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LUMASEC
Land Use Management for Sustainable European Cities

LUMASEC Thematic Report 3

Governance of sustainable land use management

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April 2010

European Union
European Regional Development Fund

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1. Governance of sustainable land use management

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This introductory section of the report aims to briefly explore some of the key issues for the sustainable land use management of Europe's cities today as a context for the prime focus of this report on initiatives to support sustainable land use management in the Bristol region, the thematic focus adopted by the City of Bristol as a contribution to LUMASEC. The report is a collaborative effort of all partners in the project supported by additional partners including the European Investment Bank and the University of the West of England, Bristol.

Following this introduction Chapter 2 *JESSICA Strategy: An Instrument to Finance Integrated Urban Development*, explores more fully specific aspects of recent initiatives in respect of sustainable urban development, with Pan-European application, and identifies JESSICA as a specific instrument to secure finance for cities developed at the European level, which offers the potential to secure the essential, but increasingly difficult to obtain finance investment for sustainable cities. Chapter 3 *Brownfield Policy in England*, is a review of the effectiveness over the past 10 years in the UK, of key policy objectives underpinning the regeneration of UK cities and thereby supporting sustainable land use management. The initiatives pursued by the City of Bristol and its partners in the West of England Partnership to attain sustainable urban management in the Bristol sub-region are described in Chapter 4 *Sustainable Land Use – making it happen locally,* offering a reflection on the Bristol experience set in the context of the state-of-the-art on sustainable urban governance today.

The Chapter 5 of this report *Recommendations for Local Authorities* concludes with a series of recommendations addressing the specific circumstances of local authorities in seeking the development and implementation of Sustainable Land Use Management at the local level. These recommendations are based on the collective experience of the project, including initiatives pursued by the City of Bristol and its partners in the West of England Partnership, as well as inputs to the Bristol LUMASEC conference, including the presentations of Jessica and Brownfield Policy in England. These recommendations are also supported by the other prime input to this report, the question survey of all participating partners that focused on the experience of sustainable urban governance in Europe as represented by widely differing European cities and regions. The survey was conducted prior to the Bristol LUMASEC Conference in November 2009 and as a contribution to the Bristol event.

Urban Europe Today

Most of Europe's population living in major metropolitan regions is at risk. City dwellers have high expectations, and most expect their lives to be more pleasant over the next five years (Eurobarometer, 2005). But the current patterns of urbanisation and forms of most new urban development are unsustainable and becoming increasingly so, putting at risk the quality of life of inhabitants.

Cities and towns are a threat to the natural environment, with significant adverse impacts on natural resources, as a result of consumption, pollution and other factors. But cities and towns are also important resources in their own right. The challenge of urban sustainability is to solve both the problems experienced within the cities themselves and

the problems caused by cities. The economic activity and the health of urban residents along with the quality of life are seen as an essential component of the diverse and multifunctional European city. These conflicts and tensions in urban development can become a source of increasing pressures on city governments to deliver a better way forward.

It is clear that each European city is unique because it is the expression of the cultural identity of each community and local authorities have distinctive local mandates. However, whatever the responsibilities and competencies of local authorities as direct or indirect provider, regulator, leader by example, community informer, advocate, adviser, partner, mobiliser of community resources, initiator of dialogue and debate; local authorities throughout Europe are ideally placed to advance the goals of sustainability and to formulate a multi-levelled corporate strategy for the sustainable management of the local environment.

Clearly the legal and organisational basis for urban environmental action varies between Member States, in part reflecting differences in the responsibilities assigned to different tiers of local government. In addition, cities differ in their geographical circumstances and city administrations vary in terms of the sophistication of local responses, processes and techniques. Approaches to sustainable development are likely to be different in different cities. Such action reinforces and complements global initiatives.

Nonetheless, this is an opportune moment for European cities to take action, playing their part in international processes and debates. Furthermore, if the EU is to tackle these issues, and in particular the overriding challenge of climate change, then it must increasingly be an active partner in the governance of Europe's towns and cities. Such an integrated and collective response to urban governance provides the potential to reverse these trends.

Common Problems - Common Solutions

The emergence of the agenda for sustainable development in the early 1990s raised new issues and demands for the management of urban Europe that has progressively transformed the way we plan our cities and regions in Europe today.

In developing a common approach to urban sustainability, a starting point is the definition of sustainable development set out in the Brundtland Report (World Commission on Environment and Development, 1987):

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

The following definition by the World Conservation Union, UN Environment Programme and World Wide Fund for Nature (1991) is regarded as complementary:

"Sustainable development means improving the quality of life while living within the carrying capacity of supporting ecosystems."

Sustainable development is thus a much broader concept than environmental protection. It implies a concern for future generations and for the long-term health and integrity of the environment. It embraces concern for the quality of life, not just income growth, for equity between people in the present, including the prevention of poverty, for inter-generational equity, as people in the future deserve an environment which is at least as good as the one we currently enjoy, if not better, and for the social, health and ethical

dimensions of human welfare. It also implies that further development should only take place as long as it is within the carrying capacity of natural and human systems. Clearly, addressing the sustainable development agenda provides new challenges for urban policy integration within holistic frameworks.

In addressing this challenge, the complexity of the city became fully apparent, as soon as it was recognised that to deliver sustainable development and sustainable cities it was necessary to make connections between the economic, social, and environmental dimensions, and seek to understand these very real interdependencies.

Conceptual frameworks were developed to try to provide a rationale for the complex interdependencies of the socio-economic reality of the city and its environmental impacts, so that these impacts could be more effectively managed. One such approach was the ecosystems perspective on the city.

Ecosystems thinking emphasizes the city as a complex system which is characterised by continuous processes of change and development. It regards energy, natural resources and waste production as flows or chains. Maintaining, restoring, stimulating and closing the flows or chains contributes to sustainable development.

The dual network approach, for example, based on the principles of ecosystems thinking provides a framework for urban development at regional or local level. This framework consists of two networks: the hydrological network and the infrastructure network. The hydrological network defines ecological cohesion by managing water quantity and flows. The infrastructure network, addressing the regulation of traffic and transport, provides opportunities to minimise car mobility and to stimulate the use of public transport systems, walking and cycling.

Analysing these networks results in basic principles for urban sustainability from a physical ecosystems point of view, although ecosystems thinking also includes a social dimension, which considers each city as a social ecosystem, based on the protection and development of niches and diversity that form the elements of this social ecosystem.

Sustainability as a Process

The ecosystems perspective highlights the sustainable city in process terms rather than as an end point. Accordingly, it emphasises policy processes as well as policy content. Both emphases are significant when it comes to the transfer of good practice from one locality to another. The city is seen as a complex system requiring a set of tools which can be applied in a range of settings. Although the system is complex, it is appropriate to seek simple solutions which solve more than one problem at a time, or several solutions that can be used in combination.

Sustainability as a process does not envisage blanket solutions or recipes for all cities. Instead the concern is for the provision of supportive frameworks within which cities can explore innovative approaches appropriate to their local circumstances, capitalising on traditions of local democracy, good management and professional expertise. Whatever their responsibilities and competencies, local governments throughout Europe, through the many and varied roles which they perform, are now in a strong position to advance the goals of sustainability based on these principles.

Focus on Spatial Planning

Spatial planning forms a key focus for these initiatives to secure the sustainable city based on the planning controls that exist to a greater a lesser extent in all European Member States, and which seek an appropriate balance of economic, social, and environmental objectives, in accordance with the principles of sustainable development.

Spatial planning systems are essential for the implementation of city-wide policies for sustainable development. In developing policy and practice recommendations for land use in cities, the diversity of local problems and solutions is acknowledged, and the aim is to strengthen existing spatial planning systems, especially by encouraging ecologically-based approaches, and the movement away from a narrow land use focus. The solutions advocated are seen as applicable in all urban settings, in city centres, suburbs and new settlements.

Existing spatial legislation can generally provide the basis for an integrated approach. However, the unsustainable development of the majority of urban areas demonstrates that planning legislation focusing on a traditional planning approach alone is often insufficient. The current legal planning system is mostly not suited to deal with the wide range of sustainability issues evident today. It cannot sufficiently take into account the rapidly changing environment and the need to adapt plans and the planning system so they are more comprehensive and spatially sensitive, embracing cyclical, integrated, inclusive and participatory approaches.

Action is needed to ensure the more effective use of the principles and mechanisms available for achieving greater awareness and prioritisation of sustainability issues in policy and practice. Of particular importance is the integration of environmental and spatial planning, the identification of environmental objectives at an early stage in plan making, the use of targets and indicators in this area of urban management, improved forms of public involvement in planning and the potential linkage of spatial planning and associated innovative processes including Local Agenda 21.

A key challenge for the integration of environmental and spatial planning arises as sustainable development is defined as the appropriate balance of socio-economic development within the environmental limits, but these environmental limits are not well defined. However, in recent years these issues have been increasingly articulated in terms of climate change objectives. Today it is becoming increasingly clear that cities have a major role to perform in responding to these environmental limits by measures for climate change mitigation and adaptation, according to increasingly well specified environmental limits.

Against this involving background of political priority for city management, the conceptual understanding of these issues and the technical means to achieve sustainable cities that meet global change climate change objectives has also evolved. The focus of current research and practice is upon sustainable land use management to meet climate change objectives. Governance has also replaced government, as a conceptual framework for action. In structural terms governance implies enhanced integration vertically between levels of government, and horizontally between sectoral departmental interests at the local level. Such integration enhances the capacity of government and non-government organisations to comprehend the complexity of urban interactions, to plan for specific outcomes, and to effectively implement the plan.

In spatial terms governance implies a focus on the city region, the functional urban area in which the socio-economic reality of cities is played out, and which involves the management of both the urban core as well as the rural hinterland is a single planning objective. Governance also implies enhanced dialogue between stakeholders to secure

collectively defined objectives. Critically in process terms, governance implies integrated urban management.

Integrated Urban Management Defined

The management of urban issues is complex and is influenced by a multitude of issues and stakeholder interests. The integrated approach to urban management provides general criteria applicable to all administrative levels, from local to European, although application in practice requires specific tailoring to individual and thematic circumstances.

Spatial considerations for integrated urban management address all urban processes, whether they are governed by the city or town administration or other administrative levels including the regional level, state, EU, and global levels. Such an approach includes also city to city, urban rural and local to global interactions considered from the urban perspective according to the following definitions.

- **Urban** (towns, cities, conurbations, metropolitan areas):
- **functional** in terms of employment, housing or retail areas or the areas within which people seek jobs or homes (larger area than the city or town), or in terms of urban networks, for example transport systems;
- **typology** including the distribution of urban services, different forms of urban society, and variation in population densities;
- **administrative** according to the boundaries of government agencies;
- **morphological** according to the actual area covered by urban land use.

Structural considerations for integrated urban management highlight the development of a holistic perspective on urban management, that considers the various interlinkages within the urban environment, and seeks to combine the related processes in order to develop greater coherence and mutual reinforcement of planned responses to the challenges generated by the key drivers of urban development. Of particular importance is the integration of plan-making and plan-delivery mechanisms. The different dimensions to be considered include:

- **horizontal integration** between different policy and programme areas including economy, social affairs, environment, culture…;
- **vertical integration** between levels of governance ranging from local to global;
- **spatial connection** of towns, cities, rural hinterland and regions;
- **temporal linkage** of the impacts of current developments in relation to the potentials for future development;
- **balancing** individual and group interests with societal needs.

The management component of integrated urban management involves the linkage of different stakeholder groups, business and administrations and civil society in acting together towards a common goal, for example achieving a certain quality of life. This includes planning, leadership, organisation, resourcing — human, financial, technological

as well as natural resources — monitoring and evaluating the process of sustainable urban development to enable corrections and adaptations. This also requires spatial coherence in order to take the right decisions not only at the right level but in ways that reflect the spatial functionality of Europe.

Integrated management requires appropriate integrated institutional structures and information bases in respect of all the above dimensions.

Towards Integrated Urban Management

The core argument is that integrated management needs to become mainstream across Europe. But despite the widely recognised need, general commitments and the availability of many tools and good practice examples, the reality is that integrated management across Europe is still a matter for a few pioneers. Isolated policy and individual interests still threaten sustainable development and longer term quality of life.

Even if overall sustainable development strategies based on an integrative concept are in place, sectoral and vested interests remain dominant where decision making, administration and budgets are fragmented, lacking institutional integration, and decision makers are not aware of the benefits of an integrated approach. In general, governments are free to apply integrated management, and there are no penalties for failing to implement an integrated management system.

Furthermore, despite all the benefits that have arisen from EU policies and programmes, it must be recognised that these have been mostly sectoral in nature and project driven. More effective application requires more integrated, both horizontally and vertically, and comprehensive approaches to systematically address the common challenges, including the need for 'urban-proofing' of policies and programmes.

Even where policy documents like the Strategic Guidelines for Structural Funds (EC, 2006) request an integrated approach, it remains too often unclear what exactly is expected. No common standards exist, and at best only recommendations exist, to assist policy and decision makers to define minimum criteria for an integrated approach. In some cases specific guidance is given, as with the EC Guide *Integrated environmental management* (EC, 2007) that supports the implementation of the Thematic Strategy on the Urban Environment, but all too frequently such guidelines and in particular concrete criteria are not developed

Socio-economic and geospatial data describing the existing state of urban areas are collected by municipalities and at higher administrative levels but this information remains sectorally specific. Sectorally specific formats differ, time series and spatial units inhibit effective application in the description and analysis of the urban system, how it is driven and the impacts of different trends and policies.

Integration Gaps

Clearly on the basis of the above review, policy making needs to reflect and respond to the many interconnections that underlie the fundamental drivers of urban development, yet the reality is that major gaps still need to be filled including:

- ***between sectoral policies:*** typically a plethora of plans and strategies exist for major urban areas, concerning transport, housing, environment, economic development etc. Policies within these different documents are often based on different

assumptions and timescales, and with no regard for the unintended impacts on other policy fields;

● ***between plan-making and implementation:*** the power to implement plans often lies with other agencies, and increasingly the private corporate sector. The challenge is to achieve the integration of plans and programmes and to engage all stakeholder interests, including small business and the community, without compromising effective implementation;

● ***between resources needed and available:*** this particularly applies where major new infrastructure is required, for example transportation systems. The frequently high levels of new investment required for major projects often distort the political debate and create perceptions of unequal distribution of benefits between competing cities and regions;

● ***between administrations and functional urban regions:*** few urban administrative areas relate effectively to travel to work, or labour market areas, or indeed natural regions. As a result urban and rural areas are frequently planned in isolation, and the associated competition between municipalities generates a resistance to collaborate on the development of the necessary common policy framework. This reluctance to collaborate is reinforced by the perception that economic growth merely diverts or displaces growth between urban areas.

Overcoming the Barriers

Effective urban policy demands an integrated approach, yet it is clear, as endorsed by the individual experience of numerous agencies and initiatives at all levels of governance, this remains a major challenge. Nonetheless, there is clear evidence of positive examples of initiatives at all levels, to overcome the barriers to the attainment of integrated urban management to secure sustainable development and climate change policy priorities.

Local governments have developed integrated management approaches to improve consistency and coherence between policies also supported by a variety of EU funded programmes. The many municipalities signed the Aalborg Commitments that address all dimensions of sustainability using the framework of the Commitments and an integrated management for the implementation of local sustainability.

Municipal networks including EUROCITIES, ICLEI, METREX, Energie Cités, CEMR, and the Union of Baltic Cities are active with their member cities in the development of innovative approaches to the sustainable development of cities. Whether cities and municipal networks collaborate or compete depends amongst other things on both national and EU policy. When municipalities can apply for funds independently they tend to compete. On the other hand, if national government or European Union funding permits collaborative action, they tend to cooperate and integrate, as witnessed by the European Sustainable Cities and Towns Campaign, and projects in the context of the Interreg, URBAN and URBACT programmes.

The common challenges to the quality of life in towns and cities are increasingly beyond the control of local agents alone. There is an over-riding governance deficit in the development of systematic approaches to EU policy to improve the management of towns and cities. It is also fully understood that the EU has no direct mandate for urban affairs, and its involvement in urban affairs must always be sensitive to the subsidiarity principle.

Cities and towns also may resist greater engagement in local affairs from European and national levels. Subsidiarity requires that decision making is undertaken at the lowest appropriate level. This risk of excessive parochialism needs to be recognised since there is not a single uniquely appropriate level for decision making as most issues are linked via other levels and sectors. An emphasis on localism needs to recognise the risk of a 'democratic deficit' in society whereby those who are affected by decisions are excluded by administrative geography from those decisions.

Overall therefore, the performance and development of cities and towns clearly has a European dimension, which must be addressed with supportive action.

Towards Implementation

All sectors of society and all administrative levels can gain long term benefits from applying and being part of an integrated approach, creating good governance for urban areas. Instead of cities and towns competing for jobs, tax and other funding, local government can mobilise more resources, creativity and support in delivering desired outcomes and managing unwanted change.

Local city based programmes, policies and projects remain key to delivering the required action to secure sustainable urban development and to meet the challenges of climate change. Numerous local initiatives demonstrate that European urban areas are already strongly committed to the need to improve the quality of life of Europe's towns and cities.

Urban areas have the responsibility to regulate and manage urban policy and effective planning strategies in the interests of the local population, however, no city is self-contained. Urban Europe is a mosaic of overlapping and complex polycentric metropolitan regions in which context urban development is driven and guided at all government levels.

The European ideal is based upon the central concept of a common future. The Lisbon Treaty builds on this concept and has reinforced a culture of cooperation and integration between governments and their communities. This vision of cohesion and cooperation has never been more essential or urgent than now in meeting the many challenges facing cities, including globalisation, the need to secure sustainable energy sources, the impacts of demographic shifts, as well as the growing threats of climate change and to national security. Urban areas are also central to EU economic and social policies and programmes as key drivers of economic growth (EC, 2006).

However, such an approach requires strong political support. As claimed by the European Parliament (2008), the EU should not only financially support the use of such approaches at national, regional or local level, but also analyse, when providing funding, to what extent a binding requirement is feasible. Equally, it should apply these principles in its own policy making. This would make funding of local and regional projects more efficient and better enable the integration of supportive measures, such as standard setting and taxation, at EU and national level.

Many relationships exist between European and local policy in different policy areas, where financial resources and other incentives steer urban development. In particular the Structural Funds of EU cohesion policy have had and will continue to have, major direct and indirect impacts on urban development. Also, the implementation of the Trans-European Transport Networks (TEN-T) has been key in redefining the relationships

between the cities of Europe, the patterns of movement, logistical systems and economic activity.

In a globalising world, cities and towns in once peripheral regions are becoming increasingly accessible, and locational choices, including those for new urban investments, are generally more inter-changeable. As a consequence the scale and scope of action required is no longer the responsibility of any single sector or level of government.

Furthermore, European integration has not simply shifted authority upwards to European institutions; rather authority has become increasingly dispersed through a variety of different levels, actors and agencies, creating a multilevel basis for governance (Rosamund, 2004). As a result cities seek to reinforce action at the local level by engagement in wider city regional networks and directly at the European level.

European policy together with the policies of the member states and regions, provide the framework and general conditions for the realisation of quality of life in cities and towns. Cities and towns implement measures on the ground and create the conditions for quality of life and sustainable development.

Nonetheless, a key challenge remains overcoming isolated action at the local level and competition between cities and between regions by collaboration and integration from local to European level to the long term benefit of all. In addressing this challenge and in securing the effective implementation of integrated urban management at the local level the following implementation principles are advocated:

New Governance through Partnership

'Partnership between the local, regional, national and European levels of government will ensure we can cope better with common global challenges ahead,'

Luc Van den Brande, President of the Committee of the Regions at the Brussels Open Days of the European Regions and Municipalities 2008.

As problems can seldom all be solved at one level or within one policy sector, successful implementation of the integrated approach requires the active participation of all actors, which can range from individual citizens to the European Union. Therefore, governmental action needs to shift to new forms of governance through partnership. Integration of individual action programmes with other interdependent areas and administrative levels must become a basic and natural principle of all bodies.

This involves:

- new governance arrangements;
- inter-governmental relationships and connections between areas of concern, regardless of jurisdiction;
- engagement in more coordinated decision□making;
- new partnerships and approaches to action with local organisations and citizens;
- more accountability in fulfilling commitments.

The new forms of governance need to improve the linkage of stakeholders to policy processes, through consensus-building, participation and coordination. Instruments for supporting governments in evaluating their sustainability processes are already well

established, with practical expert led management complemented by bottom-up community visioning.

Involvement and participation of the different levels and stakeholders should be continuous and vary according to the requirements of the integrated management cycle. Participatory decision making is desired and demanded by citizens who wish to play a more active role in the governance of their society. Regional, national and local governments, NGOs, as well as the scientific community and business interests are also increasingly eager to reap the benefits of engaging actively in decision making processes. Enabling wide participation ensures the acceptance and sustainability of policy implementation.

Good governance in relation to vertical integration requires the reinterpretation of the subsidiarity principle. The major urban problems cannot be solved at only one administrative level. Responsibilities need to be defined in relation to the many interlinkages between European, national and local policy. The EU needs an urban approach that is neither a new policy area nor a top down 'one size fits all' administrative process, but an auditing of the impacts of EU policy in terms of their implications for the urban level. The EU also needs to develop supportive cross sectoral policies for urban areas.

Long□term Vision

Integrated approaches and good governance need long term strategic visions — for example as recognised in the Guidance to the *Thematic Strategy on the urban environment* (EC, 2007). The different actors involved in urban development need a shared vision of the quality of life to be maintained or attained. A common vision is an indispensable prerequisite that links the different policies at different administrative levels, and facilitates the delivery of coherent actions. Common vision can also reduce pressures on sectoral policies to act in a short term timeframe in order to produce immediate success that is almost certainly not sustainable. With a shared long term vision, policy can demonstrate its ability to fulfil the vision, and can also justify actions that will be successful in the long term, and only in combination with other partner actions.

Management Cycle

A crucial aspect of successful integrated urban management is the application of a cyclical approach, consisting of five major steps that are repeated in regular cycles, according to the specific circumstances. A baseline review documenting the current environmental and administrative situation, legal requirements and political priorities prepares the ground. On this basis, objectives and targets are discussed, agreed, set and approved and actions and initiatives are identified according to current technologies and life styles. The timeframes related to these targets provide for future monitoring, review and evaluation of the process.

New information permits the validation of established policies, and if necessary for new decisions are taken, and the cycle recommences. Once the mechanism is established, in subsequent years the entire process is repeated. All the above steps are linked in a continuous process; the targets set are (re)defined as an essential element of government procedure with increasing effectiveness and coherence.

Improved Data and Knowledge

Policy makers need a solid basis of information and intelligence to support decision making. There is a need to organise information on urban development in a consistent and integrated way to support integrated policy making, not just at the local level, but also interlinked to urban-relevant data at higher administrative levels. For example, at the European level Eurostat collects socio-economic and some environmental data for around 300 cities via the Urban Audit database. The Corine Land Cover project of the European Environment Agency produces land use maps from satellite images and the ESPON programme provides data on urban functional zones. Integrating such information, complementing it, and linking it to other regional and local data are vital to support assessments and projections of the impacts of urban development, in order to support integrated urban policy making.

2. JESSICA Strategy: An Instrument to Finance Integrated Urban Development

Brian Field[1], Urban Planning and Development Adviser, The European Investment Bank

The European Investment Bank

The European Investment Bank (EIB) is the European Union's long-term lending institution, established in 1958 under the Treaty of Rome, which supports the EU's objectives by lending money to both the public and private sectors for projects of European interest. As an international financial institution (IFI), the Bank is not only active in the EU but also in more than 140 other countries worldwide with which the EU has cooperation agreements.

The EIB is a not-for-profit, policy-driven bank that in general makes long-term loans for capital investment projects (mainly fixed assets), although it's portfolio of intervention possibilities is becoming increasingly diversified. It does not, however, give grants. The Bank's owners are the Member States of the European Union, who subscribe jointly to its capital, each country's contribution reflecting, in large measure, its economic weight within the Union. The total subscribed capital at the end of 2008 was EUR 164.2 billion, of which EUR 8.2 billion was actually paid in. Because the Bank extends more than EUR 50 billion per year in the form of its various loan products[2], it uses its AAA credit rating and funds itself by raising equivalent amounts on the capital markets. The Bank does not use any funds from the EU budget.

Not all projects are eligible for EIB support, but those that do satisfy the Bank's eligibility criteria are then carefully selected according to the following criteria:

- they must help to achieve EU policy objectives, reflecting EIB's raison d'être as a policy bank;
- they must be economically, financially, technically and environmentally sound, satisfactory environmental performance becoming an increasingly important component of the Bank's project appraisal process;
- they should help attract other sources of funding – as a rule of thumb, EIB funding is normally limited to a maximum of 50% of a project's total cost.

The European Union's Urban Policy Agenda

The European Union has been relatively slow in bringing the urban dimension into the policy mainstream. In the recent past, the argument that urban issues are intrinsically domestic, and therefore better dealt with through national institutions, was often invoked by EU policy makers to limit intervention in the urban sector under subsidiarity[3]

[1] Brian Field is a Senior Economist at the European Investment Bank, where he is also the Bank's Special Managerial Adviser on Urban Planning and Development. The usual disclaimers apply.
[2] This figure has since risen to more than EUR 70 billion as the Bank has become a key participant in the rescue package following the recent economic crisis.
[3] The principle of subsidiarity is defined in Article 5 of the Treaty establishing the European Community, whereby the Union does not take action (except in areas that fall within its exclusive competence) unless it is more effective than action taken at national, regional or local level. It is linked very closely with the principles

considerations. However, given the emerging consensus of the European Union institutions, and indeed of industrialised countries generally, of the need to pay increasing attention to the urban environment, and the consequences that localised deprivation and social exclusion may have on the quality of life and economic performance of urban areas, it is hardly surprising that the urban theme should have become part of the EU agenda. Due to the commonality of a wide range of problems, challenges and opportunities throughout Europe, and the fact that cities are pivotal delivery points for many strands of EU policy, the promotion of more sustainable cities and communities has become one of the priorities of European action.

European Union intervention in the urban sector has therefore evolved over time from early support for a series of relatively modest and ad hoc initiatives to far more substantive intervention and associated financial support, with the urban agenda now formally embraced within the policy mainstream. Against this backdrop, and in pursuit of the headline policy goal of developing more sustainable cities and communities, the Union's urban policy is informed by both the economic imperatives of the Lisbon Agenda[4] and the need for a more integrated approach to urban planning and development as emphasised in the Leipzig Charter[5]. As the lending arm of the EU, the EIB has responded accordingly, formally supporting the EU's sustainability objectives and developing a range of financial products to meet the resulting funding challenge. In doing so, the Bank has developed what might be termed an implicit action plan for cities, comprising three elements:

- extending its traditional lending operations in the urban sector by increasing its lending volume and customising its lending products to more appropriately meet the needs of cities and municipalities;
- extending the scope of its structured finance facility (SFF), where the Bank takes more risk than normal including possible equity investment, to include urban projects; and
- promoting financial engineering and, in particular, supporting the EU in the promotion and implementation of the JESSICA instrument.

A plethora of policy options and potential projects can be identified in pursuit of sustainability objectives and to avoid the obvious threat of fragmentation, Leipzig has highlighted the need for a more integrated approach to urban planning and development. The EIB has therefore explicitly embraced the need for more holistic evaluation as part of its due diligence, to ensure consistency between apparently disconnected projects and to exploit any obvious and positive synergies in development programmes. Within the urban sector, it is a requirement that almost all projects seeking Bank finance, by way of loans or equity, must form part of an integrated urban development plan for the localities in question. What this actually means in practice is open to interpretation, but there is now a clear requirement that any project seeking EIB support must be "planning led".

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of proportionality and necessity, which require that any action by the Union should not go beyond what is necessary to achieve the objectives of the Treaty.

[4] The Lisbon Agenda, also known as the Lisbon Strategy, was set out by the European Council in Lisbon in March 2000, and comprises an action and development plan for the EU that aims to make the Union "the most dynamic and competitive knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion and respect for the environment, by 2010."

[5] The Leipzig Charter on Sustainable European Cities was signed in May 2007 all the Ministries responsible for urban development in their respective countries.

It is beyond the scope of such a short paper to detail the full extent of the Bank's activities in support of more sustainable cities and communities, but the following paragraphs briefly outline EU policy and the EIB's response vis-à-vis use of the JESSICA instrument.

The JESSICA Instrument

JESSICA is a policy initiative of the European Commission, supported by the EIB, designed to help the authorities in the Member States of the EU to exploit financial engineering mechanisms to support investment in sustainable urban development in the context of cohesion policy. Other International Financial Institutions (IFIs), as well as the European banking and private sector, are also expected to contribute and the Council of Europe Development Bank (CEB) is already a key participant.

JESSICA responds to the request by several Member States and the European Parliament to give special attention to the need for renewal and/or regeneration of certain urban areas, and is based on a perceived market failure in the urban sector or, more specifically, on the lack of investment funds to finance integrated urban renewal and regeneration projects in pursuit of more sustainable urban communities. JESSICA has therefore been designed to provide new opportunities to Managing Authorities (MAs) responsible for the 2007-2013 Operational Programmes by:

- leveraging additional loan resources for public and private partnerships (PPPs) and other projects for urban development in the regions of the EU;
- contributing financial and managerial expertise from specialist institutions such as the EIB, the CEB and other IFIs;
- creating stronger incentives for successful implementation by beneficiaries, by combining grants with loans and other financial tools; and
- ensuring long-term sustainability through the revolving character of the Structural Fund's contribution to funds specialising in investing for urban development, creating a lasting legacy of the Structural Funds across the EU to support investment for urban development.

Under JESSICA, Managing Authorities in the Member States are allowed to use some of their Structural Fund allocations, principally those supported by the European Regional Development Fund (ERDF) but also, where appropriate, the European Social Fund (ESF), to invest in so-called Urban Development Funds (UDFs) to accelerate investment in urban areas. UDFs are simply defined in the Regulation laying down general provisions on the ERDF, the ESF and the Cohesion Fund for the 2007-2013 programming period as "funds investing in public-private partnerships and other projects included in an integrated plan for sustainable urban development[6]." Managing Authorities also have the option to employ Holding Funds (HFs), as a further layer in the delivery of JESSICA monies through UDFs. A Holding Fund is simply a fund which invests, through equity, loans or guarantees, in UDFs.

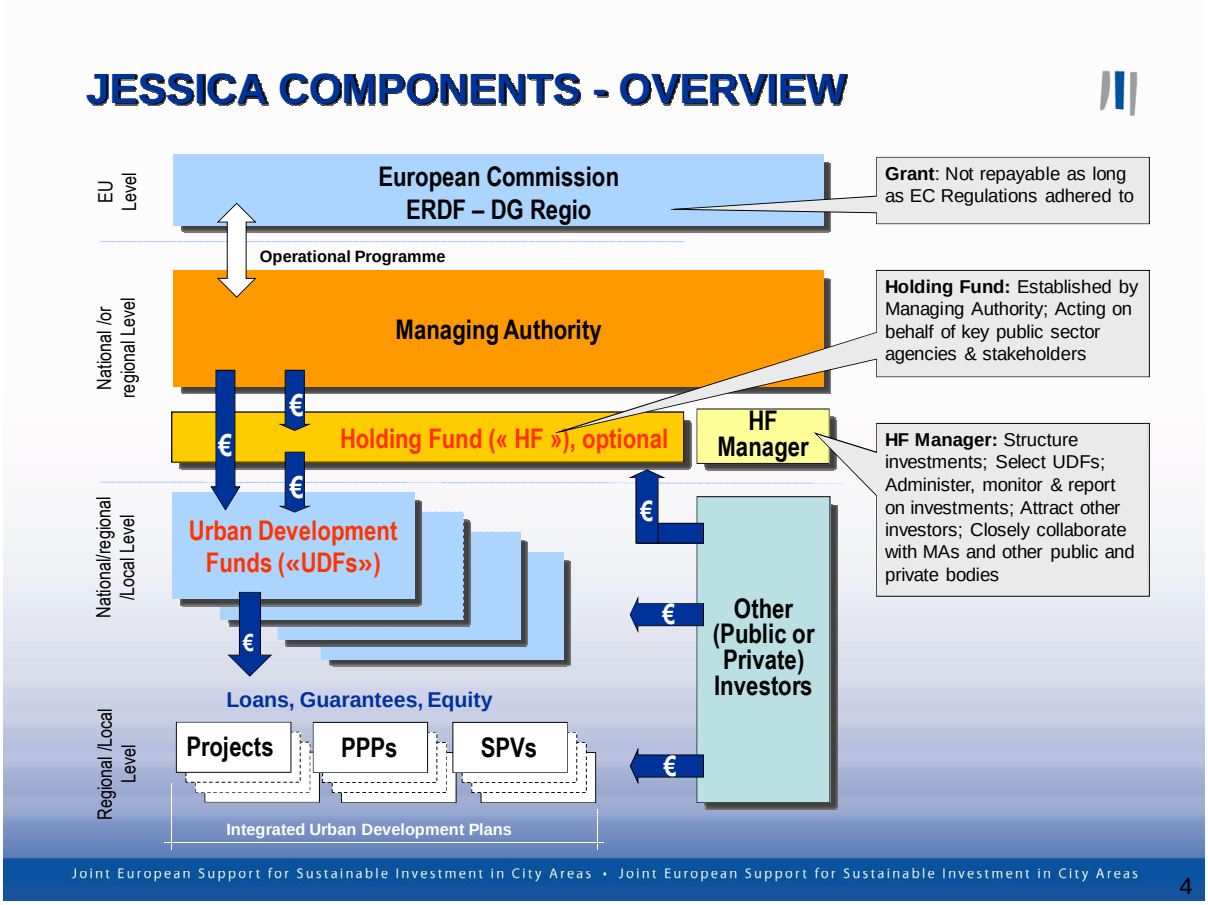
[6] First paragraph of Article 44 of Council Regulation (EC) N° 1083/2006.

To be eligible for JESSICA funding, a UDF will need to demonstrate, amongst other things: sufficient competence and independence of management; a comprehensive business plan and budgets for undertaking qualifying projects; and sound financial backing. Building on a market driven approach that is essential for the success of UDFs, the Structural Funds dedicated to JESSICA are expected to leverage substantial amounts of investment into areas in need of social cohesion, and speed up their transformation.

The establishment of UDFs and HFs are subject to EU procurement protocols. However, according to the Council Regulation (EC) N° 1083/2006, the EIB can be appointed as a Holding Fund by direct attribution (without public tender), if the Managing Authority decides to avail itself of this option. In this way, the technical and financial skills of EIB staff could assist the MAs of the Operational Programmes to establish UDFs able to channel European funds to projects leading to sustainable urban transformation.

The schematic in Figure 1 illustrates the basic JESSICA components, highlighting the revolving nature of the funding mechanism and the opportunities that are afforded for the leveraging of additional resources.

Figure 1 Jessica Components - Overview



In practice, the potential for using JESSICA and the level of interest in using UDFs to support urban regeneration will vary according to country, depending on: prevailing urban renewal and development policies and instruments; who the key market participants and existing financial vehicles for urban investment are; the severity of

market failures; and the capacity of financial engineering actions and products to address perceived deficiencies.

The fact that these mechanisms imply a commercial discipline - funds assigned to JESSICA must be recovered for reinvestment - should have a significant impact. The old relationship with "recipient" stakeholders, based on grants and inflexibility, should be transformed into cooperative agreements that should improve efficiency in project delivery and reduce the effects of administrative fragmentation. In some cases, the combination of traditional grants with loans and other financial tools will create stronger incentives for successful project implementation by beneficiaries. JESSICA may also have a significant technical and advisory component. It is expected to use the technical, financial and managerial expertise from specialist institutions such as EIB, the CEB and other IFIs to improve the know-how of urban planners and managers who have to design and implement integrated urban plans, and to develop a pool of specialists in urban project finance who are essential to support the rapidly expanding market of UDFs.

Conclusions

The emergence of "urban" at the forefront of the broader European policy agenda has not only highlighted the importance cities as key policy delivery vehicles but also the importance of spatial planning or, more specifically, integrated urban development planning, to ensure best practice in the delivery of projects designed to achieve sustainability objectives. It has also drawn attention to financial imperatives!

There is a general view that budgetary resources to support cohesion in the Union are unlikely to be expanded and, in the wealthier regions in particular, may well be reduced in the next programming cycle. One of consequence of this view has been recognition that a better way of using of existing budgetary resources must be found. This has not only encouraged policy makers to lend increasing support to public-private partnerships to deliver a variety of services of European interest, but also to pay increasing attention and weight to financial engineering – the use of investments funds – as opposed to the traditional non-recoverable grant instruments.

Following the introduction of the urban dimension into the mainstream programming and allocation of European resources, it was anticipated that the launching of the JESSICA initiative would mobilise significant additional financial, managerial and other resources to support urban development. In this regard, although the current financial crisis has somewhat tempered such optimism, the paradox is that JESSICA is probably more important than ever. Against this backdrop, the EIB's mission is to ensure that JESSICA becomes a central and effective tool for the successful implementation of the European urban agenda. For this to be achieved, European institutions and their partners will need to assist public and private promoters, cooperating under the integrated approach required by EU urban policy, to meet the challenges of sustainable urban transformation. The creation of a system of UDFs suited to the specific legal and administrative environment of each Member State is an essential pillar in this agenda. If the efforts of the European institutions and their partners are to come to fruition, this will necessarily entail the extension and, for some EU countries, the establishment of a European market for financial urban regeneration instruments.

3. Brownfield Policy in England

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Quantitative and Qualitative Impacts of Brownfield Policies in England

The redevelopment of brownfield sites (or Previously Developed Land, PDL) has been a concerted planning objective in England for over a decade now. Brownfield land is defined in England as 'land that has been previously subject to physical development (other than agriculture) and where its reuse may be complicated by one or more factors, which may include contamination' (English Partnerships, 2006, p.1). Therefore, in contrast to many other countries in Europe, and common usage in the USA, English brownfield sites are not necessarily contaminated, but have been developed (CABERNET, 2004). A range of policy initiatives, which are described below, have cumulatively attempted to steer development on to PDL, mainly in urban areas. The policies have, broadly, been devised to meet the twin objectives of:

1. Reducing the total amount of brownfield land in England; and
2. Contributing to sustainable development and urban regeneration

These two policy aims can be seen as 'quantitative', i.e. related to the amount of land redeveloped, and 'qualitative', focusing on the types of places and wider social, economic and environmental benefits that can be achieved via the development of brownfield land (Ganser and Williams, 2005).

This Chapter explores the extent to which English policies have succeeded, in both these 'quantitative' and 'qualitative' ambitions. First, it sets out the context of brownfield development in England, discussing why the issue rose to policy prominence from the late 1990s to the present day. Second, it sets out the government's response, tracking the development of a series of initiatives, policy statements and targets addressing PDL, housing, regeneration and sustainable urban development. Third, the extent of PDL redevelopment is analysed, with the aim of assessing the success or otherwise of the policies outlined at improving land recycling rates. Fourth, a qualitative analysis is offered of the types of development that have been delivered in this policy context. Specifically, issues such as the sustainability of the developments and their contribution to urban regeneration are evaluated. The Chapter finishes by drawing some conclusions about England's experiences in attempting to tackle the 'brownfield problem'.

The origins of the contemporary policy focus on brownfield redevelopment in England

A specific set of circumstances in England from the mid 1990s to the present day have combined to bring about a new focus on brownfield development by government and a number of key agencies working in planning, regeneration and countryside protection. These circumstances do not have a neat chronology, but have coincided to produce a new and targeted policy response to PDL. The policy activity grew out of the emergence of a number of meta-narratives that influenced political discourse, including 'sustainable development' and 'holistic regeneration' (Raco and Henderson, 2006).

The origins of the renewed emphasis, by the Labour Government from 1997 onwards, on brownfield development is set firmly within the context of growing interest in sustainable

development. The concept became a strong objective in English, UK and European policy throughout the 1990s and 2000s, and is intrinsically linked to brownfield policies (see Dixon, 2008, for a full account of the development of the concept of 'sustainable brownfield regeneration'). In 1994, the UK Government became the first to develop a national strategy on sustainable development, and subsequent strategies and frameworks have developed the concept deeper in policy ever since (*ibid*, p.241). The planning system was seen as one of the key mechanisms for delivering a more sustainable future, and the planning profession welcomed the new challenge and purpose that the sustainability agenda offered. From the mid-1990s onwards, planning policies have been revised continually to embed and operationalise sustainability into all land use planning decisions, from large-scale strategic developments to minor changes.

The sustainability agenda is important to the brownfield development story because it informed and accelerated national and international debates about desirable spatial development patterns. Brownfield sites came to form part of the debate about the capacity and opportunity to achieve sustainable urban forms through urban compaction (see for example Adams and Watkins, 2002; Williams *et al,* 2000; Rudlin and Falk, 1999; Power and Mumford 1999; Jenks *et al,* 1996; Breheny and Rookwood, 1993). Redeveloping urban brownfield sites was seen as an opportunity to raise densities. Proponents of more compact cities argued that high-density, mixed-use living enhances sustainability because it reduces car use and pollution, leads to urban vitality, encourages social interaction, provides support for the local economy and facilities, and diverts development from greenfield sites (CEC 1990; Adams and Watkins, 2002).

Although there was far from consensus on the sustainability of the compact city model, with some research evidence suggesting it was neither necessarily sustainable nor feasible, the government still embraced the concept (see, for example, Breheny, 1992, Jenks *et al,* 1996; Williams, 1999, Adams and Watkins, 2002). It stated frequently the dual benefits of contributing to regeneration and staving off development in the countryside. (DETR, 1998a; DETR 1998b, DETR, 2000a; DETR, 2000b; DTLR and CABE).

In addition to the transition to sustainability, in the mid 1990s the English government was also facing political pressure in response to the development patterns of the 1980s and early 1990s. This period had seen a weakly regulated development industry build extensively on greenfield sites, particularly in the South East of the country. This had led to dispersed settlement patterns and fast peripheral growth of urban areas. In due course, adverse environmental and social effects became obvious (Breheny 1996; Stretton, 1996; Williams, 1999, Williams et al. 2000), and consequently the development of greenfield sites became a central political issue. National and local pressure groups were effective in their campaigns to raise awareness of the impacts of greenfield development: the loss of countryside, increased car use, and social exclusion were all highlighted (CPRE, 2001, Breheny, 1999). This fuelled arguments that a more integrated, and some argued, regulated, approach to land development was required.

Yet in the late 1990s, massive housing growth was still required to meet demand. This was driven partly by natural population increases (i.e. more births than deaths) and net in-migration, but also by changes in household sizes. On average, English households are becoming smaller due to social and demographic trends such as aging, higher divorce rates, and a growing number of single households. This situation left the Government with the challenge of finding new land for housing in an already densely populated country (Williams, 2009).

At the same time, PDL was also seen as a genuine catalyst and mechanism for much needed 'holistic regeneration'. Like much of Western Europe, in the post war period, England had experienced decline in industries such as coal, steel and textiles, and had witnessed the closure of large-scale infrastructure facilities (Grimski and Ferber, 2001). Many cities, particularly in the North of England, were in economic decline and were suffering from the effects of recessions in the 1970s and 1980s. Many were experiencing counter-urbanisation, with populations declining dramatically in the largest English cities. The worsening social conditions, combined with dereliction of sites, and their negative impacts on neighbouring properties and wider urban areas, contributed to the policy focus on brownfield regeneration.

Against this backdrop of decline in many cities, continual pressure for new housing, and growing 'sustainability' and 'regeneration' agendas that favoured clustering development in existing built up areas, the issue of urban brownfield development came to the fore. In 2001 it was estimated that there were around 66,000 hectares of PDL in England, and a focussed policy response was seen as necessary to bring this land back into beneficial use.

An overview of brownfield policies and targets in England

> The redevelopment of land is not an end in itself: rather it should maximise benefits for new and existing communities through the provision of housing, retail, employment and amenity space, as well as sustaining the living environment (English Partnerships, 2007, p.4)

A general policy of urban containment has existed in England throughout the post war period. A distinctive element of the English planning system is the Green Belts that surround most major cities and restrict development in the countryside. However, as set out above, from the mid 1990s onwards, the impetus for compact city policies including development on urban PDL gained in strength.

As far back as 1996, the government made the bold move of setting an 'aspirational' target for 60% of new housing in England to be built on PDL. This target was stated in the Green Paper, *Household Growth: where shall we live?* (DoE, 1996). However, the Labour Government, which came to power in 1997, then incorporated the target into national planning guidance, *Planning Policy Guidance Note 3: Housing* (DETR, 1999a). A finalised version of PPG3, in 2000, stated that 'the national target is that by 2008, 60% of additional housing should be provided on previously-developed land and through the conversion of existing buildings' (DETR, 2000a, para 23). This national 60% target was relatively easily transferred into regional and local levels of planning. *PPG3:Housing* was directly binding for decisions on planning applications, and thus the 60% target was widely considered in practice. More recently this target has been adjusted for each of the English Regions, and regional targets vary between 50% and 100% depending on local circumstances.

To operationalise the 60% target, and encourage PDL development in general, the Government focused attention on brownfield development in its *Planning for the Communities of the Future* document, which set out a comprehensive vision for house building (DETR, 1998a). The ideas were developed further in the Urban White Paper of 2000, entitled *Our Towns and Cities: the Future, Delivering an Urban Renaissance (*DETR, 2000b). The White Paper contains a section entitled *Bringing Brownfield Sites and Empty Property Back into Use*. It talks of bringing previously developed land and buildings into '… beneficial economic or social use, so that they can contribute to, rather than detract from, the urban fabric.' (*ibid*, p.42). The paper urges that new development

in towns and cities is built in a sustainable way. In the Paper, the Government stated that it aimed to: '…accommodate the new homes we need … through a strategy that uses available land, including, in particular brownfield land and existing buildings in urban areas' (*ibid*, p.29). This Paper was significant as it signalled the introduction of the 'Urban Renaissance' movement in the UK. This was a concerted effort, in policy at least, to attract people back into cities and towns and to provide high-quality urban environments through well designed, high-density residential and mixed-use schemes.

Since the late 1990s, in addition to national planning statements on housing, mentioned above, the government's targets and urban compaction policies have been underwritten by a number of other Planning Policy Statements in England (Dixon, 2008). These address, for example, sustainable development, transport, biodiversity, regional spatial strategies, local development, and sustainable economic development, and all have been written or re-written in the last decade to support brownfield development. In some policy statements this is an explicit aim, in others it is implied by policies encouraging development in existing built up areas, ensuring a sequential approach to land development (where the most appropriate urban sites are used first) and raising residential densities. *PPS:3 Housing* was last updated in 2006, and this version included a reinforced message to LAs to increase development on brownfield land, and introduced further safeguards to prevent developers from concentrating only on greenfield sites (DCLG, 2006a).

In the early 2000s, however, housing completions were falling and housing demand was still high. Hence, in 2003, the Government launched a prescriptive and detailed housing strategy entitled *'Sustainable Communities: building for the future* (ODPM, 2003). This plan, known as the Sustainable Communities Programme (SCP) with a £38 billion spending plan attached to it, introduced a two-pronged strategy for housing growth. It consisted of developing large numbers of dwellings in targeted 'Growth Areas', mainly in the South East of England, and specifically in the Thames Gateway and regenerating declining areas to stimulate demand, via nine 'Market Renewal Areas' in Northern cities. In both the Growth Areas and the Market Renewal Areas whole new communities were planned. The vast majority of development delivered under the SCP was to be on brownfield sites, although there was also some development on undeveloped land (Williams, 2007).

The SCP also introduced the challenge of developing a new *National Brownfield Strategy*. This task has been undertaken by English Partnerships (the national regeneration agency), and the Department for Communities and Local Government (DCLG). In 2007, English Partnerships reported to Government with a number of key recommendations, and the Government published its response in 2008 (EP, 2007; DCLG, 2008a). This strategy seeks to learn from stakeholders involved in brownfield development to devise recommendations on policy and good practice in four distinct areas: identifying, assessing and preparing brownfield land for reuse; safeguarding the environment and ensuring appropriate levels of regulatory control to ensure efficient reuse of land; enhancing communities through the removal of blight and ensuring long term maintenance of PDL; and improving accreditation and skills by ensuring qualified and experienced practitioners (EP, 2007). This Strategy takes the DPL issue forward nationally, and tackles some of the more recently identified barriers to brownfield development.

Are English brownfield policies successful in reducing the total stock of brownfield land and preventing development on greenfield sites?

In order to find out if the policies, strategies and targets outlined above have been effective in quantitative terms, several policy objectives are considered:

- Is the total amount of brownfield land in England being reduced?
- Are all types of brownfield land being recycled, or are there successes and failures in land recycling activity?
- Is the rate of recycling similar across England, or are there spatial successes and failures?
- Is the target for 60% of new housing to be built on PDL being met?
- Is the development of PDL leading to a reduction in development on greenfield sites?

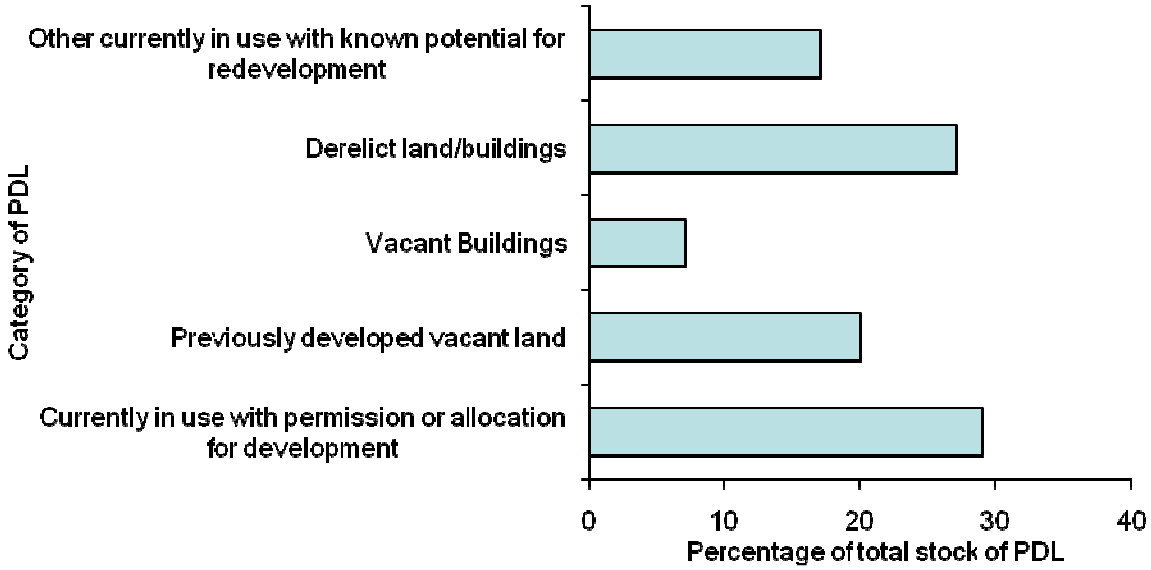
Before answering these questions, it is useful to set out the data available for assessing these quantitative aspects of PDL reuse in England.

Quantitative brownfield data available in England It is possible to answer questions about the extent of contemporary brownfield development relatively accurately due to recent improvements in land use data collection. Data on PDL in England is collected in two national data sets. The National Land Use Database (NLUD, see NLUD, 2009) was established in 1998 to provide a comprehensive record of PDL (although some data are only available from 2001/2). The survey collects data from local authorities (LAs) in England, the latest being collected in 2007. Data on land use change are also collected nationally, and published annually, in the Land Use Change Statistics for England (LUCS, See LUCS, 2009). The latest data in this set are provisional estimates for 2008, with the last robust data for 2004-7. These data are useful in tracking the nature of DPL redevelopment, particularly in terms of house-building activity, but do not update data on rural areas as frequently as urban. In addition to these two data sets, researchers and government also use Ordnance Survey data which is collected as part of periodic maps updates.

Is the total amount of PDL in England being reduced? Overall, the total amount of brownfield land in England has reduced year on year since the introduction of brownfield targets (and NLUD) in the late 1990s (EP, 2008). The NLUD shows that in 2007, there were an estimated 62,130 hectares of PDL in England, representing a 6% drop from 66,000 hectares since 2000/1 (when comparative data are available). Hence in terms of absolute stocks, the amount of PDL is being reduced, although this figure does not reveal any information about the 'churn' of land (i.e. how much is being redeveloped compared with how much new PDL is coming on stream).

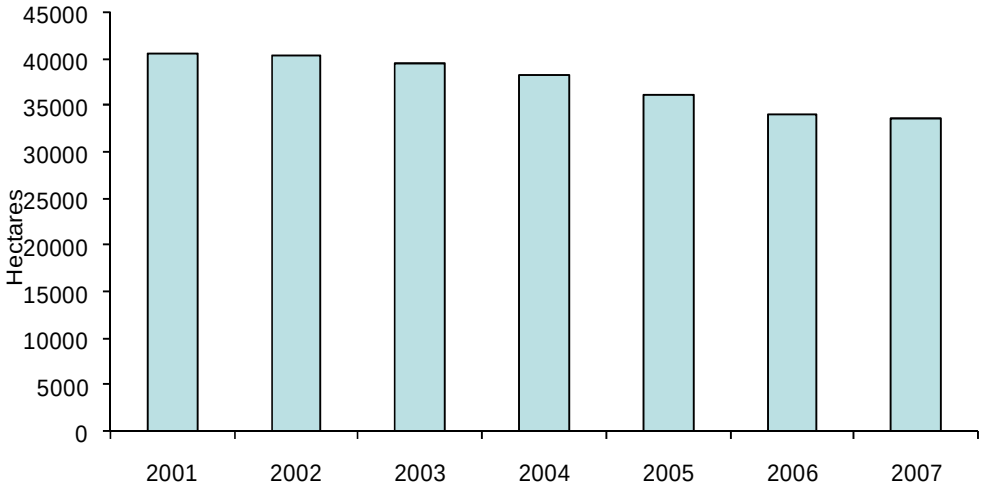
Are all types of PDL being recycled, or are there successes and failures in land recycling activity? The NLUD collects information on the nature of PDL. Specifically it categorises it into two main types: 'vacant and derelict land' and 'land that is still in use but with the potential for redevelopment'. This latter category is land that is being used, but is allocated in a local plan for redevelopment, or has planning permission for any use. It also includes land with 'known redevelopment potential' but no planning allocation or permission. Latest data show that an estimated 33,600 ha of the 62,130 ha total of PDL were 'vacant or derelict land or buildings' (54%). The remaining 28,520 hectares were 'in use with redevelopment potential' (46%) (see Figure 1).

Figure 1 Previously developed land by type
Source: DCLG, 2008b



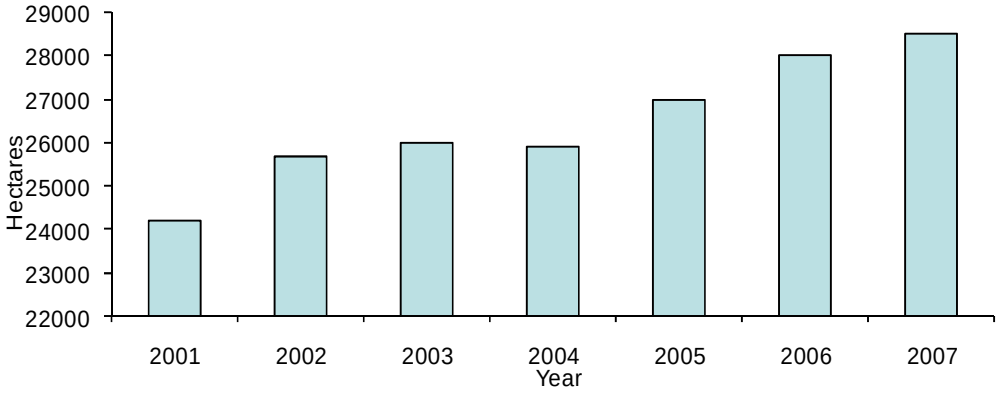
The monitoring surveys conducted for NLUD show a marked reduction in the extent of derelict and vacant land and buildings since 2001 (Figure 2). Year on year these have reduced from 41,000 ha in 2001 to the 33,600 ha in 2007. Research conducted in 2005 (by DTZ Pieda, cited in EP, 2007) indicated that even long and medium term derelict sites are being returned to beneficial use. Between 2002 and 2005 the stock of these sites had fallen by 29% (in terms of hectares) and 38% by number of sites. What was particularly important was a 37% reduction in the number of long-term derelict sites (EP, 2007). The study showed that 23% of the reused land had been developed for housing, 19% for employment and 17% for mixed uses. Around 10% was used for open space and 26% had reverted to an acceptable natural state which was no longer classed as PDL. These changes have been heralded by government as a marked level of policy success (*ibid*, p.5).

Figure 2 Derelict and/or vacant land and buildings in England, annual change in hectares, 2001-2007
Source: DCLG, 2009; NLUD, 2009



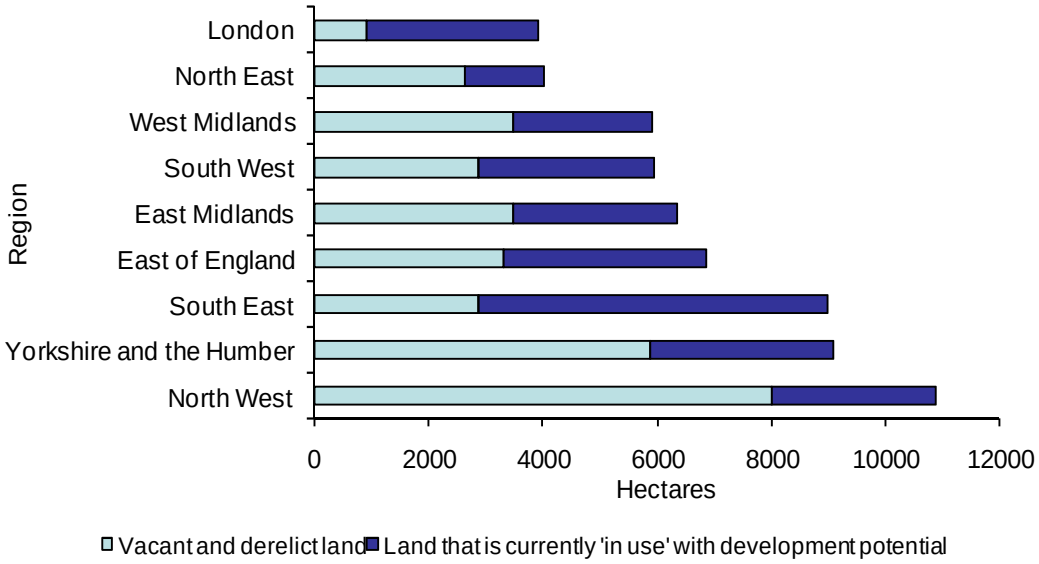
However, a different picture emerges of land that is 'in use but with redevelopment potential' (Figure 3). This category of land has shown an annual *increase* since 2001 from 24,000 ha in 2001 to 28,520 ha in 2007. English Partnerships suggest that this increase may reflect the fact that local authorities are getting better at identifying land for redevelopment, but what is also interesting is that more than 40% of this land has been on the database since its inception in 1998. This means that even though the land has planning permission, and is ready to be developed, it is not coming forward for redevelopment (*ibid*). This type of land is often earning valuable returns for its owners, and may be providing services to local communities, so there is little incentive for it to be released for development. Such sites may also be constrained because of flood risk or ecological issues (*ibid*)

Figure 3 Land with planning permission or identified for redevelopment in England, annual change in hectatres, 2001-2007
Source: DCLG, 2009, NLUD, 2009



Is the rate of recycling similar across England, or are there spatial successes and failures? A key feature of the land reuse picture in England is the variation across Regions (Figure 4). The greatest concentrations of derelict and vacant sites are in the industrial towns and cities in the Midlands, and Northern Regions of England (*ibid*). These sites are often hard to remediate because of physical problems, such as contamination, lack of infrastructure and existing site conditions, but also because they are not economical to develop. In the areas where, until recently, the property markets have been more buoyant, physical restrictions have been more likely to limit redevelopment (*ibid*). Land that is still in use but that has planning permission or redevelopment potential is more evenly distributed throughout England than vacant and derelict sites. In places like London and the South East there are more 'in use' sites than derelict and vacant sites, and it is these 'in use' sites that are often not coming forward for redevelopment.

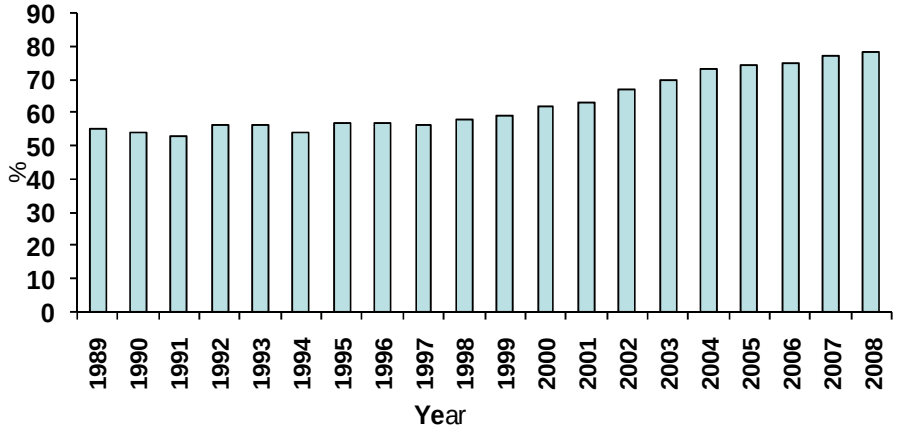
Figure 4 Amounts of PDL by Region and by Type
Source: DCLG, 2008b



Turning to the Regional picture over time, in two regions the total amount of PDL has increased since 2002. In Yorkshire and Humber the figure has increased by 14% and in London by 12%. The largest decreases are in the South East (down by 18%) and the North East (16%). There were larger changes in 'vacant and derelict land', where every region saw a decrease, with the South East seeing a reduction of 32% and the North East of 30%. However, the amount of land with development potential increased in most regions. The largest increases were 78% in Yorkshire and the Humber, 43% in the East Midlands and 40% in the North East (again perhaps because of Local Authorities becoming more adept at identifying sites). In contrast, the East of England saw a drop of 10% and the South East of 8% (DCLG, 2008b).

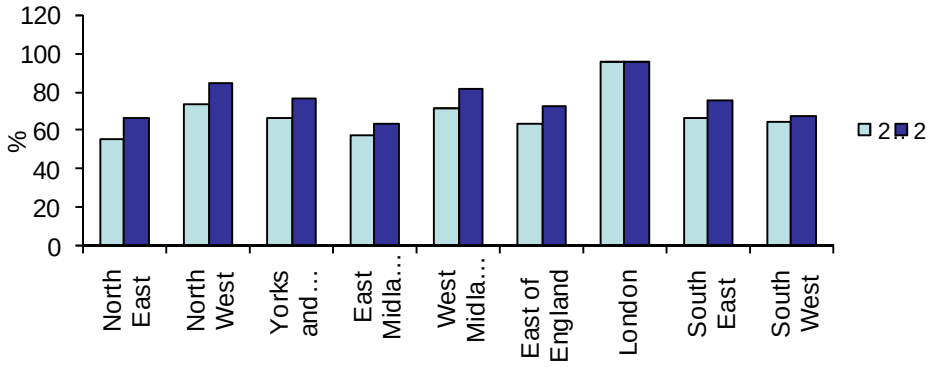
Is the target for 60% of new housing to be built on PDL being met? The latest LUCS data show that in 2008 (on a provisional estimate) 78% of dwellings (including conversions) were built on PDL, 18% above the target. Since 1998, the proportion of dwellings built on PDL in England has increased by 22% (see Figure 5).

Figure 5 Percentage of new dwellings built on PDL
Source: LUCS (2009)



Compared to 2003, every region except London showed an increase in the proportion of dwellings built on PDL (See Figure 6). This is perhaps unsurprising as London already has the highest proportion of dwellings built on brownfield land (96%), compared with, for example, the East Midlands, which has the smallest proportion (63%).

Figure 6 Proportion of dwellings on PDL by Region 2003 and 2007
Source: DCLG, 2009



In fact, the 60% target was achieved nationally in England for the first time in 2000, when 61% of new housing was built on brownfield sites. The achievement of the 60% target, in all Regions and ahead of the original 2008 target date has led Government to report a major policy success. However, some commentators have questioned the value of the 60% target, given the well-documented regional differences, and have viewed the Regional targets as more valuable (Ganser and Williams, 2005). Others still have questioned if the target itself was too low, and suggested an element of political positioning by setting levels that could be reached easily. Specifically critics have questioned the value of divorcing the target (which is proportional) from the number of completed units and the area of land developed (see Adams, 2004 and Ganser and Williams, 2005 for a fuller discussion on the 60% target).

Is the development of brownfield land leading to a reduction in development on greenfield sites? The policy ambitions of redeveloping urban PDL are directly linked with goals to stave off development on greenfield sites. So, it is important to ask if the reductions of PDL are also seeing a reduction in greenfield development: to test if the displacement policy is working in practice. However, accurate and up-to-date data on the extent of greenfield land development are hard to obtain. The LUCS record the amount of hectares that change from non-previously developed land to developed land. However, the latest data available from this set are from 1996-1998 (DEFRA, 2009). This is because data from rural areas is updated infrequently.

As no precise data exists, other measures are often used to report house building activity, and to suggest reductions in greenfield development. However, these data are unsatisfactory for a number of reasons. Proportional data on the extent of PDL being used for housing is often presented as an indication of displacement from greenfield sites, but it can not be translated directly into information about land take. For example, in 2005, 73% of new dwellings were built on PDL, but only 62% of land for new housing was previously developed. This is because, on average, urban houses are built at higher densities than those on greenfield sites. It is also possible to report on the *proportion* of land area changing to residential use that was previously undeveloped. This has

increased from 46% in 1994 to 55% in 2005, but this is still limited in what it can reveal about the total amount of greenfield land developed. These data are also problematic as they are restricted to housing (and do not include other uses), and do not capture the PDL that has been returned to a natural state.

Perhaps surprisingly, Government currently uses figures from Ordnance Survey map updates (DEFRA, 2009). These use cartographic (rather than planning) land classifications. They show that the amounts of forest and woodland, grassland and set aside land increased marginally over the period 1998 to 2005, with crops, grazing and other agricultural land decreasing slightly. The total amount of 'urban and all other land' increased by around 5%. Hence, from this data, it seems that while there have been small gains and losses in different types of 'greenfield' land, there has also been a total increase in urban and other developed uses.

Summary of the quantitative findings

In answering the questions posed above, a mixed picture emerges. There has been an overall reduction in the amount of PDL since the introduction of a concerted target and accompanying policies in the mid-late 1990s. However, although the amount of vacant and derelict land has gone down, the amount of 'in use' land has increased. The extent to which this is a 'real' increase, or one related to LA designations is difficult to quantify. There are also regional differences in land recycling successes, although all Regions saw a decrease in derelict and vacant land. In terms of the housing targets, the 60% goal has been achieved, and exceeded nationally, but again regional differences emerge, with London building almost all of its new dwellings on PDL, while the East Midlands is building just over 60% on brownfield sites. There has certainly been a 'rebalancing' of brownfield and greenfield development since the 1980's, yet significant amounts of greenfield development are still taking place.

The 'qualitative' impacts of brownfield policies: are they contributing to sustainable development and urban regeneration?

As set out above, brownfield policies lie at the heart of the English Government's sustainable housing growth and regeneration agendas. The Labour government years saw a series of policies that sought to redevelop brownfield sites as part of a strategic ambition to make existing cities more compact and to regenerate large areas of the country through housing-led development schemes. As set out above, alongside the quantitative performance of these policy measures it is important to question the 'qualitative' impacts of the brownfield development agenda, specifically the extent to which brownfield development has contributed to sustainable development and urban regeneration.

Qualitative brownfield data available in England Unlike the quantitative targets for brownfield development that can, notwithstanding some data problems, be assessed relatively easily, the qualitative impacts of the brownfield agenda are far harder to evaluate. Brownfield policies, strategies and targets have evolved and become more multi-faceted over the last 15 years, and complex, wide-ranging benefits are now expected from developing on PDL (Dixon, 2008; Raco and Henderson, 2006). Brownfield redevelopment is seen as a central component in regeneration, seeking to bring about social and economic development. It also has a major part to play in *The Urban Renaissance*, with all of its socio-cultural and urban design aspirations. PDL is also a conduit of environmental improvement, offering the chance to remediate contaminated land and provide new green space. Yet, urban brownfield sites are the major focus for housing supply too, where they are required to increase urban densities and reduce sprawl. Because of this complexity and diversity, compiling evidence to determine

whether policy aims have been met is a challenging task. The approach taken here is to use existing research on a number of aspects of PDL policy to assess successes or failures.

The contribution of brownfield reuse to 'sustainable development' and 'holistic regeneration' As set out above, the ambitions for brownfield development to contribute to sustainability and regeneration are closely related. However, they are often dealt with quite separately in policy, and hence the analysis here offers an assessment of the extent to which brownfield development has played its part in policy successes within each of the two discourses. Starting with an assessment of the contribution of brownfield development to sustainable development, there are two ways in which this problem can be viewed. The first is to ask if the developments taking place on PDL can be described as 'sustainable' schemes in their own right (i.e. do they incorporate good practice in sustainable design, end use etc.), and the second is to assess if the PDL developments, in combination, are leading to sustainable *patterns* of spatial development, e.g. are they contributing to urban compaction and reducing dispersal?

Are new developments on brownfield sites 'sustainable'? It should be stated here, that this analysis deals with sites that have been built on, not those returned to natural uses. This is because the vast majority of redeveloped urban sites are used for hard end uses. Several researchers have attempted to assess the sustainability of schemes taking place on brownfield sites in England. Most take a broad definition of sustainability that embraces social, economic and environmental concerns, considered in terms of inter- and intra-generational equity. Dair and Williams (2004) undertook case study research of completed small-scale housing and mixed-use brownfield developments and found that much new development remains unaffected by consideration of the aims of sustainability policy guidance or good practice. For example, they found that the majority of schemes were meeting only limited sustainability standards (*ibid.*). A particular shortcoming was the omission of environmental sustainability features. However, other sustainability requirements such as social housing were being delivered, mainly because planning policies and national guidance were prescriptive about what should be provided. In another study, Dixon (2008) investigated developers' attitudes towards sustainable development on brownfield sites. He found a general lack of awareness of some of the key sustainability objectives, and a reluctance to incorporate sustainability aspects into brownfield schemes because of perceptions of increased cost. He also found a particular lack of performance on environmental standards in residential and commercial schemes.

Another source of evidence on the sustainability of completed schemes come from a number of reports undertaken by Government Commissions, academics and professional bodies, assessing the major projects built under some of the key government initiatives outlined above (see, for example, SDC, 2007; Power, 2004; DCLG, 2006b; Williams and Lindsay, 2007; Cowans, 2006). Much of this research evaluates the large-scale new developments in the South East of England, built on PDL in the 2000s. Overall, this research reports both sustainability failures and successes in these projects. On the whole, they are not delivering the flagship sustainable places many would have hoped for. They are not performing well on energy efficiencies, via homes or transport, and are struggling to phase the delivery of housing and public services. There are also difficulties in delivering sustainable transport solutions, with developers tending to put forward 'road only' solutions. This said, compared to the developer-led housing schemes of the 1980s and 1990s, these new developments are of higher urban design quality, and do offer some improvements in terms of sustainable travel choices and community development.

Is development on brownfield sites contributing to sustainable patterns of development? As seen above, brownfield policies and targets have been successful in steering a large proportion of housing development onto PDL, mainly in urban areas. They have also raised average densities and can therefore be seen to be contributing to the compact city agenda. The extent to which these development patterns can be argued to be sustainable depends on how the perceived strategic benefits (e.g. greenfield protection, sustainable transport options and urban regeneration) are weighed against both local benefits (see below) and potentially unsustainable localized impacts (e.g. overcrowding, pressure on local services, poor urban environmental conditions and increased traffic congestion).

In England, there is certainly evidence of such localised pressures in urban areas, but determining the extent which they are linked to cumulative development on PDL is difficult. For example, it is clear that the compaction policies, supported by prescriptive density standards, mean that England is now building some of the smallest homes in Europe and that 70% of the population think that Britain is too crowded (Williams, 2009). Most large English cities also suffer from traffic congestion, and developing brownfield sites has inevitably added to vehicle concentrations in some places.

In addition, the larger scale schemes (delivered in the Growth Areas via the SCP) have also been criticised for their lack of contribution to sustainable spatial development. Many argue that the SCP, in continuing a 'predict and provide' approach to growth, is contributing to overcrowding in the South East at the expense of more balanced development in other Regions. In some of the Growth Areas, developments have taken place outside of existing towns and cities and have created new 'dormitory' settlements, without the required services or transport connections.

However, these negative issues have to be balanced against alternative locations for growth. There is evidence that, overall, urban DPL development has had some benefits. It has led to more sustainable growth patterns with respect to greenfield sites, and in some areas has certainly produced higher densities to support facilities and services in urban areas. However, the Regional differences in PDL development can be seen as exacerbating 'overheating' in some regions and economic and social malaise in others.

Is brownfield development contributing to urban regeneration? Over the last decade, large swathes of inner urban PDL have been redeveloped and new neighbourhoods of flats, shops and restaurants have been delivered in most cities in the UK. The re-population of city centres and inner suburbs has also contributed to the beginnings of an 'Urban Renaissance', reversing long-term counter-urbanisation patters in many places. The fact that over 70% of housing is now taking place on, mostly urban, PDL has had a major impact in some cities, brining much-needed social and economic activity back into central areas. England now has numerous examples of successful brownfield regeneration schemes, on re-used docklands, industrial sites, housing estates, and underused or decommissioned public land. Many such projects have revitalised urban areas with in-fill housing, mixed use schemes, and employment and educational facilities. Many of these schemes showcase high-quality urban design, and add considerably to their 'host' cities' attractiveness.

However, while there are undoubtedly some real successes in the brownfield regeneration story, there are also some problems, and much to learn. In particular some analysts argue that too much is expected from the PDL programme. Raco and Henderson (2006) argue that brownfield sites are treated too homogenously in policy, and that they need to be understood better, and set within a wider and more comprehensive set of development projects and policy agendas. Echoing some of the findings about the SCP

above, they argue that much recent brownfield development has not benefited local communities, and has not been set in a wide environmental planning context. They argue that brownfield sites can become commodified, with their development taking place 'separately' from local communities. This criticism has also been levelled at some projects that have taken place on brownfield sites under the auspices of *The Urban Renaissance* agenda. Observers have argued that some schemes have gentrified neighbourhoods and excluded existing communities. The benefits of regeneration via PDL development have also not been evenly spread across the country. The schemes that have come forward have been attractive to the market (some only because of publicly-funded incentives), yet in many deprived areas brownfield sites remain unattractive to developers, and blight neighbourhoods. It is here that the issue of 'in use' sites earmarked for development but not coming forward needs to be tackled in a more concerted manner.

Conclusions

This Chapter started by setting out its aim to assess the extent to which brownfield policies in England have reduced the amount of brownfield land and contributed to sustainable development and urban regeneration. The paper has drawn on data and research to give an assessment of these quantitative and qualitative policy objectives. It has found that there is a mixed picture. Quantitatively, there has undoubtedly been a huge change in the take-up of PDL. The last decade has been characterised by visible changes in urban landscapes across the country. Every Region has seen a reduction in total stocks of vacant and derelict land, although many have seen increases in land 'in use', but ready for development. There has been a turnaround in spatial patterns of housing delivery, and in the types of dwellings now provided, with a shift away from larger family homes on greenfield sites towards high-density flats and smaller units in urban locations.

In qualitative terms (sustainability and regeneration) development on PDL is providing some benefits. There are examples of urban brownfield schemes that are sustainable in their own right, and have enhanced and regenerated urban neighbourhoods. There are some exemplars of urban design, community development and environmental improvements. However, there are also schemes which have been developed without due consideration of the long term benefits of their communities, and which do not contribute to wider sustainability objectives. There are also problems with some of the large scale projects, which have failed to deliver in the key areas of sustainable growth, and there is also the continuing debate about the extent to which brownfield land is being used to continue the 'predict and provide' culture within national planning policy which is delivering massive growth in the South and South East, while less is invested in the Northern Regions.

From the review presented above, it is clear that brownfield development lies at the heart of some of the biggest planning challenges in England today. In the future, the debate is likely to become even more contentious as increasing (and different) pressures shape the land use agenda. For example, is has already been estimated that England will not be able to meet its housing needs through a concentration on PDL. Even if current high-density housing levels are achieved on urban PDL in the future, we will 'run out' of brownfield sites, and need a substantial greenfield development programme within the next 50 years (Barker, 2006). However, house building levels are now at their lowest for decades, and it is very likely that there will be a real slowing in development on all types of land, but particularly on more costly PDL. As a result of the economic downturn, we may also see more PDL coming on to the registers as businesses close and current uses become uneconomical. Other pressures may also force a reconsideration of the best end

uses for PDL. For example, climate change may require a whole new focus on PDL to provide very different elements of urban landscapes, linked perhaps to urban cooling or greening. It will be interesting to see how English brownfield policies (supported by the new National Brownfield Strategy) adapt to both ongoing and new challenges.

4. Sustainable Land Use – making it happen locally

Sarah O´Driscoll, Service Manager, Strategic Planning, Bristol City Council and Michael Reep, Planing Policy Manager, North Somerset Council

Local Partnership and Governance in Action - Bristol

The West of England (WoE) sub region is made up of 4 separate political Councils Partners (Bristol City Council, South Gloucestershire Council, Bath and North East Somerset and North Somerset). Working collectively to deliver sustainable communities for a sub-region made up of a number of different local authorities, requires clear organisational and governance structures. It also requires good co-operation between the politicians of the separate Councils and the technical officers. The British Planning system provides for local decision taking but within a national planning structure – a top down imposition of national objectives through regional statutory documents called 'Regional Spatial Strategies - RSS'. The RSS for the South West has yet to be approved by Central Government – but is already providing informal targets for the WoE sub-region to be measured against.

The Opportunity...

Bristol City is at the centre of an attractive area with a strong local economy, the WoE Sub-region is subject to high pressure for growth in population, homes and jobs. Accompanying this growth is a need for a growth in supporting infrastructure – social, educational, transport and leisure, for example. Bristol City is developed tightly to its administrative boundaries and the impact of on going growth affect all three adjoining administrative areas.

The Vision for the West of England sub-region has been agreed by the four Councils working together as the West of England Partnership with social, environmental, and economic partners.

The Process…

The Regional Spatial Strategy for the South West will set the broad context and targets for each sub-region and local authority administrative area for the period 2006 to 2026. Within these targets the Local Authorities produce strategic spatial plans for their areas - a 'Local Development Framework', of Core Strategies – high level direction of growth and objectives, Site Allocations Development Plans – identifying the future use of key sites and the major constraints on future development, Development Management policies to guide proposals and supplementary planning documents to provide detail where required. Within the West of England the 4 Councils have commissioned Joint Infrastructure studies to help to identify the investment required and the opportunities for delivery from the private sector, and government agencies.

Challenges and Vision Developed

Responding to the challenges the WoE Partnership has agreed prioritisation for a futurue development vision and its delivery. The key priority being the regeneration of areas of deprivation in the sub-region through focussed investment in new homes and jobs – this focus is initially in the South of Bristol and in the area around Weston super mare, North Somerset where employment opportunities are particularly sought.

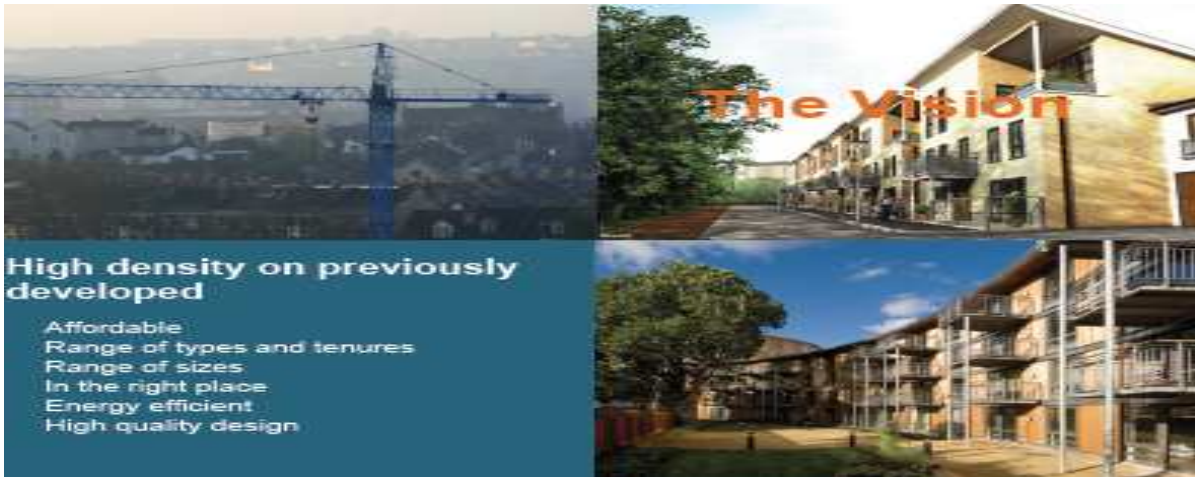
The Challenges.....

- Regeneration of difficult sites
- Significant areas of deprivation
- Shortage of Affordable Housing
- Limited employment opportunities
- Low density housing
- Protecting valued local environments
- Investment challenges
- Accessibility challenges

The Vision for the sub-region

- Sustainable growth, sustainable future
  - Maximising use of previously developed land
  - Minimising use of green field land
- Delivering balanced and sustainable communities
- High quality environment, high quality of life
  - Shared places and mixed communities
- reducing deprivation, improving aspiration

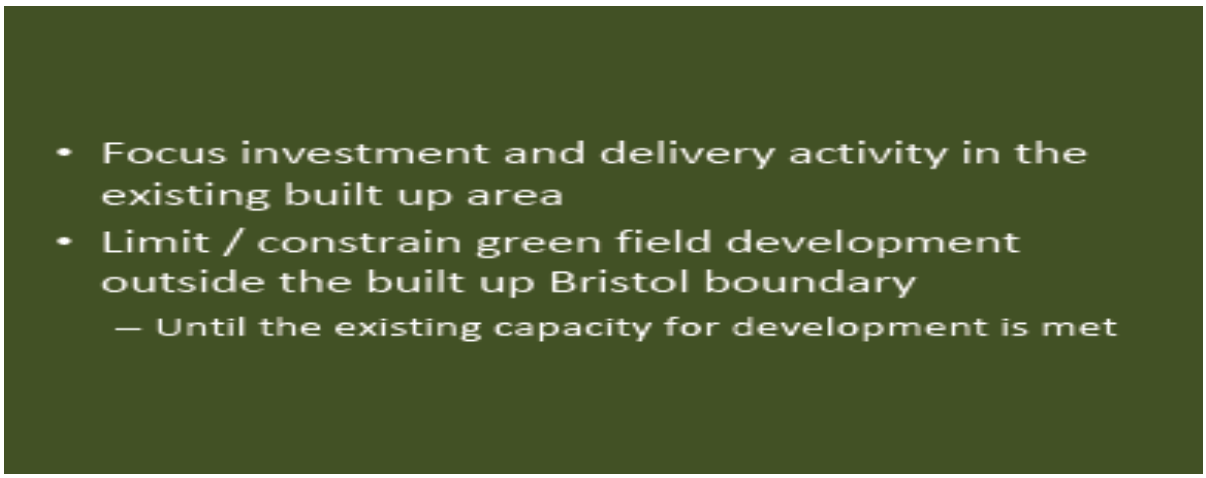
..... regeneration of South Bristol




The Vision
Greenfield land protected
• Green Belt areas to be maintained
• Green infrastructure built into new development
• Open space available to all

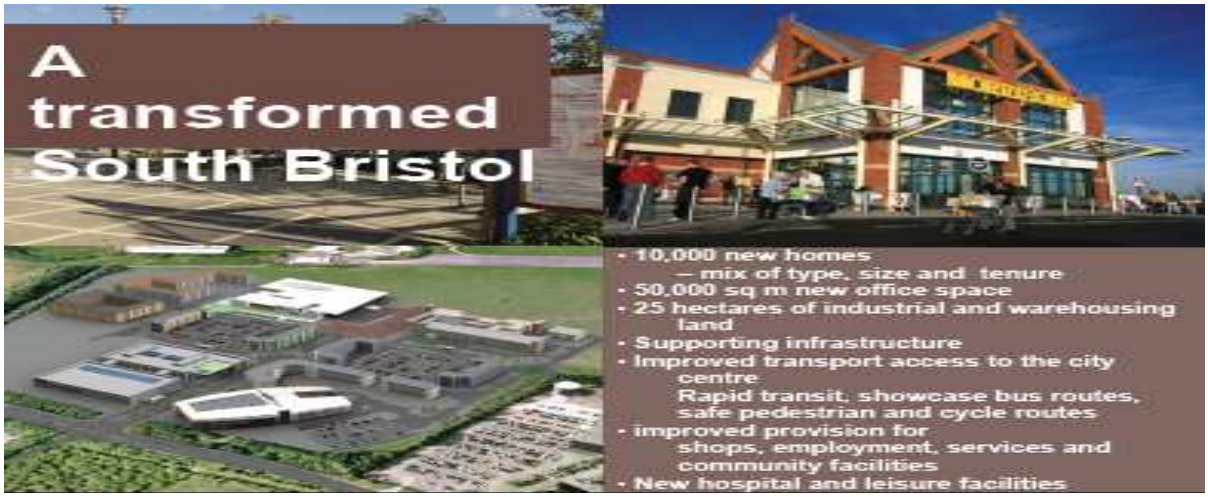

The Vision
Sustainable Communities
Social, community and economic services
Green infrastructure
Accessible

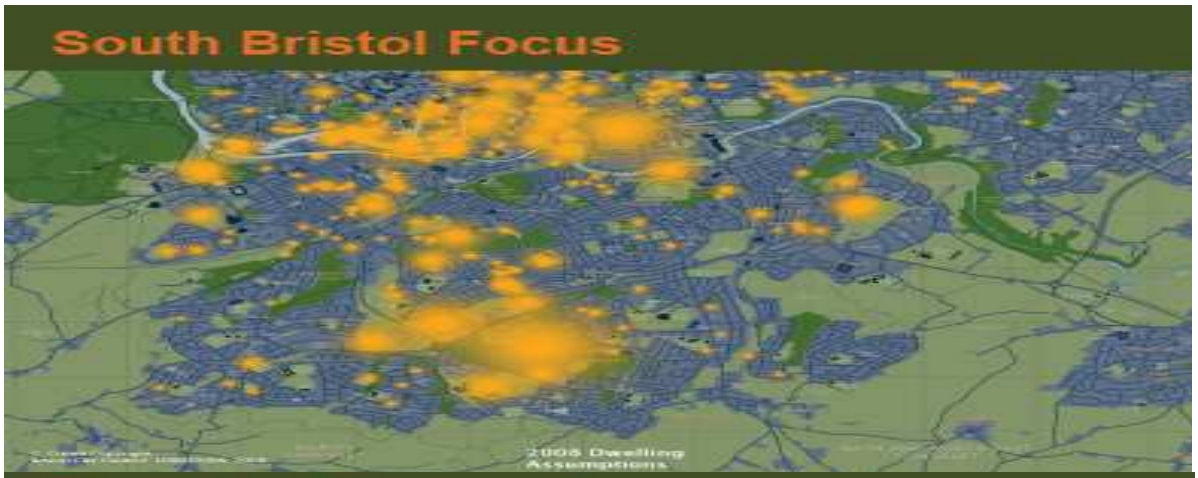

And the delivery aspiration...
....action to get the investment to the priority locations.....

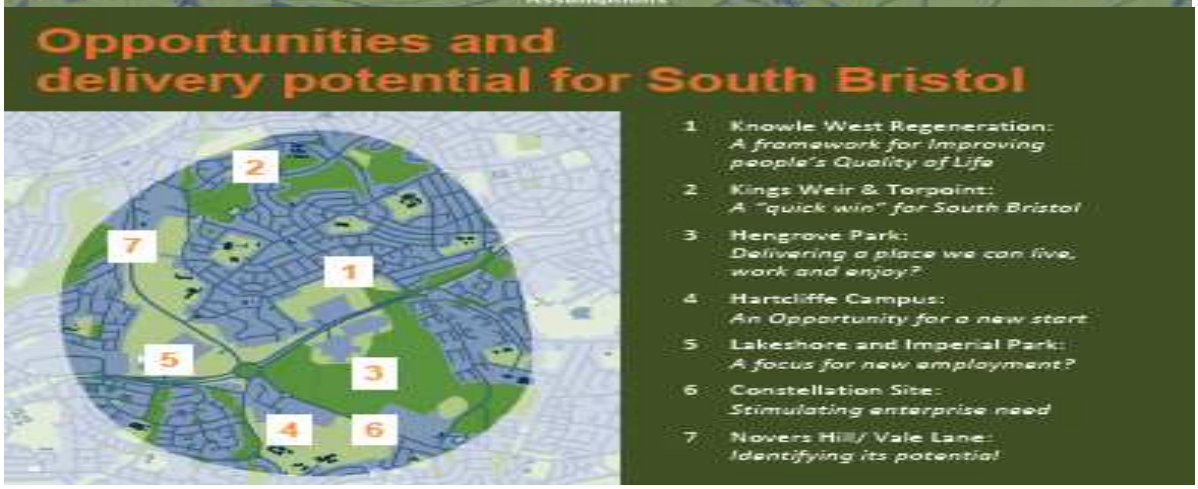


Transformed South Bristol

Interpreting the spatial vision of the West of England in South Bristol over the next 20 years is expected to deliver significant change and opportunity for the local residents as identified. Historic decline in the traditional tobacco industry in this area has left an under skilled community and several generations of unemployment and low aspiration. Development opportunities have been identified in South Bristol as shown in the accompanying slides which show how opportunities are being developed in the Knowle West area of South Bristol.




South Bristol Focus
2005 Dwelling Assumptions

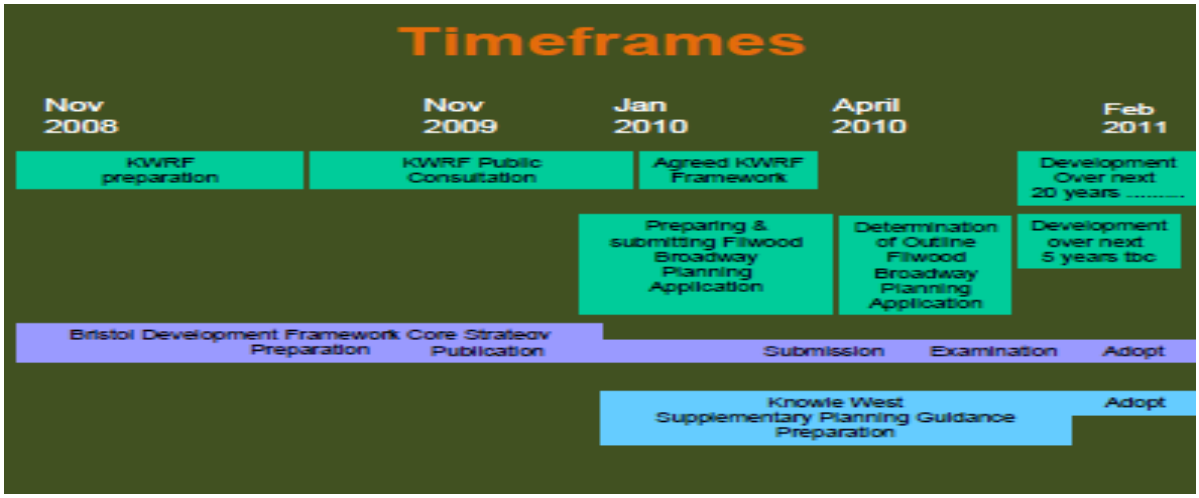

Opportunities and delivery potential for South Bristol
1 Knowle West Regeneration: A framework for Improving people's Quality of Life
2 Kings Weir & Torpoint: A "quick win" for South Bristol
3 Hengrove Park: Delivering a place we can live, work and enjoy?
4 Hartcliffe Campus: An Opportunity for a new start
5 Lakeshore and Imperial Park: A focus for new employment?
6 Constellation Site: Stimulating enterprise need
7 Novers Hill/ Vale Lane: Identifying its potential


and how do we make this happen.....?
• area planning – AAP, SPD
• 'Masterplanning'
• neighbourhood plans?
• development management
• asset management and external investment
• .... and the Single Conversation...

The Knowle West Regeneration Framework is an example of an urban area based regeneration project which is seeking to deliver the high level objectives of growth,

regeneration, and the delivery of balanced and sustainable communities at the local level. It is led by the Council as the main client and has engaged with the community as key partners from the outset. Using the support of the government funding agency the 'Homes and Communities Agency the Council, with commissioned Consultants Urban Initiatives has set up a governance structure for the project with key representatives from the local community of residents, businesses, land owners and community groups. The community have also established their own specific vision for their area and identified the objectives for development and investment in infrastructure in the area, in order to ensure that they have 'a future proof community'.

Working with the community the Council and its consultants have used a range of techniques to identify the key aspirations of the community. The Knowle West Regeneration Framework will identify the investment needed in the area, the sites which could be used for development, the range of uses on those sites and how the sites should be brought forward on a phased basis. This document will be consistent with the statutory Local Development Framework Core Strategy and will inform the content of the Site Allocation Plan. It may also find status as a Local Development Framework 'supplementary planning document '



North Somerset Urban Edge – Alternative Perspectives

Top down versus bottom up. Many planning practitioners would argue that the only way to secure new development to meet identified needs in a sustainable way is through a clear regional planning approach which can focus on strategic priorities. However, this makes the regional plan appear to be undemocratic, particularly when large housing numbers are 'imposed' on local communities. The natural allegiance of local politicians is to their local constituents rather than regional or sub-regional objectives. This can lead to at best a lack of leadership, or worst, opposition to the regional planning process.

Urban versus Rural

Urban extensions are seen as sustainable additions to towns and cities. However, these fringe areas contain rural and semi-rural communities who have different perceptions to urban dwellers. While these communities benefit from easy access to jobs and facilities, they live in the countryside, and are fiercely protective of their chosen lifestyle. In many ways they act urban, but think rural.

Green Belt

One of the best known, but most misunderstood planning tools.Green Belts are specific areas where there is a strict control over newdevelopment to control sprawl and coalescence - although the common perception is that they apply to all areas of countryside. In England Green Belts have been rigorously enforced and highly successful in preventing development. There is therefore a clear urban edge to Bristol where the city ends and North Somerset begins.

SW Bristol Urban Extension

The Regional Spatial Strategy proposes 10,500 dwellings in the Green Belt (9,000 in North Somerset and 1,500 in Bristol City). This has become highly contentious with considerable opposition from local residents. Uncertainty has been created through challenges to the RSS in other parts of the county facing similar issues, and delays to final approval. Final publication will now not take place until following the forthcoming general election (May 2010), and then, depending on the outcome, might be scrapped

The local planning authority is placed under considerable pressure from the Government Office to progress plan making on the assumption that the RSS and urban extension will be approved. It has proved difficult to engage with local communities on the form and nature of a possible urban extension, but progress has been made through stakeholder workshops and using urban design consultants. Both Bristol City and North Somerset are opposed to the SW Bristol urban extension and land is not allocated in the emerging Core Strategies. However, there is considerable developer pressure in the area and a major planning application has been lodged for 9,500 dwellings.

The Common Solution

The Councils working with partners to deliver the key strategic priorities of brownfield first and urban regeneration at both south Bristol and Weston before 'easier' green field, Green Belt land. This involves co-ordination of strategic infrastructure, and is made more difficult by the current economic climate.

5. Recommendations for Local Authorities

David Ludlow, Senior Research Fellow, Centre for Sustainable Planning and Environments, UWE, Bristol and Didier Vancutsem, Lead Expert

The recommendations for local authorities identified in this report set out a range of options for action by local authorities and other agencies in support of urban sustainability. It is recognised that not all recommendations will be appropriate in all circumstances and furthermore, that variations in the specific competences of local authorities and other local factors will inhibit the implementation of certain recommendations even where they are desirable and relevant.

The recommendations which emerge from the report seek to achieve:

- further integration of the economic, social, health and environmental dimensions of sustainability across all policy sectors at European Union, Member State, and regional and local government levels;
- improved capacity for managing urban areas for sustainability;
- greater coherence of policy and action, so that the development of sustainability at local level is not undermined by decisions and actions by Member State governments and the EU;
- measures to avoid wasteful duplication of work and to enhance the productive exchange of experience; and
- both the enhanced application of existing policies, programmes and mechanisms and, where necessary, the development of new ones.

The problems of non-integration of environmental policies into other areas identified in cities apply equally, if not more so, to higher levels of government. All governmental and public agencies should:

- apply the principles and tools for policy integration to themselves;
- promote the development of sustainability appraisal through appropriate applied research and ultimately include sustainability appraisal in the decision making process for all significant changes in action or policy; and
- establish formal management procedures for declaring environmental aims; deciding on, resourcing and implementing actions to work towards aims; and monitoring and reporting on progress.

Action by Local Authorities

An urgent requirement for local authorities is to reorganise their internal management structures to facilitate cross-disciplinary working and an integrated approach to environmental issues. In addition, local authorities should consider the following:

- engaging in networking between cities and towns in the pursuit of sustainability; supporting the maintenance of an information system concerning local environmental initiatives, providing examples of good practice, reference literature and access to expertise on environmental issues;
- setting up and participating in inter-municipal projects to further develop and test the tools for sustainable urban management; and
- encouraging and facilitating exchanges and secondments of staff (such as those arranged through the European Municipal Officials Exchange Programme).

Spatial Planning

Sustainability requires a move to planning systems in which environmental carrying capacities at local, regional and global levels are accepted as guiding principles within which other considerations may be traded off. Capacity-based approaches are already being applied in certain Member States and should be encouraged. Other measures recommended for local authorities include:

- Local authorities should ensure that planning is objectives-led. Objectives should formulate strategic directions and specific levels of environmental quality, economic growth and social progress. Through them, plans should describe intended states of the environment;
- Local authorities should ensure that plans include both national and locally-derived targets related to sustainability, and should develop indicators to measure both the extent of problems and the degree of success in dealing with them;
- Local authorities should develop planning policies based on long-term principles with strategic short-term programmes and continued feedback;
- Local authorities should adopt ecologically-based approaches to planning;
- Local authorities should develop policies promoting flexibility of use in areas and buildings throughout the city, and should promote the concept of green building in order to ensure the design of buildings for durability, adaptability and multiple use. Local authorities should also facilitate longer write-off periods to extend the life of structures; and
- Local authorities should use the planning system to influence urban form and function as a long term mechanism since new development is a relatively small proportion of the total urban stock, but it is essential for the development of more radical measures in the future.