are linked to firstly understanding the complexity of regeneration process and then applying this knowledge to find sustainable solutions for the sites that link to regional strategies, but also taking account of the wider dynamics of the overall urban area.

In terms of characteristics, some of the most problematic brownfield sites have poor infrastructure and have disadvantaged and possibly fragmented local communities. In terms of physical conditions, these types of sites include: harbours and ports, rural mining and landfill areas, railways, military sites, chemical works and increasingly, degraded housing estates. These areas may have one or more of the following demographic or socio-economic issues: an ageing population, poor health status within the population, low employment levels, few amenities and lower than average incomes.

Importance of Sustainability Objectives

When considering sustainable development objectives, brownfield opportunities and redevelopment responsibilities can be characterised as follows:

- **Economic:** Mobilising human resources, using existing sites and infrastructure to modernise and improve the urban fabric. Generate economic growth in urban quarters, increase public and private income
- **Environmental:** Cleaning up, restoring previously used land. Placing brownfields regeneration at the forefront of regeneration strategies and using this programme as a driver for the clean-up of contaminated land. Reducing land consumption and urban sprawl by encouraging sustainable brownfield regeneration projects
- **Social:** Ensuring the long-term sustainability of brownfields redevelopment by including socio-cultural dimensions. Mobilising communities to ensure representative and equitable sustainable development which may reduce the potential for subsequent decline and recreation of brownfields, improving the quality of life in city areas

Taking into account the complexity of this urban problem, brownfield regeneration should consistently be part of a coherent spatial and strategic land management approach, particularly with respect to the wider issues of economic, environmental and social dimensions of sustainable development.

Role of Stakeholder Groups

One of the key dimensions of brownfield regeneration is the diversity of professions involved in the process. Studies of urban management and planning note 'Clearly the topic involves so many scientific and social disciplines that it is difficult not only to understand how the whole system works, but also to define the limits'⁹. The diversity of professions involved in the process is only succeeded by the array of stakeholders that influence, or are influenced by, brownfield regeneration. Different stakeholders have different perspectives and different needs. As a result, problem-oriented solutions for brownfields will need to focus on multi-stakeholder approaches that respect the range of perspectives as well as the diversity of stakeholder values. It should be noted that although new tools and approaches are needed, there are already available an excellent number of good practice examples and valuable tools that are not widely recognised and therefore require wider dissemination.

1.3

The Brownfield Challenge: The role of CABERNET

The complexity of the land use problem should not be underestimated. Hence, sophisticated multi-stakeholder approaches are required to tackle this pan-European problem. As characterised above, the land use problem is very complex and many stakeholders with different interests are involved, therefore multi-stakeholder approaches are required to tackle this pan-European problem.

CABERNET, a European expert Network on brownfields, was funded by the EC to examine this land use problem from a multi-stakeholder perspective. There is an important role for Stakeholder Networks, such as CABERNET, to facilitate the development of brownfield solutions that are acceptable to a multi-stakeholder community of decision-makers and affected parties. A Network of this nature can act as a valuable information resource and as a 'tool' in itself for stimulating topic debate and highlighting the importance of this issue.

CABERNET aims to enhance the rehabilitation of brownfield sites within the context of sustainable development of European cities, by sharing experiences from across Europe, and by providing new management strategies, innovative tools, and a framework for coordinated research activities. CABERNET provides one of the few forums for the interaction of a diversity of Stakeholder Groups at a European level. These groups have met to discuss and exchange practices, experiences and aspirations relating to brownfields and the wider issues of urban regeneration. The establishment of the Network has successfully created the opportunity to find and exchange practical sustainable solutions to both strategic and site-specific urban brownfield problems.

In this report the CABERNET Network sets out a vision for sustainable brownfield redevelopment, highlights good practice and proposes a number of key recommendations that relate to policy, good practice and research programmes.

⁹EEA (2002) Towards an Urban Atlas, Assessment of Spatial Data on 25 European Cities and Urban Areas, European Environment Agency, Copenhagen;

2

**Tackling Brownfields:
The CABERNET Multi-Stakeholder
Approach**



Chapter 2: Summary Message

- The process of brownfield regeneration involves numerous stakeholders at various stages of the process
- Different stakeholder objectives can affect the regeneration process
- The process of regeneration is affected by local, national and European drivers and barriers
- Regenerating brownfields can be a more complex process than greenfield development or urban regeneration
- A lack of shared understanding amongst stakeholders can significantly affect the regeneration process
- A lack of coordination between local, national and European strategies can impede sustainable regeneration
- Multi-stakeholder engagement and participation is needed in all aspects of the regeneration process
- Pan-European multi-stakeholder dialogue can help practitioners deal with local issues by sharing knowledge and defining good practice
- The exchange of national problem solving experience can also inform EU policy initiatives on the urban environment. This helps to create instruments that empower European cities working in a global market while still maintaining the important aspects of subsidiarity
- The CABERNET Network had four overarching objectives: a) better awareness and shared understanding of brownfield issues across stakeholder groups throughout Europe; b) conceptual models for a variety brownfield issues; c) coordinated research and training activities across different sectors and countries; d) the identification of best practice approaches and other tools
- CABERNET has produced four main outcomes: (1) Shared good practice knowledge through the provisional Case Studies (2) Conceptual Models (3) Policy and Practice Recommendations (4) Research Recommendations

2

Tackling Brownfields: The CABERNET Multi-Stakeholder Approach

2.1

The Need for Multi-stakeholder Approaches

Urban Systems and Current Challenges

Solving the brownfield problem has been challenging practitioners and policymakers for several decades. Many 'forces' can influence a regeneration project and the successful achievement of its objectives. Recent studies focusing on the establishment of sustainability indicators have increasingly highlighted the level of complexity of the regeneration process and the intricate dynamics of stakeholder interactions¹⁰.

Strategies to tackle brownfields require an increased understanding of sustainable regeneration and how this links with wider urban development strategies. A key objective must be to further understand the complexity of the urban system and then apply this knowledge to find sustainable reuses for brownfield sites that link to regional land management and sustainable development strategies and are supported by national and European initiatives. This requires a greater understanding of the different forces that impact on regeneration processes and this can only be achieved by better engagement and involvement of the diverse group of stakeholders.

Learning from the outcomes of previous regeneration programmes, it is increasingly apparent that there is no 'silver bullet' for European brownfield regeneration. However, what is becoming more evident is the potential benefit of multi-stakeholder approaches for tackling a number of the core issues and the realization that the 'learnt outcomes' from these approaches must be placed within a local context if they are to be successfully transferred.

Although there are no simple 'quick fixes', there are numerous examples of successful projects, beneficial programmes, and valuable tools that are not well known within the European Brownfield community and these need to be characterized and disseminated much more widely. In addition, a greater understanding of the process of regeneration and the development of a number of system oriented tools will assist policy makers and practitioners tackle this problem in a more coherent and consistent way.

Multi-stakeholder Understanding

Many stakeholders are involved in brownfield regeneration. A lack of understanding and communication amongst these stakeholders can significantly affect the regeneration process. Previously, the study and management of urban regeneration had been addressed by teams of specialists working on specific tasks and individual components of the process. This has led to fragmentation in thinking and fragmentation of

¹⁰EC (2004) Towards a Thematic Strategy on the urban environment, COM(2004)60

proposed solutions. This problem has been further compounded by a lack of trans-stakeholder insight, which in turn forms professional barriers and can amplify existing regulatory, cultural, economic and ideological barriers.

In addition, the process of regeneration is affected by local, national and European drivers and barriers. Understanding these drivers in the context of land use relationships, with emphasis on understanding the dynamics of EC policy, local planning and economic drivers on the process, can only be achieved from a multi-stakeholder perspective. Multi-stakeholder engagement is an essential tool for bringing together informed parties to formulate solutions for complex multifaceted problems. The aim of multi-stakeholder dialogue is to increase the understanding of stakeholder positions and interests, to strengthen relationships, and to develop partnerships and to build consensus on topics between different groups. Proposed solutions for brownfields will only be successful if they are derived from multi-stakeholder dialogue and approaches that respect the range of professional perspectives, as well as the diversity of stakeholder values.



2

Tackling Brownfields: The CABERNET Multi-Stakeholder Approach

2.2

CABERNET Approach

In response to this need for multi-stakeholder engagement and derived solutions, CABERNET has focused on identifying gaps in national and international approaches, and categorising tools that have been successfully used in brownfield rehabilitation by various stakeholder groups. CABERNET is one of the first multidisciplinary networks to focus explicitly on the reuse of brownfield within the context of a sustainable land use policy. The Network has provided one of the few forums for the interaction of a diversity of stakeholder groups at a European level.

The Network has convened a unique mix of stakeholders from over 21 countries across Europe¹¹, representing policy makers and industry to technologists and community groups, advisors and academics. Each of the individual Members are also linked to other brownfield-related networks, projects and initiatives, so extending the knowledge base of the Network¹². This expert base allows CABERNET to examine perceived skills gaps and build on existing knowledge to promote balanced solutions.

CABERNET's main focus has been to further understand the complex issues that are raised by brownfield regeneration from a multi-stakeholder perspective. Building on this, the Network's aim has been to enhance the rehabilitation of brownfield sites within the context of sustainable development of European cities, by sharing experiences from across Europe, and by providing new management strategies, innovative tools, and a framework for coordinated research activities.

The multinational representation of CABERNET has allowed a comparison of national and international approaches. This has resulted in the Network proposing strategies to coordinate research and good practice initiatives in many Member States and elsewhere. CABERNET has also created a new framework of integrated thinking through the development of a series of conceptual models (see Chapter 4). This in turn has generated new ideas to overcome persistent barriers. By networking within a multinational environment with different stakeholders and disciplines, the Members of the Network have recognised more sustainable and integrated approaches to the complex issues of brownfield regeneration.

The Network has stimulated new multidisciplinary research recommendations, which focus on cross cutting issues. The extensive stakeholder dialogue has also highlighted the need for new skills in multi-disciplinary working.

Specifically the Network's innovative multi-stakeholder approach has developed recommendations in the following areas:

¹¹For a list of the CABERNET Members and the European Countries represented by the Members please go to www.cabernetorguk

¹²For a list of other brownfield related contact networks, projects and international initiatives please refer to the CABERNET index to information on the CABERNET website: www.cabernet.ac.uk

- new transferable approaches to brownfield regeneration at a regional and local level
- good practice recommendations for stakeholders, resulting from challenging existing paradigms and allowing new ideas and perspectives to emerge
- conceptual models (Chapter 4) and proposed benchmarks (Chapter 9) for policies, programmes, organisations and projects



Figure 2.1: Stakeholder Wheel

TABLE 2.1: Key CABERNET Themes in Brownfield and Economic Regeneration

Cross-cutting issues	Sustainability components
Citizen participation and decision-making (Working Group 1)	Environmental issues (Working Group 4)
Policy approaches and regulatory practices (Working Group 2)	Social and cultural issues (Working Group 5)
Professional skills (Working Group 3)	Economic issues (Working Group 6)

As well as characterising the major dimensions of the regeneration process using the eight multi-stakeholder groups, CABERNET has also been developing a number of key positions, identified through the work of the six Network Working Groups (see Table 2.1). Ten clear Network positions have emerged. As a result of the Working Groups' theme-driven discussions, CABERNET has also been developing a number of integrated positions and recommendations.

3

Defining Brownfields: Scale and Nature



Chapter 3: Summary Message

- Brownfields are a land use problem throughout Europe
- Large areas of urban brownfields have been identified in the majority of EU countries
- There is limited national data on the true extent of the problem
- The characteristics of brownfield sites are well documented in most Member States, the impact of brownfields on urban systems is quite poorly understood
- A number of trial studies have identified that only a small percentage of brownfield sites (predicted as <25 %) have contamination issues
- CABERNET has identified aspects of the scale and nature of brownfields which may assist policy makers at regional and national level

3

Defining Brownfields: Scale and Nature

3.1

Definitions of Brownfields

Brownfields are recognised as a problem in numerous European cities that require EU policy attention. Brownfields result from structural changing such as the decline in traditional extractive manufacturing and mining industries.

Through a survey of the Network members, CABERNET has identified a significant knowledge gap in the scale and nature of brownfields across Europe. This is significant as such knowledge is essential for any policy discussion regarding the establishment of indicators for brownfield 'flow' (such as changes over time, extent, location and type). It is also vital for national bodies if they wish to determine realistic and effective targets for the future regeneration of brownfield land. The efficient and meaningful collection of such data in turn requires a common and robust trans-European brownfield definition.

At present there is no standard definition for brownfields across Europe¹³. However, in common usage the term refers to previously developed land, encompassing a range of sites in terms of size and location. A first European approach to define the term brownfields was made by a European working group within the CLARINET network (www.clarinet.at)

CABERNET, revising the CLARINET definition¹⁴, has defined brownfields as sites that:

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

This definition is analogous to the common usage in the UK of the term brownfield to denote previously developed land (PDL)¹⁵, and therefore encompasses a wider area and range of sites. A key aspect of the CABERNET definition is the emphasis it places on the need for intervention as a common characteristic of brownfields.

Recent discussions of definitions indicate *'international momentum... towards a definition of brownfields that is equivalent to land affected or potentially affected by contamination...'*, matching the definition of the term as it is almost exclusively understood in the United States¹⁶.

¹³ Nathanail, P., Thornton, G. and Millar, K. (2003) What's in a Word: UK and international definitions of 'brownfield'. Sustain 4 (3)

¹⁴ CABERNET has taken as its starting point the definition of brownfield developed during the CLARINET project (Brownfields and Redevelopment of Urban Areas: A CLARINET report <http://www.clarinet.at/library/brownfields.pdf>)

¹⁵ National Brownfield Strategy (2003) ODPM

A survey by CABERNET of their national colleagues revealed some regional trends amongst European brownfield definitions. In particular, there is a clear contrast in the perception of the term between the nations of western Europe and those of Scandinavia, a difference that may be understood by the differing priorities of the nations in the light of two key statistics: population density and competitiveness¹⁷. The concept of brownfields as previously developed land (referring to UK terminology) is prevalent throughout much of western Europe. The prevailing notion of brownfields in western Europe seems therefore to be driven by the need to make more land available for development in urban areas. It is surely significant that Austria, Belgium, France, Germany, the Netherlands and the UK have invested considerable resources in recording the scale and nature of their brownfields.

The 'brownfield' situation in Scandinavia is in marked contrast to that of western Europe. At present, there are no official brownfield definitions in Finland, Denmark and Sweden, but the term appears closely associated with contamination by land management professionals from these nations.

Throughout the rest of Europe the CABERNET survey revealed a broad range of brownfield definitions although contamination issues provide the dominant focus, with the presence of contamination (either potential or confirmed) being the decisive indicator in Bulgaria, Italy, Poland, Romania and Spain. These nations do not have the extremely high levels of population pressure which are a feature of Western Europe, yet neither do they have the extremely low population densities and high competitiveness scores that typify the Scandinavian nations. This is something that is undoubtedly being recognised, as highlighted by the recent Czech Brownfield Regeneration Strategy (2004) and brownfield surveys undertaken in Slovenia and by the Municipality of Budapest (Hungary) and Riga City Council (Latvia), as well as the inclusion of brownfield concepts within the masterplanning for the future development of Sofia (Bulgaria).

Even though the opportunities presented by the regeneration of previously developed land (whether contaminated or not) are being increasingly recognised across Europe, the notion of brownfields as contaminated sites does for the most part prevail outside densely populated western Europe, and is a feature of most commonly accepted European definitions. This perception of brownfields, or derelict land, as contaminated has been identified as a significant barrier to secure both exclusively private and PPP (Public Private Partnership) funding for regeneration. What is most apparent from the responses to the survey is that Europe is still some way from the commonly accepted brownfield definition required, if meaningful scale and nature data is to be collated, indicators of brownfield flow are to be established and targets for future brownfield regeneration set.

¹⁷A statistic based on economic performance, government efficiency, business efficiency and infrastructure; IMD, 2004

3

Defining Brownfields: Scale and Nature

3.2

Scale and Nature of Brownfields

Brownfields are recognised as a problem in numerous European cities that require. When discussing the extent of brownfields in Europe, sites can be categorised in several different ways. For example by:

- location (rural, peri-urban, urban);
- by former land use (e.g. defence, industry, railway land, residential, retail, leisure);
- by type (e.g. under-utilised, vacant, derelict, dangerous) and;
- by development phase (e.g. urgent need of action, in planning)

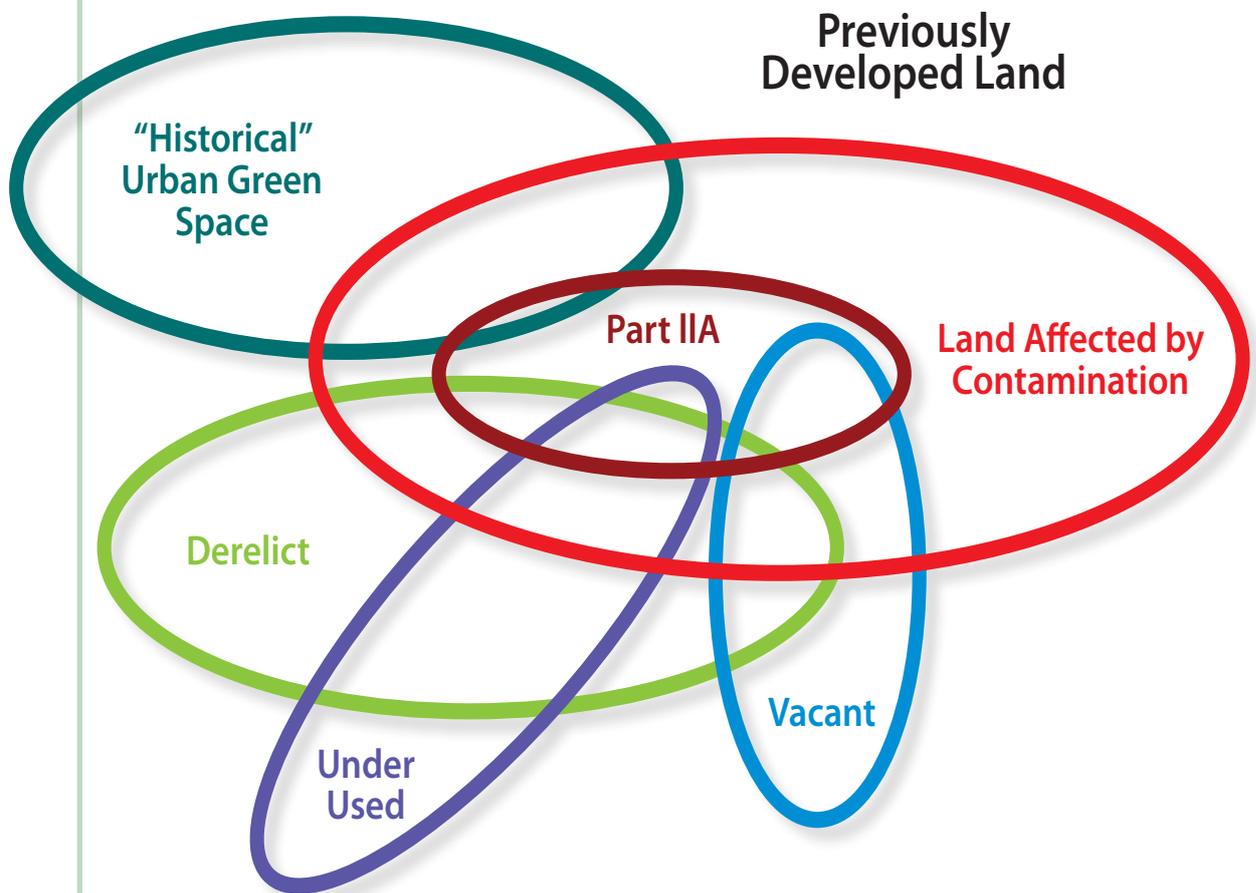
The scale of individual brownfields can differ from extremely small sites in mixed urban areas up to large military sites, such as former industrial sites or military airfields. The scale of brownfields has become a rising problem for all European countries since the European economic crisis of the coal, steel and textile industries in the 1970s.

Brownfields sites differ in size, former use, and location. A "first generation" of brownfields appeared in Europe with the closure of large sites in the 1970s. The generation of brownfield land is a normal phenomenon as a consequence of land use change. City and landscape planners always had to deal with previously used land that became derelict. Unused land becomes a problem when there are barriers to reintegrate it into the urban pattern, i.e. when there is too much land. The restructuring of smaller sites within the urban fabric became more prominent in the 1980s. At the beginning of the 1990s, military downsizing and the vacation of transport infrastructures have added to the list of brownfield sites. That is not to say that during this period there has been an accelerated cycle of site reconstruction and redevelopment in a number of urban areas. However, this has not been seen across Europe and this form of structuring has had a particular impact on a number of Eastern European countries.

There are very few, if any, consistent datasets that can be used to compare information between countries. Definitions and typologies vary, there is not 'one size fits all', as information has been collected for different purposes. Indeed even in just one country several different indicators may be used. For example Figure 3.1 identifies how the UK Parliamentary Office of Science and Technology (POST) explained to politicians the implications of different data sets that had been gathered on land¹⁸. The shaded background represents those that could be considered brownfields. The non-shaded area is operational land.

¹⁸ POST (2001)

Figure 3.1: Urban land Condition Typology (excludes rural land condition specifically for ease of presentation)



3

Defining Brownfields: Scale and Nature

3.2

Policy makers and developers need reliable and up to date information if they are to re-use land. They also need reliable information to understand (and predict and monitor) the impact of fiscal and regulatory mechanisms on urban development.

These examples clearly demonstrate the kind of difficulties that would be encountered if an attempt were to be made to establish brownfield regeneration targets on the European level at the current time, and how significantly brownfield statistics could be manipulated through a simple change in definition

From the CABERNET survey, no specific data was available to describe the scale of brownfield land in Bulgaria, Greece, Hungary and the Slovak Republic, and there was no data on the total area of brownfield land in Denmark, Finland, Ireland and Sweden, Italy, Portugal or Spain. Very little new data has become available since 2001, although the new Member States appear to be leading the way, with new studies commissioned in Poland (2002), the Czech Republic (2004) and the city of Riga (2004). New data is also expected shortly from Slovenia and the city of Budapest. The UK National Land Use database was updated in 2004 (as was the Scottish Vacant and Derelict Land Survey) but updated figures for other countries are not available and information for some countries is now up to six years out of date.

For those nations for which some form of national dataset is available, the total area of brownfield land varies considerably; from 11,000 hectares in the Netherlands to 128,000 hectares in Germany with figures of 800,000 and 900,000 hectares respectively for Poland and Romania. 'Brownfield density' shows some consistency, with identified brownfields covering between a quarter and half a percent of total land area (see Table 3.1) in all the nations for which data is available. Although exceptions are observed for Sweden and France (which have very low brownfield densities of 0.01% and 0.04%) and Poland and Romania (with 2.5% and 3.8% respectively).

The disparity in these figures is indicative of the current difficulty in comparing brownfield data across Europe. From this data it is difficult to determine whether Poland and Romania have vast brownfield lands on a scale unseen in western Europe, or if this is merely a feature of the way information was collected and the way 'brownfields' are defined when compared with other countries. In both Poland and Romania 'brownfield' lands are defined by the presence of contamination. Using such a definition, the vast coalfields of Silesia are classified as brownfield lands, and whilst indeed suffering from widespread contamination and subsidence, as large sections of the coalfields remain in operation, these regions would not be classified as brownfields if adopting a definition of brownfields as previously developed land (as in western Europe). The same is true of Romanian sites such as Baia Mare (site of a cyanide spill in 2000) and the towns of Zlatna and Copsa Mica (sites of major mineral smelters) which despite high levels of contamination remain key economic centres and would certainly not qualify as derelict or abandoned.

Information is even more limited on the actual number of brownfield sites in the different European nations. The information that is available, however, again shows some significant contrasts. French Environment Ministry figures for 2001 show 222,000 brownfield sites in France covering some 20,000 hectares. This is an average of just 0.09 hectares per site compared with 3 hectares per site from the figures of the 2004 Czech Brownfield Regeneration Strategy and an average 248 hectares per site from the 2002 Polish Environment Ministry figures. Whilst again this may be the result of a marked contrast in the characteristics of brownfield land in these nations, it seems more likely that such a difference is a feature of the way in which separate brownfield 'sites' are defined by each nation. Again, this demonstrates the huge impact of the methodology and criteria adopted when recording brownfield land statistics.

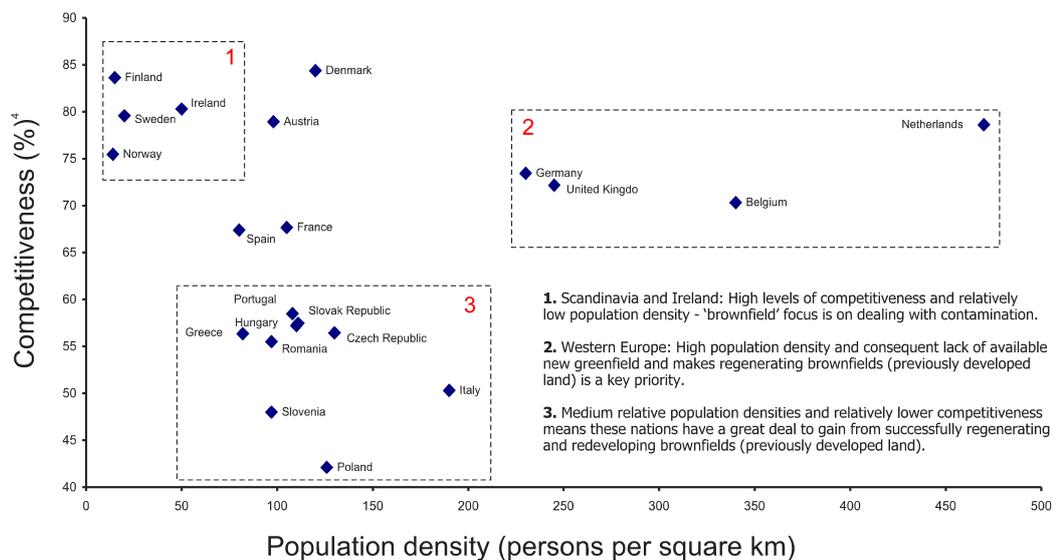


Figure 3.2 Population density and competitiveness of selected European nations (Oliver et al 2005¹⁹)

¹⁹ Lee Oliver, Uwe Ferber, Detlef Grimski, Kate Millar and Paul Nathanail. The Scale and Nature of European Brownfields. In Proceedings of CABERNET 2005: The International Conference on Managing Urban Land, pages 274-281. Land Quality Management Press, Nottingham, 2005. ISBN 0-9547474-1-0

3

Defining Brownfields: Scale and Nature

3.2

Table 3.1 Definitions of ‘brownfield’ land in European nations based on the responses of members of the CLARINET and CABERNET networks. (Oliver et al 2005²⁰)

Country	‘Brownfield’ definition	Data Source
Austria	No official definition. Understanding similar to CABERNET definition recognising potential for reuse and with less focus on contamination.	Umweltbundesamt Wien (2004)
Belgium	Wallonia: Sites previously dedicated to economic activities and where the current condition is contrary to ‘efficient land use’ (Sites d’activité économique désaffectés – SAED)	Direction Generale des Ressources Naturelles et de l’Environnement (DGRNE)
	Flanders: Abandoned or under used industrial sites with an active potential for redevelopment or expansion but where redevelopment or expansion is complicated by a real or perceived environmental contamination (legislation including a definition is in the process of approval).	Openbare Afvalstoffenmaatschappij voor het Vlaamse Gewest (OVAM)
Bulgaria	Contaminated sites – areas where previous activities have ceased but are still impacting on neighbouring areas.	University of Mining and Geology, Sofia
Czech Republic	Sites that have been affected by the former uses of the site and surrounding land; are derelict and underused; may have real or perceived contamination problems; are mainly in developed urban areas; and require intervention to bring them back to beneficial use (CABERNET definition).	Czech Brownfield Regeneration Strategy, Progress Report (Czechinvest)
Denmark	Land affected by contamination.	Danish Environmental Protection Agency
Finland	No recognised definition.	Finnish Environment Institute
France	Space previously developed that are temporarily or definitely abandoned following the cessation of activity and need to be reclaimed for future use. Can be partially occupied, derelict or contaminated.	Ministere de l’Environnement
Germany	Inner city buildings not under use. Inner city areas for redevelopment and refurbishment.	Umweltbundesamt Berlin
Greece	No information.	
Hungary	No information.	

Country	'Brownfield' definition	Data Source
Ireland	Derelict land: Land which detracts, or is likely to detract, to a material degree from the amenity, character or appearance of land in the neighbourhood of the land in question because of ruinous structures, neglected condition or presence of waste.	Environmental Protection Agency
Italy	Contaminated site: site that shows levels of contamination or chemical, physical or biological alteration of soils, sub soils and of superficial or underground water in a way to determine danger for public health or for the natural or built environment. The site must be considered contaminated if the presence of only one of the values of contaminant in soils, sub soils, superficial or underground water is higher than the permitted values of the law.	Italian National Law 426/98 and Italian National Law 471/99
Latvia	A place that has been previously used or built up, but currently is derelict or abandoned - can also be contaminated (adapted CABERNET definition).	Riga City Council
Netherlands	No commonly recognised definition. 'Obsolete industrial sites' defines data listed in table 2.	Ministry Economic Affairs
Poland	Degraded areas due to diffuse soil contamination - high density of landfill sites.	Ministry of Environment
Portugal	No information.	
Romania	Polluted lands (soils).	Ministry of Waters and Environment
Slovak Republic	No information.	
Slovenia	Degradated / abandoned building land usually inside urban areas.	University of Ljubljana
Spain	Basque Country only: Potentially contaminated sites / Industrial ruins.	IHOBE ⁵
Sweden	No official definition – commonly understood as formerly used land which needs revitalisation (or remediation before going back to the nature).	C.Egelstig (JMAB)
United Kingdom	England and Wales : Previously developed land – land which is or was occupied by a permanent structure (excluding agricultural or forestry buildings), and associated fixed surface infrastructure. Scotland: Vacant and derelict land.	Planning Policy Guidance Note No 3: (PPG3) Housing DETR (2000); Welsh Assembly Scottish Executive

²⁰ Lee Oliver, Uwe Ferber, Detlef Grimski, Kate Millar and Paul Nathanail. The Scale and and Nature of European Brownfields. In Proceedings of CABERNET 2005: The International Conference on Managing Urban Land, pages 274-281. Land Quality Management Press, Nottingham, 2005. ISBN 0-9547474-1-0

3

Defining Brownfields: Scale and Nature

3.2

Table 3.2 The scale of European brownfield land – data collected by the CLARINET and CABERNET networks (*Oliver et al, 2005²¹*)

Country	Estimated total area of brownfield land
Austria	yes
Belgium	9,000 hectares (Wallonia) 5,500 hectares (Flanders)
Bulgaria	No data available
Czech Republic	30,000 hectares
Denmark	No data
Finland	No data
France	20,000 hectares 5000 hectares (Lorraine) 1000 hectares (Ile de France) 400 hectares (West Rhône Alpes)
Germany	128,000 hectares 18,000 hectares (Saxony)
Greece	No data
Hungary	No data
Ireland	No data
Italy	No national data 1260 hectares (Milan Province)
Latvia	No national data 1900 hectares (Riga only)
Netherlands	9,000 – 11,000 hectares
Poland	800,000 hectares
Portugal	No data
Romania	900 000 hectares
Slovak Republic	No data
Slovenia	Data soon to be available
Spain	No national data Basque Country: 7930 hectares potentially contaminated land, 482 hectares industrial ruins
Sweden	> 5000 hectares (estimate)
United Kingdom	65,760 hectares (England) – full regional data available ⁹ 10,847 hectares (Scotland) No data for Wales or Northern Ireland

²¹ Lee Oliver, Uwe Ferber, Detlef Grimski, Kate Millar and Paul Nathanail. The Scale and and Nature of European Brownfields. In Proceedings of CABERNET 2005: The International Conference on Managing Urban Land, pages 274-281. Land Quality Management Press, Nottingham, 2005. ISBN 0-9547474-1-0

Suspected / potential number of brownfield sites	Data source
2500	Umweltbundesamt Wien (2000)
5,528 (Wallonia) 53,000 (Flanders,	
No data available	
10,000	Czech Brownfield Regeneration Strategy, Progress Report (2004) –Czechinvest
30,000	Danish Environmental Protection Agency (2000)
20,000	EEA (1999); Finnish Environment Institute (2001)
200,000 (estimate)	EEA (1999) ; Ministere de l'Environnement (2001) <i>Les Etablissements Publics Fonciers (EPF) Direction Regionale de l'Equipement Etablissement Public Foncier Ouest Rhône Alpes</i>
362,000	Umweltbundesamt Berlin (2000)
No data	
No data	
1,900 - 2,300 (contaminated sites)	Environmental Protection Agency (2000)
9,000	EEA (1999); Agenzia Nazionale per la Protezione dell'Ambiente (ANPA) (2001)
1900 hectares (Riga only)	Riga City Council (2004)
110,000 – 120,000 (estimate)	EEA (1999); Environmental Ministry (2000)
3230 sites	Ministry of Environment (2002)
2000 (estimate)	Lab. Nac. De Engenhaira Cical (1998)
No data	Romanian Ministry of Waters and Environment (MAAP) (2000)
No data	
Data soon to be available	Ministry Environment, Spatial Planning and Energy / Environment Agency
4,900 (potentially contaminated sites) Basque Country: 9328 potentially contaminated sites, 459 industrial ruins	Ministerio de Medio Ambiente (2001) IHOBE
40,000	Unofficial estimate (C.Egelstig, JM AB, 2004)
100,000 (England, estimate) 4,222 (Scotland)	National Land Use Database (2003 return - published 2004) Scottish Executive (Scottish Vacant and Derelict Land Survey 2003, published 2004)

3

Defining Brownfields: Scale and Nature

3.2

It is apparent from the CABERNET survey that the lack of a common European brownfield definition and the paucity of scale and nature data currently available for a number of countries represent major barriers to the effective monitoring of brownfield flows and the balance of brownfield with greenfield development on the European level, and to informing an EU wide policy.

Establishing a national land use database, if not in place already, incorporating not only the extent but the nature of brownfield land would seem a key goal for all Member States in dealing with the problem of brownfields and in taking advantage of the opportunities for increased competitiveness presented by successful brownfield regeneration and urban land management. Creating such a database would be of particular benefit to those nations with greater population densities or relatively lower levels of competitiveness.

The term Brownfield is now well established in the common language of urban land management stakeholders. Work such as that carried out by CABERNET is helping to achieve a common understanding of the term as abandoned, derelict, underused but not necessarily affected by contamination. This is essential if realistic brownfield regeneration targets, that can not be easily manipulated, are to be established across Europe.

4

Understanding Brownfields: Conceptual Models



Chapter 4: Summary Message

- Stakeholders have highlighted the need for conceptual models for brownfield issues
- CABERNET has developed five conceptual models to aid understanding of the brownfield regeneration process
- Model 1, Bath Model: represents the dynamics of brownfield creation and redevelopment
- Model 2, A-B-C Model: characterises the drivers for economic viability of brownfield redevelopment (key financial aspects are the location, e.g. the site value after restoration and the financial efforts to prepare the site for development)
- Model 3, Football Model: highlights different stakeholder interests and identifies the key drivers for development
- Model 4, Land Use Puzzle Model: demonstrates the interconnected nature of brownfield distribution, land development and the land use cycle
- Model 5, Interaction Model: demonstrates interactions between social, environmental, economic and governance factors in urban systems

Understanding Brownfields: Conceptual Models

4.1

Conceptual Models

Conceptual Models and Brownfield Regeneration

Brownfield regeneration is a complex process. Brownfield regeneration can have far reaching effects on wider urban development so it is vital that efforts are made to further understand the dynamics of the process, in particular the barriers to successful regeneration.

Role of Conceptual Models in Problem Formulation

Conceptual models are useful tools in problem formulation. They provide visual representation (with associated explanatory text) of a problem and as such they are able to hypothesise, or demonstrate, the relationship between different elements of system that are often difficult to represent in an accessible way.

Certain concepts and forms of data can be difficult to understand when presented in a fixed textual form²². Visualisation in the form of a conceptual model is one method for potentially enhancing the comprehension of the user. A visual representation is inherently more understandable than other methods of presenting information, as it tends to be a less abstract representation of information than textual equivalents. A visual representation of a particular data set can show the changes in the state of the data represented by changes in the state of the visual image²³.

A visual display will be an abstract representation, either because what is being represented is abstract, or because it would be impractical to have a realistic representation of the data. However, the aim is that the conceptual model should be more meaningful to the user than the original source data. The main benchmark for evaluating a conceptual model should therefore be its usefulness. The model should improve the user's understanding of the system in a way which other, more abstract representations (such as text) do not. The user's additional insight should be something arising from the change in perception, in particular the user is able to explicitly 'see' concepts that were previously implicit. Even if it is only for one context or facet that a particular conceptual model has any advantage over other representations, then it is still deemed to be useful²⁴.

^{22 23 24}Aumen (1998) Conceptual Modeling Workshop, UC Davis, June 17-18, 1998

4

Understanding Brownfields: Conceptual Models

4.1

CABERNET's Conceptual Models

As a result of CABERNET's work examining the underlying nature of the brownfield problem and in response to the need for further clarification of dynamics of the regeneration process, the Network has developed a number of conceptual models.

These models have been produced as simple schematics and visual representations. Five models have been developed representing different aspects of the brownfield problem. Each of these models process properties which are drawn from:

- Current state of understanding of the brownfields problem across stakeholder groups
- Characterisation of key regeneration drivers and pressures
- An understanding of the long-term sustainable development aims, particularly acknowledging environmental, economic, social dimensions of the process
- An awareness of cross cutting issues, such as citizen participation and professional skills, and their impact on the overall success of projects and programmes

Conceptual models for brownfields that incorporate all of the above elements can facilitate the efficient identification of best practice approaches, research and professional skills gaps. More specifically, conceptual models provide valuable tools for shaping understanding and facilitating the development of holistic solutions through the provision of management strategies, public policy instruments and decision-support tools.

One of the main roles of the CABERNET conceptual models has been to characterise and increase the understanding of the problems from a multi-stakeholder perspective. In terms of a greater multi-stakeholder understanding of the key aspects of brownfields, the conceptual models focus on the dynamics of brownfield regeneration/creation, the characterization of the problem by different stakeholders and highlight the role of brownfields in the wider context of land use.

4.1

Five Models have been developed to:

- Represent the dynamics of the system in the context of urban land management (**Bath Model**)
- Characterise different types of sites which reflect location, former use, treatment costs and economic conditions (**A-B-C Model**)
- Raise awareness of the different stakeholders' understanding and problem characterisation (**Football Model**)
- Demonstrate the interconnected nature of brownfield distribution, development and the land use cycle (**Land Use Puzzle Model**)
- Demonstrate interactions between social, environmental, economic and governance factors in urban systems (**Interaction Matrix**)



4

Understanding Brownfields: Conceptual Models

4.2

MODEL 1: CABERNET Bath Model

When examining the brownfield problem, EU and national policy discussions have sometimes focused on targets for brownfield regeneration as a percentage of the total number of current sites. One of the problems with this approach is that it can overlook an important dimension of the brownfield problem, the length of time that sites remain derelict and underutilised. This is a very important aspect, as is the nature of, and extent to which brownfield sites are created through changes in land use and urban restructuring.

The CABERNET Bath Model (Figure 4.1) attempts to highlight the dynamics of the brownfield problem either for Member States, regions or cities (in terms of both the extent and type of sites), as a 'bath' that is not only affected by the regeneration process that can 'empty the bath', but also by wider land use issues that 'fill the bath'.

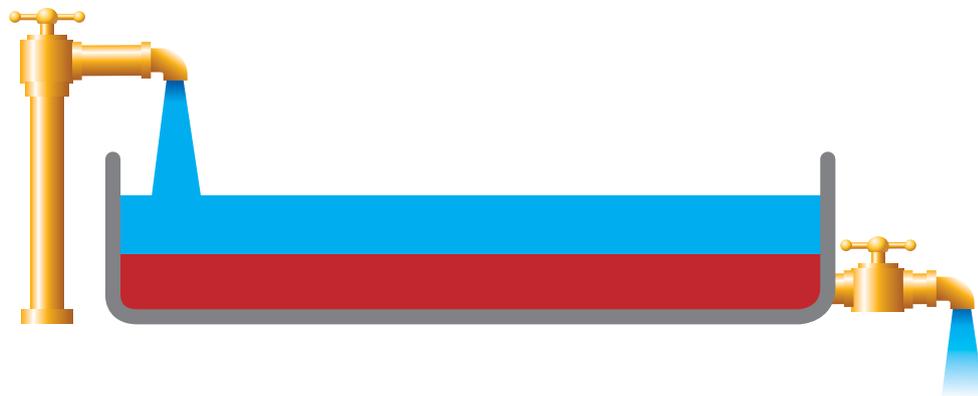


FIGURE 4.1: The Brownfield Bath Model – showing the filling and emptying of the bath

This conceptual model demonstrates that as long as the brownfield bath continues to 'refill', due to the creation of brownfield sites, cities will always have brownfield sites. In some regions more sites become derelict than are regenerated and therefore the overall area of brownfields will increase. More importantly for some regions, as shown in Figure 4.2, a number of types of sites remain on the bottom of the bathtub for a considerable amount of time. These persistent sites, are shown in the model as the red 'sludge' at bottom of the bath. Persistent sites are often sites of low economic value that have remained derelict for a number of years.

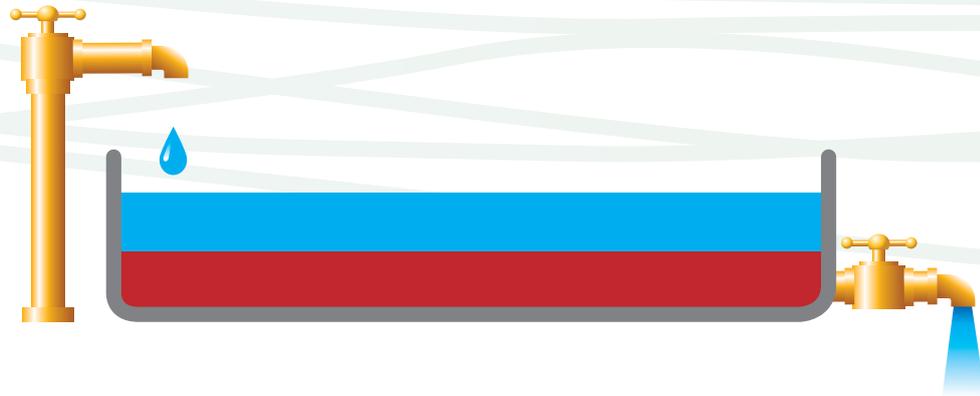


FIGURE 4.2: The Brownfield Bath Model – showing the 'sludge' or hardcore sites

If public policies that deal with brownfield sites only focus on reducing the overall number or total area of sites (represented in the model as the volume of the bath), then it is possible that this form of strategy will ensure that many of the sites which can be difficult to deal with, such as the hardcore sites, will remain (Figure 4.3). This could potentially result in public funds being targeted, in a form of 'cherry picking', to brownfields that may not require significant public intervention of this type. Understanding the nature of the 'brownfield bath' and the prevalence of long-term hardcore sites can help policy-makers target limited resources at sites that can be permanently removed from the bath, preventing stagnation of city areas through persistent dereliction and the impact that this can have on urban decline.



FIGURE 4.3: The Brownfield Bath Model – showing the 'sludge' or hardcore sites that persist

In terms of brownfield regeneration and the land use cycle, there will always be a flow of brownfields into the bath as sites change in use and are regenerated. However in terms of the land use cycle, ideally there should be a steady flow of sites into and out of the bath in equal volumes. The residual volume of brownfields should be at a low level (a low volume in the bath) and this volume should not consist of any hardcore sites (there should be no sludge in the bath).

4

Understanding Brownfields: Conceptual Models

4.2



FIGURE 4.4: The Brownfield Bath Model – showing optimal brownfield flow

The final figure (Figure 4.5) represents the brownfield bath conceptual model for the UK, where there is a target to build 60% of new housing on brownfield land. In terms of the persistent or hardcore sites, in the UK these are determined as sites that have remained derelict for over nine years. Within the 60% target there is no specific strategy to deal with the hardcore sites.

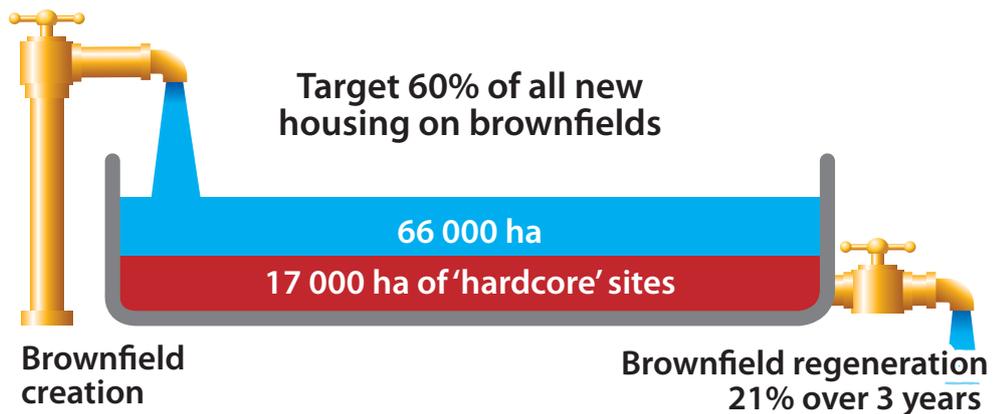


FIGURE 4.5: The Brownfield Bath Model – showing figures for the UK (reference)



4

Understanding Brownfields: Conceptual Models

4.3

MODEL 2: CABERNET A–B–C Model

One of the major drivers of brownfield regeneration is the economic viability of individual sites. This can be affected by many different factors which can alter quite considerably over time. The economic status of a site can be affected by:

- indirect as well as direct costs of the regeneration,
- predicted revenues / return from the site
- the type of financing and the associated financial risks
- national and local taxes and their perceived risk of fluctuations
- any development agreements between the land owner and / or the municipality and the developer

Using a conceptual model to characterise different types of sites in terms of their economic viability and highlighting how status can change based on variation in location standing, site treatment costs and other economic conditions, can help policy makers identify strategies that can improve the economic viability and status of sites. Different types of brownfield regeneration projects, representing their economic status, can be illustrated by the

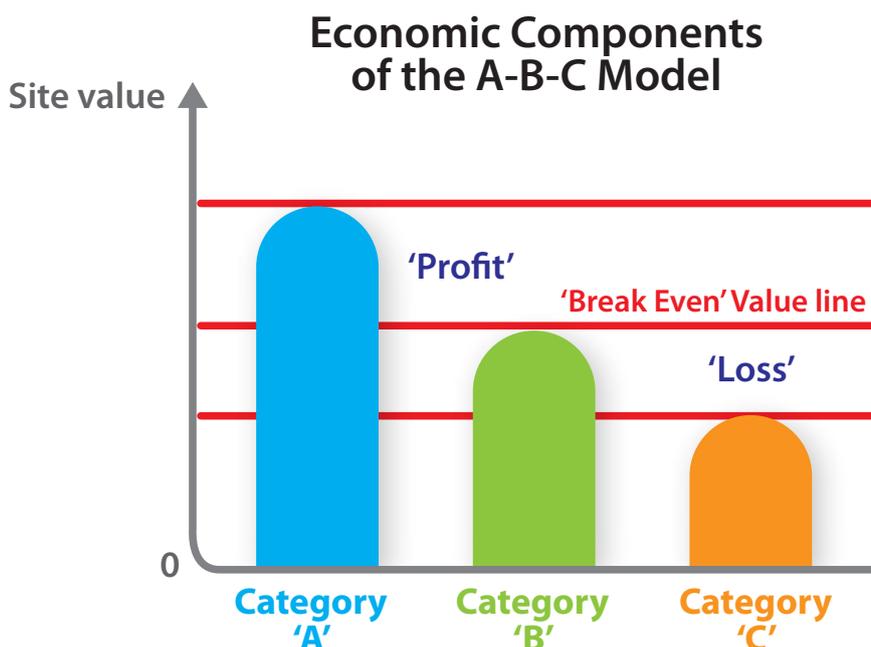


FIGURE 4.6: The Economic Components of the A-B-C Model

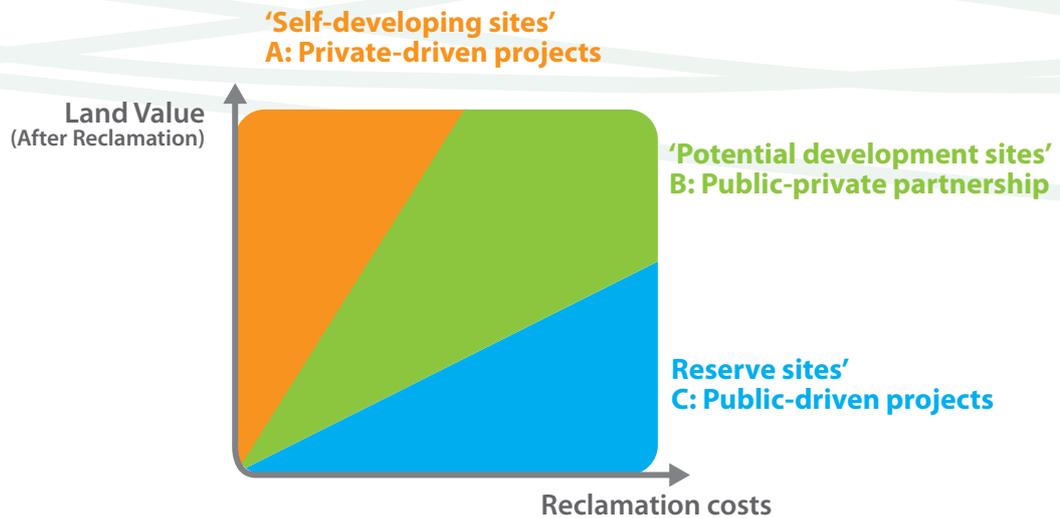


FIGURE 4.7: The A-B-C Model

This model identifies three types of sites according to their economic status (due to the cost of regeneration, the value of the land, etc). Sites are classified as:

- **A Sites** – are highly economically viable and the development projects are driven by private funding
- **B Sites** – are on the borderline of profitability. These projects tend to be funded through public-private co-operation or partnerships
- **C Sites** – are not in a condition where regeneration can be profitable. Their regeneration relies on mainly public sector or municipality driven projects. Public funding or specific legislative instruments (e.g. tax incentives) are required to stimulate regeneration of these sites

The A-B-C model highlights the funding drivers for brownfield regeneration. The conceptual model can be used to assist institutions that are responsible for regional development and investment by allowing them to characterise strategies for dealing with different types of brownfield land. By identifying the type of site and considering the factors that are affecting a site's category, i.e. if it is an A, B, or C site, both public and private bodies can examine intervention options and regeneration strategies²⁵.

Using this conceptual approach to examine the factors that affect re-categorisation of a site, for example from a B Site to an A site, can result in the development of site-specific strategies which can also be useful. A number of municipalities are currently using these categories to review their local brownfield strategies and to produce informal inventories of regional brownfield sites .

²⁵Please refer to Working Group 2 Case Studies on the CABERNET website – www.cabernet.org.uk

4

Understanding Brownfields: Conceptual Models

4.4

MODEL 3: CABERNET Football Model

Brownfield schemes are influenced by an extensive range of stakeholders that are involved in the regeneration process. Understanding the views of the various stakeholder groups, in particular their concerns and expectations, is an important part of ensuring the success of both individual projects and more extensive programmes.

One of the ways that this can be achieved is by mapping multi-stakeholder views. Exploring stakeholder profiles can assist with further engagement and dialogue programmes. Initial maps of views can be used to stimulate further interactive face-to-face discussions, which in turn can increase trans-stakeholder group understanding of positions and interests.

In order to help explore stakeholder views, the CABERNET Football Model was devised to highlight how different stakeholder perspectives can influence and affect the regeneration process. With this interactive model, individuals are asked to list the most significant regeneration drivers. Stakeholders list and prioritise a number of Regeneration Drivers through a web-based interface (Figure 4.8).



FIGURE 4.8: The Football Model interactive screen showing the stakeholder selection list

4.3

Once the stakeholder (using the model) has selected a set of key drivers, the football is then 'kicked'. The conceptual model, the 'football', is then activated and 'spins'. The drivers selected by a stakeholder are represented on the panels of the football. When the football is 'kicked' the most significant 'drivers' determine where the football falls and which drivers are more clearly exposed on the visual representation. Figure 4.9 shows the panels of the football and the prioritisation of the drivers.



FIGURE 4.9: The Football Model interactive screen showing the stakeholder selection list

The CABERNET Football model was devised to highlight how different stakeholder perspectives can influence and affect the regeneration process. When various groups of stakeholders list their drivers, it is informative to review the divergence and convergence of their views and how they 'kick' the football. With this interactive model, the individual stakeholder lists can be cross-compared to determine the most significant regeneration drivers (again in terms of divergence and convergence) for a particular group or even across several stakeholder groups. The model reminds 'users' of not only the role of drivers and conflicting forces in the regeneration process, but also draws attention to the significance and impact of different stakeholder views and interests.

4

Understanding Brownfields: Conceptual Models

4.5

MODEL 4: The CABERNET Land Use Puzzle Mode

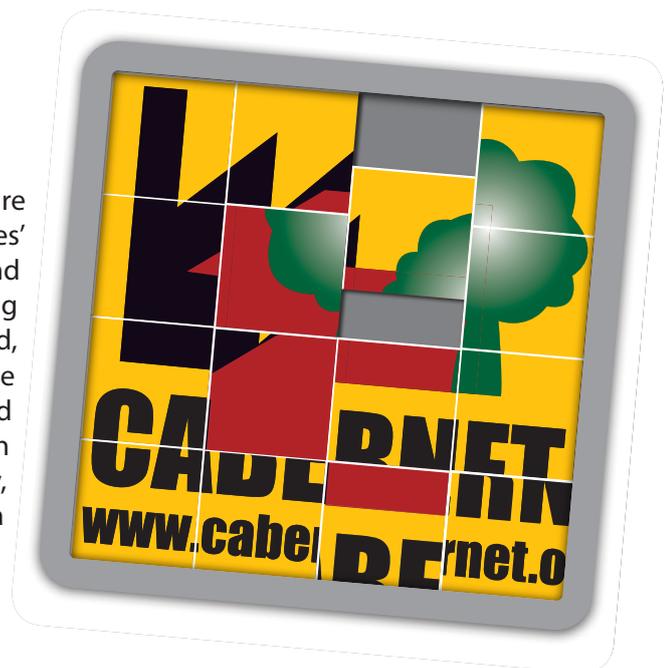
Urban systems consist of interconnected or interwoven parts that are linked in an intricate or involved way. When considering brownfield regeneration schemes it is useful for practitioners to consider how these schemes are linked with other aspects of a holistic urban development strategy. Many local and national programmes correctly aim to reduce the overall level of brownfields in urban areas, however the land development process requires an amount of 'spare' land and to some extent this requires the creation of brownfields.

Brownfields offer opportunities for positive land use changes within an urban area. Derelict areas and urban districts can be revitalised through new developments which are able to create new city linkages, stimulating economic renewal through the introduction of new areas and incorporating new amenities to name but a few opportunities.

The **Land Use Puzzle Model** demonstrates the interconnected nature of brownfield distribution, land development and the land use cycle. The model demonstrates that the creation of brownfields is part of the overall land use cycle and is in fact necessary to allow cities to manage their development through the creation and stimulation of new regeneration.

FIGURE 4.10: The Land Use Puzzle Model

Figure 4.10 highlights the interconnected nature of the urban system in flux, where land 'pieces' are changing in use (moving in puzzle) as land is being redeveloped. The spaces, representing derelict land, can be filled, sites can be reused, within a 'semi-structured land use plan'. The 'semi-structured land use plan' is represented by a semi-complete CABERNET logo, although the middle section of the puzzle is disorderly, it is still possible to see the formation of a picture (the CABERNET logo).



4.5

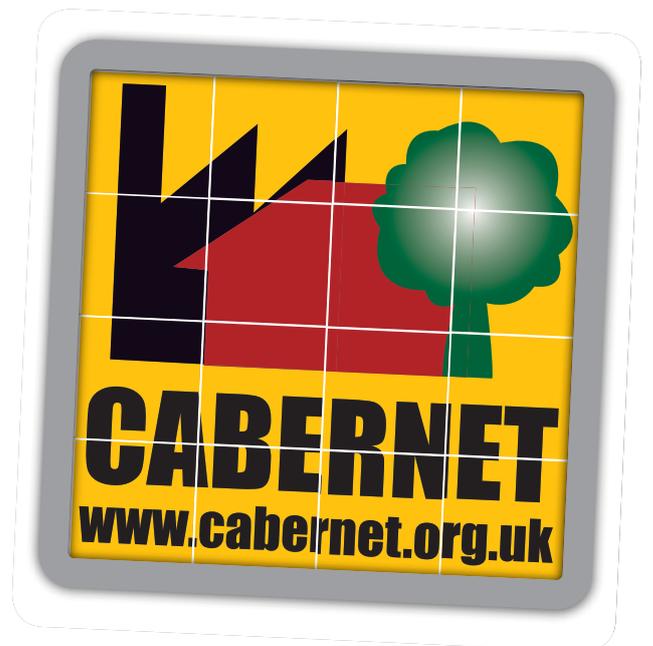
FIGURE 4.11: Land Use Puzzle Model showing the absence of a land use strategy

However, if there is no clear strategy for the management of sites as they become derelict or change functionality, then the overall land management strategy remains chaotic without any defined framework or clear vision for achieving successful city development. Hence, as represented by the conceptual model (Figure 4.11), the land use (the 'puzzle') becomes more and more disorderly to a point where it may even become too complicated to solve.



FIGURE 4.12: Land Use Puzzle Model showing the successful completion of a land use strategy

In contrast, if managed comprehensively then a sustainable land use vision for the city, represented here as the CABERNET logo picture, can be realized (figure 4.12). Brownfield strategies are an essential part of any city's short-term urban master plans as well as the city's long-term sustainable urban development, as represented by the puzzle's completed picture (Figure 4.12).



4

Understanding Brownfields: Conceptual Models

4.6

MODEL 5: The CABERNET Interaction Matrix

The Interaction Matrix has been applied to urban regeneration. The approach involves a well-defined sequence of actions that ensures that all factors relevant to a proposed brownfield regeneration scheme in a given location have been explicitly considered.



The interaction matrix can be used to study the relative interactiveness, dominance and dependence of the parameters. The sum along a row is a measure of the influence of a parameter on other parameters (cause). The sum down a column is a measure of the dependence of one parameter on the others in the system (effect). A plot of cause against effect allows dominant parameters (plotting below the 45°) to be differentiated from dependent parameters (plotting above the 45° line). The farther from the origin a parameter plots, the more interactive it is; the more it influences or is influenced by the rest of the system. The overall system performance is summarised by the mean cause and mean effect point, P_{bar} , that lies on the 45° line (mean cause = mean effect; Hudson, 1992).

A systems approach to objective focused problem solving has been shown to map onto the challenge of ensuring that brownfield regeneration meets the criteria of sustainability.

4.6

Environmental	Health protection	Attract tourists	Environmental
Provide habitat in parks	Social	Provide a market	Prioritise policy choices
Fund habitat conservation	Provide jobs	Economic	Provide tax revenue
Prevent unnecessary use of resources	Mixed cost housing	Impose CSR or other reporting rules	Institutional controls

FIGURE 4.13: Illustrative interaction matrix for the urban land system

5

Regenerating Brownfields: The Current Agenda



Chapter 5: Summary Message:

- CABERNET has identified a number of barriers to, and opportunities for, sustainable brownfield regeneration
- Institutional structures can facilitate or hinder the regeneration process.
- Effective public-private partnerships, that have been designed to bridge the cost-value gap that often prevents the commercial regeneration of many marginally non-viable brownfield sites, should be exempt from EU competition policy
- EU and Member State funding is necessary for, and should be used, to return non-viable sites to beneficial use (e.g. permanent or transitional low-intensity activities)
- Environmental issues can catalyse brownfield regeneration raising environmental, social and economic benefits when targeted at sustainability in a balanced and integrated approach. A simplistic sectorial regulatory approach, e.g. focusing on waste, hinders regeneration
- Critical evaluation of the role of dedicated agencies is required to get a better understanding of their potential impact
- There is a need for a specific strategic approach for brownfield regeneration at the local government level if the objective of competitive urban environments is to be achieved
- Streamlined decision-making is needed in order to make brownfield regeneration competitive with development on greenfield

5

Regenerating Brownfields: The Current Agenda

5.1

Current Dimensions of Brownfield Regeneration

Sustainable Brownfield Regeneration is the management, rehabilitation and return to beneficial use of brownfields in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations in environmentally sensitive, economically viable, institutionally robust and socially acceptable ways within the particular regional context²⁶.

CABERNET has explored the key brownfield regeneration issues for the four sustainability dimensions. As a result the Network has set out a number of statements and recommendations under that relate to these dimensions (See Figure 5.1):

- Economic Issues
- Social Issues
- Environmental Issues
- Institutional Issues

These issues are discussed individually in the following sections.

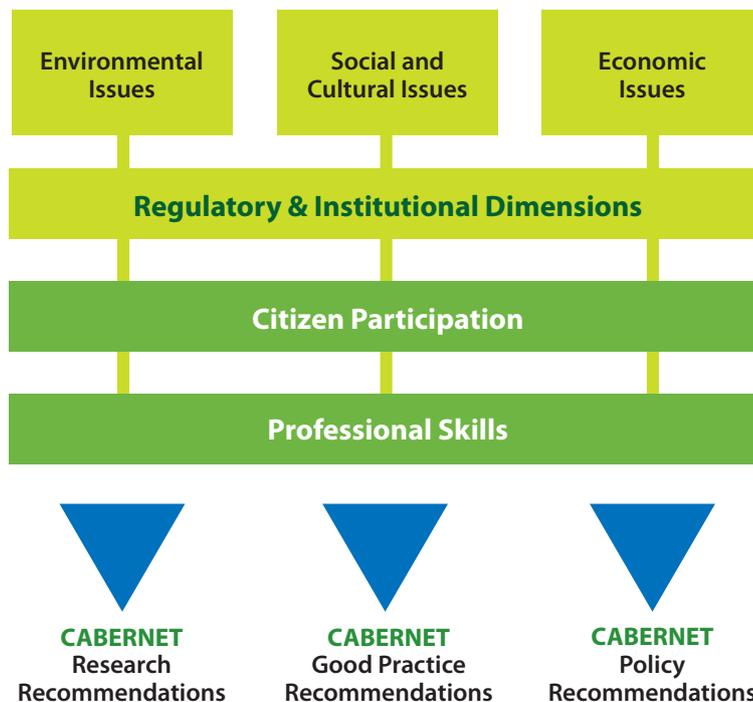


FIGURE 5.1: Sustainable dimensions of Brownfield Regeneration

²⁶RESCUE (2005) Best Practice Manual. LQM Press, Nottingham

5.1

Economic Viability and Regeneration

One of the key drivers of brownfield regeneration is the economic revitalisation of an urban area and the potential profit to be made. When examining the effects of economic globalisation and the growing challenges of current European real estate markets, the role of brownfield redevelopment as a means for supporting economic development and competitiveness across Europe has become more prominent. This is particularly true in more traditional formerly industrial areas, where the economic possibilities associated with site redevelopment are increasingly acknowledged.

Although municipalities and local authorities are concerned by wider issues associated with vacant or derelict land, increasing urban growth and a lack of access to greenfield sites has acted as an economic stimulus for brownfield development.

Striking examples, e.g. Bilbao, Manchester, Pireus and Prague, of the economic viability of brownfield redevelopment when compared with greenfield development. Also, when taking a mid- and long-term perspective, there are advantages to developing urban derelict land (for example, public transport and sewage networks often already exist). In addition, investment to revitalise city areas can improve local municipality revenues and have implications on taxation.

Economic conditions for regeneration

Whilst much brownfield land is being brought back into beneficial use solely by the market (i.e. Category A sites), in other cases, vacant and derelict brownfield land persists (i.e. Category B and C sites). These persistent sites can often be concentrated in areas of social deprivation, and so policies to deal with the backlog of vacant and derelict brownfield land is clearly a crucial component of urban regeneration – and the challenge is to accelerate the pace at which the market is able to absorb brownfield land.

The CABERNET Network has developed position statements targeting the current discussions on:

- Corporate Social Responsibility (CSR) responsibilities of private investors when regenerating sites of high market value
- Public-Private-Partnerships in relation to the European state aid policy
- Strategic EU approach to regenerating “hard core sites”

5

Regenerating Brownfields: The Current Agenda

5.1.1

Commercially viable sites, CSR and Private Investors

Recent work by the CABERNET has shown that industrial land continues to be abandoned and that despite over 20 years of regeneration effort, the extent of such land has not only failed to shrink but has probably grown. Characterisation of this type strongly implies that within the domain of corporate real estate, management strategies are potentially inadequate and the principles of CSR are not being successfully applied.

By extending CSR principles through the application of corporate policies to the after use of land occupied for corporate core business, the CRE function can deliver holistic socially responsible behaviour that will meet sustainable development objectives and as a result been positively welcomed by socially responsible investors and ethical consumers.

CABERNET Position:

The impact of CSR on CRE, and in particular on global corporate exit strategies from on site requires research and knowledge transfer activity.

5.1.2

Encouraging Regeneration: Reducing limitations on Public-Private Partnerships

If the perceived value of a site is less than anticipated costs, the site will remain vacant or under-used for the foreseeable future (Category B and C sites). This can only change if there is some means of creating a surplus of value over cost. Policy initiatives can variously seek:

- to raise market values,
- to reduce anticipated costs, or
- a combination of the two.

Only modest adjustments to perceived costs and values are required for the market to redevelop Category B. In contrast, the market is highly unlikely to be able to respond with Category C sites, implying a more leading role for the public agencies (whether at national, regional or municipality level). Therefore, a proportion of brownfield sites (i.e. Category B) can be taken forward by the private sector if the public sector

is able to assist with the costs (or values) at the margin, rather than requiring leading investment to be made by public agencies.

The benefits of partnerships working in urban regeneration include:

- access to wider sources of funds,
- greater leverage in the use of limited public funds, and
- encouraging the private sector to develop on brownfield land

These forms of public private partnership have attracted the attention of EU Competition Policy²⁷, and yet without some form of intervention, the sites will remain under- or unused for the foreseeable future. EU Competition Policy²⁷ constrains the ability of Member States to develop certain policies that can be highly effective in achieving sustainable brownfield regeneration.

The principle of allowing partnerships to address the cost-value gap in the development of property on brownfield sites (even where local property market conditions make such activity non-viable) has not been recognised, other than to provide low cost housing. Without a viable use of land, site remediation by itself does little for local regeneration. A solution would be derogation from the provisions of Competition Policy for grant aid used to secure the re-use of non-viable brownfield land, irrespective of the land's location or the size of the enterprise receiving the grant. Such changes might need to be to a pre-agreed limit. With any such amendment, Member States could develop a broad range of policies to achieve sustainable urban regeneration. Without this, the ability to develop effective partnerships that can increase the pace and scale of re-use of brownfield land is limited. In terms of the alternative styles of intervention that could be considered as part of any policy review, there are essentially two forms of intervention, viz (1) market enhancements; and (2) market displacements.

(1) Market enhancements involve action by the public agencies to improve the working of the market by sharing, or modifying the costs and/or risks faced by the private sector or by taking steps to enhance the market values likely to be achieved. In these ways, market enhancements:

- encourage private sector involvement in sites that they would otherwise decline to invest in,
- stimulate, over time, adjustments to market perceptions of costs, risks and values, and
- over time, permit the public sector to withdraw from the market.

In other words, the objective of market enhancements is to achieve self-sustaining market activity without the need for continued public sector interventions.

²⁷Article 87 of EC Treaty

5

Regenerating Brownfields: The Current Agenda

5.1.2

(2) Market displacement, by contrast, involves the public agencies taking primary responsibility for dealing with problematic brownfield land. Inherently, the role of the private sector is reduced to that of a contractor to the public sector, rather than that of a risk-sharing partner. Such a relationship may well be justified by the particular circumstances, such as sites that have deep-seated problems.

If market displacement activity becomes the norm for all non-viable brownfield sites, private sector innovation and risk-taking cannot be rewarded and, over time, may well discourage market innovation and competition in the field of urban regeneration. In other words, market displacement activity can discourage the private sector from urban regeneration activity except in the most buoyant areas. Any brownfield site, perceived by the market as in any way non-viable, will become wholly the responsibility of the public sector.

To summarise, market enhancement activities offer the opportunity to foster market activity and to stimulate innovation and competition in urban regeneration. Market displacement activities, by contrast, will require the public sector to wholly fund the urban regeneration process other than in the most buoyant market areas.

Recommendations

The Commission needs to recognise the value of Member States achieving urban regeneration through partnership schemes, even in regions that are otherwise buoyant, as contributing to the renewal of the social and economic fabric of Europe's cities. It must be recognised that the major beneficiaries are the people living or working near unused brownfield sites, not the commercial enterprises that are the immediate recipients of grant aid. Under such circumstances, the risk of providing unfair competitive advantage to enterprises, or of under-mining intra-community competition, is modest. Without such recognition, the pace of re-use of brownfield land will be slower than it might otherwise be.

To date, various partnership schemes have been recognised by the Commission as an appropriate part of the policy response, but only in the assisted regions, or as support to SMEs. It is far less readily accepted as a means of addressing the non-viability of the many brownfield sites outside the assisted areas. Urgent consideration therefore needs to be given to the granting of a derogation from the provisions of Competition Policy for urban regeneration partnership that involve grant aid towards the adverse costs involved in the remediation and re-development of brownfield land, irrespective of its location and the scale of the enterprise nominally receiving the grant. As with the recently proposed relaxations for smaller scale initiatives, limits could be set in terms of the maximum grant per individual project in financial terms, and / or in terms of the aggregate amounts of grant per recipient per annum, but these must be at levels that permit non-SMEs to participate in meaningful ways.

5.1.2

Achieving such an 'adjustment' would mean that Member States could develop a broad range of policies to achieve sustainable urban regeneration. Without this Member States will continue to be required to demonstrate that each scheme is a tool of regional policy or as restricted solely to the SME sector and will be obliged to depend on primarily public sector initiatives for urban regeneration activities, with adverse consequences for the pace and scale of re-use of brownfield land.

CABERNET Position:

The cost - value gap prevents the development and regeneration of many marginally commercially non-viable brownfield sites (B sites) across the European territory. EU competition policy has the unintended effect of restricting the ability of member states to develop public-private partnerships to facilitate the regeneration of commercially non-viable sites, other than where the private sector partner is an SME, and / or the site is located in an assisted region. **CABERNET believes effective public-private partnerships, that have been designed to bridge the cost-value gap that often prevents the commercial regeneration of many marginally non-viable brownfield sites, should be exempt from EU competition policy**



Regenerating Brownfields: The Current Agenda

5.1.3

New funding approaches for C sites

C sites represent a significant problem as they can have a negative impact on the surrounding area and community, especially when concentrated within a given locality, increasing the difficulty of achieving effective urban regeneration.

C sites generally require substantial pre-investment from the public sector before they can be handed over to private developers or redeveloped using PPP approaches or put to soft end uses. These sites with their high reclamation / redevelopment costs and low market values, constitutes a specific challenge for many cities and regions.

Generally speaking, C sites result in large part, due to decreasing populations and declining economic growth in many European regions. One European study and pilot project in the former eastern German region of Saxony classified 66% of brownfield sites as Category C sites²⁸. Investigations in the region of Thüringen indicated 44% of sites also fell into this category. Reasons for these high percentages include the vast areas of brownfields, reported as 18.000 ha, caused by the rapid economic changes since 1990 and also the release of military land. Shrinking populations and the oversupply of land for housing and commercial use has led to depressed real estate markets and persisting brownfield sites. This in turn has led to a low demand for land causing low land and property values. The situation is made worse when there are limited local public funds to regenerate sites due to economic decline of a region. These conditions lead to large, persistent areas of brownfield land that remains unused and derelict for substantial periods.

The problems associated with these sites particularly relate to:

- Market forces are not able to drive redevelopment of these sites
- Future uses are often limited to soft-end uses
- Reuse is only considered relevant if they are related to long-term options
- Many major public programmes focus on redevelopment to stimulate direct economic growth

The National Land Use Database²⁹ in England records the number of persistently under-utilised sites that have been vacant or derelict for nine years or more. In all, some 16.000 ha of hardcore land have been identified. This represents one quarter of the total stock of all previously developed land (PDL) in England. Many of these sites are located in the traditional industrial regions of northern England and the Midlands. However, these sites can also be found in the less buoyant parts of many prosperous regions. Negative site-specific factors are amplified with local factors of low local property market values.

²⁸ Please refer to the Conceptual Models paper on the CABERNET website - www.cabernet.org.uk

²⁹ National Land Use Database - www.nlud.org.uk/

5.1.3

Current approaches for C Sites

One possible option or basic solution for these sites are soft-end uses, whether permanently (i.e. with a definitive loss of development opportunities), or as an interim use (i.e. affording the sites some form of reserve status). In response to this issue, at beginning of the 1990s, French regions of Lorraine and Nord-Pas de Calais have concentrated public funding on C-sites by bringing them into a reserve status. A new organisation in the UK, the Land Restoration Trust (LRT), has been set up to take responsibility, of sites which are deemed not suitable for hard-end use³⁰. The LRT is focusing on projects that draw in local organisations to create new 'green amenities' providing benefits both for people and for nature.

When examining the 'reserve status' approach, no final or binding decision is made regarding the future use of a site. It is perceived that the transition of a site from abandoned or derelict status to a reserve status can be realised fairly quickly, especially for sites already publicly-owned, and this approach can also be a cost-effective strategy. There is, therefore, a need to explore specific planning and technical approaches for transferring brownfields from an unutilised form to a reserve status. Options of this nature can be developed and implemented by affected regions and municipalities as part of their spatial planning responsibilities.

Sites which could be definitively excluded from further developments for technical reasons, market conditions or planning goals could be reclaimed for soft end-uses as a way of managing the potential social costs of doing nothing. However, most of these sites will require long-term maintenance. Therefore, any short-term treatment will need to be linked to a maintenance strategy that will be managed by the public sector.

Sites with a future prospect of redevelopment could be transferred into reserve status. A number of initial planning, technical and financial concepts have been tested in different European regions. The main goal of any reserve status redevelopment should be the limitation of treatment costs in the first step of remediation, demolition and interim landscaping. Planning and technical goals can be defined as:

- Immediately overcoming the negative urban impacts
- Flexibility in plans relating to after use
- Encapsulation and interim security of soil contamination (still ensuring the application of the "polluter pays principle")
- Reduce impacts on protected green/natural sites
- Ensuring low maintenance cost for green areas and buildings with historical or urban value.

³⁰Land Restoration Trust - www.landrestorationtrust.org.uk

5

Regenerating Brownfields: The Current Agenda

5.1.3

Recommendations

Current European, national and regional funding schemes are still quite myopically focused on the redevelopment of sites for hard-end uses. Given the large areas of persistent brownfields in the traditional industrial regions of both Western and Eastern Europe and the increasing number of sites in the Accession States, public funding of these persistent sites for hard-end uses is not a realistic option.

There are a limited number of existing funding programmes for C category brownfield sites, as many of these sites do not have a clear future development potential.

A significant proportion of brownfield land, specifically in areas with low market values, is not commercially viable to bring back into beneficial use. Without some form of public intervention these sites will remain unused, and potentially derelict, for the foreseeable future. The consequence is a blight on the surrounding areas and communities, and the loss of an opportunity to renew the community in a sustainable manner. There appears to be a strong case for the establishment of a new form of programme to tackle these issues. Any specific approach could be applied either through existing programmes or via the establishment of a new funding programme aiming at reserved sites, which could specifically highlight a social advantage for town planning and municipal development.

A case might also be made that the EU should consider a specific funding scheme, through the Structural Funds programme (applying Objective 1 and 2 areas assessments), which recognises that the persistence of unused brownfields (hardcore sites) can have significant adverse effects on a region's and a municipalities' competitiveness.

CABERNET Position:

A significant proportion of brownfield land is not commercially viable in the foreseeable future (C sites). Such persistently unused brownfields often have adverse effects on the sustainability including the competitiveness of European regions and cities. **CABERNET believes that EU and Member State funding is necessary for, and should be used, to return non-viable sites to beneficial use (e.g. permanent or transitional low-intensity activities).**



5.2

Environmental Quality and Protection

Sustainable urban regeneration is essential if Europe's cities are to play their essential role in delivering a dynamic and competitive economy and bring about social, economical and environmental renewal leading to job creation, social cohesion and environmental sustainability. Sustainable urban regeneration is essential if Europe's cities are to maintain their present success without compromising their long-term survival. Such regeneration must achieve a balance between environmental protection, social cohesion and wealth generation within appropriate forms of governance. The key to sustainable urban regeneration is the creation and implementation of correct plans that make optimum use of all the resources and mitigate the effects of relevant constraints.

Discussions in the CABERNET working group focusing on environmental issues have led to grouping topics into the following categories:

- environmental management, policies and regulations
- environmental aspects of planning
- environmental tools for preparation and regeneration of brownfields

Each of these topics is addressed separately.

5

Regenerating Brownfields: The Current Agenda

5.2

Environmental management, policies and regulations

From a sustainability point of view maintaining a balance between land which is regenerated and additional land that becomes brownfield should be the minimum ambition. At present, data is missing regarding the dynamics of this process and the possibility that land is actually consumed is real. Brownfields have an effect on environmental media (soil, air, water) and even without regeneration these require management and monitoring leading into societal costs. Examples of this are land stabilisation of former mining areas, also area maintenance (fences, water run-off etc) to prevent negative impacts on the surrounding areas. Even at relatively low costs (several thousand Euro's per ha/year) the large total surface area that requires this type of intervention/maintenance lead to significant costs.

Environmental policy and integration of environmental regulation

A wide range of EU policies/directives/strategies govern environmental issues related to brownfield regeneration. Changes in EU policy can have a significant impact upon brownfield regeneration across Europe. These effects may come from policies that are specifically designed to impact brownfield regeneration or from policies that have impacted brownfield regeneration indirectly or inadvertently. They act as important drivers, but addressing topics in an isolated sense will put up unnecessary constraints when an integrated approach is sought after.

As part of the 6th Environmental Action Plan of the European Union, seven thematic strategies are being developed. Of these, four are likely to have an impact on brownfield regeneration. These are the strategies on the urban environment, soil, the sustainable use of natural resources and waste prevention and recycling.

The strategy on Urban Environment seeks to directly encourage brownfield regeneration and as such is likely to have the greatest impact on stimulating brownfield regeneration. The thematic strategy on Soil could encourage brownfield regeneration on sites where the soil is contaminated. Of the other five thematic strategies, only the strategy on Waste Management and the strategy on Sustainable Use of Natural Resources are likely to impact brownfield regeneration, and this impact is likely to be indirect.

In general, EU policy appears to be moving towards direct encouragement for brownfield regeneration as a means to promote sustainable development within Europe's urban areas.



5.2

Human health / Ecotox / Risk Assessment

The proposed European Environment and Health Strategy (CEC 2003) aims to achieve a better understanding of the threat that the environment poses to health and develop policies to respond to those threats. The rationale behind the strategy is to consider the environment as a whole rather than in its individual components (soil, air etc) as pollutants are transferred between these environmental media. It also proposes examining synergistic effects of pollutants acting in combination. This strategy is still at the development stage.

In the redevelopment of brownfields (BF), risk assessment is a significant part of the overall decision process. In risk management, human risk is often the major driver. Brownfields, on the other hand, are not necessarily contaminated areas i.e. risks may be more likely perceived than factual. Different risk management options have various positive as well as negative, on site and off site, environmental and other impacts which have seldom been considered comprehensively. In some countries, risk management decisions are still mainly based on generic guideline values, which do not take into account these aspects. There is clearly a lack of adoption of risk-based land management strategy and methodologies to achieve it. It is felt also that associated decision tools are missing. This deficiency can lead to uneconomical and non-sustainable solutions in brownfield management and redevelopment.

CABERNET endorses Risk Based Land Management for Brownfields but further dissemination and training is required linked with consistent regulatory approaches to ensure its consistent adoption across Europe.

5

Regenerating Brownfields: The Current Agenda

5.2

Waste management, reuse and recycling

Constructing and operating buildings requires enormous amounts of energy, water, and materials and creates large amounts of waste demolition debris can be reused. The main problem in Brownfield Regeneration is the effect of contaminants on recycled building materials if left behind as well as soil, which has to be excavated and is contaminated due to former uses.

The EU is promoting policies aimed at reducing the use of primary resources and increasing reuse and recycling³¹. As one of the objectives of the 6th Environment Action Programme "Reduction of the quantity of waste going to final disposal by around 20% by 2010" is to be met, dealing with construction and demolition waste and excavated soil in brownfield regeneration can contribute to reach this goal. According to the 2004 Management Plan of the EU Commission/DG Environment they will seek to work towards sustainable management and use of resources, in particular, to promote more effective waste prevention and recycling. (Landfill Directive; EU Liability directive; Soil Thematic strategy; Water framework Directive; Groundwater Daughter Directive; Directive on Worker Consultation; Strategic EIA; Competition Regulations; Volatile Organic Compounds (Vic's) Directive).

The cost of treatment of contaminated soils and contaminated construction materials is seen as the main barrier to successful remediation and development in a brownfield.

CABERNET endorses an integrated management of construction and demolition debris and of excavated soils: recycling waste from building and infrastructure demolition materials (selective demolition), reducing and recycling construction waste and applying on-site remediation techniques can significantly reduce the costs for remediation, construction or renovation of the redevelopment process as well as recover resources.

A lack of harmonisation between national regulations reduces the viability in manufacturing fit for use construction materials from waste materials.

CABERNET highlights the need for a common vision at the regulation level all over EC and non-EC countries to facilitate the reuse of waste materials into building components supporting local markets to make it economically viable.

Environmental aspects of Planning

Compact and sustainable urban environments require an integrated (spatial) planning approach in which environmental objectives are attained in a systematic but flexible way. Elements that need to be incorporated in land management and provide opportunities for brownfield regeneration are planning approaches incorporating

5.2

time as a specific parameter and including the subsurface as a resource. European initiatives e.g. Spatial Development Perspective and Soil Strategy could eventually strengthen this.

4D planning

Today's common practice in city planning is very map-orientated. City planners are mainly interested in the two dimensions in the horizontal plane. Sometimes specifications for the height of a building are given. Thus, although master plans often consist of inspiring pictures in three dimensions, there is little interest in the possibilities and difficulties in the subsurface and the time factor. That is, unless outside factors such as scarcity of space, really force city planners to consider these factors. After the phase of a master plan, the juridical output of the planning process is a technical and time-fixed map with some specifications of the possible uses of the area.

This practice seems to be designed for the transformation of greenfields into new residential or industrial zones. It is not suited for the redevelopment or prevention of brownfields where subsurface and time factors, such as contamination or industrial developments, may have influences that need to be taken into account. Reasons why two-dimensional planning is not suited for the redevelopment or prevention of brownfields are:

- There is no consideration of future developments that could lead to stagnation and even degradation in industrial areas. For example the bankruptcy of an industry may lead to the downfall of an area while redevelopment possibilities are hampered by the juridical framework;
- Because of the two-dimensional planning approach city planners just don't see the possibilities in time and space within the current city border. On a map everything seems to be taken into account, but the subsurface (incl. water resources) and possibilities in time are not projected on the maps and are therefore overlooked;
- In case brownfields contain contaminated land, long term planning in relation to (in situ) remediation can lead to significant cost reduction during the planning process.

CABERNET believes there is a need for a paradigm-shift in city planning in relation to redevelopment of existing brownfields and degradation of industrial sites to new brownfields. Common practice in city planning is a two dimensional, map-oriented approach. Incorporating the dimensions space and time in the planning progress will lead to new possibilities for redevelopment and prevention.

³¹More than 200 million tons of C&DW are produced every year in Europe. Only about 30% is supplied for recycling in Europe. But in the Member States the amount of recycling is vastly different.(source: F.I.R). EU Commission's recommendation paper on C&DW contents objectives for recycling 2005: 50-75%, 2010: 70-85%.

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Subsurface

Underground space has long been recognised as a key resource for military, economic and social purposes. In urban areas underground space has allowed the development of essential services and modes of transport, provided security, storage and even non-renewable resources. Past use of underground space is however encroaching on our ability to use such space in an optimum fashion. In some cases replacing past infrastructure is needed in order to provide flexibility for the future.

Out of sight should not be out of mind and there is a need for underground space to be fully integrated into the land use planning system and be given the full protection that this unique non renewable resource deserves. Such space plays a multitude of roles, many of them simultaneously but some to the exclusion of others. Judicious selection of the role of underground space is needed. Such selection can only come about if planners, architects, engineers, investors, citizens and the earth scientists who have a unique grasp and appreciation of the ground beneath our feet communicate, cooperate and coordinate.

Experiences from London, Boston, Egypt, Poland, Scandinavia, Nottingham and elsewhere bear out the value of underground space and the fragility which that value has.

Conclusions

Each Brownfield has a unique set of characteristics in terms of land use, its environment and the people living in the area. Contamination is not necessarily a common factor. Identifying what makes it a Brownfield and approaching regeneration from a process point of view is necessary. Time is an important factor and phasing regeneration opens up new opportunities. Make use of the existing resources (buildings, materials, subsurface).

Choices and outcome differ but generic tools can and should be identified as well as common factors in strategic approaches to environmental management. Creative solutions are necessary to reach sustainable, compact urban development. A simplistic sectoral regulatory approach hinders regeneration.

Specific Aspects

Environmental management, policies and regulations

- CABERNET recognises that continued land consumption without redevelopment will compromise Europe's ability to achieve the Lisbon objectives.

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Environmental aspects of planning

- Successful urban land management requires integrated consideration of the spatial, subsurface and time components within the planning and development control process. CABERNET encourages the reuse of old buildings and the recycling and reduction of waste produced during demolition, soil remediation, construction and changes in infrastructure
- CABERNET believes that the subsurface presents both an opportunity for sustainable urban regeneration and a constraint as a resource that should be reused and can be impacted by previous exploitation

Environmental tools for Preparation and Regeneration of brownfields

- CABERNET endorses the risk based land management approach but warns that poor risk assessments and inconsistent regulatory approaches threaten this approach thereby increasing redevelopment costs and their ecological footprint for little benefit
- CABERNET believes that Brownfield regeneration projects can profit from knowledge exchange and harmonised approaches to environmental assets, risks and impacts e.g. using Due Diligence and Impact Assessment procedures and tools

CABERNET Position:

Environmental aspects are not always given a balanced consideration e.g. contamination issues can be over emphasised in brownfield regeneration. **CABERNET believes that environmental issues can catalyse brownfield regeneration raising environmental, social and economic benefits when targeted at sustainability in a balanced and integrated approach.** However, a simplistic sectorial regulatory approach hinders regeneration.

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5.3

Social Coherence and Cultural Heritage

Social and Cultural Objectives for Brownfield Regeneration

Brownfield sites damage the social fabric and cultural capital of their surroundings. In order to achieve sustainable brownfield development, social and cultural, economic and environmental objectives all need to be met. However, in the past, economic and environmental objectives have driven brownfield development, and there now needs to be a strengthening of social and cultural aims and outcomes. Without more consideration of social and cultural impacts, current brownfield regeneration schemes that appear successful in the short term could become the eyesores and blighted areas of the future. For brownfield regeneration schemes to fully realise sustainability goals, more attention needs to be paid to achieving social and cultural benefits.

CABERNET has defined 8 fundamental social and cultural principles that should be considered when developing brownfield sites. These objectives go to the core of a social and cultural challenge to redefine the traditional concept of brownfield regeneration as an endeavour that relates to sites and reclamation, to an activity that is about delivering sustainable places that enrich the lives of the people who live and work there.

The Network has identified eight key social and cultural objectives to consider when developing brownfield sites (Table 5.1). These are sub-divided into those that deal mainly with 'people' and those that deal mainly with 'place'. This distinction is useful, although several of the objectives incorporate elements of both 'people' and 'place'. For simplicity, the objectives are placed where their primary emphasis lies. It is important to note that this list of objectives is not definitive and, as stated, the relative importance of different objectives will change depending on the characteristics of any given brownfield scheme, but this is a valuable generic list with applicability across Europe³².

³² Please refer to list of simple case studies and tools for implementation of social and cultural issues in brownfield redevelopment on the CABERNET website – www.cabernet.org.uk/wg5.

Table 5.1: Social and Cultural Principles for Brownfield Regeneration**People-oriented objectives: focusing on social and cultural needs**

- Objective 1: Preserve cultures that are valued by the local people and exploit opportunities for new forms of social and cultural development
- Objective 2: Provide or enable learning, or 'up-skilling', opportunities (improve employability)
- Objective 3. Promote employment opportunities appropriate for the development
- Objective 4. Promote social equity in the brownfield development

Place-oriented objectives: focussing on creating more sustainable places

- Objective 5. Improve perceptions and image of the brownfield development
- Objective 6. Contribute to strategic sustainability objectives in the urban context
- Objective 7. Ensure physical accessibility
- Objective 8. Provide liveable, healthy and safe environments for local communities

Before presenting the eight social and cultural objectives it is useful to highlight how social and cultural objectives can be implemented (Table 5.2).

Table 5.2: Potentially appropriate instruments for achieving social and cultural objectives

- High quality master planning
Effective public participation and consultation
(specific methods e.g. 'planning for real')
- Social impact assessment
- Cultural heritage rating methods
- Preferential entry system to local colleges/training for local people
- Good project management and planning (i.e. allowing for interim uses, phasing of development)
- Supportive legislation and regulation (e.g. on public transport, housing densities, local mobility)
- Good collaborative working arrangements between all agencies involved in development (including 'neutral' organisations)

The eight objectives are set out as Place-oriented (first four objectives) followed by People-oriented objectives (final four objectives).

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Eight Key Social and Cultural Principle

Principle 1: Preserve cultures that are valued by the local people and exploit opportunities for new forms of social and cultural development

A common consequence of brownfield redevelopment is the displacement or destruction of local cultural heritage and memory. This has been a common experience across Europe, for example in the redevelopment of industrial sites such as mines, docklands and those with other heavy industrial uses (Examples? The opposite is often true!). In addition new, redeveloped schemes often lack a cultural or social identity of their own. There is a need to preserve elements of existing or past cultures to provide some continuity, but also to balance this with the needs of new development and offer opportunities for new forms of social and cultural development. This objective relates primarily to 'people': to maintaining where appropriate, skills, experiences, crafts and memories. But it is also about maximising benefits from the physical environment, for example, by making the best use of industrial buildings and familiar and valued landscapes. In particular, the objective is to highlight high quality existing features with complementary high quality new designs.

- Creating new elements of physical structure as a project will have spin-off benefits to the local population. The cultural history can be commemorated in the form of sculptures, art shops and interpretative panels³³ of course, a key to being able to maximise cultural benefits is access to adequate resources, and to this end all available funding opportunities need to be pursued. An important point to remember, however, in seeking to achieve this objective is that a realistic approach must be taken towards the skills match between previous and new uses for brownfields.

Principle 2: Provide or enable (education) learning, or 'up-skilling', opportunities (improve employability)

Local people need the skills and knowledge to take advantage of employment opportunities and to participate as citizens within their locality (i.e. improving employability). This is important in brownfield regeneration schemes as often whole communities require new skills to be able to adapt to new economic opportunities or new social identities. Another aspect of this 'up-skilling' or 'reskilling' objective is the desire to maximise local learning about the process of regeneration. Employability is about the capacity to move self-sufficiently into and within labour markets and to realise potential through sustainable and accessible employment. It is particularly

³³Please refer to the list of simple case studies and tools examples elaborated by Working Group 5, available on the CABERNET website: www.cabernet.org.uk

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relevant to the experience of communities in a brownfield context. For an individual employability depends on; knowledge and skills they possess and their attitudes; the way personal attributes are presented in the labour market; and the economic context within which work is sought.

- offering special courses and training programs and adapting them to the knowledge and skills standards in the locality of the brownfields
- using the specific potential of skills and knowledge of the local population and train them towards suitable employment opportunities that are required by increased competitiveness in labour market
- identifying the gaps in labour market and use them as targets for specific training based on the local tradition
- providing programmes designed to encourage children and their parents to complete education and offering local scholarships for those having abilities for third level education

Principle 3. Promote employment opportunities appropriate for the development

There is a need for a wide range of differing jobs to maximise the opportunities for local people. Proposed developments should review the potential to provide a range of job opportunities provided by mixed employers, for example retail, services and educational facilities. It is important to recognise that there may be a local skills gaps associated with long-term brownfield sites, particular when sites have previously had single industrial occupiers, so redevelopment plans should encourage the establishment of re-training programmes.

It is important to ensure access to any new jobs for local people. In this sense access is both 'physical', i.e. meaning local people can actually travel to new jobs, but also related to 'skills match', i.e. the jobs are available to local people in terms of qualification, skill and experience requirements.

There are numerous ways of achieving employment opportunities through brownfield development. Sometimes, the need is for housing development to provide homes near to employment; in other cases, the need is for new employment-generating buildings on site; in others still the need is for new mixed-use neighbourhoods. Where possible, new or reused buildings or infrastructure in brownfield developments should be used for new enterprises and job creation and give support to:

- development of the mixed use areas in the process of brownfield revitalisation
- public-private partnership as the guarantee of variety of interests in the locality and diversity of functional use of the area
- self-regeneration process of the brownfield using the local potential for starting the business activities
- establishing the local training centres in order to educate local people in relevant skills and methods

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Principle 4. Promote social equity in the brownfield development

Promoting social equity in a particular brownfield development is an almost impossibly complex objective. However, there are some tangible goals that can be achieved. An important objective is to provide affordable housing and business accommodation. In any given development it is important to strive to meet the differing requirements of local residents and potential newcomers. A key aim in many urban brownfield regeneration schemes is to attract relatively wealthy people to an area to improve the local economy, however in these cases consideration should also be given to providing a proportion of affordable accommodation for local residents and businesses. An equally important issue is access to services and facilities. Wherever possible, access and opportunities should be open to all, schemes should resist elements of 'private areas'. Likewise, transport and physical infrastructure should not disadvantage particular elements of society (such as non-car owners, disabled people or cyclists). In devising schemes, all involved should be mindful to attract a mix of people to support (and not over-stretch) local facilities.

Principle 5. Improve perceptions and image of the brownfield development

The approaches to counteracting the negative image of brownfields are various. It is possible to improve the sites physically through demolitions by the erection of clean fencing, flags and signage. In the case of brownfields, an international development competition can be held to make a statement about the high standard of development desired. Foreign developers and professionals can often have a wider vision for a site, being familiar with successful brownfield redevelopments elsewhere, than local people who can be sceptical, having lived with a problem for a long time. Interim uses for the site can then play an important part in beginning to change the image of an area and soft uses such as quality green space is frequently beneficial too. It is also good to renovate an existing building and bring it to use³⁴ and promote the image of brownfield regeneration schemes very successfully.

Physical improvement works should concentrate on social infrastructure such as the forward development of public spaces. In the cases of an extraordinary negative visual image amongst citizens, it should be considered essential to wipe out that memory with the provision of public spaces of quality around the neighbouring areas. For improving the image of brownfields it is important to:

- identify latent potential of the brownfields (historical, socio-cultural, geographical) for the development of positive impression/perception of the brownfield locality,

³⁴ A good example of this is the Gasometer in Vienna which became an important landmark. Other examples can be found on the CABERNET website: www.cabernet.org.uk

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- initiate the development/creation of the significant symbols and connotations of structural elements,
- create new progressive interesting architecture, preserved technical works, or natural complexes in the locality of the brownfield,
- promote the development of public spaces in the area, including greenspace,
- to extend the master plan with a design guide for urban design,
- preserve valued elements of existing cultural heritage, underlying positively perceived specific features and architectural quality of the redeveloped structure.

Principle 6. Contribute to strategic sustainability objectives in the urban context

The redevelopment should be in line with existing policies on sustainability. People should be able to work, live and play in the area if they chose to do so, thus minimising travel between these activities. Mixed use can be difficult to achieve as it depends on the developer's plan and in the case of the company's imperative to make profit, the developer is likely to seek the highest value use in all cases, often at the cost of the long-term viability of the development. A strategic decision has to be taken in the process of preparing land use plans that the area can be developed, with the local authority exercising control on each site. Thus the authority will be able to take a balanced view between financial returns and long term sustainability.³⁵

This objective can be achieved largely through good spatial and land use planning techniques. However, supportive legislation is required which puts the onus on developers to reuse brownfield sites before greenfields. The redevelopment should not rely only on private car transport for access because of the lack of planning and investment in public transport. It should be predicated on the provision of public transport and seek to integrate with the developing proposals for such transport. It is necessary to concentrate on:

- avoiding all brownfield regeneration projects looking the same
- avoiding the development of mono-functional structures in the process of regeneration,
- supporting mixed ownership/investments in the locality of brownfield,
- creating viable public services and public transport,
- connecting the newly developed local economy to the variety of hierarchic levels of market (local, regional, national, international).



³⁵ Please refer to the CABERNET Case Study of the Third Level College, Dublin Docklands, which was given a site free of charge on condition that it provided particular courses suitable for the local communities and that it reserved a number of places for local students who might not have the normal, minimum academic entry requirements. Further details at: www.cabernet.org.uk

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Principle 7. Ensure physical accessibility

In order to achieve a physically well-connected site, a supportive legislative framework is required³⁶. High quality master planning is a pre-requisite for physical and virtual connectivity of the site so that the infrastructure for a choice of travel modes can be carefully integrated. Local transport mobility plans can be of use too, as they can link to city wide, regional and national plans. The preparation of “access statements” linking macro and local planning to specific building proposals will also assist the development of accessibility strategies. The most important issues impacting upon accessibility are:

- The inclusion of brownfield sites within sustainable macro, regional and city plans, fully connected to transport, socio-cultural and economic networks
- The provision of a choice of travel modes rather than single-system solutions. Transport systems should be fully integrated, prioritising public pedestrian and cycle routes;
- Urban design principles should optimise planning solutions to minimise local movement, and promote barrier-free inclusive environments for all buildings and public spaces.

Physical accessibility in the areas of brownfields can be met by fulfilling the following requirements:

- including the locality of brownfields in the system of the city and of the region, in its transport system and technical and social infrastructure;
- avoiding one-system transport service for the locality;
- optimising the developed local functional structure and minimising the length of necessary inner movements in the locality;
- avoiding collisions of the various transport systems and giving preference to pedestrian and cyclist oriented public routes;
- setting architectural standards of barrier-free environment for disabled, children, women, aged people and good engagement with and provision for young people

Principle 8. Provide liveable, healthy and safe environments for local communities

The objective of providing liveable, healthy and safe environments for local communities is extremely important, whatever the end use of the site. Advances in understanding and skills in urban design, neighbourhood planning and landscape design in the last decade are beginning to produce exemplars of healthy, safe neighbourhoods, which

³⁶ For example, compulsory purchase orders may be required to buy land to enable links.

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provide a high quality of life. Key elements of these neighbourhoods are good access to open and recreational space, high quality public realm (places that people can freely go that are not private or retail space) (landscaping, lighting, public art etc.), provision for walking, cycling and public transport, and a sense of place.

Good consultation and design processes are a key to securing high quality neighbourhoods, when coupled with highly skilled planners, designers and community representatives. Innovative collaborative design and planning processes have been devised to achieve such high quality results, such as “planning for real”, “visioning” and “scenario testing” methods. In order for these to be successful all involved in the redevelopment need to be committed to collaborative processes, and resources need to be available to facilitate them. It should be noted that regeneration that focuses on soft-end uses can significantly contribute to the objective of providing liveable, healthy and safe environments for local communities. In the effort to provide sustainable communities it is necessary to consider:

- the development of appropriate scale of the physical structure and concentration (via functional and structural limits for the built environment) with the goal to optimise the conditions for the development of the communities
- public-private investment in the refurbishment of the environment,
- the urban design with the elements to increase social security
- stabilising the population in the locality through improvement of the living conditions – employment opportunities, safety, social atmosphere, hygienic and health standards
- providing a certain amount of all new housing units in the area to be social/affordable and designated for the local people with no differences articulated in the design

Recommendations

Brownfield sites can damage the social fabric and cultural capital of their surroundings. In order to achieve sustainable brownfield development, social and cultural, economic and environmental objectives all need to be met. However, in the past, economic and environmental objectives have driven brownfield development, and there now needs to be a strengthening of social and cultural aims and outcomes. Without more consideration of social and cultural impacts, current brownfield regeneration schemes that appear successful in the short term could become the eyesores and blighted areas of the future. It is argued that for brownfield regeneration schemes to fully realise sustainability goals, more attention needs to be paid to achieving social and cultural benefits.

CABERNET Position:

For brownfield regeneration schemes to fully realise sustainability goals, more attention needs to be paid to achieving social and cultural benefits. There needs to be a strengthening of social and cultural aims and outcomes. **CABERNET believes that when regenerating brownfield sites, a set of key social and cultural objectives should be considered.**

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Governance and Institutional issues

There are many institutional factors that impact on the brownfield regeneration process. CABERNET has highlighted three key areas where decision-makers from both the public and private sectors impact on the success of brownfield projects:

- Strategic Municipality Brownfield Management
- Role of Public Bodies in Streamlining the Decision-making Process
- The Role of Dedicated Agencies in Brownfield Regeneration and cultural objectives should be considered.

5.4.1

Strategic Municipal Brownfield Management

Local urban development objectives cover a wide range of priorities. These objectives can vary quite considerably, depending on the specific characteristics of the city and the regional context. However, there are specific aspects that feature in almost all urban development strategies:

- conserving the rate of use of greenfield land and bringing back into use formerly used brownfield land, especially where this can take advantage of existing urban infrastructure and contribute to the reduction of urban sprawl; and
- the achievement of urban sustainability and the preservation of the quality of urban life

It is recognised that municipalities are not primarily land reclamation agencies, rather they have multiple responsibilities – including the achievement of sustainable, desirable and competitive urban environments. Nevertheless, their actions, or indeed inaction, can impact on the manner and pace at which brownfield land is brought back into use, or the degree to which it might remain under-used or derelict. Therefore, there is a strong need for a brownfield specific strategic approach for regeneration on the local government level.

Drawing up a brownfield policy on the national level will not eliminate brownfield sites without the active involvement of local governments. Brownfield strategies are clearly linked with urban planning and development strategies and hence they are also, in part at least, the responsibility of the local government. Without a local management component in any brownfield strategy, national regeneration schemes are in danger of focusing only on specific site conditions, without examining the wider impact of the intervention on the surroundings area. There is a strong need for a holistic approach to brownfield regeneration, as opposed to purely environmental concerns about contaminated sites.

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Local governments therefore play a key role in urban regeneration and development. On the one hand, they set the boundaries of development activities by local planning regulations, land-use and zoning plans, thus trying to prevent undesirable urban sprawl. They are capable of ensuring a holistic approach to redevelopment schemes, public participation and sustainability. In addition, they can play an active role in promoting urban regeneration by providing a policy framework and resources that can bring about brownfield regeneration. By accomplishing this task, local governments need to interlink with neighbouring communities as well as being part of national and European programmes³⁷.

A number of issues need to be considered when reviewing the role and value of Municipalities in brownfield regeneration. A number of current conditions are characterised by:

a) Low awareness among municipalities and national governments - Some local governments have already been actively involved in brownfield regeneration, while others have only just started to see the importance of this urban issue. In some cases, even the term 'brownfield' is not well understood by politicians.

In less developed regions of some countries, where any kind of new investment is welcomed, the term 'greenfield development' often refers to the successful establishment of a new manufacturing plant, creating a considerable number of new jobs in the area. In this respect, the term 'greenfield development' can be seen in the media as a synonym for a desirable type of development. From the economic point of view, such investment is viewed as a welcome sign of economic growth, but the adverse impacts on sustainable urban development of many of these new constructions is given less attention. From an urban planning point of view, these new greenfield sites are an unwelcome addition to the urban sprawl and they can weaken existing urban structures (e.g. commercial centres), and raise the costs of infrastructure despite the underlying investment being perceived as a 'good thing'. In addition, there is often a lack of recognition on the national level that greenfield developments can easily turn into brownfield sites when multinational corporations move on (sometimes within a few years) in the search for even cheaper labour markets.

Generally speaking, therefore, there is still some confusion and low awareness regarding what brownfield regeneration really means and why greenfield developments have adverse impacts on sustainable urban development. Re-use of brownfield sites is often simplistically considered as an expensive option rather than an opportunity that can positively contribute to urban regeneration.

b) Urban development strategies are not given priority on the re-use of brownfields - Local governments set priorities in their urban development strategies. These generally focus on comprehensive urban issues such as promoting economic competitiveness or preserving the historical urban fabric along with the natural resources and environment of the city. Even if the term 'brownfield regeneration' comes up in the list of priorities, it often remains a loosely defined policy. Implementation of any brownfield regeneration policy is seldom carried out expansively and consequentially.

³⁷Sustainable communities and places are new aspects of urban development, and brownfield regeneration plays a key role in sustainable development. In the new EU 6th Framework, under the 6.3. subpriority "Global Challenge and Ecosystems", a thematic strategy on the urban environment closely corresponds with the goal of brownfield regeneration on urban sites.

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c) Insufficient coordination with municipalities - Bringing about a profound change in urban brownfield areas is a complex endeavour, requiring the joint effort of numerous stakeholders. Projects sometimes fail at an early stage because of insufficient coordination within the local government, departments do not regularly communicate, or coordination is undermined by in-house rivalry. When a local government cannot present a united front, other stakeholders will also fail to commit, which can result in the premature collapse of a brownfield regeneration scheme.

d) Insufficient coordination with state regulators and other municipalities - Coordination within local government is a crucial element of successful regeneration. However, it is also vital to cooperate with state regulators and neighbouring municipalities on a regional and national level. If a major city sets stringent regulations against greenfield developments, but the neighbouring municipalities offer greenfield sites, sacrificing agricultural land, then it will become very difficult to get developers to use urban brownfield sites. Regional cooperation and coordination is therefore crucial, and the state government must act in a responsible way to support brownfield regeneration in its legislation.

e) Lack of adequate knowledge about the scale of the problem - A large number of municipalities have only started just to grasp the importance of brownfield regeneration. However, there is often only a limited amount of data available about brownfield sites (ownership structure, extent of any potential contamination, etc). Regeneration of brownfield sites must be based on realistic market assumptions and a clear understanding of the legal and technical development conditions. Often, there is a lack of recognition of the different needs and interests of the various stakeholders in the regeneration scheme, such as the property owners, the local government and the people using the area and/or living in the neighbourhood.

When the role of municipalities are placed in the context of these issues several recommendations emerge:

Recommendation 1: Briefing local politicians

Raising the awareness among local politicians of the costs of ignoring the brownfield issue at a municipal level policy is essential. The important message that existing urban areas should be re-developed instead encouraging further development of greenfield sites, needs to be better articulated at a political level. There needs to be a greater awareness of the benefits of brownfield regeneration strategies, in particular that they can help to avoid urban sprawl and preserve the compact urban structure typical of European cities. Local governments need to be more provocative and proactive to achieve these goals, and local politicians have the means to do this. They can set the guidelines for policymaking; they can draw up a local strategic plan that focuses on sustainable development, preserving the historic fabric of the city. They can oppose out-of-town greenfield development proposals and lobby at a national level for policy

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support and financial provisions at a local government. Healthy competition between local governments can also be helpful. A good example of brownfield regeneration in a rival city can help to stimulate political interests and activities³⁸.



Recommendation 2: Drawing up a municipal strategy for brownfields

Rapidly changing urban lifestyles challenge local governments all over Europe. In order to keep our cities attractive places to live and work, integrated urban renewal strategies are needed which provide a comprehensive framework for community intervention. A successful urban renewal scheme can provide a new identity for a neighbourhood.

A key question is whether local governments are capable of promoting brownfield regeneration. This is a controversial issue as some believe that local governments have the means to make any impact, assuming that only a national brownfield policy can reduce the number of sites. However, others argued that the regional level is far more suitable for tackling brownfield problems. Differences in perspective on the most appropriate approach can be partly explained by country-to-country differences in land management responsibilities that are spread between the regional and local level. While in some countries regional authorities have wide planning powers and dispose of considerable regional budgets, in others the regional level is weak or non-existent, and it is the cities themselves that set out the planning guidelines and regulations, and can make a profound impact on the way the urban landscape is being shaped. This especially holds true for large cities, where derelict brownfield sites are more of a problem.

However even when the national framework for brownfield policy is weak or non-existent, local municipalities still have a scope for promoting and bringing about brownfield regeneration. Of course, in some countries the regional level authorities might be a natural choice for doing so. Still, local governments usually can do a lot to eliminate some of the brownfield sites, or at least protect undeveloped land. The key message is that decisions must be made at the right level and respect the principle of subsidiarity.

³⁸ See the case study of Vilnius on the CABERNET website – www.cabernet.org.uk.

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Recommendation 3: Using and Adopting Traditional Planning Tools

Along with strategic plans and area-based action programs, traditional planning tools can still play an important role in brownfield regeneration. Implementation of strategic goals drawn up in the city plan of the municipality should include the fine-tuning of traditional planning tools such as land-use planning and local plans. In most European countries, land-use plans define the boundaries of development areas. Unwanted greenfield developments in the outskirts of the city can be discouraged or prevented through planning regulations, and some of the developments can be channelled towards urban brownfield sites.

Developers often criticise the planning process, claiming it is too complicated, it involves too many crossroads and therefore it is difficult to forecast the time-scale and outcome of the planning application. Different levels of planning authorities can have a completely different approach to regeneration. Even within the same local government, different departments do not share the same approach. On the whole, a more flexible planning system is needed for promote this type of regeneration as sites have a different set of conditions or nature to greenfield sites (for example in terms of redevelopment time, technical restrictions, changing market conditions, etc). Local plans should take this into account as in some cases a greater flexibility is needed³⁹.

Recommendation 4: The Need for Information Systems for Brownfield Sites

In all stages of brownfield regeneration, decisions need to be based on up-to-date, detailed information. A number of public and private sector organisations are building databases of known and potential contamination, but these databases are often isolated from other GIS data such as the existing land-use categories and urban planning regulations. Establishing links with the different types of data can help to find the best possible route to regeneration. It would be helpful for most brownfield regeneration schemes if the different threads of investigation and study could be brought together and an efficient, quick analysis could be carried out at an early stage of the project⁴⁰.

Making good use of existing data rather than setting up elaborate systems of compiling detailed data sets might be a good first step when information about brownfield sites is needed. It is arguable whether new data should be collected on the local or national level⁴¹. Collecting data based in an agreed common structure at the lowest possible level is a good option, although compiling an information system with accurate and

³⁹ See details of the Danish planning system.

⁴⁰ A good example of how this can be done is through the use of decision support software NORISC. See cabernet.org.uk for details

⁴¹ A good example of a brownfield and land use database is the NLUDB – National Land Use Database of the UK.

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relevant information may take a considerable amount of time. A local level database could also serve as a model for a nationwide system.

Adequate information on brownfield sites could serve as a marketing tool for attracting investors, for example a type of 'Sellers' Pack' that includes information both about the development potential of the site.

Careful assessment of data on brownfield regeneration schemes is vital also because it might be difficult to judge whether a particular development was really a quality development or merely another acre of redeveloped land. However information systems should be comprehensive and include all land use, not just brownfields.

Recommendation 5: Prioritisation of Brownfield Sites

The dynamics of demand and supply determine the 'value' of a brownfield site. Intervention for brownfield sites can only be justified when the subsidies, and/or measures to be taken, will benefit the wider community instead of just improving the position of certain properties. Public action needs to be steered by policy objectives and priorities, not just on a case-by-case basis. In addition to exercising development control, city planning authorities are called upon to initiate urban regeneration projects and policies and to establish a "ranking system". Local government professionals (urban planners, environmentalists, etc.), argue that some kind of priority list is necessary when defining areas in need of assistance⁴². Local governments' budgets are tight, and public money spent on regeneration schemes has to be well justified. Authorities must make sure that the money is being spent where it is most needed (that is, B and C sites), not where redevelopment can be done based on the potential of the site (A sites). However, planners need to be very careful about formally categorising sites (i.e. the categories A, B, or C), since an unfavourable categorisation can blight the property. Landowners and developers are wary of categorisation⁴³, because owning a piece of land which is registered (or rather, stigmatised) might result in a considerable drop in the value of the site.

Interim uses considering the time-scale of brownfield regeneration schemes

An outline plan should have built-in time scales for the completion of the various stages that can be adjusted accordingly if the outline conditions change. A step-by-step approach can be useful, because brownfield regeneration is a lengthy process. Interim uses can be crucial for the long-term success of the regeneration scheme. Interim uses can provide a smooth continuation from the traditional (industrial) use into the future use of the area. Instead of decay and dereliction, the short-term tenant/leaseholder/occupant can do the necessary maintenance work, which makes the buildings and the site safer and livelier. It also helps to demonstrate the potential of the area.

⁴² In the UK, an index of multiple degradation is being used, that combines health, unemployment etc. data, and the worst 20% of degraded areas get some kind of funding.

⁴³ A site – low remediation costs, high potential value, no intervention needed. B site – remediation costs are counterbalanced by the potential of the site, some intervention might be necessary. C site – high remediation costs that outweigh the potential of the site, regeneration without public intervention is unlikely. See other CABERNET documents for details.

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5.4.1

Coordination of redevelopment process with other agencies

If developers and investors feel that a particular municipality's ability to streamline the redevelopment process is not convincing, the consequence will be that these groups will opt for easy and safe greenfield developments. Against this background, it is vital that in practice the city is ready to have a well-organised, coordinated and structured procedure for managing the complex regeneration process. Strong leadership is also essential for the success of any regeneration scheme. A committed mayor can stimulate all the departments to pull their weight in a project. A major challenge is the integration of the different stakeholders in the process.

On one hand there is the city administration and municipal corporations, on the other hand there are private stakeholders such as the investor, banks, NGOs and citizens. The need for coordination starts with integrating the relevant regional and municipal authorities that have a say in the different legal approvals (according to environmental and planning law). A suitable organisational form (e.g. administrative working group, independent public corporation, dedicated agency etc.) has to be set up, able to concentrate the relevant coordinative decisions and set up an integrated management plan. Decisions have to be coordinated and counter-checked with the private partners in the redevelopment process. Suitable forms of cooperation including the setting up of time-lines and measures to be taken have to be agreed on in order to keep the project going and maintain process and project security.

The better the process is organised, coordinated, streamlined and presentable, the higher the confidence levels of potential investors. Timely action is required with brownfield sites; if undue delays are involved in decision-making, the land-owner/developers may miss the market opportunity. In the long term, a well-organised, coordinated and structured procedure for managing the complex regeneration process can contribute to preventing the creation of brownfields



Conclusions

Even though municipalities are not the primary agencies charged with the responsibility to manage the effective re-use of brownfield land, the pace of its re-use can be materially influenced by the actions (or inactions) of municipalities, as well as of other public sector agencies. Therefore, action by municipalities to address brownfield land issues can make a direct contribution to their wider strategic responsibilities and objectives, the achievement of sustainable development leading to competitive urban environments. However, public intervention can only be justified when the subsidies and/or measures to be taken will benefit the wider community instead of just improving the position of certain properties. Public action needs to be steered by policy objectives and priorities, not just on a case-by-case basis.

Brownfield regeneration policies face a number of implementation problems, at the municipal level, such as:

- low levels of awareness among landowners and local politicians of the wider issues at stake – and at times, differing perspectives among landowners and politicians;
- urban development strategies are not giving appropriate priority to the re-use of brownfields;
- there is often insufficient coordination among local authorities, or with state regulators;
- a lack of adequate knowledge about the scale of the problem.

As a result of the issues discussed, a number of recommendations can be made:

- better briefing of local politicians;
- draw up a municipal brownfield strategy which highlights that brownfield regeneration can help to keep the compact urban structure reducing urban sprawl;
- apply good use of traditional planning tools;
- build an information system, establishing the link between brownfield information and land use regulations;
- define an informal ranking system of A-B-C brownfield sites;
- increase awareness of the time-scale of brownfield regeneration schemes;
- encourage efficient coordination between departments and other agencies.

CABERNET Position:

The activities of Municipalities impact on the manner and pace at which brownfield land is brought back into use. The actions of Municipalities to address brownfield land issues make a direct contribution to their wider strategic responsibilities and objectives, i.e. the achievement of sustainable development leading to competitive cities. **CABERNET believes there is a need for a brownfield specific strategic approach for regeneration at the local government level if the objective of competitive urban environments is to be achieved.**

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5.4.2

Better governance as a key to success for integrated decision-making

It is claimed that on greenfields, the level of multi-disciplinarity and the need for integration are often much lower than for brownfields. This aspect, together with the fact that development costs are often higher on brownfields than on greenfields, makes it difficult for brownfield development to compete with greenfield development.

In practice, it is the existing Planning, Water and Environmental Acts that provide the legal framework for the management of brownfields. In many countries, most of these focus on environmental aspects of contaminated land management and not on brownfield redevelopment. There is also little emphasis on the need for an integrated approach between the environmental, economic, and social instruments used as part of any redevelopment. Brownfield redevelopment requires an integrated approach between planning, reuse and remediation legislation. Against this background many countries emphasise the need for more specific regulations for brownfield redevelopment⁴⁷.

It should be noted that the lack of integration, due to fragmentation of responsibilities and reluctance to co-operate across sector borders, is not only a major problem for the delivery of brownfield redevelopment but also for many other cross-sectoral issues. The need for integration amongst public sector activities both vertically between different levels of administration and horizontally between various policy sectors is repeated many times when addressing the issue of sustainable urban development. In several European countries, the handling of cross-cutting issues has become one of the key points of modernising the government. In this process of modernisation, it has become evident that one structural solution for addressing all cross-cutting issues does not exist and that 'one-stop-shop' government cannot solve all the problems of policy integration.

A number of EU funded research projects in the field of effective local governance and sustainable urban management are confirming this vision. Projects like PLUS⁴⁸ (Participation, Leadership and Urban Sustainability) and PEGASUS⁴⁹ (Planning, Environment, Governance and Sustainability) are referring to successful experiences in different European cities with local policy leadership, public involvement, area based approaches, etc as a tool for ensuring sustainable development at urban level.

The lack of integration between different permitting procedures and the abundance of regulations are a serious obstacle to speeding up the decision-making process for

⁴⁷ FERBER & GRIMSKI: "Brownfields and redevelopment of urban areas", Austrian Federal Environment Agency, 2002 on behalf of CLARINET

⁴⁸ <http://www.plus-aura.org/>

⁴⁹ <http://www.eurocities.org/pegasus/>

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development projects. In several countries, Governments have set up programmes to reform the regulatory framework. One of the objectives is the introduction of an integrated or single permit combining existing environmental and building permits for development projects. Some countries or regions have introduced this type of single permit, i.e. the Walloon region of Belgium. Others are considering it as an option.



The potential role of 'One Stop Shop' Approaches

Although it is clear that better integration should speed up the decision-making process for brownfields, it is also reasonable to predict that the decision-making process should reflect the complexity of problems that it has to deal with and therefore will last longer for brownfield redevelopment than for greenfield development. This is certainly the case if all necessary actors are involved in a proper way. Therefore, the primary goal should be to "improve" integrated decision-making and speeding up the process should be the secondary goal.

Improving the integration in the decision-making process is a matter of improving fundamentally co-operation and co-ordination between the different competent authorities. Co-ordination and integration can be achieved through the combination of the subsidiarity principle with the wider concept of shared responsibility. New approaches of better governance, with local (strategic) partnerships playing a key role and with a strong focus on the outcome for the delivery of public services, are needed. Strengthening leadership in the public sector will be essential to face these challenges.

The notion of a 'One Stop Shop' has been discussed as a possible solution to the problems identified above.

The three basic models of a 'One Stop Shop' can be categorised:

"letterbox" model (first stop): In this model, the one-stop-shop is an interface with the customer. It is typically an information counter and will guide the customer to the relevant services. There is no consultancy and no decision-making in the one-stop-shop

"accompanying counterpart" model: In this model, the one-stop shop is responsible for tracking the application. The one-stop-shop is not involved in decision-making but has the task of co-ordinating. The one-stop-shop provides consultancy and is able to advise customers

"decision-making" model: In this model the one-stop-shop is processing the application itself and making the final decision.

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A true one-stop-shop service (decision-making model) totally integrating urban planning procedures, environmental permits, building permits, etc for brownfield redevelopment is not achievable. In practice, most important is to avoid that final decisions of the different permitting administrations will be inconsistent or contradictory or will conflict with the goal-oriented process. Therefore, the authorities should be involved in the process as early as possible in order to remove in an early phase uncertainties on what will be acceptable or not from their sectorial perspective. The goal-oriented approach and the early involvement in the process will require highly skilled administrations. It is advisable to establish a “co-ordination office” with mainly co-ordination and consultancy functions. This should serve as a training and knowledge centre to improve skills of the different administrations involved in the permitting process.

Integrated permitting: The delivery of a unique integrated permit may be helpful in solving difficulties related to contradictions between legislations (i.e., environmental legislation can hinder redevelopment of brownfield, when urban planning wish to promote it). Moreover, it will promote the reduction of administrative burdens. However, in practice the delivery of a “true fully integrated permit” is hard to be achieved. There are dangers in the introduction of such a unique permit, as this may negatively affect the way currently elements work efficiently as part of the current permitting systems. The success to introduce the integrated permit will strongly depend on the degree of integration and the organizational reform it will require in the public sector.

The creation of specific development agencies: The creation of specific agencies is an important tool to assure the delivery of a better public service. Experiences over the last 30 years haven proven that this approach can be successful for the delivery of brownfield regeneration. However it is recognised that some approaches are more successful than others, and that there is a need to learn from European experiences. The diversity of organisations must be protected, due to various national and regional contexts and typology of the brownfield problem.

Recommendations

It is essential to improve the decision-making process in order to make brownfield redevelopment competitive to greenfield development.

Many countries have already undertaken institutional changes in order to deliver better governance. However, there is still a lack of information on how these actions had an impact on brownfield redevelopment, in particular how successful they are or why they failed. Moreover, the experience in many brownfield redevelopment projects shows that there is still an urgent need for improve the current decision-making process.

1. Policy makers at European and national level must recognise the need for a truly integrated decision-making process in brownfield regeneration. Mechanisms supporting the delivery of brownfield regeneration (e.g. structural funding) must recognise and facilitate a thoroughly holistic approach which allows the linkage of physical interventions with people-focused interventions from the very outset.
2. In order to deliver thoroughly holistic urban regeneration there is not only the need for specific skills and knowledge from a number of long-established disciplines and professions but also skills in "Integrated Assessment (IA)" where "Integrated Assessment"⁵⁰ can be described as a multi- or interdisciplinary process of structuring knowledge elements from various scientific disciplines in such a manner that all relevant aspects of a social problem are considered in their mutual coherence for the benefit of decision-making. Training and exchange of experiences in Integrated Assessment applied to urban regeneration should be stimulated on European level.

In order to share best practice, debate common issues and learn from experience elsewhere we recommend the establishment of a European network of brownfield regeneration development agencies and "co-ordination offices". This would allow practitioners to influence macro policy at either a national or European level with the benefit of 'on the ground' experience. E.C. could support the creation of brownfield regeneration agencies and co-ordination offices in new European countries, to help them to face the huge problems of brownfields respecting sustainable development principles.

CABERNET Position:

One of the major obstacles in brownfield redevelopment is the complexity and the multitude of factors that are influencing the decision-making process. Planning and permission procedures result in a time consuming and complex process. **CABERNET believes it is essential to streamline this decision-making process in order to make brownfield redevelopment competitive with greenfield development**

⁵⁰Rotmans, J., Integrated Assessment: A bird's-eye view. 1999, ICIS: Maastricht

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5.4.3

The Role of Dedicated Agencies in Brownfield Regeneration

In terms of an institutional response to the brownfield problem many countries have established dedicated agencies, separate to existing government agencies or departments, to tackle brownfields. The reasons for their formation vary widely but one key motive has been the failure of previous responses to deliver sustainable solutions. Over the years many different models for these agencies have been tested in Europe, with differing structures (100% public/100% private/public-private mix); legal forms (private limited/private not-for profit/charitable, etc⁵¹); geographical boundaries (from site-specific to city/ municipality, sub-regional or regional areas); and operational remits (from basic site remediation & recycling, through to responsibility for wider economic and/or social responses). The formation of these dedicated agencies has sometimes required a change in law or special legislation, and so they have often

⁵¹ There is some debate as to how truly 'private sector' these agencies are. It is true to say that they are created by the state and the extent of their true independence is very often dictated by the prevailing structures of governance; however it is accepted that many do operate on a daily basis independently of other government/state agencies

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historically represented a new or innovative approach to the brownfields problem within that country. Figure 5.2 provides examples of agencies to date in various Europe countries, including 'successor' models which have been developed to address the weaknesses of previous models.

There has been much evaluation and debate over the past 20 years of the relative successes and failures of dedicated agencies across Europe⁵². It is clear is that this history of tackling the brownfields issue via dedicated agencies is extensive and provides an invaluable opportunity to learn from both best-practice and lessons learnt

Current activities of Dedicated Agencies

An analysis of the extensive research to date on sustainable brownfield or area-based regeneration identifies a number of common principles for success⁵³:

- establishing a new 'mindset' which engages all necessary public and private partners, facilitates delivery and promotes the vision (as 'catalyst' and 'champion')
- freedom from 'statutory' responsibilities that multi-purpose agencies such as municipalities
- tackling issues via the three pillars of sustainability - physical, economic and social - with some evidence that this is best done from the outset rather than 'bolted-on' at a later stage
- existence of a long-term (10 years or more) strategic framework, endorsed by all key partners including the local community, to focus and prioritise activities for maximum impact
- ongoing 'top-down/bottom-up' linkages to ensure full stakeholder engagement
- acceptance and integration with all other statutory organisations at practical & strategic levels

Dedicated agencies can be key tools in facilitating brownfield regeneration. A number of roles fulfilled by dedicated agencies which could not have been easily undertaken or fulfilled by existing governmental structures, for example as a focus for delivery around a major event or a key date e.g. the Millennium, Commonwealth Games, European Capital of Culture; or acting as the 'broker' to stimulate the involvement of/ investment by the private sector.

This is not to say that dedicated agencies do not have potential weaknesses, and that they are always the best model for delivering regeneration of all brownfield sites. Macro-economic factors - such as the prevailing governance structures & political systems, economic conditions, etc - clearly have an influence on performance of these agencies and so cannot be ignored. Taking the 'success principles' outlined above and realistically assessing potential problems CABERNET has identified some key advantages and disadvantages of dedicated agencies:

⁵²see attached Bibliography for selected references

⁵³see selected Bibliography

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Fig 5.2: Advantages and Disadvantages of dedicated agencies

Advantages	Disadvantages
provides an identity and raises visibility and awareness of an area (also provides a real competitive advantage)	limited lifespan reduces ability to deliver long-term holistic regeneration and ability to retain key staff
guardian of a shared strategy which provides clear lines of remit & responsibility and sets performance targets for all relevant agencies to work towards	reliant on time-limited funding or resources that do not always match lifespan of the agency
focused in terms of geography, activities & timescales leading to greater success or impact	reliant upon strong leadership and management to be truly consultative
potential to be a democratic & consultative agency free of pre-existing local politics or tensions	reliant upon inter-agency working & buy-in from all key partners
status and influence with policymakers, especially if seen to be successful or innovative	lack of authority or status to influence or enforce local or mainstream policies
potential to deliver truly combined and sustainable physical & social regeneration	perceived/real lack of accountability if not properly managed, leading to loss of confidence or resistance
enables flexibility on individual project/activity leadership, leading to greater buy-in from partners improved prospects for success	tendency to become involved in too many activities and lose focus; or to focus on outputs easier to achieve in the shorter-term (usually physical) than in the longer term (often social)
potentially a more effective vehicle to engage private sector & hence maximise available resources & impact	vulnerable to changes in political views at a national level
smaller size & focused remit enables a speedier and/or enhanced response to external changes	potential for duplication and/or friction with existing agencies

The link between the effectiveness of development agencies and their geographical areas of operation is less clearly defined by existing research. There is also a feeling that the concept of identity - particularly important when trying to change negative perceptions about an area - may also be more easily understood at the city/sub-regional scale than at either a larger scale or a single-site scale. There is also some existing evidence that lessons learnt at a city/sub-regional scale are more easily transferred

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upwards to regional or national-scale agencies, or downwards to smaller or single-site initiatives⁵⁴. There are practical examples of this thought-process being translated into practice, for example in France where the “Etablissements Publics Fonciers” (EPFs) established in the early 1990s to overcome the negative image of regional areas blighted by brownfield conditions, have been succeeded more recently by smaller-scale EPFs to enable a more local focus, ensure engagement of all key stakeholders and so maximise the impact of available resources.

Their operational remit has also been extended in response to ‘lessons learned’ to address the relationships between physical interventions and social interventions and to stimulate sustainable economic end-uses for remediated sites.

The potential positive role of development agencies is illustrated by model of the optimum lifecycle of a brownfield project (Figure 5.3). This was developed following analysis of examples of best-practice (and worst) in dedicated agencies across Europe, and sets out the key steps to be taken throughout the process of developing individual sites in a simple linear model⁵⁵. The model does not assume that a dedicated agency will deliver all of these steps but shows the vital role they can have in bringing together all parties required to deliver brownfield regeneration in a way that an existing state or government agency may not be able to (due to lack of resources, conflicts of interest, etc).

Fig. 5.3 Optimum lifecycle of a brownfield site

		Dedicated agency role
□	Step 1. establish the ‘vision’	coordinator & champion
□	Step 2. consult on the ‘vision’	coordinator & champion
□	Step 3. develop necessary infrastructure & public realm standards	driver, champion & facilitator
□	Step 4. prepare site development briefs	deliverer & coordinator
□	Step 5. training & employment access principles	champion & coordinator
□	Step 6. developer-partner selection	independent coordinator & adjudicator
□	Step 7. developer-partner agreements	independent body
□	Step 8. implementation	facilitator
□	Step 9. training & employment linkages activated	coordinator
□	Step 10. aftercare	coordinator/deliverer

⁵⁴ “Combating social exclusion: lessons from area-based programmes in Europe” - Michael Parkinson for The Joseph Rowntree Foundation (UK), August 1998⁵²see attached Bibliography for selected references

⁵⁵ In reality the model is not necessarily linear, and many of these steps can be approached simultaneously

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Recommendations

It is recognised that evaluating the different types of dedicated agencies found across Europe is difficult, due to the wide variance in structural and political climates conditions, and there may not be a 'one size fits all' approach. However it is recommended that particular aspects should be investigated further to establish whether or not there are particular tools and models that are more appropriate or effective in certain situations in delivering sustainable brownfield regeneration. Particular areas of interest include⁵⁶:

1. the inter-relationships between image and perception, and role/remit of agency

Given the importance of area perception and image in delivering brownfield regeneration the inter-relationships between this and the precise structure, role and remit of agencies is not clearly understood. As a general rule the public sector tends to play a much more significant role in owning/controlling dedicated delivery agencies at the moment. The likely scale - and therefore public sector resources required - of the brownfields issue in the newly-acceded European Union states makes it vital to understand how best to focus delivery in future. Understanding the impact of leadership on the engagement of the private sector is for the same reason extremely important.

2. the relationship between geographical remit and impact

Given the wide-ranging nature of sustainable regeneration it is almost impossible to conceive that one single agency can be responsible for delivering all elements of regeneration over a large geographical area. Evidence from identified principles of success, advantages & disadvantages and optimum model for delivery supports this view too, as does the growth of 'city/sub-regional' scale agencies. The links between geographical remit and impact need to be understood clearly given the likely scale of the brownfield problem with the European Union in the near future.

3. the relationship between direct control of statutory & fiscal powers, resources, etc and impact

As outlined previously there is considerable difference in the amount of control and resource available to dedicated agencies from country to country. Further evaluation needs to be undertaken as to whether 'rights' such as dedicated guaranteed funding or 'powers' such as direct control over planning, tax-levying, ring fencing of capital receipts/revenue income, etc, are essential or preferable to successful brownfield regeneration.

⁵⁶ Similar recommendations have been expressed by other EU expert groups & networks eg. Sustainable Cities Expert Group on Urban Environment: Sustainable Land Use (Recommendations 8, 12 & 14), October 2001

4. the relationship between structure and impact

Dedicated agencies across Europe have had a variety of operational structures, in particular the level of private sector involvement. The importance of private sector involvement, at either a management or operational level, in delivering sustainable brownfield regeneration is not clearly understood and is worthy of further research.

There is an invaluable opportunity to share experiences and learn from both best-practice and mistakes made to date from the history of dedicated agencies in Europe and beyond. Some European-wide networks have already been established to do this and to further research into areas of common interest - one example of this is the 'European Association Of Development Agencies' (EURADA), a non profit-making organisation comprising of representatives from regional economic development agencies in 27 European nations. Existing European programmes such as URBACT and Eurocities (in particular the Sustainable Cities forum) could be used as a conduit for exchange of information and ideas.

An alternative would be that the European Commission supports the establishment of a dedicated virtual European network for city/sub-regional development agencies to support the continued exchange of best practice at both the individual and organisational level; debate common issues; and promote direct macro-policy dialogue in both national and European institutions. Examples of best practice at a national level already exist⁵⁷.

CABERNET Position:

Dedicated Agencies can potentially offer a range of benefits in delivering sustainable solutions to the brownfields problem. **CABERNET believes it is important to critically evaluate the role of dedicated agencies to better understand their potential impact.** It is vital that these relationships are understood now so that we can further improve attempts to empty the 'brownfield bath' in the future

⁵⁷ In the UK English Partnerships, the national brownfields regeneration agency, has established a network for URCs which has twice-yearly symposiums, and an ongoing training & development programme and its own dedicated website to facilitate this; Italy similarly has an Association of Development Agencies (AIDA).

6 Involving and Qualifying People: Brownfield Management, Skills and CP

6.1 Involving People: Citizen Participation in Brownfield Regeneration



Chapter 6.1: Summary Message

- Citizen participation (CP) plays an important role in regeneration ensuring that local people are active in the decision-making process
- There is a mature CP knowledge base already, but this is poorly understood among brownfield practitioners in particular.
- CP has a long way to go before it can be regarded as mainstream practice for brownfield regeneration
- Brownfield regeneration must shift from being predominantly a 'site-based' endeavour, to an activity that is 'people-based', involving processes that engage with all stakeholders
- There are many excellent tools already available to support CP processes
- There are examples demonstrating how best practice has featured in brownfield regeneration activities, but these remain relatively uncommon
- There is a significant need for better dissemination of existing information, practice and tools
- Delivering training in CP for relevant practitioners is needed
- CABERNET recommends that a higher proportion of project development resources should be used in CP processes;
- There is a need for further validation of CP approaches, as well as the refinement of existing tools and the develop of new models
- CABERNET believes that effective citizen participation in decision-making enhances the sustainability of brownfield regeneration projects

6

Involving and Qualifying People: Brownfield Management, Skills and CP

6.1

Citizen Participation in Brownfield Regeneration

Since the mid-1980s there have been increasing calls for greater public representation and participation in national and regional policy decisions. This has resulted in many public and private decision-makers, including those involved in urban development, reflecting on ways to improve the involvement of a broader public in opinion forming and decision-making.

Citizen participation (CP) plays an important role in brownfield regeneration by ensuring that local and regional people are represented and actively involved in the decision-making process. Urban development of this type can significantly impact, both positively and negatively, on local communities in many different ways, it is therefore not only a social imperative, but now also a legal requirement that these communities be consulted as part of a regeneration project. In addition, for larger development projects, the social and physical changes that result from brownfield regeneration can often come 'once in a lifetime' and therefore represent a defining moment for a local community.

Although the merits of citizen participation are largely understood at a public policy level, there remains a high degree of scepticism within the professional brownfield community as to whether what is credible at a conceptual level can be made to work in practice. Therefore citizen participation in the context of brownfield regeneration has a long way to go before it can be regarded as an integral component of mainstream practice.

The increasing focus on CP and the momentum to ensure that it is considered as part of the regeneration process is largely due to two societal and two legislative drivers. The two societal drivers (a) to improve governance, citizenship, and transparency in decision-making and (b) to encourage greater social justice and the rebuilding of communities have played an importance role in wider discussion of the role of CP in democratic societies.

(i) Governance, Citizenship and Transparency in Decision-making. Particularly within the new member states and other young democracies, recent laws have given citizens an influential role. More generally, there is recognition of the value of promoting active citizenship, "bottom up" decision-making, and promoting more open government, all of which encourage CP. The Aarhus Convention⁵⁸ (Appendix 1) and recent EU Directives⁵⁹ are regarded as a highly significant, but generally poorly known, public policy tool for promoting improved CP.

(ii) Social Justice and the Rebuilding of Communities. This is a major political driver among a number of governments and development agencies working to overcome social exclusion, build greater social capital and achieve improved social

6.1

equity in the light of structural change and population shifts in recent decades. Where this is the case, public sector funding for regeneration is frequently contingent upon a substantive CP component within the whole regeneration process.

The two legislative drivers are (iii) planning legislation and (iv) environmental protection legislation.

The improvement in CP is due to the above and the additional drivers:

(iii) Acquiring planning consent is often dependent upon applicants having been through a process of community consultation. Following the due process and avoiding the risks associated with being challenged for not having properly done so, is a key motivation for CP. However, this can lead to very 'tokenistic' CP, meeting basic legal requirements, but not advancing to the higher, more meaningful, levels of CP.

(iv) Environmental protection legislation. There has been an increasing tendency for environmental protection legislation to require CP within the overall risk management strategy

These drivers are influencing stakeholder groups involved in CP activities as part the regeneration process and empowering citizens and local communities to resolutely request adequate CP in regeneration projects.

⁵⁸ United Nations / Economic Commission for Europe - Convention on access to information, public participation in decision-making and access to justice in environmental matters. Conducted at Aarhus, Denmark, on 25 June 1998. This convention is founded on three fundamental 'pillars'. Pillar I, Access to Information - access to environmental information ensures that members of the public can understand what is happening in the environment around them. It also ensures that the public is able to participate in an informed manner. Pillar II, Public Participation in Decision Making - this requires more than simply following a set of procedures; it involves public authorities genuinely listening to public input and being open to the possibility of being influenced by it. Pillar III, Access to Justice - this enforces both the information and the participation pillars in domestic legal systems, and strengthens enforcement of domestic environmental law.

⁵⁹ Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC and Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directive 85/337/EEC and 96/61/EC

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Involving and Qualifying People: Brownfield Management, Skills and CP

6.1

Defining Citizen Participation for Brownfields

‘Citizen Participation and Decision Making’ as used here, refers to two related subjects in brownfield regeneration⁶⁰:

- ‘Citizen participation’ means ‘being involved’ as opposed to ‘being represented’ (i.e. the focus is on participative rather than representative democracy)
- ‘Citizen decision-making’ focuses on the processes that enable citizens to legitimately influence how brownfields are regenerated. There are two aspects to this latter point, namely the ability of citizens to articulate their opinions and the extent to which those with decision making power have regard for these opinions

There are two particularly useful concepts in considering CP, the ladder of participation and the definition of citizenship. The ‘Ladder of Participation’⁶¹ shows that there are a number of levels of CP, from mere public relations, verging on citizen ‘manipulation’, through to the higher levels where citizens are in control of the process and the outcomes. At these higher levels, citizens are not passive recipients of other peoples’ ideas and plans, but can be proactive in initiating regeneration activity in ways that meet their own needs and aspirations. It should be noted that it does not follow that higher levels on the ladder are always the best. Different levels (and different approaches) will be appropriate in different locations and circumstances.

TABLE 6.1: Ladder of Participation

Citizen control	Degree of citizen power	Deciding together
Delegates control		
Partnership		
Placation	Degrees of tokenism	Consult
Consultation		
Informing		
Therapy	Non-participation	Tell
Manipulation		

⁶¹ Arnstein, Sherry R. “A Ladder of Citizen Participation,” *Journal of the American Planning Association*, Vol. 35, No. 4, July 1969, pp. 216-224.

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Good practice in the CP process would usually involve a detailed mapping of stakeholders to identify whom to include. The second concept is concerned with the question 'who are the citizens'? An extensive literature has discussed and map the different types of stakeholders in regeneration in relation to CP⁶², CABERNET has focused on people who lead a significant part of their lives in proximity to a site and whose views, perspectives and ideas are the most frequently undervalued and overlooked. This group of people can be referred to as "non-expert insider",. While other categories of stakeholders of course have legitimate rights and roles, focusing CP on the "non-expert", particularly local residents, is usually an attempt to redress a historical participation imbalance.

CP is frequently considered as synonymous with achieving consensus, however this is a misrepresentation. While consensus is always desirable, it is not always achievable. Good CP processes nevertheless give stakeholders the opportunity to articulate their views, with these being seriously considered in the decision-making process, even if decisions ultimately run counter to these views.

CP should not be regarded as a static or one-off activity. What constitutes effective CP will change as a project progresses through the stages of inception, planning, implementation and long-term use and management. For example, having engaged citizen interest during the project planning process (where issues will focus largely on questions of 'what'), different mechanisms will be needed to maintain this interest and ongoing involvement during the implementation phase (where issues will largely revolve around questions of 'how'). In addition CP should not be regarded as a necessarily highly formalised or mechanistic process. Quality CP process, or at least a large part of it, can frequently be conducted in a relatively informal manner.



⁶² After Arnstein, 1969 and www.ecoregen.com

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Involving and Qualifying People: Brownfield Management, Skills and CP

6.1

Current Practice in CP across Europe

There are many excellent tools and a few excellent examples of where best practice has featured in brownfield regeneration activity⁶³, however these remain relatively uncommon and are poorly known. Although there is sufficient existing know-how to enable CP to be more widely adopted in regeneration practice, there are nevertheless a number of areas that require further research.

CABERNET has defined six interconnected factors that specifically influence CP in brownfield regeneration projects and strategies:

Factor 1 - Predominant mainstream regeneration culture. Brownfield regeneration culture is largely characterised by concerns with decontamination, finance and construction. This is coupled with a desire to reduce greenfield consumption through brownfield regeneration. Focusing on these admittedly vital issues has tended to skew the whole brownfield agenda away from improving quality-of-life for local people. The perspective of working with a 'site' rather than a 'people' can lead to CP being regarded as an imposition upon, rather than integral to, regeneration processes. The predominant culture is sustained by the types of training available to practitioners, most of this training will have little if any reference to the role of CP

Factor 2 - Land ownership. Brownfield land in public sector ownership, or land which has become 'orphaned' from the original owner (necessitating public sector intervention), is more commonly subject to extensive CP processes than that in private ownership. Land owned by NGOs is frequently acquired with the specific purpose of enabling CP processes or addressing needs identified through such processes. Few corporate real estate functions appear to be empowered to adopt CP in determining post industrialisation exit strategies

Factor 3 - Regeneration profitability. For 'A' sites CP is most likely to be carried out either on a de minimus basis (Driver 1) or it can be completely absent. Conversely, CP is more likely to be a significant factor at 'C' sites. This difference partly reflects time scales: Market-driven regeneration often involves a developer initiating and driving the whole process and seeking to make a rapid return on investment. CP and uncertainties over the outcome, time scale and cost are a cause of concern. Therefore, in depth CP is not part of the prevailing culture among developers and usually there is little incentive for going beyond minimum legal requirements. Regeneration on 'C' sites may be more difficult to initiate from an economic perspective, but this does at least provide plenty of time for in depth CP. For 'C' sites it is often members of the local community themselves who champion the need for regeneration .

⁶³ For example see Berryhill Fields (Stoke on Trent, UK). www.ecoregen.com/home/share_ex/exampleindex.html

Factor 4 - Availability of resources for CP processes. Difficulty of securing funding for CP processes is frequently cited as an obstacle, especially where it is regarded as a project overhead or included within the category of 'fees' rather than regarded as a legitimate project cost in its own right or indeed as a value generating activity. Of equal significance is the lack of availability of expertise in facilitating CP processes. Special sets of skills are needed to properly achieve this, and the expertise is often lacking, not only among brownfield practitioners, but also more generally

Factor 5 - Corporate Social Responsibility (CSR). Land-owners or developers adopting CSR principles are more likely to engage in meaningful CP. Companies with a CSR ethos should over time allay public scepticism regarding underlying corporate motives, especially if accompanied by more transparent economic modelling. This in turn will encourage a greater level of engagement by the public. At present there is huge variation in CSR practice among businesses and between some countries. The significance of CSR is expected to increase in the future although national differences are likely to continue⁶⁴

Factor 6 - Deregulation. Many countries are seeking to simplify and speed up decision-making processes by removing or avoiding 'unnecessary rules'. There is some evidence that this 'speeding up' is working against the interests of CP, particularly in the context of commercially driven brownfield regeneration ('A' sites).

While there is much in common across Europe regarding CP processes and brownfield regeneration, CABERNET has revealed a number of significant national differences⁶⁵. A survey of CABERNET members revealed considerable variation in how well CP is practiced, with northern European countries in general showing higher degrees of CP than those in the southern or Mediterranean regions. In the latter countries, CP is only advanced in a small number of experimental projects whereas it has become more mainstreamed in the former.

There appears to be a strong correlation between the level of CP and the strength of the NGO sector, especially where NGOs themselves own land (although there is great variation in NGO land ownership models both within and between the countries of Europe). In countries with a strong tradition of NGO involvement (most notably in the UK), there is perhaps a greater predisposition to participate in CP processes. Alternatively, it may be that in the absence of NGOs there is less overall capacity to demand and manage CP.

As with NGOs there is much variation across Europe in the role of third party facilitators of CP. In some countries (e.g. UK, Denmark, Netherlands) the use or involvement of such bodies is now increasingly common whereas in others it is virtually unknown. There is some evidence that the involvement of such organisations correlates with the level of CP.

⁶⁴ See also Position Papers from CABERNET's Economic Working Group – www.cabernet.org.uk

⁶⁵ Through a survey of CABERNET Members

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Involving and Qualifying People: Brownfield Management, Skills and CP

6.1

The Role of CP in Brownfield Regeneration

The value of citizen participation in decision-making (CP) is relatively well established, however, CP has a long way to go before it can be regarded as mainstream practice for brownfield regeneration. CP has a particular relevance and importance for brownfields :

- The restructuring of Europe's industry has led both to abandoned, damaged land and to abandoned, damaged communities⁶⁶. The processes of finding a new future and perhaps a new identity for such land and communities must go hand in hand if regeneration is to be legitimate and truly sustainable
- Brownfield regeneration can greatly affect those who live or work nearby. These people are therefore key stakeholders and have much to contribute to developing regeneration strategies. Accommodating local perspectives can result in win-win regeneration solutions as local communities can have a strong positive impact and local objectors can adversely impact development
- Brownfields are commonly associated with issues of contamination (real or perceived) and associated risk to public health. Local people will therefore have a particular interest in the proper management of this risk
- Brownfield regeneration presents a major opportunity for contributing to the imperative of sustainable development. One of the central tenets of sustainable development is putting local people at the heart of decision-making. Recent reviews of successful projects have shown that brownfield regeneration that fails to adequately engage with local people is not sustainable brownfield regeneration, and carries a much greater risk of failure⁶⁷

Tackling brownfields is commonly regarded as the domain of technical specialists, engineers and developers, and the potential for achieving sustainable quality of life improvements for local people is usually not the starting point for determining the way forward. Brownfield regeneration must shift from being predominantly a 'site' based endeavour, aiming for specific physical outputs, to an activity that is 'people' based with the process of engaging with all stakeholders given a comparable level of consideration as the physical outputs themselves.

⁶⁶ CLARINET 2002 Working Group 1 Report: Brownfields. www.clarinet.at

⁶⁷ Learning from Experience. The BURA Guide to Achieving Effective and Lasting Regeneration. Office of Deputy Prime Minister, BURA, London 2002; Mainstreaming sustainable regeneration – a call to action. UK Sustainable Development Commission. December 2003. www.sd-commission.gov.uk

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Achieving this shift will require action on a number of fronts. One important action will be the implementation by EU Member States of recent (2003) Directives for promoting public participation in environmental matters. In addition, action must also cover professional training, changes to public sector funding regimes, much better dissemination of existing policy and good practice, and targeting new evaluative research. Above all, mainstreaming CP best practice will involve significant cultural shifts among many professionals. The necessary changes will require strong championing and committed leadership at European, national and local delivery levels.

There are enormous opportunities to be grasped in securing positive brownfield regeneration outcomes through investing in quality CP. Equally, and particularly in the context of an enlarged European Union, there is huge potential for tackling brownfields in an entirely inappropriate manner unless the “people and places” approach advocated in this paper is adopted by practitioners and politicians alike.

In conclusion, a number of key recommendations relating to CP and brownfield regeneration can be made:

- The UN/ECE Aarhus Convention and associated national interpretational documentation, along with associated EU directives, all need a much higher profile. Championing and disseminating this work by national and regional governments must be a priority. The associated development of national legislation in response to the Directives must encompass CP and brownfields
- New European policy on brownfields must avoid the danger of being overly focused on the issues of contamination or tackling technical issues. While these matters are extremely significant, even more fundamental are issues surrounding how brownfield regeneration can improve the quality of life for local people, not only through the end product of regeneration (built infrastructure, community green space, etc), but equally through the process of CP. Only by seriously engaging with CP processes can quality and truly sustainable brownfield regeneration be achieved
- Funding policy or guidance for brownfield regeneration should properly value and cost CP processes, so that this vital activity can be properly resourced. Even if the cost of getting the CP process right represents a high proportion of total expenditure, this may be money well spent
- There is a need for training among all brownfield practitioners, including those making brownfield-related decisions at a political level, to cover CP. A fuller and broader understanding of the subject’s significance would aid its greater acceptance in mainstream regeneration. Appropriate training courses or modules should be developed for this purpose
- More CP process experts are required, particularly in those parts of Europe where their role is uncommon or unknown. Appropriate training with accreditation should be supported and developed

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Involving and Qualifying People: Brownfield Management, Skills and CP

6.1

Increasing the use of CP would enhance the sustainability of brownfield regeneration projects. CABERNET recommends:

- better dissemination of existing information, knowledge and tools
- collection of good practice examples to increase confidence in CP among brownfield practitioners
- highlight the value of CP in order to challenge and change the prevailing culture
- develop and deliver training in CP for relevant practitioners
- embed existing EU policy directives and conventions into national and regional policy
- direct a higher proportion of project development resources towards CP processes
- validate CP approaches, refine existing tools and develop new models

CABERNET Position:

There is a well-developed knowledge base relating to the inclusion of citizen participation in decision-making within brownfield regeneration. However, this is commonly undervalued or misunderstood. **CABERNET believes that effective citizen participation in decision-making enhances the sustainability of brownfield regeneration projects.** Much broader discussion and dissemination of tools and good practice is therefore required

6.2

Qualifying People: Professional Skills in Brownfield Regeneration

Chapter 6.2: Summary Message:

- Brownfield regeneration at both the strategic and project management level is a complex process which involves a wide range of skilled professionals
- There is a need for a new type of brownfield specialist who is able to develop and deliver opportunity plans for sustainable regeneration
- CABERNET has developed a job specification for a 'Brownfield Process Manager'
- CABERNET believes that the type of skills-base that is currently needed is represented by a 'Brownfield Process Manager'
- A set of Guiding Principles that the Brownfield Process Manager should apply in order to deliver long-term successful regeneration have been developed
- There is a need for a European wide recognised post-graduate diploma or certificate which builds on a range of skills required by a Brownfield Process Manager



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Involving and Qualifying People: Brownfield Management, Skills and CP

6.2

Brownfield regeneration at both the strategic and project management level is a complex process which involves a wide range of skilled professionals. A substantial number and diversity of training courses are available across Europe for those operating in the brownfield professional environment. The vast majority of these, whilst of high quality and professionally relevant for improving knowledge, focus very narrowly on the technical professions which they serve. There is a need for a new type of brownfield specialist who is able to develop AND deliver opportunity plans for sustainable regeneration ensuring that these contribute to the comprehensive regeneration of a wider area by delivering environmental protection, local economic and social benefit.

In order to effectively and sustainably drive brownfield regeneration, a more cross-cutting education is needed for this sector. This approach focuses on training individuals to understand at a strategic level the technical skills available, the part each professional can play in the process and most importantly develop the ability to look at the opportunities brownfield sites can represent. This form of training should provide individuals with a more holistic view of a brownfield site, allowing practitioners to place the site in the context of an 'opportunity plan' for the site and the wider community. Through this professional approach, utilising an opportunity plan, more appropriate areas for regeneration/development may be identified prior to the development of detailed technical plans.

As a result of the nature of regeneration and the challenges faced, the role of a Brownfield Manager is possibly more about managing and facilitating the process, rather than the type of project management seen in other sectors. Therefore, the type of skills base that is currently needed is encapsulated by the notion of a Brownfield Process Manager. CABERNET has developed a job specification for what it has called the Brownfield Process Manager.

Current skills base in Europe

When discussing the existing skill base and the future skill base needed in the brownfield area, the principal skill of any new breed of Brownfield Process Manager must be to avoid 'drilling' down into technical issues of reclamation. A mature skills base already exists to identify contamination and other problems associated with some sites through site investigations. There are a number of well established techniques for dealing with these specific problems and this technical base is complemented by a group of highly competent practitioners.

Brownfields set their own challenges. By their very nature they are usually set amidst existing communities, frequently in areas where the massive structural changes that traditional industries have been through have left their mark. These communities are often stigmatised by high long-term unemployment, dereliction, poor health and

a mixture of apathy and anger at what has happened along with an accompanying feeling of powerlessness.

Particular skills are required in these communities to ensure ownership of and involvement in Brownfield projects. Through the regeneration process recognition should be given to the competing demands or expectations of local and national stakeholders. This process should achieve a shared understanding that the purpose of brownfield regeneration is not simply about clean-up of land, but is about creating sustainable communities. It is in many instances about rebuilding and supporting fragile communities until they are self-sustaining. This is a process that must be managed through consensus and capacity building at a local level and not through a top-down approach.

It is important to briefly explore this issue before discussing the specifics of a skill base, since it should help put the approach to the skills needed for a Brownfield Process Manager in context, whilst recognising the different challenges faced in developing greenfields where new communities may be created.

Guiding Principles in Regeneration – Role of the Opportunity Plan

The concept of brownfield land and its negative impact on both the environment and local communities is rapidly becoming more recognised and accepted across the EU member states and other industrialised countries. However, although many believe that action needs to be taken to deal with this legacy, if the ultimate goal of the regeneration process is a sustainable community then a broader understanding of community development and needs is required. This broader understanding can be provided through the work of a skilled manager.

When discussing skills requirements the following CABERNET Guiding Principles ensure long-term successful regeneration are:

- a) Partnership and collaborative working - All sectors public, private, community and voluntary, should work collaboratively, with each contributing their expertise and resources to add value to the regeneration process and foster collective ownership of the scheme
- b) Holistic Regeneration - The partners should recognise that successful regeneration tackles the social, economic and environmental aspects of an area as the quality of life extends beyond the physical environment. Therefore, the community and socio-economic issues must form a key part of the process
- c) Sustainability - The masterplan must demonstrate an efficient use of land, energy and resources both in developing the site and its long-term usage. The scheme must be both sustainable and viable in economic terms as well as environmentally
- d) Best Practice and High Quality Design - Commitment to promoting and implementing best practice in all aspects of the design and delivery of the scheme. The masterplan must demonstrate how these principles have been applied

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Involving and Qualifying People: Brownfield Management, Skills and CP

6.2

Brownfield Process Manager

Too much technical knowledge at a strategic level can be a bad thing! So if a dominant technical knowledge base is not the answer, what are the skills required and the training needed to create a successful Brownfield Manager? The first challenge must be the ability to take a step back and put the brownfield site into the context of the local community, the Opportunity Plan. The Brownfield Manager should have the perspective to avoid the tendency to take the technical approach to the site conditions too early. This professional should also be able to look at the broader picture rather than immediately falling back on any well established technical remediation and redevelopment skills.

The problem in identifying the skills base is that the Brownfield Manager can become pigeonholed. Terminology in a job description is everything. When individuals think about what constitutes a Brownfield Project Manager, what often comes to mind is a person on site, managing the contractors. The concept of a Brownfield Manager is an individual that can be the interface between policy makers and the technical specialists, at the first stage of the brownfield regeneration process. The Brownfield Manager in this stage is very much a Brownfield Process Manager. At the start of the process the Brownfield Manager should be able to recognise and engage with all the stakeholders that need to be involved, developing the project in its spatial and policy context.

Following on from this the Brownfield Manager must have the ability to both identify the technical skills needed to deliver the project and also the ability to manage the specialists involved in the project in order to achieve the desired outcome. These skills will change as a project moves from a vision to reality and again the Brownfield Manager needs to recognise this and have the ability to change the skills mix accordingly. Whilst a Brownfield Manager theoretically can manage the whole process, in reality the responsibility can pass from an original Brownfield Manager to a suitable second phase manager as the project evolves. In these circumstances, it is essential that as far as possible the ultimate project sponsor or owner remains the same to maintain continuity of delivery and vision.

The Brownfield Manager should be adept at facilitating and influencing in both directions. Developing an Opportunity Plan must recognise existing policy but seek to influence future policy; the process must also build on local needs and expectation, and the Brownfield Manager should have the ability to manage these expectations. This is not to say that a Brownfield Manager should not have technical skills, however the ability to manage the process is far more important.

Opportunity Plan

The starting point for an Opportunity Plan should be a review of a settlement, which would highlight the strengths and weaknesses, opportunities and threats

6.2

to a community. As an example, a derelict brownfield site whilst potentially an environmental threat may present great opportunities through the ecological biodiversity seen on the site, and this may encourage visitors to an area. This feature may be a great strength of the current site and an opportunity for the local economy/community. Therefore, it might be argued that the environmental threat should be actively managed rather than being dogmatically reclaimed.

Thinking of the future, derelict land should be viewed not only as a technical problem, but also as an opportunity to build a sustainable landscape. In this context landscape is seen to mean "an area whose characteristics and features are created as result of the action and interaction of natural and/or human factors".

The ability of any team is fully dependent on the strengths of its members, but any Brownfield Manager must have the ability to lead, motivate and organise the team.

Conclusions

Brownfield sites create blight, damage communities and can be an environmental risk. The principal skills required for regenerating these sites are not only technical ones, but skills of conceptual thinking, leadership and consensus building, and the ability and focus to understand the regeneration needs of a community. The way in which the process is managed by the Brownfield Process Manager will directly influence and dictate the technical skills that are applied and how they interact. Flexibility and adaptability are essential. It is worth also noting that whilst many environmental / land-based professions encourage continuing professional development (CPD) in technical areas, few concentrate or give much regard to managerial leadership and process-oriented skills that ensure vision and holistic thinking.

There is a need for a European wide recognised post-graduate diploma or certificate which builds on technical knowledge/skills through enhancing leadership skills, consensus building for the range of skills potentially required by a Brownfield Process Manager. The delivery mechanism for such a course and details of the course components needs to be further explored and discussed with European training and further education providers.

If the process is well driven then site reclamation and development is only a means to an end and not the end in itself. This analysis poses some challenges, not least to the much acclaimed 'reclamation first philosophy', and will require consideration by not only training and education professionals, but also a number of policy makers.

CABERNET Position:

There is a need for a new professional to develop and deliver opportunity plans for the sustainable regeneration of brownfield sites and ensure these contribute to the comprehensive regeneration of a wider area by delivering environmental protection, local economic and social benefit. **CABERNET believes that the type of skills base that is currently needed is represented by a Brownfield Process Manager.**

7

**Research Needs: CABERNET Research
Recommendations for Brownfields
and Urban Land Management**



Chapter 7: Summary Message

- High quality research plays a central role in setting and meeting public policy objectives and improving practice
- Expanding the scientific knowledge base and developing a clear understanding of the economic or societal dimensions that impact on brownfield regeneration are important aspects of any future research agenda
- CABERNET has identified a number of key research topics for brownfields and wider urban land management
- Key areas identified include: assessing the role of Agencies in brownfield regeneration; assessing and developing Corporate Social Responsibility (CSR) codes; developing methods to facilitate integrated stakeholder decision-making systems for brownfields; and the development of 4-Dimensional Planning approaches
- The added value of multi-stakeholder and multidisciplinary approaches in research programmes is demonstrated in a number of EC projects, such as CABERNET

Research Needs: CABERNET Research Recommendations

7.1

Brownfields and Urban Land Management Research

The development perspectives of European cities and regions are increasingly challenged by economic globalisation. Many traditional European cities have developed into regional agglomerations, but planning methods, institutional structures and the associated management tools have not progressed simultaneously and fast enough to cope with the increasing scale, interconnectivity and complexity this growth has generated. This is particularly true in the view of shorter land use life cycles and the appearance of brownfields. There is an indication that the “traditional planning models/approaches” still applied can no longer deliver integrated planning for modern cities. To compound difficulties, new planning tools that are being developed are not being transferred to practice in an effective manner. In addition, poorly integrated and unsystematic land use policies will increase land-related conflicts in densely urbanised regions. This undermines social coherence and competitiveness of all European cities and regions, New Member States are affected particularly because adoption and transformation happens very fast.

Regenerating brownfields facilitate opportunities at numerous levels, e.g. by improving urban quality of life; enhancing urban competitiveness; reducing urban sprawl, etc.

Brownfield research issues are consequently linked to numerous topics including urban environment, social segregation, greenfield consumption rates and soil sealing; Transportation pressures and problematic traffic flow; Better understanding of the causal links between the urban environment and human wellbeing (in both psychological and physiological terms); Improving urban quality of life, through integrated regional and urban planning, while maintaining medium and long-term competitiveness.

CABERNET has identified several areas of future research needs on brownfields. They encompass either research topics for brownfield redevelopment or - in a broader context - research topics for proper inclusion of brownfields within urban land management approaches. The research recommendations described below have been derived from the CABERNET Conceptual Models and the CABERNET Position Papers. They aim at enabling stakeholders to make better use of existing knowledge or at filling knowledge gaps. It should be noted when considering this list of recommendations that although the brownfield community is increasingly improving its methods for disseminating research results, a number of national programmes may be producing valuable outcomes in one or two of these research areas, but have as of yet not published the results.

7.2

Key Research Topics: Gaps and Priorities

The topics set out below have been developed from research priority discussions within CABERNET. Each of these topics meets the criteria necessary for research conducted within the European Research Area. In particular, these topics fundamentally support the attainment of the Lisbon Strategy; they are key research questions at a European level and are research areas that will result in valuable short-term outcomes, as well as providing long-term sustainable benefits. A number of these research themes are discussed more extensively in the Network's Position Papers.

When considering the research priority areas for delivering Sustainable Land Management and also advancing Europe as a world leader, both in this research area and in the development of relevant policy instruments, the following topics are proposed:

- Development and transfer of management approaches, decision-making frameworks and models for the urban/sub-regional level (dealing with issues of governance, land ownership, land consumption and urban sprawl, use of natural resources, and transportation). In particular examining the roles of Municipalities and Development Agencies as specific delivery institutions (for example for brownfield regeneration) and developing approaches that can facilitate the transfer of successful management strategies
- Assessing and developing Corporate Social Responsibility (CSR) codes that relate to urban land management to assist commercial companies to manage their land in a way that is compatible with current sustainability indicators and good practice guidelines. This may also be an area where tools can be developed in cooperation with the public sector, where this sector leads by example
- Develop technologies that allow a flexible and dynamic change in existing urban structures. For example, in terms of infrastructure construction, building materials, etc, so that the urban structure can be adapted quickly and sustainably, e.g. through the incorporation of energy efficient construction materials and the subsequent reuse of these materials to meet the changing needs of the urban population. Strategies for market implementation have to be explored simultaneously
- The development of Brownfield specific funding models and the dissemination of current best practice for financial management of urban and sub-regional development, in particular the use of novel regulatory and economic models for European cities with special regard to the new EU Member States. Development of mechanisms to support financial transparency of Public Private Partnership (PPP) Models
- The development of economic models and financial instruments to give incentives to promote technologies uptake in Brownfield regeneration
- Methods and tools for assessing new land use models that relate to a concept of an urban ecological system. Improvement of land use planning procedures that can analyse and consider the interaction of nature within the urban fabric. Development of an approach for assessing an urban ecology component, particularly for land use problems such as brownfields

7

Research Needs: CABERNET Research Recommendations for Brownfields and Urban Land Management

7.2

- Technologies and decision-making tools for flexible and innovative land use options, such as sustainable use of the subsurface in densely populated areas. This could include developing new land use models that could be transferred across Europe as regional successes
- Development of 4-Dimensional Planning approaches, incorporating the dimension of time. In particular, developing technological and conceptual approaches to model how cities operate. Developing holistic multi-dimensional impact assessment models that demonstrate how this form of planning can reduce the legacy and creation of brownfields within the urban fabric
- With specific regard on shrinking cities: Methods and technologies that facilitate temporary or interim land uses that do not impair or limit future use. This links to the need to improve the understanding of land use changes within cities through better data management. These research areas could also review the need and opportunities for providing short-term utility within a longer development time frame
- The development of models that can improve the predictability of social, environmental and economic impacts from land use changes within a regional setting. In particular prediction models for areas that are impacted by temporal and seasonal land use pressures, such as the pressures of tourism
- Tools for the characterisation and predictability of land use related liabilities, including new insurance models for residual risks. This should include assessing the limitations of such models to address long-term contingent liabilities that may need to reside with the public sector
- Develop tools and decision-making support systems for the minimisation of financial risks that relate to real or perceived residual contamination after redevelopment. Improve financial management instruments for investors that deal with these issues. Development of guidance for the use of Due Diligence tools for brownfield redevelopment
- Impact analysis from a multi-stakeholder perspective for assessing technology application for particular land use problems, such as brownfields
- Instruments and technology transfer methods to increase confidence in existing rehabilitation technologies

7.2

- Methods and frameworks to facilitate access and to empower individuals in land use decision-making processes. The development and evaluation of new models of urban governance. These models should be reviewed within the context of established representative democratic processes (For example, LA 21 processes and the Good Governance White Paper⁶⁸)
- Methodologies for assessing the policy impacts of new land use models on cultural identities and values. Technologies and tools that can assist the preservation of valued cultural and industrial heritage. Evaluation methods to assess the preservation of European cultural histories within an urban context. In particular examining implications for social cohesion and security at a national and personal level.

7.3

The future of the multi-stakeholder research approach

High quality research plays a central role in setting and meeting public policy objectives and improving practice. This is particularly significant when dealing with the complex problems of brownfields and urban land management. Sound and durable policy-making processes require a strong evidence base. Expanding our scientific knowledge base and developing a clear understanding of the economic or societal dimensions that impact on the problems being addressed, are important aspects of the research agenda. In terms of defining policy options, sound evidence-based research can also demonstrate the efficacy of a chosen course of action, such as highlighting the intended and unintended effects of a given policy.

The future direction of EU urban and regional research that relates to land use strategies should build on the experience of the “The City of Tomorrow and Cultural Heritage” Key Action that was first introduced in the 5th Framework Programme. Specific attention should be given to the successes of the networks and projects that have realised a multi-stakeholder approach. This will assist the delivery of Sustainable Land Management, particularly in relation to the sustainable management of European cities within their regional settings, including the interactions at the urban-rural land fringe. Urban systems are inherently complex, therefore unless policies are based on a sound (i.e. research-based) understanding of the dynamics of the urban system, there is considerable risk that as a result of unintended consequences (e.g. market influences, etc) policies will prove to be counterproductive. Ensuring a rigorous urban management research-base is vital for underpinning the delivery of sustainable European cities. In turn, the sustainability of our cities is the cornerstone for delivering the Lisbon Objectives⁶⁹, making Europe the most competitive global knowledge-based economy.

⁶⁸ COM(2001) 428 final, 25 July 2001;

⁶⁹ The Lisbon Strategy - Making Change Happen, Communication from the Commission to the Spring European Council in Barcelona: COM (2002)14 final, 15.1.2002

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Research Needs: CABERNET Research Recommendations for Brownfields and Urban Land Management

7.3

In order to achieve high quality solution-oriented research that is able to deliver new tools, integrated strategies and conceptual approaches to help address the “real world problems” of sustainable land management, a series of ‘research platforms’⁷⁰ need to be established. These should involve the engagement of a range of public and private stakeholders and multidisciplinary approaches. In addition, these research platforms should be directed by ‘boards’ or panels of both problem-holders and solution-providers working in partnership with research organisations. There is significant value at a European level of implementing research platforms, which can support the exchange of good practice and the implementation of strategic approaches (e.g. planning methods, economic incentives), particularly when formulating strategies to tackle common European problems, such as land management issues and brownfield regeneration.

The need for a multinational, multi-stakeholder and multidisciplinary research and development and knowledge transfer platform for the Urban Land Management research area builds on current thinking on the role of technology platforms and the future structure of the European Research Area⁷¹. Such a platform would allow multi-stakeholder groups to set out a strategic research vision, define goals and interim objectives to achieve the vision. This approach would challenge the research teams delivering the products and tools, enhance the quality and applicability of research outputs and improve synergy within the research field. In order to ensure its effectiveness, such a platform would need to examine and address all dimensions of Urban Land Management including the application and dissemination of knowledge (in particular technology transfer), and barriers to application, including regulatory aspects, fiscal aspects, skills gaps and training needs, social acceptability, etc.

The added value of multi-stakeholder and multidisciplinary approaches is demonstrated in a number of EC projects, such as the CABERNET Network.

⁷⁰ This concept of Research Platforms is derived from the structure of ‘technology platforms’ as set out in ETAP; COMMUNICATION FROM THE COMMISSION TO THE COUNCIL AND THE EUROPEAN PARLIAMENT Stimulating Technologies for Sustainable Development: An Environmental Technologies Action Plan for the European Union. COM(2004) 38 final. These platforms are qualitatively different from the current FP6 instruments such as an IP, NoE or CA.

⁷¹ COMMUNICATION FROM THE COMMISSION. Investing in research: an action plan for Europe. {SEC(2003)489} COM(2003) 226 final/2



8

EU Policy Recommendations on Brownfield Redevelopment



Chapter 8: Summary Message

- The regeneration of European brownfield sites is an essential part of improving European global competitiveness in a sustainable way
- A 'brownfield land dimension' is critical to the pursuit and attainment of many aspects of the EU's structural change, cohesiveness and competitiveness agenda
- CABERNET believes that incorporating a specific brownfield land dimension in emerging EC environmental strategies and other policy initiatives would enhance sustainability and therefore ensure European competitiveness. The role of sectorial, cross-cutting or thematic approaches should be assessed

EU Policy Recommendations on Brownfield Redevelopment

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The international competitiveness of Europe's towns and cities is to no small degree influenced by the extent to which they offer an attractive and desirable living and working environment – and so are capable of attracting and retaining residents and investment. Their attractiveness is, in turn, influenced by the ability of these towns and cities to re-invent themselves and their built assets in the face of economic, social and technological change.

The extent to which brownfield land becomes re-used rather than remaining vacant or derelict is a key indicator of this ability of cities to re-invent themselves and a major contributor to the achievement of sustainable urban environments. Failure of such land to be readily re-used is both a lost opportunity to achieve sustainable development of Europe's towns and cities, and creates an added burden on achieving desirable and competitive cities to the extent that it blights the local area and its community.

It becomes obvious that the reuse of derelict sites plays a contribution to European Cities realising the "Lisbon Strategy": If the EU is to be *"the most competitive and dynamic knowledge-based economy in the world by the year of 2010"*, then the EU has to offer high quality of life in its urban context.

A wide range of EU policies and initiatives influence the pace at which brownfield land becomes re-used or, conversely, remains as vacant or derelict land and buildings further degrading its surroundings. In addition, given the contribution that the better re-use of brownfield land makes to the achievement of competitive and sustainable cities, the successful re-use of brownfield land can positively contribute to the underlying objectives of many of the EU policies and initiatives.

In other words, a 'brownfield land dimension' is critical to the pursuit and attainment of many aspects of the EU's structural change, cohesiveness and competitiveness agenda. The various links between brownfield land and EU policies and initiatives are set out, in turn, below, together with specific recommendations to improve the synergy with brownfield land matters.

There is a shared desire within the brownfield Redevelopment sector for more clearly articulated, consistent and practical policies and regulations on land reuse from the EC. Generally, the policy and legal frameworks used for managing brownfield sites are those associated with 'contaminated land', although this does not adequately encapsulate the range of issues related to Brownfield Redevelopment (Grimski and Ferber, 2001⁷²). Currently, a large number of EC activities impinge on brownfield Redevelopment, and determining the EC's position requires engaging with numerous diverse policy fields. Yet a coherent approach to brownfield Regeneration is a prerequisite to successful environmental, spatial, urban and economic development in Europe. Without such

⁷²Grimski D and Ferber U (2001) Urban Brownfields in Europe, Land Contamination and Reclamation, Vol 9 No 1, pp. 143-148

an approach, key EC objectives relating to sustainability will not be realised. Hence, many different groups engaged in European land use issues (for example NICOLE, Clarinet, and the EU Working Group on Sustainable Land Use) are now advocating a more coherent approach to brownfield Redevelopment. CABERNET believes this hard focus is flawed as it ignores the socio-cultural and economic aspects of regeneration.

Once again: If the aim of the Lisbon Strategy is to be fulfilled the European cities have to be put in a better position to redevelop their derelict sites in the urban context: Redevelopment of brownfield sites plays a vital role in order to produce convincing arguments for strategic settlements of investors in European cities. Decisive “soft” factors as the enhancement of the urban quality of life underpinning the uniqueness of the “European City” including its surroundings and the prevention of sprawl leading to rising infrastructure costs will serve as major motivations to attract human resources in healthy urban circumstances.

Therefore it is crucial to understand that the revitalisation of the growing number of brownfields in European urban areas is an essential part of gaining competitiveness under the challenges of globalisation in a sustainable way.

CABERNET would commend the EU Commission to adopt, in the ways described, a deliberate brownfield land dimension to many of its activities – whether sectoral, cross-cutting or thematic, and in the several instruments for action that the Commission (and Member States) apply.



CABERNET Position:

The regeneration of the growing number of brownfields in Europe is an essential part of improving European global competitiveness in a sustainable way. **CABERNET believes that incorporating a specific brownfield land dimension in emerging EC thematic strategies and other policy initiatives would enhance sustainability and therefore ensure European competitiveness.** The role of sectorial, cross-cutting or thematic approaches should be assessed.

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EU Policy Recommendations on Brownfield Redevelopment



Furthermore, initiatives by Member States to encourage the re-use of brownfield land has, unfortunately, been constrained by the manner in which Competition Policy has been applied – to the disadvantage of the achievement of wider environment and social objectives. For these reasons, a key part of the solution rests with the European Union's several institutions. First, European funding sources can have a marked influence over the various activities that are carried out in Member States at different levels of government (i.e. national, regional and local), in that certain activities are only carried out when funds are also available from the EU to complement locally available resources.

For this reason, there is great merit in considering further the inclusion of an explicit brownfield dimension in many funding streams – both those aiming to support urban and regional regeneration and those more deliberately aimed at environmental and social objectives. All can be furthered, or hindered, by the stance taken to encourage, or ignore, the brownfield land dimension. Therefore Member states must integrate, support and give special consideration to the brownfield dimension while setting up their regional funding programmes and guidelines regarding the new programming period for Structural Funds, 2007-2013.

Secondly, a more deliberate recognition of the brownfield dimension in European policy programmes and legislation will allow the proper interpretation of wider policy objectives, such as Competition policy, in ways that furthers rather than hinders the ability of Member States to address the problems that the under-use of brownfield land represents for the cities, towns and regions of Europe. If sustaining competitiveness and attractiveness of European cities with a high quality of life is to be reached in a global context, the redevelopment of brownfield sites and the revitalisation of urban areas must play a major role in EU policy approaches in the near future.

9

Conclusions and Recommendations



9.1

Conclusions

9.1

CABERNET's vision is the enhanced rehabilitation of brownfield sites within the context of sustainable development of European cities, by the provision of an intellectual framework for coordinated research, policy and development of tools. CABERNET network members are engaged to support policy monitoring and development from a multi-stakeholder and international perspective.

In order to achieve real progress in terms of sustainable brownfield regeneration, a number of key aspects of the regeneration process need to be identified and assessed. These range from aspects relating to training, policy, finance, organizational aspects and the setting of key good practice objectives. As a result of the Network's activities, CABERNET work has produced four main outcomes:

- (1) Shared good practice knowledge through the provisional Case Studies
- (2) Conceptual Models
- (3) Policy and Practice Recommendations
- (4) Research Recommendations

Conclusions and Recommendations

In addition, CABERNET has agreed a number of position statements that relate to specific dimensions of the brownfield problem in Europe:

Message	Title	Position Statement
1	Specific Brownfield Dimension in Emerging EC Policy Initiatives	CABERNET believes that incorporating a specific brownfield dimension in emerging EC thematic strategies and policy initiatives would enhance sustainability and therefore enhance European competitiveness
2	Effective Public-Private Partnerships	CABERNET believes effective public-private partnerships, designed to bridge the cost-value gap that often prevents the commercial regeneration of many marginally non-viable brownfield sites, should be exempt from EU competition policy
3	Evaluate Role of Dedicated Agencies	CABERNET believes it is important to critically evaluate the role of dedicated agencies to better understand their potential impact
4	Emphasise Social and Cultural Objectives	CABERNET believes that when regenerating brownfield sites, a set of key social and cultural objectives should be considered
5	Citizen Participation	CABERNET believes that effective citizen participation in decision-making enhances the sustainability of brownfield regeneration projects
6	Local Regeneration Strategies	CABERNET believes there is a need for a specific strategic approach to brownfield regeneration at the local government level if the objective of competitive urban environments is to be achieved
7	Financial Strategies for Commercially Non-viable Sites	CABERNET believes that EU and Member State funding is necessary for, and should be used, to return non-viable sites to beneficial use (e.g. permanent or transitional low-intensity activities)
8	Brownfield Process Manager	CABERNET believes that the type of skills base that is currently needed is represented by a 'Brownfield Process Manager'
9	Environmental Issues	CABERNET believes that environmental issues can catalyse brownfield regeneration raising environmental, social and economic benefits when targeted at sustainability in a balanced and integrated approach. However, a simplistic sectorial regulatory approach hinders regeneration
10	Streamline Decision-making in Regeneration	CABERNET believes it is essential to streamline the decision-making process in order to make brownfield redevelopment competitive with greenfield development

Commentary

The regeneration of the growing number of brownfields in Europe is an essential part of improving European global competitiveness in a sustainable way. The role of sectoral, cross-cutting or thematic approaches should be assessed

The cost-value gap prevents the development and regeneration of many marginally commercially non-viable brownfield sites (B sites) across the European territory. EU competition policy has the unintended effect of restricting the ability of Member States to develop public-private partnerships to facilitate the regeneration of commercially non-viable sites, other than where the private sector partner is an SME, and / or the site is located in an assisted region

Dedicated regeneration Agencies can potentially offer a range of benefits in delivering sustainable solutions to the brownfields problem. It is vital that these relationships are understood now so that institutions can further improve attempts to empty the 'brownfield bath' in the future

For brownfield regeneration schemes to fully realise sustainability goals, more attention needs to be paid to achieving social and cultural benefits

There is a well-developed knowledge base relating to the inclusion of citizen participation in decision-making within brownfield regeneration. However, this is commonly undervalued or misunderstood. Much broader discussion and dissemination of tools and good practice is therefore required

Municipalities influence the manner and pace at which brownfield land is brought back into use. Municipalities address brownfield land issues as part of their wider strategic responsibilities and objectives, e.g. the achievement of sustainable development leading to competitive cities

A significant proportion of brownfield land is not commercially viable in the foreseeable future (C sites). Such persistently unused brownfields often have adverse effects on sustainability including the competitiveness of European regions and cities

There is a need for a new professional to develop and deliver opportunity plans for the sustainable regeneration of brownfield sites and ensure these contribute to the comprehensive regeneration of a wider area by delivering environmental protection, local economic and social benefit

Environmental aspects are not always given a balanced consideration e.g. contamination issues can be over emphasised in brownfield regeneration

One of the major obstacles in brownfield redevelopment is the complexity and the multitude of factors that are influencing the decision-making process. Planning and permission procedures result in a time consuming and complex process

9.2

Developing Benchmarks for Brownfield Regeneration: The CABERNET BAROMETER

One of the possible ways of tackling the brownfield problem is to set brownfield regeneration targets. This approach may be a valuable for a number of key reasons:

- as identified by Network, **there is a need to monitor and understand land use patterns**. This can could be combined with targets, albeit targets subject to review at a local level so respecting subsidiarity
- **brownfield land will always be with us** - it is a symptom of the process of urban land use change, seen as cities evolve to meet the needs and challenges of a changing society and economy. There will never be, nor should there be, no available brownfield land
- a priority is to **accelerate the pace at which brownfield land is reclaimed and brought back to beneficial use**. In order to achieve this there is a need to accurately monitor the regeneration cycle
- in most Member States, **the area of brownfield land appears to be persistently high**, with adverse impacts upon the achievement of sustainable cities. Land use opportunities are lost and at the same time local communities can be blighted by derelict and further 'decaying' sites

Brownfield redevelopment needs to be seen in the overall sustainable urban development framework in order to avoid the persistence of long-term brownfields and more importantly recreation of these sites.

As identified in the discussion of the scale and nature of the problem, each Member State has different perceptions of what is needed to address the brownfield problem. Acknowledging the understandable variation in processes and perceptions, even definitions, across the EU it would be unworkable (if not inappropriate), to determine specific and common brownfield land targets for delivery across the EU.

In order to translate sustainable brownfield regeneration principles and objectives into actions at a EU level, three methodological approaches could be applied:

- Obtain comprehensive data sets on brownfield sites and other land uses
- Set operational targets and indicators within a realistic timescale at a local/sub regional level. These targets should differentiate 'stocks' and 'flows' of brownfield land, so characterising the dynamic nature of the brownfield land use and creation cycle (i.e. the 'bath' model)
- Identify and disseminate benchmarks at a European level. This would amount to a EU wide initiative to tackle brownfields

Obtain comprehensive data sets on brownfield sites and other land uses

Obtaining comprehensive data sets on the existing brownfield stock found within boundaries of European municipalities and regions is essential. In a number of countries fairly detailed land use databases exist at a municipal / regional / national level, however this is not true for a great many regions. A set of common metrics would need to be established.

Set operational targets and benchmarks for brownfield regeneration

While acknowledging the importance of subsidiarity, proposed targets are (where xx, yy and zz years are defined at the EU level and l, n and m are percentages defined by EU framework defined within a national setting):

- by 'year 20xx' a Member State (or a municipality etc) should have established a system to record the stock of brownfield land (and the 'hardcore' component) within its territory as part of a comprehensive land use database
- by 'year 20xx' a Member State (or a municipality etc) should have established a system to record the pace at which greenfield land is absorbed into the urban areas within its territory
- by 'year 20yy' a Member State (or a municipality etc) should aim to have re-developed 'n%' of the stock of brownfield land as recorded in 'year 20xx'
- with effect from 'year 20zz' a Member State (or a municipality etc) should look to achieve 'm%' of all / residential/ amenity / etc development on brownfield land
- by 'year 20xx' the planning / permission process should be comparable to the greenfield planning timescale, with the overall aim of bringing sites back to beneficial use in 3-5 years
- with effect from 'year 20zz' a Member State (or a municipality etc) should look to reduce by 'l%' the pace at which Greenfield land is absorbed into urban areas

This is a bold proposal, however at the lowest level conducting a feasibility study to determine knowledge and organisational structure requirements, as well as the impacts in terms of the economic, environmental and social costs and benefits will help to identify priority targets at a Member State and EU level.

Communicating Benchmarks on a European Level

Communicating Brownfield regeneration benchmarks supports strategic approach in European regions and cities and could lead to effective programmes and good practice. CABERNET proposes to set up a European Brownfield Barometer on targets communicated at the CABERNET conferences directed to European stakeholder networks.

Conclusions and Recommendations



9.3

Sustainable Brownfield Regeneration and Urban Land Management: Next steps

CABERNET intends that, as a result of its work, a wide range of stakeholders involved in the process (such as policy makers, regional and municipal authorities, industry and small businesses, as well as professionals and scientists) will have a greater awareness and understanding of the problem. It also hopes that all parties will have greater access to an improved information base and a number of solutions, which will facilitate the sustainable use of brownfields. The CABERNET website (www.cabernet.org.uk) offers an interactive internet platform for networking and exchange of experience and knowledge.

CABERNET has focused on bringing together ideas and information, as well as stimulating the development of new initiatives. The challenge of achieving value-driven sustainable brownfield regeneration can never be underestimated, but in order to ensure a cohesive urban society this challenge must be met. There is an important role for CABERNET, to facilitate the development of brownfield solutions that are acceptable to a multi-stakeholder community of decision-makers and affected parties. In the future, the Network will act as a valuable information resource and as a 'tool' in itself for stimulating innovative topic debate and highlighting the importance of this issue for our collective European future.

As a result, CABERNET 2005: The International Conference on Urban Land Management (held on 13-15 April 2005 at the Belfast Waterfront Hall) is the first conference of a series. The 2nd International Conference will be held in 2007 in Stuttgart. One of the main goals of the conference series is to establish multi-stakeholder dialogue and engagement for truly lasting and sustainable urban regeneration to be our legacy to future generations.

CABERNET has provided one of the few forums for the interaction of diverse Stakeholder Groups at a European level. CABERNET consists of stakeholders from groups such as landowners, municipalities, researchers, developers, national regulators, representatives of community groups, consultants and professional advisors. These groups meet to discuss and exchange practices, experiences and aspirations relating to brownfields and the wider issues of urban regeneration. The Network has successfully found and exchanged practical sustainable solutions to both strategic and site specific urban brownfield problems.

CABERNET Outcomes: CABERNET has focused on strategic approaches, exploring solutions for a number of the key economic, environmental and social issues that impact on brownfield regeneration.

The Network has developed a series of conceptual models of brownfield, identified tools that encourage good practice, set out research needs that could be addressed in future EC research programmes (i.e. in the Seventh Framework Programme and beyond).

9.3

In particular the CABERNET work has produced key recommendations on:

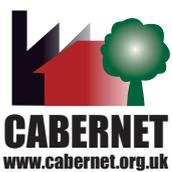
5. Priority EU Policy Issues
6. Research Recommendations (at EU and Member States level)
7. Training Priorities
8. Knowledge Transfer and Stakeholder Dialogue

CABERNET has focused on bringing together ideas and information, as well as stimulating the development of new initiatives. The challenge of achieving value-driven sustainable brownfield regeneration should not be underestimated, but in order to ensure a cohesive urban society this challenge must be met. There is an important role for CABERNET in partnership with other related professional networks, to facilitate the development of brownfield solutions that are acceptable to a multi-stakeholder community of decision-makers and affected parties.

The Network has acted as a valuable information resource and as a 'tool' in itself for stimulating innovative topic debate and highlighting the importance of this issue for our collective European future. CABERNET 2005: The International Conference on Urban Land Management (held on 13-15 April 2005 at the Belfast Waterfront Hall) was the first conference of a series. CABERNET 2007: The 2nd International Conference will be held in 2007 in Stuttgart (www.cabernet.org.uk). One of the main goals of the conference series, and the Network activities, is to establish multi-stakeholder dialogue and wider engagement to ensure that truly sustainable urban regeneration is our legacy to future generations.



Sustainable Brownfield Regeneration: CABERNET Network Report



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