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Measuring the Outcomes of Spatial Planning in England

Final Report

Centre for Urban Policy Studies, University of Manchester
Department of Town and Regional Planning, University of Sheffield



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**A report for
The Royal Town Planning Institute and
The Department for Communities and Local Government**



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SECTION 1

Key tasks to be addressed in this Report

Context of Study
Research Methodology
Structure of the Report

Context of Study

- 1.1 Spatial planning involves 'critical thinking about space and places as the basis for action or intervention', according to the Royal Town Planning Institute's *New Vision for Planning* (RTPI, 2007). *Planning Policy Statement 1: Delivering Sustainable Development* (ODPM, 2005a) also emphasises that 'spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they can function'. The planning system is now more than ever concerned with promoting the role of planning as a coordinator, integrator and mediator of the spatial dimensions of wider policy streams. The focus is thus with addressing the factors that influence the nature and functioning of the places we live in and what is referred to as their 'liveability'.
- 1.2 The introduction of the Annual Monitoring Report (AMR) framework has helped local planning authorities (LPAs) to ascertain progress made in achieving the targeted outputs of their core planning strategies. However, it does not directly measure outcomes as stipulated in the 2006 *Local Government White Paper* (HM Government, 2006). This new performance framework proposed a radical reduction of national performance indicators to a set of 198 indicators that are outcome-oriented. The two indicators used to measure the objective of 'providing a more efficient, effective and transparent planning framework to support sustainable development' are related to the delivery of housing and the efficiency target of processing planning applications. It is clear that the scope of these two indicators is too narrow to reflect the holistic objectives of spatial planning in achieving sustainable development as stated in PPS1 and they are not spatially-oriented. At the national level, it is also interesting to note that the Public Service Agreement (PSA) does not have a specific target relating to the spatial planning system, although it is clear that most PSA targets represented outcomes that the planning system was expected to jointly or in part contribute towards.
- 1.3 This poses a very important question of how to devise a monitoring system for spatial planning strategies that can truly reflect spatial planning outcomes in terms of integrating multi-spatial levels and cross-sectoral policies. The need to measure the outcomes resulting from policy integration within a spatial policy framework is currently omitted from both the AMR and the Local Government Performance Framework. More importantly, the spatial planning system requires the core strategies of the Development Plan Document to be founded on a robust and credible evidence base and should be deemed as most appropriate when considered against the reasonable alternatives.
- 1.4 These latest government changes point to the fact that it is important to develop a robust methodology that will allow LPAs, regional planning bodies (RPBs) and their partners to evaluate and monitor the outcomes of their spatial planning strategies and to support the development of justifiable and deliverable plans. However, the measurement of the effectiveness and outcomes of planning has long been seen as a challenging task due to the complexity involved in spatial planning activities and the limitation of any single method as a means of effectively measuring the outcome and impact of these activities.
- 1.5 The main purpose of this study is, therefore, to examine the possibility of identifying a coherent and integrated set of indicators for spatial planning outcomes in England and to develop a robust

analytical framework to assist the interpretation of the indicators. To achieve this, the project harnessed existing research and assessment of planning performance and outcome measures and the wide-ranging indicators and datasets in the public domain that have relevance for the measurement of spatial planning outcomes.

- 1.6 The research also took into account the broad and dynamic policy context within which spatial planning operates; in particular, the *Local Government White Paper*, the *Planning for a Sustainable Future White Paper* (HM Government, 2007) and the *Comprehensive Spending Review* (HM Treasury, 2007a). In addition, the study reviewed the use, value and ownership of the existing AMR core output indicators at both regional and local levels to form a strategic overview of the different functions served by output and outcome indicators in monitoring spatial planning strategies.

Research Methodology

- 1.7 A five step methodological approach was devised to address the research, which is summarised in Figure 1.1. The stages were:

- (1) To develop a **strategic performance framework** by identifying the main objectives and desirable outcomes of spatial planning in England and the evidence base that underpins them; clarifying the precise meaning of ‘outcomes’, ‘impact’ and ‘performance’; establishing the relationship between inputs, process, outputs and outcomes of the planning system at multi-spatial levels; and developing a set of analytical principles to guide the analysis and use of indicators.
- (2) To set out an **appraisal framework** of outcome indicators by specifying the key criteria and methodological approach to be used to guide the selection of candidate outcome indicators that will meet the strategic performance framework developed in (1). The appraisal framework aims to examine the conceptual relevance, policy integration (both vertically and horizontally), contribution to accountable decision-making, and technical robustness of potential indicators.
- (3) To identify the candidate outcome indicators by conducting a **scoping and appraisal exercise** of national policy and performance indicators and other relevant datasets in the public domain. This will involve a review of all relevant indicators and datasets in the initial scoping exercise, followed by the implementation of the appraisal framework as set out in (2).
- (4) To **validate the relationship** between the candidate outcome indicators and planning inputs through conceptual and statistical causal path analysis and consultation workshops with key actors.
- (5) To **recommend the outcome indicators and their associated analytical principles and framework** (as set out in the Strategic Performance Framework), and to highlight key issues and procedures to be addressed for the ongoing development and review of the strategic performance framework and the outcome indicators for spatial planning.

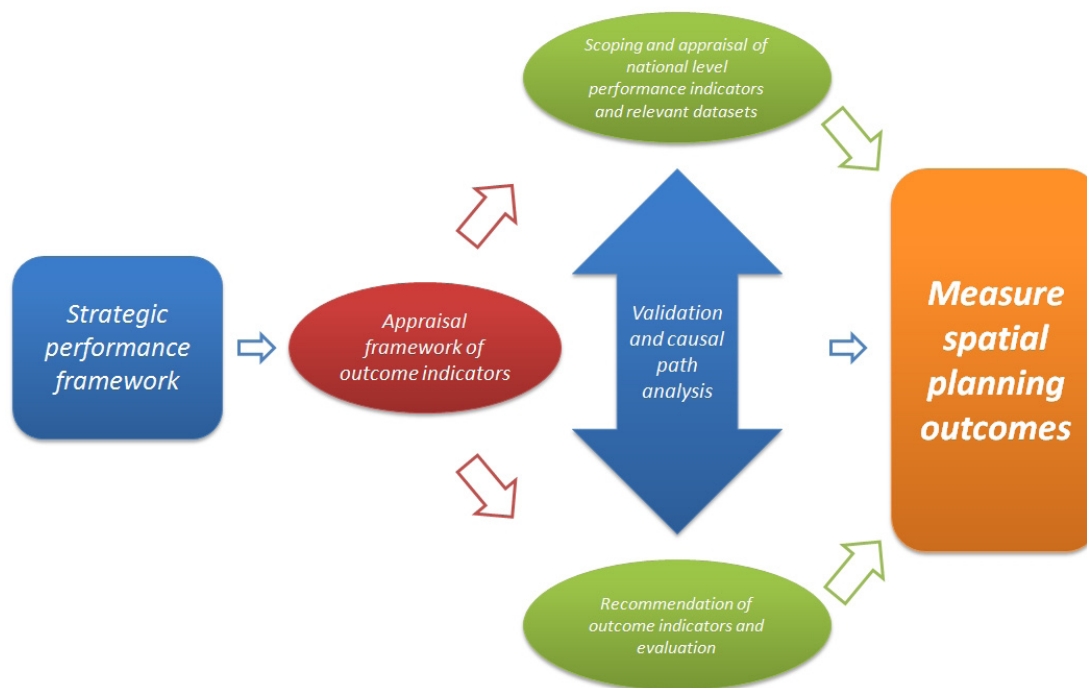


Figure 1.1 Methodological Framework of the Study

- 1.8 In order to elicit a wide range of views over issues concerning the monitoring of spatial planning strategies, the problems encountered in compiling indicators for existing AMRs, and the prospects of developing an approach to monitoring the outcomes of spatial planning, a number of methods were used by the research team to collect the data. This data allowed corroboration and triangulation of views and evidence presented by actors from different institutional backgrounds.
- 1.9 A rich seam of information was firstly collected by an e-questionnaire survey (resulting in a very high response rate of 47 percent and a total of 186 valid questionnaires) with LPAs and in-depth telephone interviews with RPBs and Government Offices. Some follow-up interviews were also conducted with LPAs to clarify and elaborate the answers they made in the questionnaire.
- 1.10 These findings helped to inform the subsequent workshops held at Manchester and London with practitioners who were actively involved in AMR and helped facilitate a more interactive discussion on the issues surrounding the existing AMR core output indicators and performance measures of spatial planning. An additional third workshop, focusing on the measurement issues of spatial planning outcomes, was held at London with a wider range of planning stakeholders. A final (fourth) workshop was held at London with senior practitioners to test the robustness of the indicators and the analytical framework. Details of these workshop discussions are given in Annex 1 and Annex 8.
- 1.11 The triangulation of these different data sources show that the viewpoints expressed are very similar and coherent, in spite of the fact that a wide range of stakeholders were involved. This also demonstrates the robustness of the data collection methodology.

Structure of the Report

- 1.12 There are four further sections to this report. Section 2 seeks to clarify the objectives and desired outcomes of the spatial planning system as a whole. This involves conceptualising spatial planning and its objectives and unpacking the relationship between sustainable development and spatial planning, and that between outputs and desired outcomes at different (regional and sub-regional) spatial scales.
- 1.13 Section 3 of the report outlines the recommendations made in relation to the 'strategic performance framework'. The terminology and purpose of different types of indicator used in spatial planning monitoring, as well as the precise meaning of 'outcomes', 'impact' and 'performance' and their inter-relationship will be examined. The relationship between inputs, process, outputs and outcomes of the planning system at multi-spatial levels is also considered. It will then examine the rationale that underpins the current local development framework (LDF) monitoring and the wider local government performance framework. The gaps in the existing LDF monitoring framework as well as the key conceptual and methodological issues to be addressed in relation to the measurement of planning outcomes will be identified. This section also outlines the appraisal criteria and guiding principles over the selection of potential outcome indicators.
- 1.14 An outcome framework comprising 20 outcome indicators is introduced in Section 4 of the report. This section also explains how the scoping and appraisal exercise of the potential indicators were carried out. The rationale that underpin the selection of these 20 outcome indicators as well as the conceptual and statistical validation exercise will also be discussed.
- 1.15 Finally, Section 5 sets out a '**Spatial Planning Outcome Framework**' designed to facilitate partnership working across different planning bodies and their partners and to help develop a collaborative, analytical and communicative framework for partners to express their vision in the policy formulation process. A set of analytical principles underpinning the identified outcome indicators will be explained to make sure that the indicators are effectively interpreted and presented. Further explanation and illustrative examples will be given to demonstrate ways in which to apply the analytical principles set out in the strategic performance framework.

Section 2

Conceptualising spatial planning and its outcomes

Objectives of Spatial Planning
The Desired Outcomes of Spatial Planning
The Importance of Inputs and Process
Regional and Sub-Regional Outcomes
Functional versus Administrative Areas
Robust and Credible Evidence Base
Conceptualising spatial planning outcomes

2.1 This section is concerned with the need to ground the measurement of spatial planning outcomes within the relevant conceptual and policy contexts. This involves the clarification of the main objectives and desired outcomes of spatial planning, both theoretically and in policy terms. It also examines how the spatial scale and timeframe affects the conception of outputs and outcomes.

Objectives of Spatial Planning

- 2.2 Spatial planning is seen as a place shaping and space mediating mechanism. In order to establish the desirable outcomes of spatial planning, it is important to consider what the objectives of the spatial planning system in England are. There are also questions of how to, and who should, establish the relative importance between different competing objectives. By pooling key ideas from recent research, including policy and theoretical literature, the discussion here aims to pin down the nature and purpose of spatial planning, the concepts of sustainable development (the linkages of social, economic and environment and their tensions) and sustainable communities, and how these are related to the actual delivery of planning.
- 2.3 There are various perceptions of the scope of planning. At one level planning might be conceived as a set of relatively narrow statutory functions. Alternatively, the recent Barker Review (2006) was concerned with the activities of Land Use Planning and their effects on economic competitiveness. This project is, however, concerned with the broader set of activities referred to as 'spatial planning'.
- 2.4 There have been numerous attempts to define spatial planning. The RTPI's *New Vision for Planning* defines spatial planning as 'critical thinking about space and places as the basis for action or intervention' (RTPI, 2007). A recent RTPI commissioned research (UCL and Deloitte, 2007: 1) suggests that 'spatial planning is the practice of space shaping and delivery at the local and regional levels that aims to:
- enable a vision for future regions and places that is based on evidence, local distinctiveness and community derived objectives;
 - translate the vision into a set of policies, priorities, programmes and land allocations together with the public resources to deliver them;
 - create a framework for private investment and regeneration that promotes economic, environmental and social well being for the area; and
 - coordinate and deliver the public sector components of the vision with other agencies and processes.'

- 2.5 These definitions imply that the planning system is now more than ever concerned with promoting the role of planning as a coordinator, integrator and mediator of the spatial dimensions of wider policy streams. The focus is thus now with addressing the factors that influence the nature and functioning of the places we live in and what is referred to as their 'liveability' (ODPM, 2006). This is further endorsed by the government's place shaping agenda (HM Government, 2006, 2007) and reinforced by the Lyons Review's (2007) assertion that the spatial planning system should be at the centre of this agenda.
- 2.6 This broader role represents an explicit extension of the scope of planning beyond its traditional focus on mediation, management and monitoring land use and physical change within localities. Spatial planning's goal is thus to support 'sustainable development' and to help create 'sustainable communities'. This requires achieving a range of social, economic and environmental objectives that are set out in detail in a number of key policy documents. In particular, *PPS1: Delivering Sustainable Development* states that,
Spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they can function. (ODPM, 2005a: para. 30)
- 2.7 While sustainable development is seen as a unifying, long-term concept, it is also too holistic and vague to be operational (Campbell, 1996). There are important inter-relations and competitive tensions between the demand for environmental protection, economic development and social equity in both general and sector specific terms. Scott Campbell (1996) argues that these cannot be resolved unless the idealistic notion of the sustainable past and associated vague holism of policy objectives are replaced with an alternative formulation of desired outcomes. His proposed formulations include viewing sustainable development in progressive (incremental) and long-term reproduction terms, as well as distinguishing it in specific and general terms. This means that planning performs the role of managing and resolving conflicts and to promote creative solutions to achieve the vision of sustainable development. In this context, this project is concerned with assessing the outcome of spatial planning against the objectives set out in key policy statements rather than the more idealised notion of sustainable development.
- 2.8 It is recognised that spatial planning delivered through a wide variety of processes, tools, activities and decisions that seek to actively shape the nature, functions and interactions of places. The goals of spatial planning and its impacts are by their nature broad, varied and complex. Spatial planning is not just about an identifiable set of policies and this project is not concerned merely with the outcomes of policy. Rather it is concerned with the role of a broad set of spatial planning activities in influencing place making outcomes. While spatial planning provides a framework to achieve the objectives of sustainable development, its delivery is heavily reliant upon the actions of a plurality of actors and agencies across different operationally independent policy sectors. This horizontal axis of interaction is then intersected by the vertical complexity of activities across different tiers of government.
- 2.9 The implementation of the spatial objectives contained within planning policy is not only highly dependent upon the coordinating role of central government, but also local discretion over the interpretation of such policy guidance and the resources and action of developers and other stakeholders. Furthermore, all the foregoing assumes that there is some degree of consistency between broad policy objectives (and governance structures associated with their delivery) across different sectoral interests. The reality is that there remain complex relationships between policies, and even high-level policy outcomes may be contradictory (for example, policies on expansion of infrastructure for air travel versus policies for reducing carbon emissions).
- 2.10 Spatial planning does not operate in isolation from other public policies. Even if we were to focus on the direct outcomes of planning policy, it is impossible to isolate its effects or to assess the counterfactual (policy-off) situation to establish a benchmark for comparison (Morrison and Pearce, 2000). This means that it becomes very important to devise a methodology that can

monitor the effect of planning on change. The challenge of isolating the impacts of planning is best summed up in a report by Roger Tym and Partners (2002) for the House of Commons Select Committee on planning competitiveness and productivity. From an economic point of view, planning is an instrument to rectify market failures by delivering public goods and infrastructure; internalising negative and maximising positive externalities; optimising global outcomes for society such as community development and natural resources planning; and distributing resources in an equitable manner. However, based on a review of research literature they found that (House of Commons, 2003: 6):

- there is little reliable data available;
- it is difficult to distinguish the impact of planning from the impact of many other influences;
- benefits of planning are especially hard to pin down;
- there are social and economic costs and benefits from planning aside from the economic ones, and these are very important but even more difficult to quantify; and
- it is in any event difficult to put one's finger on the consequences of individual planning decisions or plan allocations.

2.11 Spatial planning indicators tend to be very good at picking up issues that can be best monitored through numbers (Wong et al., 2006). For instance, through the monitoring exercise, the North West Regional Assembly found that some LPAs had a significant over-provision of dwelling stock in relation to the targets in Regional Planning Guidance. This type of monitoring highlights the need to explore the reasons for failure to implement planning policies. It also suggests that the policy itself may need to be reviewed to take into account of changing situations.

2.12 However, the monitoring approaches adopted so far are less good at ascertaining policy outcomes that are less tangible. They have been ineffective where spatial policy is more about protecting the positives of existing assets and/or mitigating the negative impacts brought by development (Roger Tym and Partners, 2002: para. 3.2). This view found support from several participants in the Stakeholder Outcome Indicators Workshop (see Annex 2). The Workshop discussion highlighted the fact that regulatory planning functions, designed to protect the environment or defend urban vitality, actually contribute to improve quality of life and quality of places. However, these intangible outcomes are often forgotten or over-looked.

The Desired Outcomes of 'Spatial' Planning

2.13 Since the 1990s a range of policy documents, including both newer Planning Policy Statement and older, but still extant, Planning Policy Guidance, have revealed, although not always explicitly, the broader objectives of the planning system. In many cases, sectoral guidance is quite detailed and often more obviously relevant to the development of 'output' rather than 'outcome' indicators. The overarching role of the planning system in contributing to the government's sustainable development objectives is, however, a common theme of all guidance since at least the late 1990s. This has recently been given even greater emphasis by the new statutory requirements of section 39 of the *Planning and Compulsory Purchase Act 2004*.

2.14 *PPS1* (ODPM, 2005a: para.5) states that 'planning should facilitate and promote sustainable and inclusive patterns of urban and rural development by:

- (1) making suitable land available and its efficient use for development in line with economic, social and environmental objectives to improve people's quality of life;
- (2) contributing to sustainable economic development;
- (3) protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;
- (4) ensuring high quality development through good and inclusive design, and the efficient use of resources; and

(5) ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.'

- 2.15 A number of key themes (here interpreted as desired outcomes) have emerged from our review of national policy statements on various aspects of the operation of the planning system, both generally and sectorally (Annex 3 provides further details of sectoral objectives). These themes can be re-grouped under the five main objectives stated in *PPS1* to provide a framework of desired outcomes of sustainable development (see Box 2.1). These key themes are further reinforced in the 2007 *Planning White Paper* that 'our vision is for a planning system which supports vibrant, healthy sustainable communities, promotes the UK's international competitiveness, and enables the infrastructure which is vital to our quality of life to be provided, in a way that is integrated with the delivery of other sustainable development objectives, and ensures that local communities and members of the public can make their views heard' (HM Government, 2007: para. 1.3).
- 2.16 The objectives set out in *PPS1* were developed in the context of the *UK Sustainable Development Strategy* which sets out the vision for the UK as 'a sustainable, innovative and productive economy that delivers high levels of employment; and a just society that promotes social inclusion, sustainable communities and personal well-being. This will be done in ways that protect and enhance the physical and natural environment, and use resources and energy as efficiently as possible.' (HM Government, 2005: 16). Given the shared objectives of the *UK Sustainable Development Strategy* and spatial planning, the outcome monitoring framework for spatial planning in England should be transferable across the UK and form a strong backbone to link up with other sectoral policy monitoring in the region.
- 2.17 It is, however, important to note that policy objectives cannot be equated to the outcomes of what actually happen, though objectives tend to set out the desired outcomes to be achieved via policy intervention. HM Treasury's *Green Book* on policy appraisal and evaluation defines outcomes as 'the eventual benefits to society that proposals are intended to achieve. Often, objectives will be expressed in terms of the outcomes that are desired' (HM Treasury, 2007b: para. 4.3). This definition only offers a partial picture of outcomes as it ignores the important fact that policies can also create unintended outcomes which could be positive or negative, but they are definitely not expected or specified in the objectives. One of the main functions of monitoring is to detect these unintended consequences brought by policy action as well as those that are desired. However, without the benefit of hindsight, objectives have to be used as a framework to help identify suitable measures of outcomes.

Box 2.1 Key themes emerged from national policy statements

- (1) making suitable land available and its efficient use for development in line with economic, social and environmental objectives to improve people's quality of life:
 - ensuring the appropriate location of development
 - encouraging an appropriate mix of development
 - ensuring appropriate land supply and availability for various uses and activities
 - increasing the supply of housing
 - steering development towards 'brownfield' land

- (2) contributing to sustainable economic development:
 - encouraging economic growth
 - increasing competition, consumer choice and competitiveness
 - contributing to urban renewal
 - contributing to a rural renaissance
 - reducing the need to travel
 - improving our local and national infrastructure

- (3) protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities:
 - protecting 'greenfield land' from unnecessary development
 - preventing urban sprawl
 - environmental protection (natural and built/historic)
 - enhancing biodiversity
 - improving landscape and environmental quality
 - responding to climate change

- (4) ensuring high quality development through good and inclusive design, and the efficient use of resources:
 - enhancing the quality of places
 - high quality design
 - energy reduction
 - promoting sustainable modes of travel
 - contributing to other national strategies (e.g. waste, renewable energy)

- (5) ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community
 - creation of sustainable communities
 - enhancing the quality of life
 - meeting the needs of the community
 - provision of local services
 - social inclusion
 - accessibility

Source: compiled by the research team

- 2.18 In addition, attention should be paid to the fact that the objectives of sustainable development and the key themes emerging from national policy statements are generic and universal, but 'non-spatial'. If we also adopt indicators that are '*aspatial*', there is a danger that one cannot truly differentiate the performance of the government's macro-economic policy outcomes (e.g. measured by GVA per capita) from the more planning related outcomes of reducing regional inequality. Since statutory spatial plans only exist at the regional and sub-regional levels, this raises the issue of whether it is meaningful to devise indicators to measure the outcomes of spatial planning at the national level, without knowing what exact spatial outcomes are deemed as desirable nationally. As a recent review of literature on planning and economic competitiveness suggests, 'planning restraint in congested areas might function as a form of covert regional policy..... Recent work from the Treasury and the DTI has noted that there are currently severe regional productivity imbalances, and continued planning constraint in some areas may assist in the rectification of these imbalances' (Roger Tym and Partners, 2002: para 2.48). This suggests that where there is an absence of explicit national spatial policies, the outcomes of planning policies at the local and regional levels can still alter the national spatial landscape and some forms of 'spatial' indicators will be needed to gauge these spatial distribution issues.
- 2.19 There are different ways to gauge the outcomes of spatial planning. One option is to devise indicators measuring overall spatial disparities (e.g. spatial Gini coefficients, indices of dissimilarity – see Annex 4) of socio-economic and environmental change across England. The implementation of which will require decisions about the basic spatial unit of measurement: regions, functional areas (e.g. travel to work areas), districts, wards or super output areas.
- 2.20 An alternative is to monitor national outcomes of spatial planning by focusing the collective outcomes achieved within each region. This will rely on a structure within which the RPB, the LPAs and other key stakeholders work together to join up their policies within a spatial framework and to monitor the spatial outcomes. Of course, it is also possible to combine these approaches.

The Importance of Inputs and Process

- 2.21 The new spatial planning system represents a shift from the old 'plan-present-defend' approach to one that places more emphasis on partnership working and consensus building (RTPI, 2007). Participants in the project workshops also highlighted the need to have a greater focus on the development of the overarching vision for plans and planning. Process efficiency and effectiveness is seen as being central to the delivery of the visions of sustainable development and greater 'liveability'. This means the ability of plans to be flexible and adaptable to contribute to the achievement of these wider outcomes has to be assessed.
- 2.22 There is considerable research evidence showing that the processes, skills and capacity within LPAs will have a significant impact on planning outcomes. A recent study of the value of planning obligations developed a quantitative model which showed that number and value of obligations secured was less strongly influenced by the state of the local economy or local land and property markets than expected (University of Sheffield with Halcrow, 2006). Rather, policy efficacy was strongly correlated to the efficiency of the LPA as measured by Best Value Indicators. The 'effective' LPAs also tended to have a designated Planning Obligations specialist and to have invested in the development of effective internal processes (such as IT-based monitoring systems). Policy efficacy, of course, also makes a significant difference to development outcomes.
- 2.23 The importance of process has also fed in to several attempts to explore the economic effects of planning policies on property market outcomes (Bramley, 1998; Jackson and Watkins, 2007). For example, Jackson and Watkins' study of the retail property market uses survey data to construct qualitative measures of planning officers' attitudes towards new development. The

indicators, constructed by factor analysis, are composite responses to a series of 'attitudinal' questions. Through analysis of an econometric model, the measures differentiate between policies designed to regulate markets and those intended to stimulate or create a setting for private sector investment. The results suggest that in many LPA areas the demand-side effects of a proactive stance towards development outweighed the expected inflationary 'price' effects of supply-side constraints. The authors argue that proactive spatial planning policies can help secure market investment in projects that have social and economic benefits even when market fundamentals are not particularly supportive. Some authorities have successfully overcome significant economic and physical land market constraints. These outcomes, of course, only become apparent when survey-based attitudinal/process indicators are consulted. At the very least it suggests that there is importance in including some attitude-based process measures in determining the outcomes of spatial planning. Several respondents to the AMR survey suggest that attitudinal data can be used to gauge perceptions of the outcomes policies designed to protect the green space.

- 2.24 The importance of the process in relation to outcomes of planning was also emphasised in recent research by Carmona (2007). He argues that the added value achieved by planning can be viewed in connection with a particular proposal in terms of the difference (in qualitative terms) between the approved application (or final outcome) and the submitted proposal. This is, however, usually a result of the short-term negotiation process over the proposal. Like Jackson and Watkins (2007), Carmona also suggests the use of stakeholder satisfaction survey to gauge attitudinal data. However, he also casts doubt over the objectivity of such survey, especially when local authorities and planners themselves are involved in making such self-assessment.
- 2.25 This is also clear in the evidence received by the House of Commons Select Committee (2003) over the relationship between planning and economic competitiveness. This led to the conclusion that 'the concerns expressed were almost entirely about day-to-day operational issues such as delays, direct costs to firms, and uncertainty' (p.7) and that 'the best local authorities already run their planning departments in proactive, responsive ways and if the resources are put into place, such approaches can be adopted by others' (p.12). The *Effective Practice in Spatial Planning* (UCL and Deloitte, 2007) report suggests that some outcomes may be process driven in nature. Hence, its recommendations have been strongly focused on the development of joint communication strategy between different partners and across different policy sectors.
- 2.26 Besides the process, capacity and resource inputs to planning are also seen as important. In the European benchmarking project of effective metropolitan spatial planning (METREX, 2006: 5), the competence, capability and process activities of spatial plan-makers are seen as important elements of change delivery (see Figure 2.1). It is interesting to note that professional resources and information and research intelligence are seen as one of the key pillars of competence capacity. To go a step further, academics in America have attempted to measure planning capabilities in southern Florida (Brody et al., 2004). In spite of the limitations of a small sample size, the research findings suggest that having large planning staff is a critical factor in driving high plan quality scores.
- 2.27 In summary, recent research evidence clearly points to the importance of taking into account both inputs and process activities to develop a more holistic strategic performance framework of planning.

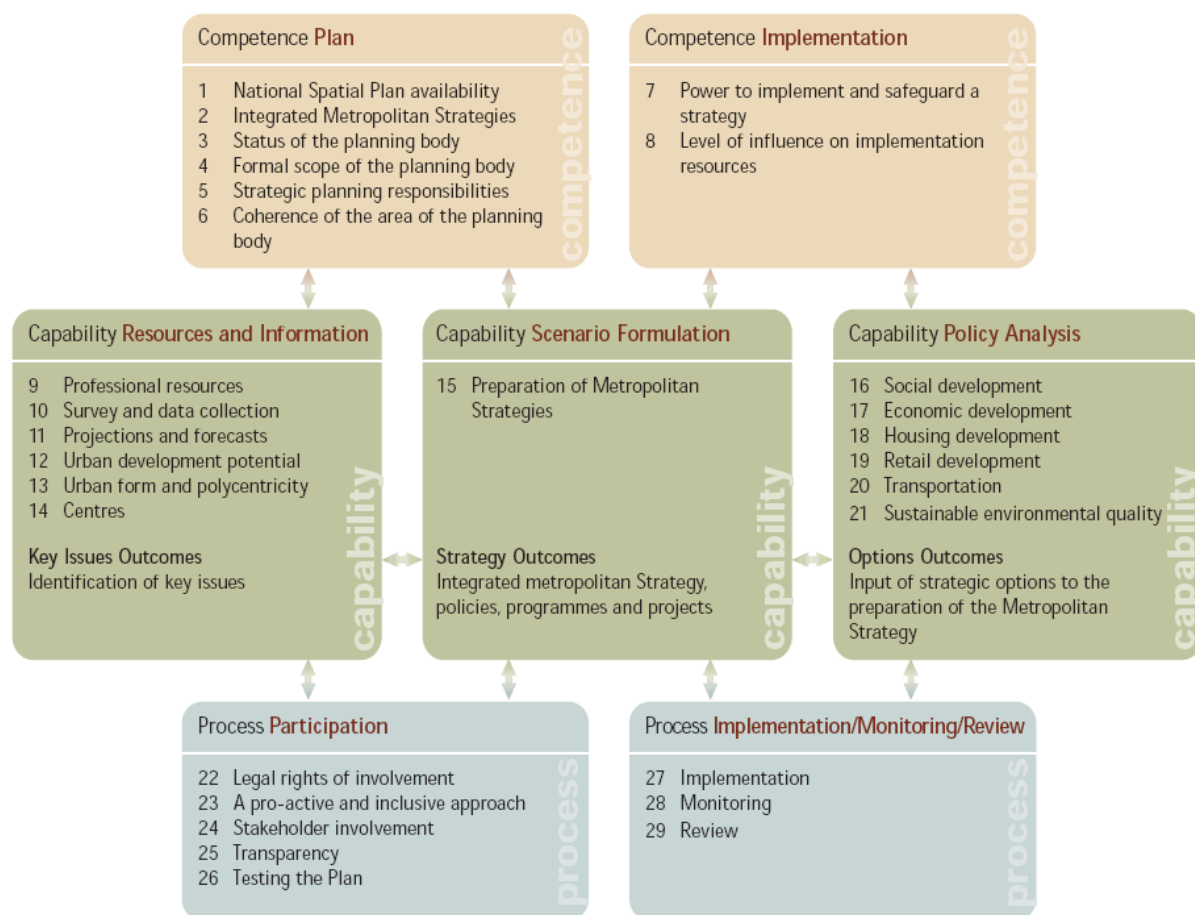


Figure 2.1 European benchmarking project of effective metropolitan spatial planning

Regional and Sub-Regional Outcomes

2.28 The differential outcomes occurring at a variety of spatial scales have practical implications for reaching agreement about the form that the desired outcomes of planning might take. There will inevitably be tensions between the desired outcomes of the spatial planning system as a whole and the differential outcomes that may occur at regional and sub-regional levels. At times the vertical integration of policy objectives and interventions is imperfect. These imperfect relationships may arguably contribute to spatially uneven outcomes.

2.29 The need to integrate policies spatially has been discussed extensively. The RTP (2007), for instance, has argued that LDFs and Sustainable Communities Strategies (SCS) should come together in the form of 'integrated strategies', sharing delivery mechanisms (through Local Area Agreements LAAs) and leading to a shared set of outcomes. Hence, there is likely to be a high degree of commonality between 'spatial planning' and 'sustainable community' in terms of outputs, outcomes and specific practice recommendations. The development of a shared evidence base for joint monitoring of SCS, LDF and LAA to monitor shared outcomes would be very important. Spatial planning is seen to provide a spatial element to data collection and analysis that informs strategy development.

2.30 At the regional level, the Treasury's Sub-National Review (HM Treasury, 2007c) recommends the Regional Development Agencies to charge with executive responsibility to develop a single regional strategy by working closely with local authorities and other partners. This will also have implications to how policy outcomes will be monitored at the regional level in the future.

2.31 It is recognised that establishing some agreement on the desired outcomes of spatial planning needs to play an important part in such relationships (RTPI, 2007). There are three significant issues. First, outputs are contractually specified in LAAs, and the planning system is expected to contribute to the delivery of these. The document provides a very long list of the areas in which planning makes a contribution to LAA outcomes, including the provision of facilities; infrastructure; design; accessibility to jobs and services; the involvement of communities and stakeholders, etc. Second, the outcomes of sustainable communities are central to SCS, which LSP have statutory responsibility for and planning is expected to be centrally involved in delivering these outcomes. Third, spatial planning outcomes, including social, environmental and economic outcomes, need to be reflected in SCS. The fact that sustainable development is broader than what planning is able to deliver means that the monitoring of the broad objectives of sustainable development and sustainable communities is best suited to be carried out at the corporate level of local authorities or in a cross-organisational approach (Carmona, 2007). This point was explicitly made by participants in the three Workshops concerning AMR monitoring and spatial planning outcomes.

Functional versus Administrative Areas

2.32 One main area of concern is that administrative areas tend to be used as the spatial entities to deliver planning policy and initiatives, but they do not necessarily define functional entities such as housing and labour market areas or river catchment areas (Wong et al., 2006). There is thus a need to consider this because many of the outcomes that spatial planning aims to bring about will have impacts over wider market areas that are poorly represented by administrative geography. The movement of population, investment, pollutants and traffic means that it is increasingly difficult to handle spatial planning issues within a tightly bounded local or even regional planning framework. Furthermore, the relationship between local authority administrative boundaries and functional areas is highly variable. Some local authorities will be over-bounded and others under-bounded.

2.33 In the past, many evaluation studies have focused on the assessment of policy impacts against the key objectives rather than using a broader interpretation that would include the combined effects of socio-economic and environmental changes and other forces. In ascertaining policy outcomes, it is arguably important that there is alignment between the space over which a particular policy is able to have an effect and the appropriate functional area (such as market areas). One of the consequences of failing to adequately reflect functional or market areas within measures of the spatial planning system is that policy can unwittingly encourage displacement activity. For example, a policy that seeks to balance the size and tenure mix of new housing development will be limited in its effectiveness if the market for housing extends beyond the local authority area and the housing mix policy in an adjacent area has different objectives. Monk and Whitehead (1999) illustrated in their research that differences in local planning regimes and market outcomes can lead to housing-led migration flows between neighbouring local authorities and that these exacerbate local house price differentials. Annex 5 provides further discussion on the use of functional areas.

2.34 Furthermore, functional areas are not easy to define and the methods that have been employed to delineate them (in the housing and labour market contexts in particular) are highly contested. As a result, in the absence of datasets that cover functional economic areas, the ideal would be to collate information at sub-district (e.g. neighbourhoods), local authority and regional levels. The consideration of data at different spatial scales is the only way to be certain that important differences in outcomes are not obscured by excessive spatial aggregation. In practice, the paucity of local data does not allow this option and the move towards ideal indicators in these cases frequently can only be facilitated by large scale investment in national data collection infrastructure and further embedding of data collection in routine practice. This may involve a difficult process of disentangling data assembly from the administrative geographies used for service delivery to more meaningfully, socially and economically, constructed units that relate to the communities or neighbourhoods and market areas that are subject to change.

2.35 One solution, endorsed by the workshop participants, is that planning outcomes ought to be examined at different spatial levels for different issues (see section 3 for further details). There are also limitations associated with relying on administrative areas as the unit of measurement. In addition, there are sectoral policies that focus on network planning, the most obvious example being transport strategy. It is thus important to measure the spatial outcomes created by the interactive effect of these strategies. The spatial processes of change and the socio-economic and environmental driving forces do not stop at administrative boundaries.

Robust and Credible Evidence-Base

2.36 The new spatial planning system requires the Development Plan Document (DPD) to demonstrate that its core strategy is sound. The nine tests of soundness are grouped under the headings of 'procedural', 'conformity' and 'coherence, consistency and effectiveness' as set out in PPS12 (ODPM, 2004: para. 4.24). Box 2.2 provides a summary of these tests.

2.37 Tests one to three focus on the process of plan preparation and assess whether the DPD has been prepared according to the timetable set out in the local development scheme, gone through proper community consultation, and considered the environmental, social and economic effects of the policies in the document. Tests four and five, however, examine both vertical and horizontal policy integration: between the DPD and other plans and policies, particularly the policies of central government and at regional level; and between the DPD and the authority's community strategy. Tests six to nine then shift the focus to take account of a wider spectrum of issues by ensuring that: the DPD is consistent with neighbouring authorities' DPDs; there is robust evidence to support the proposals and alternatives are paid due consideration; there are systems in place to monitor the implementation of the DPD; and the policies are flexible enough to deal with changes in local circumstances.

2.38 It is interesting to note that these tests very much align with the discussion set out earlier in this section about how to ascertain spatial planning outcomes. The procedural tests have resonance to the importance of input and process factors in delivering successful spatial planning as well as meeting the principles of sustainable development; the conformity tests are highly related to the discussion of multi-spatial scales and the debate over administrative and functional areas; and the coherence, consistency and effectiveness tests are very much about developing a robust evidence base to demonstrate the rationale that underpins the policies, to monitor the implementation of policies, and to make flexible adjustments to policies when circumstances change.

2.39 The nine tests of soundness are effectively repackaged, in the draft PPS12, under the two basic principles of 'justification' and 'effectiveness' (CLG, 2007a, Annex 2). Under the latest proposal to streamline the LDF, the core strategies have to be justified on the ground that they must be founded on a robust and credible evidence base and that they are deemed as most appropriate when considered against the reasonable alternatives. The core strategies must also be effective in terms of being deliverable, flexible, and able to be monitored. These changes again point to the fact that it is important to improve the methodological approach used by LPAs, RPBs and their partners to monitor their spatial planning strategies, so that effective and well justified spatial strategies can be delivered to achieve the objectives of sustainable development.

Box 2.2 The Nine Tests of Soundness

Procedural tests

- (1) The Development Plan Document (DPD) has been prepared in accordance with the Local Development Scheme (LDS);
- (2) The DPD has been prepared in compliance with the Statement of Community Involvement (SCI), or with the minimum requirements set out in the regulations where no SCI exists;
- (3) The plan and its policies have been subjected to Sustainability Appraisal.

Conformity tests

- (4) It is a spatial plan which is consistent with national planning policy and in general conformity with the Regional Spatial Strategy (RSS) for the region or the Spatial Development Strategy (SDS) if in London, and it has properly had regard to any other relevant plans, policies and strategies relating to the area or to adjoining areas;
- (5) It has had regard to the authority's Community Strategy.

Coherence, consistency and effectiveness tests

- (6) The strategies/policies/allocations in the plan are coherent and consistent within and between DPDs prepared by the authority and by neighbouring authorities, where cross boundary issues are relevant;
- (7) The strategies/policies/allocations represent the most appropriate in all the circumstances, having considered the relevant alternatives, and they are founded on a robust and credible evidence base;
- (8) There are clear mechanisms for implementation and monitoring;
- (9) It is reasonably flexible to enable it to deal with changing circumstances.

Source: The Planning Inspectorate, 2005

Conceptualising Spatial Planning Outcomes

- 2.40 The discussion so far highlights that there are different ways to gauge the outcomes of spatial planning. This summary section sets out the key parameters used in defining the desired and intended outcomes of spatial planning for England.
- 2.41 Planning performs the role of managing and resolving conflicts and promoting creative solutions to achieve the vision of sustainable development. In this context, this project is concerned with assessing the outcomes of spatial planning against the objectives set out in key Government policy statements and the Planning White Paper rather than the more idealised notion of sustainable development. It is, however, important to note that policy objectives cannot be equated to the outcomes of what actually happens, though objectives tend to set out the desired outcomes to be achieved via policy intervention. One of the main functions of monitoring is to detect these unintended consequences brought by policy action as well as those that are desired. However, without the benefit of hindsight, objectives have to be used as a framework to help identify suitable measures of outcomes.
- 2.42 The 'outcomes' of spatial planning are distinct from inputs, outputs, impacts and performance. The outcomes of spatial planning are derived from the objectives of planning. They are broadly drawn and will reflect more than just policy objectives, identifiable inputs or directly measurable outputs. Outcomes should be viewed as the combined effects on socio-economic and environmental changes brought about by the planning system and other forces that seek to achieve sustainable development. In a plan-led system, the outcomes of spatial policies can only be effectively measured and interpreted if the indicators are plan-derived.
- 2.43 The monitoring approaches adopted so far are not very good at picking out those policy outcomes that are invisible or those where spatial policy is more about protecting the positives of existing assets and/or mitigating the negative impacts brought by development. The indicators

developed will seek to capture the fact that the 'invisible' and 'qualitative' effects of planning contribute to quality of life and quality of places. The associated measurement difficulties mean that it is likely to be necessary to use survey-based attitudinal indicators to enrich our understanding of spatial planning outcomes.

- 2.44 The new spatial planning system represents a shift from the old 'plan-present-defend' approach to one that places more emphasis on partnership working and consensus building. Recent research and benchmarking exercises suggest that the competence capacity and process activities of spatial plan-making are important to the delivery of outcomes. The proposed framework will encompass indicators that capture 'process' effectiveness. This, again, may require the use of qualitative, attitudinal data.
- 2.45 The complex meshing of multi-level governance and variations in sectoral priorities has implications for the assessment and measurement of spatial planning outcomes. The dynamic relationship between outputs and outcomes, mediated through different spatial scales and timeframe, adds an extra layer of complexity. In order to address the difficulties associated with these issues, planning outcomes are best monitored at multiple spatial scales.
- 2.46 The choice of appropriate spatial scales and functional areas is very important in the measurement of spatial outcomes. In spite of the fact that administrative units tend to be used as the spatial entities to deliver planning policy and initiatives, they do not define functional entities such as housing and labour market areas or river catchment areas. Pragmatic concerns, however, mean that the LPA level will be the main unit of analysis for the measurement of the core output indicators in AMR. For the purpose of measuring the wider outcomes of planning, it is important to emphasise the importance of functionality and that different types of functional areas will be used to measure different indicators to yield the best policy intelligence.
- 2.47 Finally, it is important to establish the appropriate timeframe to ascertain different policy outcomes and to assess changes in processes. Different outcomes will change at different rates. In general, spatial planning involves a complex web of actors and activities; and takes 2-3 years to see some immediate effect of the policy and at least 5 or more years to gauge the medium to long term effect of spatial planning policies.

Section 3

Developing indicators for spatial planning

Nature and Purpose of Different Types of Indicator

Rationale of the LDF Monitoring Framework

The Government's New Performance Framework

Spatial Planning Indicators: Conceptual and Methodological Challenges

Guiding Principles of Outcome Indicators Framework

3.1 This section proposes a strategic performance framework for spatial planning outcomes. This framework is informed by the findings from the e-Survey and the workshops and is set against the canvas of the new performance framework of the Government. The discussion first clarifies the current usage and rationale of different types of indicator in the policy process. It then explores the inter-connection and linkages between different types of indicators. Some proposals are then made with respect to how different types of indicators should be structured and analysed to yield a robust evidence base for spatial planning policy-making.

Nature and Purpose of Different Types of Indicator

3.2 The objectives-targets-indicators approach adopted in the *Monitoring Regional Planning Guidance on Targets and Indicators* (ODPM, 2002) emphasises the linkage of key objectives, policies, targets and output indicators. Process delivery indicators and targets are used to gauge the implementation of planning policies. In addition, contextual indicators are used to help measure outcomes and in assisting the understanding of the evolving context in which the planning strategy operates. This broad approach has continued to influence the architecture of the indicators used in the current AMR monitoring (ODPM, 2005b). This framework, however, suffers from a lack of clear guidance of what outcomes mean and how they should be measured.

3.3 Policy evaluation's focus on intermediate output measures (such as hectares of derelict land improved, number of new houses built) rather than the impact and effectiveness of policy (Burton and Boddy, 1995; National Audit Office, 1990) has long been criticised. The missing link between inputs, outputs and outcomes/impacts (the outcomes for different groups and different areas) of policy performance also causes concern. There has, however, been a recent shift in the government's monitoring guidelines to place more emphasis on the longer-term horizon of outcome and impact measurement and to expand the scope of evaluation to allow monitoring of trends and changes (SEU, 2000). This is clearly evident in the *Local Government White Paper* (HM Government, 2006) and the *Planning White Paper* (HM Government, 2007).

3.4 A review of policy documents shows that different monitoring frameworks adopt slightly different terminologies to describe the purpose of different types of indicator. There is thus confusion over the exact meaning of particular types of indicator, and in turn how the indicators should be analysed to inform policy intelligence. This prompts for the need to clarify the definition of different types of indicator used in monitoring spatial planning strategies, as well as adopting the definition consistently across different policy documents (at least planning related policy documents).

3.5 A set of definitions that are widely used in monitoring sustainability indicators is based on the Pressure-State-Response (PSR) model. The PSR model classifies indicators according to their functions and roles in the decision-making process. Some sustainability indicators aim to provide a simple description of the current state of development (state indicators), others are used to diagnose and gauge the process that will influence the state of progress towards sustainability (pressure, process or control indicators), or to assess the impact brought by policy changes (target, response or performance indicators). The sustainability indicator sets of the OECD and the United Nations are developed on the basis of a link model of 'pressure, state,

response'. The PSR model provides a concise and logical way of conceptualizing the chain effect of human activities on the changing state of our environment and resources, and leading to formulation of the social and policy response required to alleviate the pressure exerted on the environment. Whilst conceptually simple, the operation of the model is not straightforward. When preparing the report on *Indicators of Sustainable Development for the UK* (DoE, 1996), the Working Group abandoned the idea of adopting the model and separated out indicators concerning the economy, the environment and the actors involved (Cannell et al., 1999). For others (e.g. Dunn et al., 1998), the linear relationship captured in the PSR model is seen as over-simplifying the complexity of real life and more complicated frameworks are proposed (e.g. Briggs et al., 1995).

- 3.6 Another way of defining indicators can be found in the European Directive 2001/42/EC which stipulates that Strategic Environmental Assessments (SEAs) are undertaken on plans and programmes to assess their environmental effects. It is thus important to examine the compatibility of the terminology used in the SEA Directive and that used in RPG monitoring. The SEA Directive contains input (response) indicators as well as outcome indicators:
- Input/response indicators: indicators that focus on actions to be undertaken to achieve an outcome (e.g. installing catalytic converters in new cars to reduce the level of air pollution). These are 'means' indicators.
 - Outcome indicators: indicators that focus on the outcome sought (e.g. clear air) rather than how it should be achieved. These are 'ends' indicators.
- 3.7 Implicitly, the SEA terminology equates 'responses' to outputs and thus conflates programme inputs and outputs as the 'means' by which wider 'ends' (outcomes) are brought about. However, the inputs in the spatial planning framework could be interpreted as the policies included in the plans and strategies, though this is debateable and should be subject to further review. Outcomes, however, encompasses both outputs and outcomes as defined in the AMR framework. This means that the classification used in monitoring spatial policies is slightly more fine-grained than that in the SEA Directive.
- 3.8 The operational monitoring framework proposed by the European Commission (2000) to assess the new programme of structural assistance includes the development of indicators to measure inputs, outputs, results and impacts (see Box 3.1). This rather comprehensive classification scheme is comparable to the one used in the AMR framework, with the exception of the inclusion of input and result indicators.

Box 3.1 The Operational Monitoring Framework of European Structural Assistance

- Input indicators: measures implemented by administrations, agencies or operators using various (financial, human, technical or organisational) means or resources.
- Output indicators: actual expenditure gives rise to a series of physical outputs (e.g. kilometres of road built), which demonstrates the progress made in implementing the measure. They are indicators related to activity.
- Result indicators: the immediate effects on the direct beneficiaries of the actions financed (e.g. reduced journey times, transport costs)
- Impact indicators: the results can be expressed in terms of their impacts on achieving the programme's global or specific objectives and are the principal bases for assessing the success or failure of the assistance in question.
- Contextual indicators: contextual indicators provide a quantified description of current disparities, gaps and development potential for the regions concerned.
- Baselines: baseline data refer to the initial value against which a context or impact indicators is subsequently measured.

Source: EC, 2000: 8, 11

Rationale of the LDF Monitoring Framework

- 3.9 Most indicator models have an assumption that there is a causal chain of different types of indicator in the policy-making process. Ideally, the monitoring framework should be guided by causal theories, but due to the complexity and inter-relations between different socio-economic issues, it is impossible to untangle the web of inputs, outputs and outcomes. Hoernig and Seasons (2004) helpfully point out two important concerns that planners have to take into account when deriving a monitoring framework. The first concern is about the models or conceptualisation of the interrelationship of different components of society, and the second is about the pragmatic policy-making framework and policy needs.
- 3.10 Previous and recent research shows that there is a lack of monitoring capacity at the local level where some planning authorities only have a small number of planners and they have not much experience of comprehensive monitoring work (Wong et al., 2006). This is different from the experience at the regional level. When first developing the guideline (ODPM, 2005b) for the Annual Monitoring Report (AMR) of the local development framework (LDF), a deliberate decision was made by taking a pragmatic incremental approach in the early years of spatial policy monitoring to allow capacity building.
- 3.11 Four types of indicators are adopted in the LDF monitoring guidance (see Figure 3.1):
- *Process targets*: local planning authorities are required to establish process targets to compare actual timetables for Local Development Document preparation against those set out in the Local Development Scheme.
 - *Significant effects indicators*: are used to assess the significant social, environmental and economic effects of policies to meet the requirements of European Directive 2001/42/EC undertaking SEA of plans and programmes.

- *Contextual indicators*: describe the wider social, environmental and economic background against which the LDF policy operates.
- *Output indicators*: both core and local output indicators are used to measure the direct effect of spatial planning policies. In addition, the monitoring of housing trajectories is seen as part of the monitoring of output indicators.

3.12 Due to the lack of capacity in some LPAs, and after ascertaining the concerns of those working on the ground, the current monitoring guidance does not include any outcome indicators. The only suggestion is for LPAs to gauge the result of their policies by examining the change in the output indicators over time, and the extent to which the targets set for the output indicators are being achieved. In this sense, proper analysis and interpretation of the output indicators can provide adequate information on the immediate effects of planning policy. Many of the AMR e-Survey respondents (see next section for further details) confirm that this has been a routine part of their monitoring process.

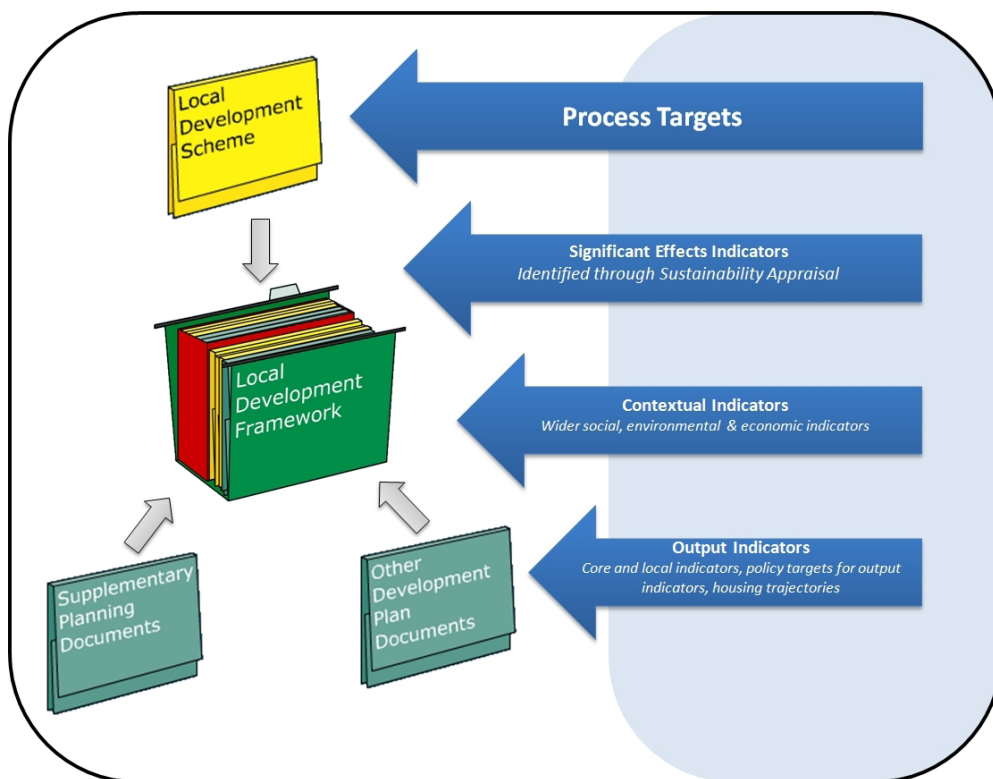


Figure 3.1 Framework of Indicators for Monitoring LDF
(Source: ODPM, 2005b: 25)

- 3.13 From the earlier discussion, it is clear that a comprehensive indicator framework for monitoring spatial planning policy should include indicators on: contextual issues; input factors of capacity; process issues of efficiency, participation, monitoring and competency in plan making and implementation; policy outputs; immediate effect of planning policy; and outcomes of longer term changes towards achieving sustainable development. The current LDF monitoring framework has addressed some of these issues, but there are still gaps identified (see Box 3.2). In particular, these relate to the lack of input indicators on capacity issues, the absence of process indicators on implementation competence, and the omission of outcome indicators on longer term changes.
- 3.14 Furthermore, the AMR delivery practice appears to be very uneven and there are considerable variations in the type and number of indicators consulted. In this context, it would seem desirable that the longer-term outcomes and impacts of spatial planning policy should be ascertained in a systematic manner, so are some relevant input and process indicators. With the recent publication of the Local Government and the Planning White Papers, it would appear to be the right time to revisit the issues.

Box 3.2 Mapping the Indicator Framework with the LDF monitoring framework	
Comprehensive Indicator Framework	LDF monitoring framework
<ul style="list-style-type: none"> ■ Contextual issues ■ Input factors of capacity and resources ■ Process issues of efficiency, participation, monitoring, and competence in plan making and implementation ■ Policy outputs ■ Immediate effect of planning policy ■ Outcomes of longer term changes 	<ul style="list-style-type: none"> ■ Contextual indicators <li style="padding-left: 20px;">IDENTIFIED GAP ■ Local Development Scheme, Statement of Participation, and AMR ■ Core and local output indicators ■ Change analysis of contextual and output indicators <li style="padding-left: 20px;">IDENTIFIED GAP

The Government's New Performance Framework

- 3.15 A new performance framework of local government was introduced in the *2006 Local Government White Paper*. This new framework proposed a radical reduction of national performance indicators from between 600 and 1200 to a set of fewer than 200, and that they should focus on outcomes rather than inputs, outputs or processes. This led to the latest CLG (2007b) publication which identifies a total of 198 National Outcome Indicators (NI), which will replace the existing Best Value Performance Indicators and Performance Assessment Framework indicators in April 2008, to measure the performance delivered by local governments and their partners. In addition, the government has published 30 new Public Service Agreements (PSA) targets and 33 Department Strategic Objectives (DSO) for Central Government departments. These indicators and targets are all set under the *2007 Comprehensive Spending Review*.
- 3.16 When examining the DSOs of the CLG, it is clear that two of them have strong relationship with spatial planning (see Box 3.3). It is interesting to note that the two NIs used to measure the objective of 'providing a more efficient, effective and transparent planning framework to support sustainable development' are the delivery of housing and the efficiency target of processing planning applications. As we note previously, the scope of these two indicators is too narrow

to reflect the holistic objectives of spatial planning in achieving sustainable development as stated in PPS1. Hence, it would be useful to draw upon a wider range of NIs that has relevance to spatial planning outcomes. Box 3.3 lists those DSOs that are deemed relevant to spatial planning performance.

- 3.17 PSA targets agreed between CLG and the Treasury clearly represent very specific, high-level statements of expected outcomes. Before the 2007 Comprehensive Planning Review, PSA6 was the only such target that specifically related to the (statutory) planning system, although it was clear that most of CLG's other PSA targets represented outcomes that the planning system was expected to jointly or in part contribute towards. It is, however, interesting to find that the newly introduced PSAs do not have a specific target relating to spatial planning system. While these new PSAs (see Box 3.4) tend to focus on the Government's priority outcomes, when examined the associated NIs, it is clear that the indicators tend to embody expectations of both process, outputs and outcomes, in particular in their search for 'effectiveness', 'efficiency' and 'delivery'.

Box 3.3 Relevant Departmental Strategic Objectives and their related National Outcome Indicators
<p>CLG DSO3 Build prosperous communities by improving the economic performance of cities, sub-regions and local areas, promoting regeneration and tackling deprivation</p> <p>NI 5: Overall/general satisfaction with local area NI 170: Previously developed land that has been vacant or derelict for more than 5 years</p>
<p>CLG DSO4 Provide a more efficient, effective and transparent planning system that supports and facilitates sustainable development, including the Government's objectives in relation to housing growth, infrastructure delivery, economic development and climate change</p> <p>NI 157: Processing of planning applications as measured against targets for 'major', 'minor' and 'other' application types NI 159: Supply of ready-to-develop housing sites</p>
<p>Defra DSO2: Economy and society resilient to environmental risk and adapted to the impacts of climate change</p> <p>NI 189: Flood and coastal erosion risk management</p>
<p>Defra DSO3: Sustainable patterns of consumption and production</p> <p>NI 191: Residual household waste per head NI 192: Household waste recycled and composted NI 193: Municipal waste land filled</p>
<p>DfT DSO2 To enhance access to jobs, services and social networks including for the most disadvantaged</p> <p>NI 175: Access to services and facilities by public transport, walking and cycling NI 176: Working age people with access to employment by public transport (and other specified modes)</p> <p>Source: CLG, 2007b</p>

Box 3.4 Relevant 2007 PSAs and their related National Outcome Indicators

Sustainable growth and prosperity:

- 1. Raise the productivity of the UK economy
- 3. Ensure controlled, fair migration that protects the public and contributes to economic growth
- 5. Deliver reliable and efficient transport networks that support economic growth
NI 167 Congestion – average journey time per mile during the morning peak
- 7. Improve the economic performance of all English regions and reduce the gap in economic growth rates between regions

Fairness and opportunity for all:

- 8. Maximise employment opportunity for all
NI 151 Overall employment rate
NI 152 Working age people on out of work benefits
- 17. Tackle poverty and promote greater independence and wellbeing in later life
NI 138 Satisfaction of people over 65 with both home and neighbourhood
NI 139 People over 65 who say that they receive the information, assistance and support needed to exercise choice and control to live independently

Stronger communities and a better quality of life:

- 20. Increase long term housing supply and affordability
NI 154 Net additional homes provided PSA 20
NI 155 Number of affordable homes delivered (gross) PSA 20
NI 156 Number of households living in Temporary Accommodation PSA 20
- 21. Build more cohesive, empowered and active communities
NI 2 % of people who feel that they belong to their neighbourhood
NI 4 % of people who feel they can influence decisions in their locality

A more secure, fair and environmentally sustainable world:

- 27. Lead the global effort to avoid dangerous climate change
NI 185 CO² reduction from Local Authority operations
NI 186 Per capita CO² emissions in the LA area
NI 188 Adapting to climate change
- 28. Secure a healthy natural environment for today and the future
NI 194 Level of air quality – reduction in NO_x and primary PM₁₀ emissions through local authority's estate and operations
NI 197 Improved local biodiversity – active management of local sites

Source: Treasury web site, 2007

Spatial Planning Indicators: Conceptual and Methodological Challenges

- 3.18 The monitoring and evaluation of planning systems so far tend to be more about processes than about outcomes and effectiveness, and are commonly measured in terms of administrative efficiency, numerical returns and cost implications. The absence of a counterfactual (policy-off) situation also makes it difficult to isolate the real effect of planning. Previous research by Pineda (1992) and Carmona and Sieh (2006) tended to address the methodological challenge by turning to a qualitative approach that was largely based on a scoring and weighting framework to assess the performance of alternative options by making explicit trade offs between different criteria and objectives. The problem of this type of approach is the cost and time involved, as well as the subjective nature of who is involved in the scoring and weighting procedures. More importantly, the multiple effects and various outcomes of the planning system will be reduced and averaged by such a technique to produce a 'pooled effect' from which it is difficult to make meaningful interpretation. It is clear that the development of outcome indicators cannot solely rely on such an approach, although it can potentially contribute to the measure of certain outcomes that require qualitative judgement.
- 3.19 The challenge, both conceptually and methodologically, is then how to improve the traditional indicator framework from a static set of indicator values into a more dynamic and discursive framework that allow the understanding of the substantial outcomes as well as the co-ordinating device of policy learning.

Contexts and Outcomes

- 3.20 Spatial planning aims to intervene to shape the development outcomes affecting a specific area, whether this is a region or a neighbourhood. Spatial planning policy interventions are inevitably shaped by some contextual factors (sometimes overwhelmingly so). It is, therefore, not surprising to find that there are potential overlaps between contextual indicators and outcome indicators; and many AMR survey respondents conflated the two. The purpose of having contextual indicators is to take into account the very different socio-economic and environmental circumstances that planning policies have to interact and operate at different localities. Ideally, it would be desirable to incorporate causal analysis within the analytical framework to help separate outcomes from contexts. However, recent research shows that there are many untested assumptions about cause and effect and that there is not a prudently proved conceptual framework to guide the analysis.
- 3.21 In addition, our communities are constantly changing. This makes it impossible to separate the dynamic processes of change from the state of outcomes. The outcomes at one point in time will prompt further changes and become the operating context of the next moment (Wong et al., 2004). Policy concepts such as competitiveness, social exclusion and sustainable development all encapsulate the process of change as well as the state of development. It is also clear that the operation of different aspects of change may reinforce and enhance the restructuring process (such as quality of life and economic competitiveness), but their interaction can be contentious (such as the tension between achieving economic growth and a sustainable environment). Hence, the indicators used to outline the context will inevitably overlap with those measuring outcomes. However, the change in the contextual indicators is probably attributed to a wide range of factors in which spatial planning may or may not play a part.
- 3.22 Notwithstanding the difficulties associated with contextual indicators, it remains important that indicators relating to different sectoral concerns (e.g. housing, transport) are seen in the context of other indicators. For instance, indicators of commuting in isolation might mislead analysts to ascribe travel patterns to the success or otherwise of policies for the promotion of sustainable transport. However, this would miss effects related to other social or economic indicators (where, for example, lower income groups are less mobile; or, all other things being equal, weaker local economies might demand less commuting).

3.23 In summary, it is clear that the driving forces of spatial change can be due to structural change and historic inertia at differential spatial levels, as well as external factors from national and global forces, or indeed the interaction of internal and external factors, as well as the interaction of different policy sectors. Spatial change is best understood in terms of issues resulting from a bundle of environmental, economic and social forces operating at multi-spatial levels and being influenced by different sectoral policies. The outcome indicators of spatial planning should thus only overlap with those contextual indicators that are more specifically related to planning strategy and policy. This suggests that outcome indicators need to be 'plan-derived' in a plan-led system so that changes are being monitored and outcomes that are being measured are to be interpreted effectively. Figure 3.2 provides a simplified presentation of such a conceptualisation.

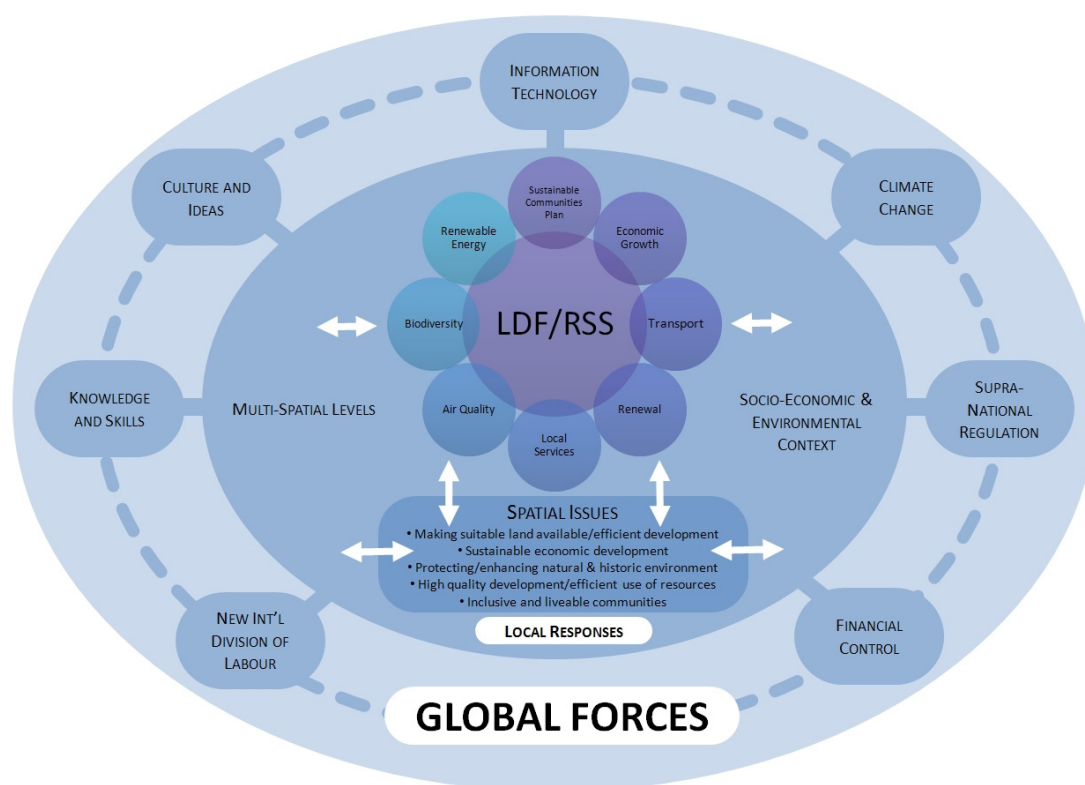


Figure 3.2 Spatial Planning and the Forces of Spatial Change

The Interaction of Outputs and Outcomes

- 3.24 It is a major challenge to differentiate outputs from outcomes both conceptually and practically. The Treasury has attempted to illustrate their differences by giving some examples (see Box 3.5), which highlight the fact that outputs are specific and outcomes are more vaguely defined improvement and conceded that sometimes they cannot be directly measured.
- 3.25 In the latest published National Outcome Indicator Set (CLG, 2007b), indicators such as 'Use of public libraries (NI 9)' and 'Visits to museums or galleries (NI 10)' are used to measure the 'stronger communities' outcome. It is very difficult to argue that these two indicators are not output indicators as they seem to focus on counting the numbers rather than ascertaining the higher level strategic outcomes of raising the culture of the communities as promised in the New Performance Framework. The qualification of using these two output indicators is that they are proved (or assumed) to be highly related to achieving the stronger communities outcome and thus are used as 'proxy' measures of the higher level outcome. This once again illustrates the difficulty in distinguishing the two types of indicators in practice.

3.26 In order to overcome the difficulties of measuring outcomes, the advice from the Treasury (HM Treasury, 2007b: para. 4.3) is to specify outputs as intermediate steps along the way. This indicates a temporal relationship between outputs and outcomes. However, it neglects the spatial mediation effects between outputs and outcomes. Conceptually, we argue that the time and spatial dimensions are important in examining the dynamic relationship between outputs and outcomes in developing the measurement methodology.

3.27 To illustrate, we might focus on the time axis to explore how outputs are related to outcomes. One can put forward an argument that when outputs persist over a substantial period of time, the embeddedness of the outputs will in turn become the more permanent impacts, and thus can now be regarded as outcomes. In this sense, if more people go to visit the libraries and the museums over a substantial period of time, the likelihood is that the outcomes of a stronger and more cultural community will be achieved. So, in this case, the persistent achievement of the 'output' indicators can be used as a proxy measure of outcomes.

Box 3.5 Examples of Outputs and Outcomes from the Treasury		
Policy Area	Outputs	Outcomes
Job search/ Job Matching	Number of job seekers	Value of extra output, or improvement in efficiency of job search
Development of skills	Number of training places and /or numbers completing training	Value of extra human capital, and/ or earnings capacity
Social outputs: Schools: Health Centres	Exam results (schools), People treated (health centres)	Improvements in human capital (schools); Measures of health gain (health centres)
Environmental improvement	Hectares of derelict land freed of pollution	Improvement to the productivity of the land
Source: HM Treasury, 2003, Box 6		

3.28 This rationale has been used to underpin the current AMR monitoring framework. The result of policies is gauged by examining the change in output indicators over time and the extent to which the targets set for the output indicators are achieved. In this sense, proper analysis and interpretation of the output indicators should provide adequate information on the immediate effects (one can arguably define this as outcomes) of the planning policy. However, what is lacking in the framework is a clear articulation of what outcomes mean, and whether this is equivalent to the measurement of the strategic and longer-term impacts in the EC framework. This raises the distinction between indicators that are used to ascertain longer term strategic relevance and those that provide monitoring and rapid feedback on progress towards policies. When looking at what spatial planning aims to bring about, it is then possible to conceptualise a hierarchy of outcomes along the time axis (see illustration in Figure 3.3).

3.29 The hierarchy of planning outcomes could further be complicated by introducing the spatial scale. The planning outcomes of one spatial scale may consist of various outputs at another. For instance, regional strategies seeking to facilitate 'sustainable economic growth' will require a series of localised outputs in the form of land being made available, etc. Similarly, a series of regional outputs may constitute the outcome at the national level. This is illustrated diagrammatically in Figure 3.4. The interaction between the spatial scale of analysis and the

time dimension will also have an impact on indicators that reflect 'functional areas'. Certain functional areas may change over time, including in response to the operation of the spatial planning system; for example, if spatial planning seeks to influence the location of future housing provision, then this will in turn have an impact on the shape and extent of the functional market area for housing.

3.30 The discussion here points to the conclusion that there is a dynamic and fluid relationship between outputs and outcomes, which tends to be mediated by time and space or the interaction of both. In addition, output indicators can be used as proxy measures of outcomes if there are proven/assumed relationships between them. The conceptualisation of how to measure spatial planning outcomes has to take these factors into account.

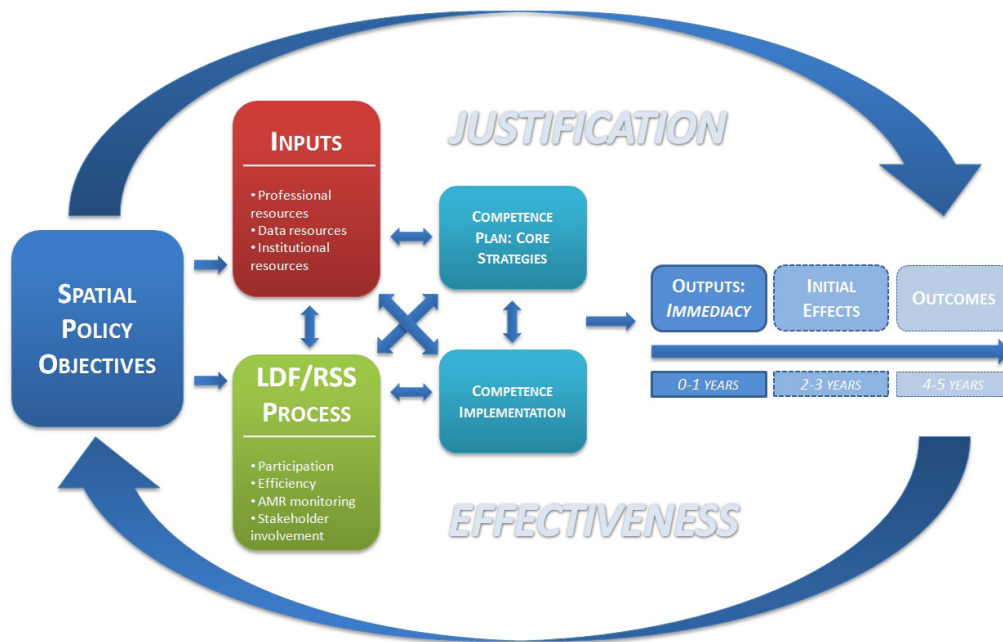


Figure 3.3 The Relationship between Outputs and Outcomes over Different Timeframes

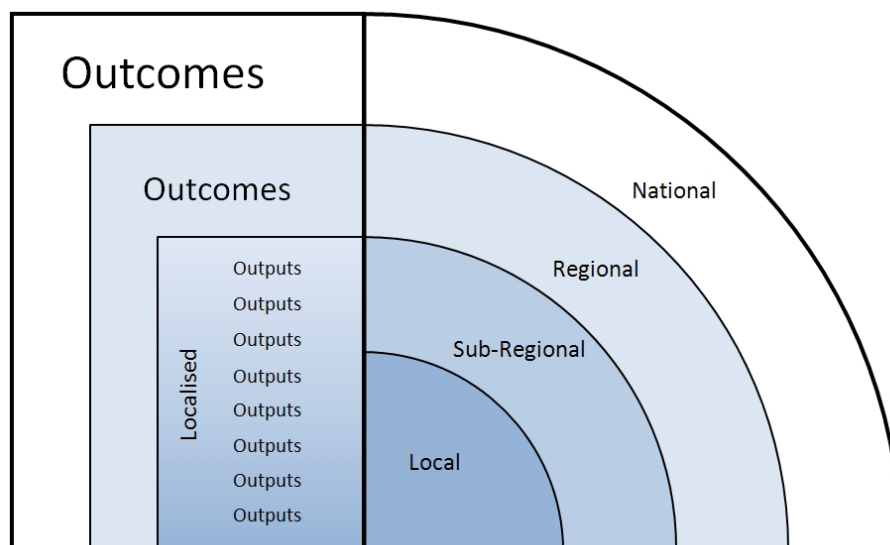


Figure 3.4 The Relationship between Outputs and Outcomes across Different Spatial Scales

Outcome, Impact and Performance

- 3.31 The terminologies of 'outcome', 'impact' and 'performance' have frequently been used interchangeably because, to a certain extent, they can all be defined in a way to relate to the achievement of specific objectives. However, there are subtle differences between them. While some researchers (e.g. Carmona and Sieh, 2006) do not differentiate between outcome and impact, others (Morrison and Pearce, 2000) define outcomes as the combined effects on changes brought by the planning system with other forces, whilst impacts are the effects solely attributable to the planning system. Since the measurement of outcomes is a highly challenging task, it is unlikely that we can further isolate the impacts that can be directly attributable to planning. It is, therefore, sensible to view outcomes as the combined effects on socio-economic and environmental changes brought by the planning system and other forces to achieve the objectives of sustainable development and sustainable communities.
- 3.32 Many argue that outcomes are just one way to assess the performance of spatial planning. Performance can be assessed in a multi-dimensional framework to include effectiveness (substantial), efficiency (procedural), as well as its success as a coordination device for decision-making (learning) (Faludi, 2000). While this study focuses on examining outcomes, both inputs (which was excluded in previous RPG and LDF monitoring guidance) and process (which includes stakeholder and community participation and should be wider than just focusing on the processing speed of planning applications) should be taken into account to develop a more holistic strategic performance framework of spatial planning.
- 3.33 In planning policy terms, the outcomes of sustainable development and sustainable communities are rather vague and multi-facet concepts. The measurement of these outcomes would require the inclusion of a group of inter-related indicators to capture the multi-dimensional nature of the phenomenon. Since planning policy interventions are shaped by both contextual factors and the effectiveness of processes of delivery and policy integration, the package of indicators required to examine spatial planning outcomes should not just include the proxy outcome indicators, but also the wider set of contextual, input and output indicators. This wider set of indicators serves to examine the 'intermediate steps' suggested by the Treasury, but goes further to provide a more holistic approach. These indicators, used in combination, will provide a more grounded framework to ascertain spatial planning outcomes; and the omission of a particular group will compartmentalise or distort our understanding. Any attempt to use a few individual indicators to represent spatial planning outcomes will be potentially misleading; at best they will provide a partial view of a very complex situation.

Spatial Units of Analysis

- 3.34 In the guidance for LDF monitoring, the emphasis is to collect indicators at the local authority district level and as far as possible to examine the sub-district level of distribution. This recommendation was made in the light of the lack of data collection capacity of many LPAs and the paucity of fine-grained spatial data in 2004. However, it was made clear that the collection of indicators only at the district level will not inform the critical achievement of the LDF as a spatial framework for the locality. A robust monitoring framework has to be able to pinpoint the success or failure of the LDF in guiding the spatial distribution of development and activities at a variety of spatial scales.
- 3.35 While acknowledging the fact that a multi-spatial framework is needed to provide a more flexible analytical structure to assess spatial policy progress, there is still a need to choose the spatial units of measurement to compile data for the assessment of planning performance. There are two different approaches towards developing a multi-spatial framework of indicators collection.
- 3.36 The first approach involves a nested spatial hierarchical structure. The best example is the official index of multiple-deprivation. The approach was first adopted by Robson et al. (1995) in

the 1991 Index of Local Conditions where the indicator value was built up from the smaller area (i.e. enumeration districts and wards) to the larger area (i.e. districts), with larger area values being aggregates of smaller area values. They also use a matrix approach to present the final index ranking for each district together with three other measures: the spatial extent of deprivation at ward and enumeration district levels, and the intensity of deprivation. The implementation of such a neat spatial structure is, however, heavily dependent on the availability of data at very fine spatial scales. More importantly, such a nesting structure of measurement may not be suitable for the exploration of certain social phenomena. Furthermore, at more aggregate scales there is a constant temptation to include additional data that are readily available at that scale. The 1998 version of the Index, for example, includes additional indicators at district level. This essentially leads to a different formulation of 'deprivation' at each scale and reduces the ability of the indicator to neatly mesh at different spatial scales.

- 3.37 The alternative approach is that indicators should be developed for different purposes at different spatial levels of concern. This means the choice of an appropriate spatial scale (or spatial scales) to the issue concerned is very critical in indicators development. This will be driven, in part, by conceptual concerns that help inform the interpretation of particular indicators. These concerns might imply that some issues such as environmental improvement are best dealt with at the neighbourhood level, whilst others such as infrastructural capacity are more appropriately measured at the functional areas of city or city-region scales (Archibugi 1998). A high level of aggregation would also be appropriate for the assessment of economic competitiveness where it might be hoped that scale or agglomeration effects would lead to greater outcomes. A further group of indicators may need to be monitored at multiple levels to avoid difficulties associated with their interpretation. Understanding housing market outcomes, for example, can be complicated by the openness of markets. This means that, at the regional scale, moderate house price growth might obscure significant variations between local authorities. In principle, this can happen without a noticeable impact on average regional prices.
- 3.38 The ultimate choice of appropriate spatial unit will often be pragmatic and will be highly constrained by data availability. Although there have been interesting attempts to invest in neighbourhood statistics and pilot community and neighbourhood based datasets such as the Bradford Community Statistics and in Scotland have found success, functionally meaningful sub-district data are very rare. Indeed sub-district data are generally limited. This means that often, important differences in policy outcomes will be aggregated away. For the majority of indicators sub-regional analysis would be highly desirable. As we note above, however, the absence of micro data and the focus of the local authority as the organisational unit for policy implementation drives the use of the LPA as the most common unit for analysis of potential outcomes measures. For many indicators, however, the LPA level is manageable rather than meaningful. In this context, AMR practitioners are critical of the tendency to monitor what is available rather than what matters.
- 3.39 The AMR is currently organised in a nested structure (in theory, the lower spatial scale data can be aggregated to calculate the indicator value of the higher spatial level) to allow the tracking of progress across all LDFs and RSSs. While this structure largely works well with indicators measuring policy outputs, it is more limited when gauging more strategic policy outcomes. This is due to the inherent tension that results from the mismatch between the administrative geographies and the appropriate functional area in measuring a particular socio-economic or environmental outcome.
- 3.40 It is, however, possible to combine both approaches to ascertain spatial outcomes. For instance, CLG has issued guidance over the importance of carrying out Strategic Housing Market Assessment and Strategic Housing Land Availability Assessment at the sub-regional housing market areas (see CLG, 2007c, 2007d). It is then possible to identify both local housing market areas and the higher level regional housing market areas to monitor housing development trajectories at different spatial levels.

Tiered Indicator Structure

- 3.41 With the burgeoning growth of different indicator sets, researchers have increasingly recommended a tier-structure of indicators to avoid information overload and to provide flexibility to incorporate more indicators to allow a fuller understanding of issues. For instance, Innes and Booher (2000) proposed a three-tier indicator system to provide intelligence on city performance. These three types of indicators are system performance, policy and rapid feedback indicators:
- System performance indicators: a few key measures which reflect the central values of concern to those in the city and how the urban system is working;
 - Policy and programme indicators: reflect the activities and outcomes of various elements of the system to provide feedbacks to policy-makers on how specific programmes and policies are working;
 - Rapid feedback indicators: provide rapid feedback data to help individuals, agencies and businesses to make day-to-day decisions.
- 3.42 The European Commission (2000a) also proposed a similar reference framework for the monitoring of its Structural Funds. Indicators are collected to monitor three tiers of programme objectives: global, specific and operational objectives. It is interesting to note that both classifications rest upon a layered indicator structure of measurement by developing indicators from a general-strategic level to gauge the overall health of the urban system, through the measurement of policy outcomes, to the more imminent/intermediate measures of policy feedback.
- 3.43 This tiered approach of structuring indicator sets has the obvious advantage of serving different analytical and policy purposes at different spatial levels and to avoid information overload. In developing a monitoring framework of the urban vision in the Urban White Paper (DETR, 2000), Wong et al. (2004) recommended the use of a two-tier approach: the strategic indicators of urban change at the top tier; and domain-based vision indicators for the five urban visions at the lower tier. Strategic indicators are used to collect trend data on a small number of indicators that are widely used to gauge urban change - brought about by the process of socio-economic restructuring such as population level and change; employment level and change; unemployment level and change and duration; and gross domestic product per head and change. The lower tier of the indicator system deals with domain-based issues guided by the underlying conceptual framework of the five Urban White Paper visions.
- 3.44 The questions to be asked here are whether a tiered indicator structure should be adopted and, if so, how will the tiered framework operate? In the light of the discussion of the nature and purpose of spatial planning and complexity of measuring spatial outcomes, there is an argument for developing more strategic and effective indicators to measure long-term and high order outcomes, that is, cross-cutting and overarching issues. These indicators will have to be easily understood by a whole range of stakeholders and organisations that need to be brought into action to deliver the visions and objectives of spatial planning.
- 3.45 To take this forward, there is a need to have innovative thinking over the choice of relevant indicators, and measured at the appropriate spatial scales and timeframe. In addition, more discussion is needed over whether such outcome indicators should be seen as part of the AMR process, if so, whether this should be mandatory in all AMRs or a separate partnership mechanism should be recommended for each region. There was a strong view from the AMR e-Survey respondents that there should also be scope for locally specific indicators within the framework.

3.46 In summary, our recommendation is to develop indicators for different purposes at the most relevant spatial levels of concern and that a tiered structure will be adopted to separate indicators measuring, for instance, the more strategic policy outcomes (those of long term and higher order nature) from the more immediate effects (that is, the change in the core output indicators against the wider contextual change at the local and regional levels in the AMR).

Analytical Indicator Bundles

3.47 Due to the polyvalence of spatial planning objectives, a single perfect indicator cannot be found to adequately represent each issue. Furthermore, the available data is more often in the form of proxy measures. This leads to a strategy of drawing upon a set of measures in the analysis. One of the key concerns is then how to consolidate grouping of indicators to provide a synopsis of the concept being measured. There are alternative ways of simplifying the structure of indicator sets - by aggregation, by representation or by classification of indicators (Wong, 2006). The use of composite indices is the approach adopted to measure multiple deprivation. However, composite indices tend to be either arbitrary or too complicated to be transparent. If there is not a particular need to use indicators to develop a specific set of rankings for funding allocation, it is arguably more important to tease out the key signals or messages that emerge from the analysis of the indicator set and to disseminate the findings in a clear and direct manner to offer insights for future policy-making (Wong, 2003).

3.48 One approach to facilitate such analysis is by linking a small number of separate indicators into groupings to reflect different aspects of the phenomenon being studied (see Wong et al., 2006a). Indicators within the bundle will be used in conjunction with each other to explain a specific set of circumstances in relation to that particular aspect of the concept. This approach is called an '*analytical indicator bundle*' method by Wong (2002, 2003). Commentaries on the spatial patterns emerging from the indicator values within the bundle will then be made to form a '*mini-profile*' of the concept being measured.

3.49 An example of the housing indicator bundle analysis, developed for the Town and City Indicators project for ODPM (see Wong et al., 2004; ODPM, 2005b), is shown in Box 3.6. Housing issues have been at the forefront of policy attention in recent years. The Sustainable Communities agenda highlights how housing issues differ nationally. While northern regions are experiencing low demand and abandonment, the South East and London have overheated housing markets and shortages of affordable housing for first time buyers and key public sector workers. In order to examine these issues, three bundles of indicators were developed in terms of the dynamics of housing market, housing choice, living costs and housing needs and demand. The analysis shown in Box 3.3 uses a bundle of 4 indicators to examine the dynamics of housing market to inform patterns of urban change in England.

3.50 It is clear from the example that the indicator bundle approach can be used to analyse spatial changes at different spatial levels. The analysis can be enriched by putting a small number of interconnected indicators together to create a mini-profile of the issues concerned, while having each indicator individually will not reveal the same level of policy intelligence. This approach has already been recommended as the method to analyse indicators for the monitoring of the LDF (see ODPM, 2005b).

Box 3.6 Using an indicator bundle to examine the dynamics of housing market

Postcode sector house price data from the land registry was used to measure four indicators to explore the dynamics of housing markets:

- **D1.01** average house price for semi-detached properties in 2001
- **D1.02** percentage of annual house price change for semi-detached properties, 1995 and 2001
- **D1.03** percentage of low price housing sales (£20,000 and below) in 2001
- **D1.04** percentage point change in low price housing sales, 1995-2001

The indicator values shown in Table D.1 below provide an overview of housing market dynamics across different regions and urban size groups. The four indicators confirmed a broad divide in terms of regional housing markets. London, south east, south west and east of England experience buoyant housing market with an average semi-detached property fetching over £100,000 in the south east, south west and east of England (see Figure D.1). The overheated London housing market went beyond the £200,000 mark in 2001.

The three northern regions (North East, North West and Yorkshire and the Humber) suffered low housing demand with over 7 per cent of housing sales been below £20,000. They also experienced the smallest house price increases between 1995 and 2001. In contrast, the East and West Midlands' housing markets were more stable. Of the three northern regions, the North West managed to achieve the largest reduction in its volume of low price sales by 5 per cent. This was largely a function of house price inflation as it also performed better in house price change than the North East and Yorkshire and the Humber. This analysis reveals the need to re-examine the definition of low price sales in line with the overall national/regional inflation rate to provide a more meaningful interpretation of regional variations.

The dynamics of housing markets was also explored over different urban size groups. The indicators show that the housing market dynamics in towns (of various sizes) outperformed those in cities with the exception of London. Towns tend to have higher levels of house prices, gain a larger percentage of house price inflation and have lower levels of low price sale in comparison to cities. It is, nevertheless, encouraging to see that both core cities and small cities have the largest percentage point reduction in low price house sales between 1995 and 2001.

INDICATORS ON HOUSING MARKET DYNAMICS				
Region	D1.01 Average house price £ (2001)	D1.02 % House price change (95-01)	D1.03 % low price housing sales (2001)	D1.04 % point change of low price sales (95-01)
East of England	115000	87	0.5	-2.8
East Midlands	65000	49	2.2	-4.3
London	215000	114	0.0	-1.3
North East	62000	29	8.5	-1.5
North West	70000	39	7.2	-5.0
South East	133000	99	0.4	-2.0
South West	107000	87	0.4	-2.6
West Midlands	79000	55	1.9	-4.0
Yorkshire and the Humber	64000	31	6.9	-1.6
ENGLAND	103400	72	2.2	-2.5
Urban size group				
London	215000	114	0.0	-1.3
Core cities	79000	51	4.2	-3.5
Medium cities	87000	64	3.5	-2.8
Small cities	86000	65	3.8	-3.7
Large towns	99000	72	2.1	-1.8
Medium towns	94000	69	2.1	-3.3
SMALL TOWNS	99000	74	1.6	-2.3

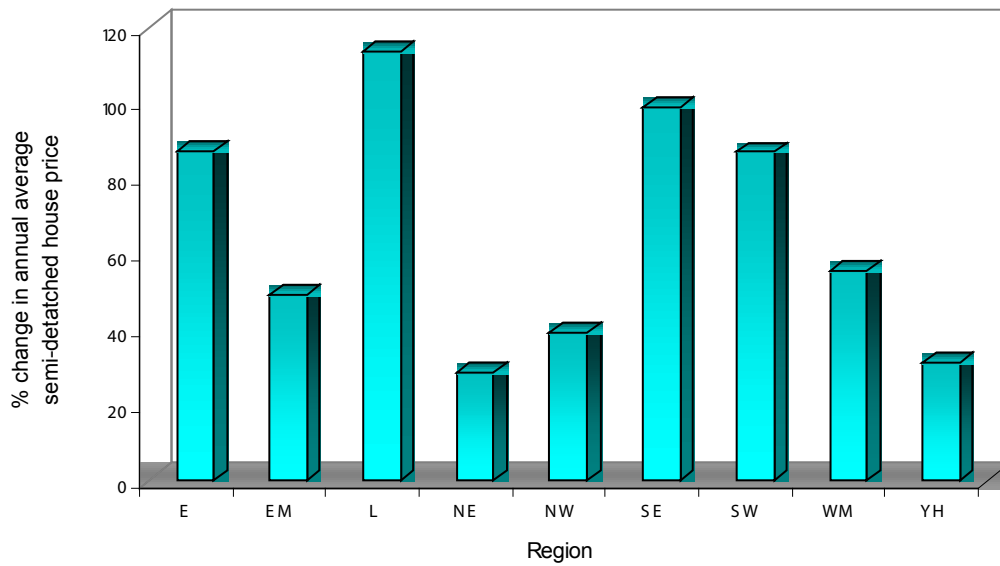
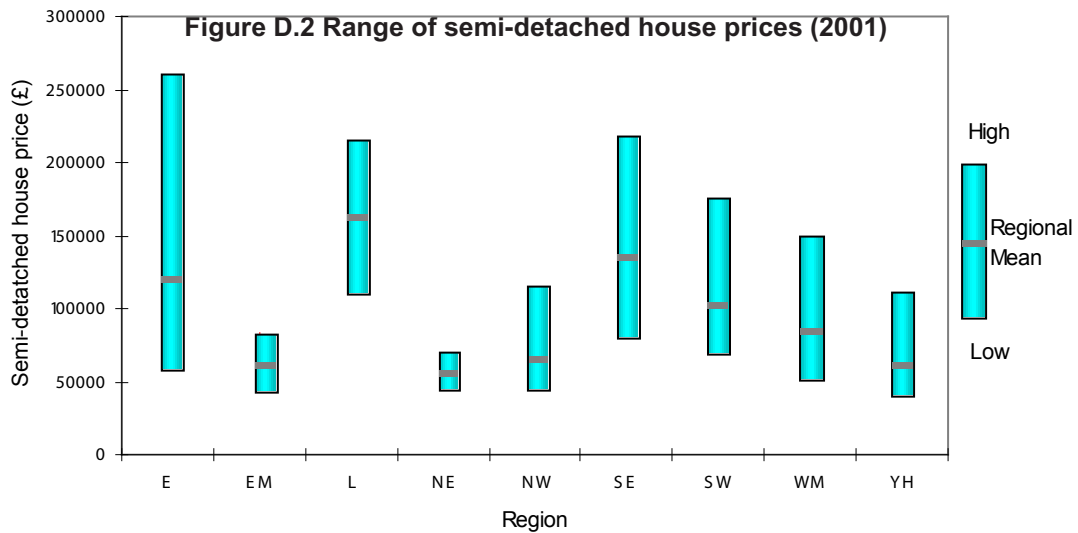


Figure D.1 Percentage change of semi-detached house price (1995-2001)

Figure D.2 below reveals interesting intra-regional variations in house prices both in terms of averages and ranges. The East of England and the South East experienced significant intra-regional housing market variations. This is because for those priority urban areas within easy commuting distance to London, house prices were much higher. Examples include St. Albans, Harpenden, Windsor, Sevenoaks, Maidenhead, Amersham, Godalming and Oxford. House prices in the North East and Yorkshire and the Humber were much less varied, as they remain consistent at the lower end of the house price spectrum.



Source: ODPM, 2005b, Annex D: 67-69

Timeframe of Monitoring

- 3.51 By focusing on the timeframe of analysis, indicators can be seen as static or dynamic. A snapshot of the statistical value at a particular point of time will produce static indicators, whereas examining the variations of values over two different points of time will provide dynamic measures of change. When identifying indicators to measure city competitiveness, Bailey et al. (2002) argued that static indicators such as GDP per capita were more of a reflection of historic outcome. They, therefore, suggested that change measures in GDP per capita or uptake of vacant land would be more sensitive indicators for the measurement of recent performance. Indicator values can also be expressed in both absolute and relative (rate and ratio) terms. These serve different analytical purposes - the absolute numbers illustrate the scale of the issues, while the expression of the values in relative term such as rates and ratios provide a more accurate basis to allow areas of widely different size to be compared. This issue should be taken into account when delineating the operation definitions of the outcome indicators.
- 3.52 In addition, it is important to establish the appropriate timeframe to ascertain different policy outcomes. There is a need to realise that some aspects of spatial planning may not be capable of assessment in the short term, as the operation of policy often requires a lengthy time period to work its way in the system before tangible benefits are evident within the locality. For instance, the procedural aspects of change can readily be monitored and policy outputs will probably take place earlier than wider spatial policy effects on the external environment, as the latter require a reasonable length of time to take effect. Similarly, as the participants in the Stakeholder Workshop noted, process and cultural change within planning practice would take some time to emerge. Planning outcomes are likely to be measured in the medium to longer term time horizon, so the timescale should be at least 3 to 5 years. If a tiered indicator structure is used to measure spatial planning outcomes, the immediate effects (change occurred in 2-3 years) should be taken into account by change analysis of output and contextual indicators, it then makes sense to give a longer-term timeframe to ascertain strategic outcomes.

Guiding Principles of Outcome Indicators Framework

- 3.53 A set of appraisal criteria was identified in Box 3.7 to set out the quality of the outcome indicators in terms of their conceptual relevance, policy integration, technical robustness, and contribution to accountable decision-making. The foremost concern when assessing the indicators is that they are conceptually relevant in reflecting the 'higher level' socio-economic and environmental outcomes of spatial planning policies as derived from the planning policy objectives. Hence, a step-wise assessment approach was used by assessing the indicators' conceptual and policy relevance in front of other criteria in relation to technical robustness and learning and accountability. This means that when an indicator fails to pass the first two sets of criteria, it will be excluded and not be assessed for the remaining criteria.

Box 3.7 Outcome Indicators Appraisal Criteria

Conceptual relevance:

- Inform the causal links with the specified social, economic and environmental objectives of spatial planning at different spatial levels
- Inform the causal links with the inputs, process and outputs of the planning system at different spatial levels.

Policy integration:

- Reflect planning's contribution to the achievement of specified key sectoral policies
- Support cross-departmental contributions to achieve spatial outcomes at appropriate spatial levels
- Enable delivery, monitoring and feedback to spatial planning at different spatial levels
- Support place-making objectives of local government

Technical robustness:

- Consistency: clarity in definition and able to compare across different spatial scales and over time.
- Transparency: clearly stated spatial objectives, targets, indicators and methods of monitoring;
- Flexibility: monitor thematic and cross-cutting issues across different spatial levels;
- Continuity: agreed and stated methodologies and routine data collection to encourage continuity in the methods and measures used;
- Simplicity: succinct and simple forms of analysis which are easily accessible;
- Relevance: intelligence has to be reliable and relevant to the issue concerned; and
- Time series: identify an appropriate timeframe for updating and reporting intelligence, taking into account the practicality of data availability.

Learning and accountability:

- Provide relevant information to planning stakeholders in the delivery chain
- Enable participative learning and negotiation in the decision-making process
- Support a transparent and accountable framework for measuring planning outcomes

3.54 During the course of this study, the research team found that there are two sets of challenging issues in choosing potential outcome indicators:

- (1) There is a dilemma of either having a large number of indicators measuring the broad brush concept of sustainable development or having a more focused set of indicators that are able to demonstrate their conceptual relevance and linkage to spatial planning policy.
- (2) Should outcomes be defined as more specific measurable indicators or as some vague ideas that can only be measured in a very qualitative or impressionistic manner?

3.55 This simply reflects the inherent difficulties of the conceptual and methodological challenges faced by researchers when attempting to ascertain planning performance and outcomes. Since the strategic performance framework sets out the remit that spatial planning outcomes should be viewed as the combined effects of socio-economic and environmental changes brought about by the planning system, the outcomes of spatial planning have to be connected to the objectives of planning. This logically leads the choice towards having a range of indicators that can relate spatial planning activities to the wider process of sustainable development. From a methodological point of view, the indicators have to be technically robust and need to be able to enhance public accountability. The preference is then to have the indicators defined in a more precise manner, though there is scope to include a few qualitative, opinion and attitudinal-related indicators.

3.56 When searching for more specific planning-related indicators, it becomes clear that some indicators will inevitably overlap with what we conceptually called 'output' indicators. The relationship between outputs and outcomes are rather fluid, as they are mediated by time and space or the interaction of both. This issue also applies to the Government's National Outcome

Indicators. Based on our earlier discussion on the interaction of output and outcome indicators, it is deemed as legitimate to use a limited number of output-related indicators that have clear linkage with spatial planning outcomes. These act as useful proxy measures. This is based on the premise that when outputs persist over a long period of time and cover a large spatial extent, then they are deeply embedded and become planning outcomes. This then highlights the importance of choosing the appropriate timeframe and the most meaningful spatial scales (e.g. functional areas, city-regions and regional level) to ascertain the higher-level, aggregate spatial outcomes.

- 3.57 There is also a need to identify possible indicators to ascertain inputs and processes. The delivery of outcomes cannot be seen in isolation from the input factors and the process of delivery as recent research shows that inputs and processes are found to be influential in shaping the quality and effectiveness of plans. The above discussion suggests that the identification of planning outcomes cannot solely rely on the proxy outcome indicators. The scoping framework needs to consider the wider set of contextual, input and output indicators and, as such, has to go further to provide a more holistic and grounded framework to ascertain spatial planning outcomes.
- 3.58 While the choice of proxy outcome indicators is based on the criteria set out in Box 3.7. It is the guiding principles set out in the wider outcome indicators framework that have the potential to ascertain complex policy outcomes and to inform policy-making. Of the nine guiding principles outlined in Box 3.8, it is the seventh principle that forms the backbone of the planning outcome indicators framework. By combining the wider set of indicators into bundles, one can tease out the key issues that emerge from the analysis to ascertain the complex spatial planning outcomes. It is through the use of analytical bundles in detailed spatial analysis that the appraisal criteria of conceptual relevance, policy integration and learning and accountability set out in Box 3.7 can be realised.

Box 3.8 Guiding Principles of Planning Outcome Indicators Framework

1. Outcome indicators need to be **'plan-derived'** and **'objectives-derived'** in a plan-led system.
2. Reflect spatial planning's contribution towards **integrating** key sectoral policies in different parts of the region.
3. Outcomes have **to be interpreted in the light of the wider context**.
4. Use **attitudinal assessment survey** to ascertain 'invisible' and 'softer' outcomes.
5. Capture **inputs** (e.g. capacity) **and processes** (e.g. competence) that are highly influential to outcome delivery.
6. **Outputs can be used as proxy measures of outcomes** when the outputs have been embedded to become outcomes over a substantial period of time and large spatial extent.
7. Include a more focused set of outcome indicators to **form effective analytical indicator bundles** to reflect the multi-dimension of spatial planning objectives.
8. Different indicators are best measured at the most **relevant spatial levels of concern, functional areas, and targeted/critical areas** within the region to reflect the complex meshing of different spatial and sectoral policy outcomes.
9. Choose the **most appropriate timeframe** to gauge the longer term effect of spatial planning policies.

Section 4

The proposed spatial planning outcome indicators

Scoping the Outcome Indicators

Proposed Outcome Indicators

Rationale of the Proposed Outcome Indicators

Scoping the Outcome Indicators

- 4.1 Using the appraisal framework and the guiding principles developed in the previous section, a scoping exercise of key national performance and policy indicators and planning databases was carried out to identify potential planning outcome indicators. A meta-database of potential indicators (full list is provided in Annex 6) was compiled to provide information on available datasets.
- 4.2 Indicators themselves tend to be proxy measures of broad and complex concepts and we rarely find a single perfect indicator to capture the essence of concepts like sustainable development. It is, therefore, important to develop a domain framework to guide the selection of indicators. The domain approach is widely used to clarify the key areas of an issue that are deemed important in the measurement of a particular concept.
- 4.3 The spatial planning objectives that emerged from PPS1 and key national planning policy documents (in Box 2.1) are used in this study as the domains to ensure that the outcome indicators identified cover the core objectives of spatial planning, though these domains do not dictate how the indicators should be analysed in the later stage. There are five key objectives in PPS1:
 - (1) Making suitable land available and its efficient use for development;
 - (2) Sustainable economic development;
 - (3) Protecting and enhancing the natural and historic environment;
 - (4) High quality development and efficient use of resources; and
 - (5) Inclusive and liveable communities.
- 4.4 A conceptual diagram is drawn (Figure 4.1) to illustrate the relationship between these 5 key issues and the overarching vision of achieving sustainable development. We view theme (1) 'making suitable land available and its efficient use' as the heart of the statutory spatial planning system. It is the spatial dimension of land use allocation that interacts with other sectoral policy activities to create different economic, environmental and social outcomes which are captured by themes (2) to (5). If positive outcomes are achieved in (2) to (5), then it is clear that good progress is made towards achieving the vision of sustainable development; and we can then relate these outcomes to spatial planning activities in (1).

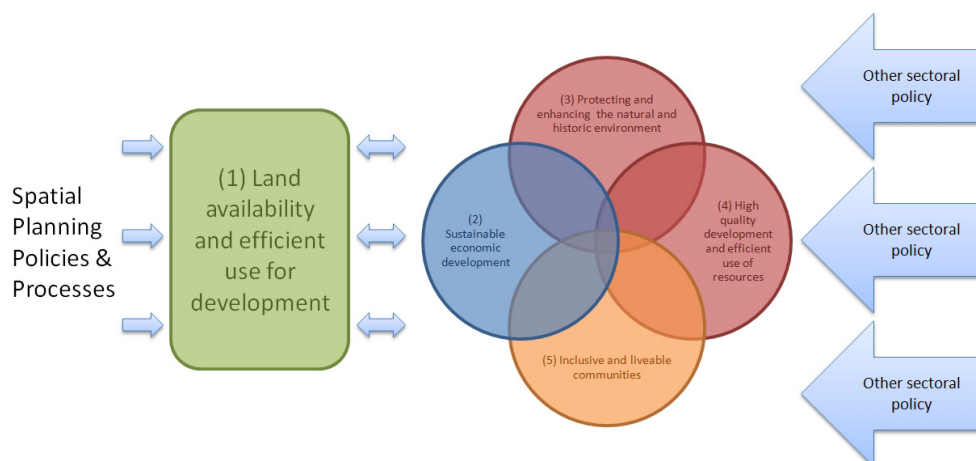


Figure 4.1 Conceptualisation of Spatial Planning Outcomes

- 4.5 Potential indicators from different indicator sets were then put through a preliminary scanning exercise to remove any duplication and to exclude those that look irrelevant to the purpose of this exercise. The indicators were then appraised by the project team via a step-wise appraisal approach that prioritised the importance of different assessment criteria, as specified in Box 3.7. This meant that when an indicator failed to pass the conceptual and policy relevance criteria, it was excluded and not assessed against the remaining criteria.
- 4.6 A set of 20 spatial outcome indicators (in Box 4.1) were identified to reflect the five key objectives of spatial planning set out in PPS1 and other key planning policy documents. These indicators were selected on the grounds that: they are conceptually related to the objectives of planning policies, though changes in these indicators can be attributed to a wide range of factors, many of which are beyond the remit of spatial planning; and they are proxy measures of different dimensions of the identified planning objectives. They have been appraised by the criteria identified in Box 3.7.
- 4.7 The 20 candidate outcome indicators that passed the appraisal exercise were then subject to a validation exercise by examining the relationship between these outcome indicators and planning outputs indicators. This was carried out via a three step process, as described below.

Box 4.1 Proposed Planning Outcome Indicators		
Theme	Source	Indicator Bundle
(1)		
<i>Making suitable land available and its efficient use for development</i>		
SPO1.1	RCOI 1a/ 1f	Additional commercial floorspace developed
SPO1.2	RCOI 2a/LQoL36/NI 154	Additional new homes completed
SPO1.3	QoL27/RCSR/LQoL22/ NI 170	Percentage change in derelict land stock
SPO1.4	BV204	Percentage of appeals allowed against refusal of planning permission
SPO1.5	RTPI NSPF	Change in inter- and intra-regional transport infrastructure capacity and connections
(2)		
<i>Sustainable economic development</i>		
SPO2.1	QoL1/ECR1/RCSR/QoLH/ NI 151	Percentage change of working age people in employment
SPO2.2	QoL4/RCSR/LQoL13a	Percentage change in the total number of VAT registered businesses
SPO2.3	ONS	Change in job density
SPO2.4	ESRC LED	Change in the level of commuting independence
(3)		
<i>Protecting and enhancing the natural and historic environment</i>		
SPO3.1	RCOI 3b	Loss of protected land (SSSI, ESA etc.)
SPO3.2	QoL18/NI 5	Percentage of residents surveyed satisfied with their neighbourhood as a place to live
SPO3.3	QoL26	Change in area of parks and green spaces per 1,000 head of population
(4)		
<i>High quality development and efficient use of resources</i>		
SPO4.1	NI 186	Change in carbon footprint (CO ² emission per capita)
SPO4.2	SC35/QoL36/Census SWS/ NI 176	Change in commuting mode (public transport)
SPO4.3	NI 167	Congestion: average journey time per mile during the morning peak
SPO4.4	QoL22/BVPI Gen Q16/SC 34a	Percentage of residents surveyed finding it easy to access key local services
(5)		
<i>Inclusive and liveable communities</i>		
SPO5.1	AMR Contextual Indicator	Percentage change in total resident population
SPO5.2	QoL6/ECR12/SC1/IMD	Percentage of population who live in the 10% most deprived areas (wards/districts).
SPO5.3	QoL13a/ECR8/SC29	Percentage of households that can afford to purchase the average first time buyer's property in the area.
SPO5.4	ESRC LED	Change in Supply-side Over-qualification Index value

BV: Best Value Indicators

BVPI Gen Q: Best Value Indicators – general question in residents survey

Census SWS: Population Census Special Workplace Statistics

ECR: Audit Commission's Economic Regeneration Performance Indicators

ESRC LED: ESRC funded research on developing indicators for local economic development (Wong, 2002)

IMD: Index of Multiple Deprivation

LQoL: Defra's Local Quality of Life Indicators

NI: 2007 Local Government National Outcome Indicators

ONS: Office for National Statistics

QoL: Audit Commission's Quality of Life Indicators

QoLH: Defra's Quality of Life Headline Indicators

RCOIs: Recommended core output indicators by the research team

RCSR: Regional Competitiveness and State of the Regions Indicators

RTPI NSPF: Royal Town Planning Institute's 'Uniting Britain – The Evidence Base: Spatial Structure and Key Drivers'

SC: Egan Review's Sustainable Communities indicators

Step 1

- 4.8 In order to demonstrate the likely relationships between the different groups and themes to which the suggested outcome indicators are aligned, a conceptual mapping exercise was carried out, as shown in Figure 4.2. These relationships are represented in terms of direction and strength and clearly illustrate both the complex nature of potential spatial planning outcomes and the inextricable linkages between different spheres of activity. Key planning objectives are represented here in relation to the five different themes identified in Box 4.1. However, due to the complexity involved in drawing the diagram, it is more for illustrative purpose than an attempt at representing reality. This conceptual approach represents a useful first step before performing more in-depth statistical analysis.

Step 2

- 4.9 Whilst the initial conceptual mapping exercise was useful in identifying causal relationships between different spheres of activity, it was necessary to go one step further and test for statistical relationship between existing output indicators and the proposed outcome indicators. The difficulty in this exercise, however, is indicative of what has previously been identified by AMR practitioners as a significant barrier to successful monitoring at a local level: lack of available data, particularly in relation to environmental themes. Nonetheless, some useful data were obtained from a regional assembly and some outcome indicators were compiled by the research team. Given the incompleteness of the AMR datasets, a wide range of replacement and proxy indicators were also used for analysis.
- 4.10 In terms of completeness, the local authority data collected from the regional assembly was favourable in relation to those indicators relating to land use and sustainable economic development, but lacking in relation to natural resources and environmental quality. However, it undermined this step of the validation exercise since two different themes were essentially invalidated by this data deficiency. With a more complete dataset likely to be available in the near future, a complete validation exercise is feasible and desirable. Full details of the validation exercise are provided in Annex 7.
- 4.11 Despite the difficulties reported above, it is possible to identify some relationships between the output indicators and outcome indicators used in the analysis. There was a relatively strong positive correlation (i.e. above 0.4) between employment land supply by type (COI 1d) and new commercial floorspace developed (SPO1.1) and also between number of affordable housing completions (COI 2d) and SPO1.1. A relatively strong negative correlation (i.e. below -0.4) was found between total net additional dwellings (COI 2a) and percentage change in VAT registered business (SPO2.2). This relationship would seem to suggest that in local authorities where more business growth is evident there was less growth in terms of additional dwellings. Although it is difficult to determine the direction of causality here, this may be indicative of a mismatch between jobs and homes.
- 4.12 There were also strong positive relationships between the population outcome indicator (SPO5.1) and a number of existing output indicators, including projected net additional dwellings (COI 2a), number of affordable housing completions (COI 2d), amount of completed retail, office and leisure developments (COI 4b), and new and converted dwellings on previously developed land (COI 2b). Since the population data used here is based on 2001 Census data and the output indicators are more recent data, there relationship between output and outcome is not in the correct time order. So, this relationships need to be explored with more updated population growth data to ensure full validation of the output-outcome relationship.
- 4.13 Commuting independence (SPO2.4) was correlated positively with both the amount of land developed for employment (COI 1a) and the percentage of employment land in previously developed areas (COI 1c). There was also a strong positive correlation between the amount of area designated as Area of Outstanding Natural Beauty (proxy for SPO3.1) and amount of

land developed for employment. Although such a relationship does seem counter-intuitive, it is likely that the AONB indicator serves as a proxy not just for protected land but also for high quality of living and working environment.

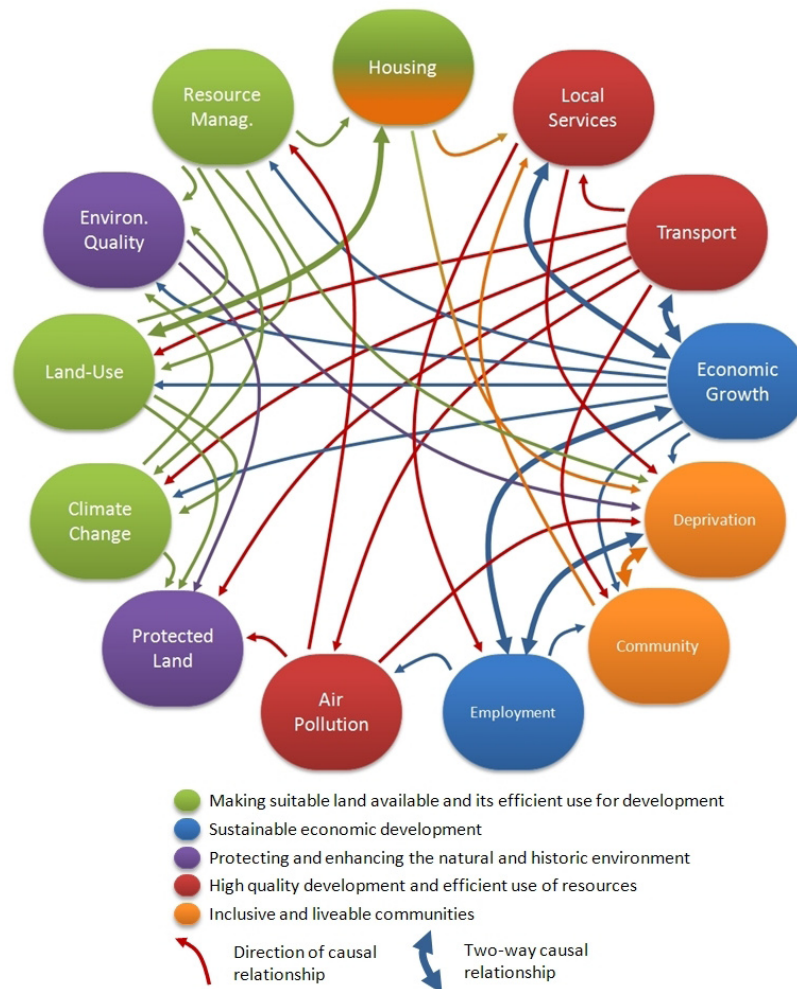


Figure 4.2 Conceptual Path Mapping of Key Planning Outcomes

4.14 Although it was not possible, due to data constraints, to complete the validation exercise for all 20 outcome indicators and the full range of output indicators, the evidence from the available data suggests that the process itself is very useful. Where statistical relationships do exist this reinforces the validity of selecting the chosen spatial planning outcome indicators and highlights the need for a more exhaustive set of data with which to work. Beyond the existence of statistical relationships between indicators, however, there is also a need to more fully consider the nature of the relationships between outputs and outcomes in order to eliminate any potentially spurious correlations.

4.15 Furthermore, it is very clear that there is not a single 'perfect' indicator standing out from the set that can be used as a representative to measure the complexity and multi-dimensional nature of spatial planning outcomes. This both justifies and validates the choice of grounding a selective set of indicators within a multi-dimensional framework to ascertain spatial planning outcomes. These indicators could then be bundled to analyse different aspects of the outcomes created.

Step 3

4.16 The final step of the validation exercise involves a consultation exercise with key stakeholders. This was based on the analysis of hypothetical data for three local authorities. The workshops

aimed to elicit comments and opinions from key stakeholders about the prospective outcome indicators and the rationale of their relationship with the strategic objectives of the spatial planning system, and about the efficacy of the overall framework as a basis for the analysis of the indicators and its ability to yield robust and relevant policy intelligence. Full details of the findings of the workshop are provided in Annex 8.

- 4.17 The key findings from the workshop show that almost all the indicators were related to land use. On the whole, the proposed set of indicators and the framework were found to be robust and coherent. There was also a consensus that there is not a perfect indicator as different participants hold very extreme views over the relevance of certain indicators such as 'Percentage of appeals allowed against refusal of planning permission'. This suggests that much more fine-tuning will be required to refine the definitions of the indicators. More importantly, the choice of the final set of indicators will probably require a wider consultation and political process to ensure the 'buy-in' of LPAs and policy-makers. The indicators will also need to be updated when new data sources become available and as policy issues emerge and priorities change. The proposed indicators in this report provide a very good starting point for this longer-term exercise.

Rationale for the Proposed Outcome Indicators

- 4.18 The themes set out in Box 4.1 have been chosen to reflect the scope of the objectives that have been set for spatial planning. The underlying rationale for the specific measures chosen is discussed below.
- 4.19 Most of the selected outcomes indicators have been used in existing performance indicator sets. It is also clear that indicators under theme (1) are closely related to the AMR Core Output Indicators and spatial planning activities. This is seen as important as there is a need to have a strategic overview of the cumulative planning activities over a longer period of time and then connect them (AMR output indicators are used as proxy measures) to the wider outcomes of sustainable development as captured in themes (2) to (5). It is important to point out that indicators under theme (2) to (5) tend to have already been collected by local authorities for various performance measures under the broad notions of quality of life, economic regeneration and regional competitiveness, and sustainable communities. This means that we can tie in the monitoring of spatial planning outcomes closely with other wider performance measures that are related to the broad and vaguely defined notion of sustainable development.
- 4.20 For the majority of proposed indicators, data is available either from the routine AMR monitoring information or has been collected by the ONS and CLG or as part of other performance datasets. Details of the definition and data source requirements of these indicators are provided in Annex 9.
- 4.21 Of the proposed indicators, SPO4.1 'Change in carbon footprint' is a new indicator to be included in the government's 198 outcome indicator set. This is seen as important in the light of the latest government housing and planning policies, and the fact that a new Climate Change PPS will address the issue. It is also important for CLG to look into the prospect of using the 1APP online planning application form to collect the data.
- 4.22 In addition, SPO2.3 'Job density', a new indicator used by the Office for National Statistics to explore regional labour market characteristics, is included to measure the spatial distribution and concentration of employment opportunities in relation to residential population. High job densities mean that there are potential employment opportunities for local residents, though it may also indicate a mismatch between the types of job on offer and the skills of people living there. Therefore, this indicator has to be interpreted in conjunction with other labour market conditions such as commuting patterns (SPO2.4) and qualifications of the workforce (SPO5.4).

- 4.23 Three additional indicators, developed in other research studies, are included in the proposed indicator set. SPO1.5 'Inter- and intra-regional infrastructural capacity and connections' was previously used to establish the spatial connectivities across the UK (Wong et al, 2006b). SPO2.4 'Commuting independence' and SPO5.4 'Supply-side Over-qualification Index' (Wong, 2002) were developed for an ESRC-funded research to measure factors that contribute to local economic development by examining community identity (as against to a commuting culture) and the supply and demand of qualified labour force in an area. These indicators aim to capture the extent of spatial integration and connection between places and the dynamic interaction of housing and labour markets.
- 4.24 The measurement of SPO2.4, SPO5.4, and SPO4.2 'Change in commuting mode (public transport)' relies heavily on the decennial Population Census information, which means that there is a need to collect survey-based information between censuses as required by the Audit Commission QoL Indicators. However, the interactive data for commuting is vital to inform many government policies, particularly planning-related activities. There is a need to explore with the ONS over possible ways to collect such data on a more frequent and consistent basis. Statistics for the measurement of SPO1.5 on transport infrastructural capacity are widely available, though the frequency of data collection will depend on the timing of the survey carried out by the respective authority. Furthermore, the compilation of train timetable has to be done manually which could be time-consuming.
- 4.25 The final choice of indicators is inevitably highly contestable. There are several issues that are difficult to resolve. There are the conceptual problems associated with causality and attribution. To some extent the move from output to outcome indicators comes at the cost of clear attribution (see Figures 3.2 and 3.3). Many of the outcome indicators included in this framework are attributable to factors beyond the remit of spatial planning. There is no attempt to argue that the proposed indicators are the outcomes of a direct causal link from spatial planning policy. These problems are compounded by the variation in outcomes across space and the interactions between places and between different levels of governance. In this context, the indicators proposed are merely reasonable rather than perfect measures of the outcomes that spatial planning has sought to influence.
- 4.26 There are also practical problems associated with measurement and data availability. Although, as we note above, some of the indicators proposed will require new data to be collected, for pragmatic reasons (including operational and cost considerations) the majority are based on existing datasets. Some policy outcomes are more difficult to measure than others and some policy outcomes have been monitored less than others. There is little data available, for example, on environmental change or on the effectiveness of land use planning. Similarly, there is no readily available information on the quality of place or perceptions of environmental quality. This means that inevitably there is some unevenness in the coverage of the indicators selected. These data problems are also compounded by the need to unravel outcomes at different spatial scales.
- 4.27 It is proposed that the framework should include two survey based, qualitative assessment indicators: SPO3.2 'Percentage of residents surveyed satisfied with their neighbourhood as a place to live' and SPO4.3 'Percentage of residents surveyed finding it easy to access key local services'. These two indicators are in the Audit Commission Quality of Life Indicator Set and the Best Value Residents Survey. They are included in the proposed set because they will help to capture the quality of place and the access to key services, which are central to the planning activities.
- 4.28 The large majority of the proposed indicators are change measures. As explained in Figure 3.3, the time dimension is critical to our understanding of the nature of achievement of spatial planning objectives. It is intended that, as most indicators are collated over time, they can be used in analyses on a year on year basis as means of ascertaining the immediate policy

effects. It is, however, important to take a strategic and cumulative overview of the embedded outcomes over a longer time horizon, say at least in a five year cycle.

- 4.29 As noted above, the intractability of the conceptual and practical problems means that it is not possible to derive single indicators that are themselves directly attributable the outcomes of spatial planning policies and processes. It is the entire indicators framework and the analysis from the flexible bundling of different indicators that allows evaluation of the nature and breadth of the outcomes of spatial planning. As shown in Box 4.2, for instance, the 20 indicators can be re-grouped to address the five policy objectives emphasised in the Queen's 2007 speech: available and affordable housing; high levels of employment; cleaner environment; tackling climate change; and health care to meet individual needs and improved social services.

Making suitable land available and its efficient use for development:

- 4.30 This theme very clearly interacts with the others. To some extent separating this sub-set of indicators from other themes is slightly artificial. But managing the availability of land and the way in which it is used is a central function of spatial planning and land-use objectives are very explicit in government policy statements. Thus, this theme is imported from the objectives set in Planning Policy Statements. Clearly the effectiveness with which this function is performed and the outputs it delivers will have implications for the wider outcomes of spatial planning. The availability of land, for instance, is an important mediator of sustainable economic development and will impact on the natural and historic environment. This is true also of infrastructure provision. The attainment of broader economic, environmental and social inclusion objectives will be highly contingent on transport capacity. Intra-regional capacity, for example, will interact with the commuting patterns, journey times and access to local services (see theme 4).
- 4.31 It is difficult to measure the 'efficiency' of land use. The key indicators identified in Box 4.1 reflect the need to make suitable land available for both residential and commercial development. However, it is worth noting that the interpretation of these indicators, as discussed previously, needs to be appropriately contextualised. The extent to which level of new floorspace developed might be efficient will depend on the extent to which commercial development is facilitating economic growth and contributing to the creation of socially inclusive places.

Sustainable economic development:

- 4.32 The sustainable economic development indicators are less clearly attributable to planning than the 'land use' indicators. In a general sense these indicators ought to be concerned about the competitiveness of places. There are many dimensions to economic competitiveness and these indicators could arguably seek to measure training and skills development, and improvements in knowledge capacity. Economic competitiveness and economic growth are difficult to measure in a manner that might be meaningful at different spatial scales. Standard measures like GDP cannot be disaggregated to a low enough spatial scale. The indicators chosen are proxies for economic growth. They are selected because they are outcomes that are clearly related to the land use planning outputs discussed above. Economic growth will be reflected in new business formation and in the expansion of existing businesses. SPO2.2 seeks to directly measure the former, while SPO2.1 is a proxy for the latter. The use of employment growth as a proxy for business expansion is common practice in economic modelling (Ball et al, 1998). Additional indicators are required to assess the extent to which economic development might be considered sustainable. SPO2.3 and SPO2.4 are concerned with matching jobs to people and localities. The first of these measures job density, while the second considers the degree of commuting independence. These indicators taken together should demonstrate whether economic growth is accompanied by greater commuting and/or a greater mismatch between employment opportunities and homes.

Box 4.2 Re-bundling of Planning Outcome Indicators to Address Key Objectives in the Queen's 2007 Speech		
Theme	Indicator Bundle (5 key planning objectives)	Key objectives raised in the Queen's 2007 Speech
(1)	<i>Making suitable land available and its efficient use for development</i>	<i>Available and affordable housing</i>
SPO1.1	Additional commercial floorspace developed	SPO1.2
SPO1.2	Additional new homes completed	SPO3.2
SPO1.3	Percentage change in derelict land stock	SPO5.1
SPO1.4	Percentage of appeals allowed against refusal of planning permission	SPO5.3
SPO1.5	Change in inter- and intra-regional transport infrastructure capacity and connections	
(2)	<i>Sustainable economic development</i>	<i>High levels of employment</i>
SPO2.1	Percentage change of working age people in employment	SPO1.1
SPO2.2	Percentage change in the total number of VAT registered businesses	SPO2.1 SPO2.2
SPO2.3	Change in job density	SPO2.3
SPO2.4	Change in the level of commuting independence	SPO2.4 SPO5.1 SPO5.4
(3)	<i>Protecting and enhancing the natural and historic environment</i>	<i>Cleaner environment</i>
SPO3.1	Loss of protected land (SSSI, ESA etc.)	SPO3.2
SPO3.2	Percentage of residents surveyed satisfied with their neighbourhood as a place to live	SPO4.1
SPO3.3	Change in area of parks and green spaces per 1,000 head of population	
(4)	<i>High quality development and efficient use of resources</i>	<i>Tackling climate change</i>
SPO4.1	Change in carbon footprint (CO ² emission per capita)	SPO1.5
SPO4.2	Change in commuting mode (public transport)	SPO2.4
SPO4.3	Congestion: average journey time per mile during the morning peak	SPO3.1 SPO4.1
SPO4.4	Percentage of residents surveyed finding it easy to access key local services	SPO4.2
(5)	<i>Inclusive and liveable communities</i>	<i>Healthcare to meet individual needs and improved social services</i>
SPO5.1	Percentage change in total resident population	SPO4.4
SPO5.2	Percentage of population who live in the 10% most deprived areas (wards/districts).	
SPO5.3	Percentage of households that can afford to purchase the average first time buyer's property in the area.	
SPO5.4	Change in Supply-side Over-qualification Index value	

Protecting and enhancing the natural and built environment:

4.33 This is a broad theme and is arguably the area that presents the most difficulty in terms of measurement. This theme encompasses concerns about biodiversity, and the quality of the built environment. The measurement of environmental change is constrained by the absence of comprehensive datasets. The selection of environmental output indicators has also been a problem in the AMR framework¹. The indicators used to explore nature preservation and habitat restoration have been hard to collect, only partly attributable to planning and difficult to interpret. Alternative indicators, including for example the number of permissions granted contrary to Environment Agency advice, are also likely to be ambiguous. The outcomes can be 'good' or 'bad'. The coverage of the indicators proposed is imperfect. The indicators do, however, provide measures of the perceptions of the quality of urban environment, the provision (although not quality) of green space, and the loss of habitat. There remains scope to extend this group of indicators to explore the quality of environmental outcomes. This may become possible as DEFRA extends its data capture in response to the recent Local Government White Paper.

High quality development and efficient use of resources:

4.34 This theme seeks to capture the environmental efficiency of planning outcomes. Again, the choice of indicators is constrained by data problems. These have been discussed extensively in the context of the AMR process². The indicators focus on three key areas. SPO4.1 is concerned with energy efficiency, SPO4.2 and SPO4.3 focus on travel to work and road congestion, and SPO4.4 on access to local services. The energy efficiency measure proposed is not available at present. It is hoped that, as the monitoring of environmental change develops, this may be available at regional and national level. The other indicators relate, in large part, to the effectiveness of the transport system in meeting environmental objectives. These are also inter-related to aspects of the quality of the urban environment. This is another area where the use of attitudinal data may be a more effective means of identifying outcomes in the medium term.

Inclusive and liveable communities:

4.35 This group of indicators is concerned with the social structure of spatially defined communities. SPO5.1 explores population change. There is considerable evidence that the most deprived communities experience high levels of population loss, while prosperous localities grow. SPO5.2 measures the extent of deprivation in the locality. This indicator captures the incidence of multiple sources of deprivation and indicates the extent to which the relative concentration of deprivation is changing within a particular locality. It is likely that this will be related to the retention and/or attraction of more affluent, economically active and better educated households. SPO5.3 and SPO5.4 focus on these issues. The affordability indicator acts as a relative income measure. The supply-side over-qualification index captures the extent to which educated residents can find suitable employment within the locality. Together these indicators provide a snapshot of social and economic cohesion. The extent to which inclusive and liveable communities can be created is related to the local labour market, the housing system and the adequacy of public service provision.

4.36 Several key outcomes of planning can only be measured indirectly. The cumulative analysis of the (other) indicators included in Box 4.1 is intended to inform assessment of the overall effectiveness of planning. These indicators indirectly proxy the way in which spatial planning contributes to the quality of places through efficient land use, sustainable development, environmental enhancement and mediating social change. It would be desirable to measure the outcome in a more direct manner. The breadth and complexity of the outcomes that contribute

1 See CUPS July report of the e-survey findings of AMR practitioners over the difficulties of collating certain core output indicators.

2 As footnote 1.

to the overall effectiveness of planning mean that inevitably this can only be measured by capturing the attitudes and perceptions of individuals. The most effective way to do this would be to include questions about the quality of place and/or the effectiveness of (or even public confidence in) planning in national longitudinal surveys such as the British Household Panel Survey. This, however, is not unproblematic.

- 4.37 The validity of the survey response requires that the general public has a good grasp of the full range of complex activities that spatial planning covers. For most of the general public, their understanding of planning tends to related to development control work. In addition, there is a lot of misconception of what planning does or does not do. This, again, reflects the difficulties involved in finding relevant and suitable questions to ascertain valid answers. This sort of indicator could only be included in the framework if it could be shown that the results generated would be meaningful. This is unlikely given the nature of media coverage of planning issues and considerable public misconception about the role of planning and the decision-making process. Public opinion tends to be shaped by a rather narrow set of planning activities. Survey-based indicators would need to be the subject of extensive testing.

SECTION 5

The spatial planning outcome framework

Spatial Planning Outcome Framework: a Partnership Approach

Key Analytical Principles

An Illustrative Example

Moving the Agenda Forward

Spatial Planning Outcome Framework: a Partnership Approach

- 5.1 A set of 20 spatial outcome indicators were identified in Section 4. The five key objectives of spatial planning set out in PPS1 and other key planning policy documents are used as a domain framework to help identify the relevant outcome indicators. However, the analysis of spatial planning outcomes focuses on the flexible bundling of the outcome indicators across different themes and with a wider set of contextual, process and output indicators for cross-cutting analysis.
- 5.2 Since statutory spatial plans only exist at the regional and sub-regional level, it is at these spatial levels where monitoring of spatial planning outcomes can help inform the development of planning strategies and activities. The recommendation is, therefore, to develop a '**spatial planning outcome framework**' (SPO framework) within each region to guide local and regional planning authorities to take a lead in developing their own integrated spatial planning outcome framework. This means that the RPB, LPAs and other key stakeholders in each region will have to work together to join up their policies within the spatial framework and to monitor the spatial outcomes of their planning policies.
- 5.3 For some long-term and higher order outcomes, in other words, cross-cutting and overarching issues of sustainable development and sustainable communities, the monitoring is best carried out at the partnership level. A whole range of stakeholders and organisations have to be mobilised. In the light of the proposal of having a single, integrated regional strategy (to combine Regional Spatial Strategy and Regional Economic Strategy) under the Treasury's Sub-National Review (HM Treasury, 2007c), an integrated regional monitoring approach will no doubt increasingly be seen as important.
- 5.4 The emphasis on having a coherent regional SPO framework is to move away from the approach of measuring a fixed set of indicators separately for different levels of administrative area. The traditional monitoring approach tends to rely on a set of indicators, with the assumption that individual indicator values can shed light on the difference between expected and obtained outcomes; and planners and others can then adjust their policy and actions to bridge the gap. This closely follows the 'single-loop learning' model (Argyris and Schön, 1978) and will not enhance organisation learning among key stakeholders to fully realise the need of achieving vertical and horizontal integration of sectoral policies within a spatial planning framework.
- 5.5 The SPO framework proposed here could be seen as a further development from that proposed in the AMR guidance (ODPM, 2005b; Wong et al., 2006a) to address two key issues: (1) to have a monitoring system that fully reflect the importance of vertical and horizontal integration of policies within a spatial framework and (2) to incorporate the spirit of the tests of soundness of developing a monitoring framework that contributes to the delivery of justifiable and effective policy-making. To achieve these will require a culture shift of policy monitoring from the single-loop learning model to double-loop learning (Argyris and Schön, 1978). While the 20 indicators identified in Box 4.1 provide a consistent set of data to monitor spatial planning outcomes across multiple spatial levels, the idea is for stakeholders in the region to think about the critical development issues in different parts of the region and allow them to exercise the flexibility to choose extra outcome indicators that are deemed as most useful to gauge intelligence to inform the progress of their spatial plans collectively.

- 5.6 The guiding principles of the outcome indicators framework set out in Box 3.8 can be applied across different spatial levels to guide the selection of other relevant indicators that reflect particular local and regional circumstances. Indicators do not necessarily have to be collected for everywhere: some may be needed for particular targeted areas, for example, in areas with high concentration of ethnic groups, or in areas with strong deprivation problems. More importantly, for some indicators, it is more useful to collect data based on their functional areas such as water catchment areas (for flood issues), housing market areas (for house price and affordable housing issues), and travel to work areas (for employment and commuting issues) to yield robust and meaningful policy intelligence.
- 5.7 More importantly, the move towards the development of a spatial planning outcome framework for the region will help LPAs to address their issues flexibly in the delivery of their core spatial strategies. Since this is a collaborative monitoring framework, it will require integration of strategies across different spatial scales as well as across different policy sectors. The emphasis of this monitoring framework on developing a more strategic approach by connecting outcomes with the wider policy operating context and continuous policy outputs, as well as emphasising rigorous spatial analysis (through bundling of indicators).
- 5.8 Unlike other rigid performance frameworks, this framework focuses on partnership working and there is flexibility to stretch the potential of the data collected to yield relevant policy intelligence to allow effective monitoring of policy delivery. This will also serve as a communicative, learning framework to allow key stakeholders to grapple with the complexity of different interconnected issues and express their vision in the policy formulation process. Hence, monitoring should no longer focus on single indicator values, but rather focus on about how to make use of indicators to help planners and key stakeholders to question the values, assumptions, and core strategies that led to the policy actions in the first place and will then be able to modify policy and actions to address the new issues identified. This double-loop learning model provides a communicative and iterative learning approach of monitoring and embeds monitoring right at the heart of the policy-making process.

Key Analytical Principles

- 5.9 In addition to the identification of potential outcome indicators, it is important to develop suitable approaches to analyse the indicators, rather than having a set of unconnected indicator values, to yield effective and credible policy intelligence. To take this forward, the discussion here focuses on identifying some analytical principles to analyse planning outcomes through a regional framework.

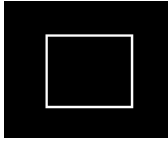





Spatial Analysis:

- 5.10 As discussed earlier in Section 2, the objectives of sustainable development and the key themes emerging from national policy statements are generic and universal, but 'non-spatial'. If we also adopt indicators that are aspatial, there is a danger that one cannot truly differentiate between the performance of the government's macro economic and social policy outcomes from the more planning related activities that aim to reduce spatial disparities. The requirement is, therefore, for central government and regional and local planning bodies to include the appropriate '*spatial dimension*'.
- 5.11 Policies that are spatial in nature can trigger spatial impacts on neighbouring areas. Well-known examples include the spatial ripple effect of house price inflation and the planning blight caused by derelict and vacant land in the neighbouring areas. Based on Rae's (2007) PhD research, Box 5.1 provides a diagrammatic illustration of how policy intervention in one local neighbourhood can impact on its neighbours within the region. This example demonstrates that different spatial perspectives can alter our interpretation of outcomes and that we must not take spatial units of analysis for granted, even if we are to some extent restricted by the national data

infrastructure. This analytical principle is more than purely academic since it can significantly alter the results of our analyses, our eventual conclusions and the intelligence which eventually feeds back into the policy cycle. This point links to the importance of functional areas as spatial unit of analysis.

- 5.12 Despite the fact that there is an absence of explicit national spatial policies, the outcomes of planning policies at the local and regional levels can still alter the national spatial landscape and some forms of 'spatial' indicators will be needed to gauge these spatial distribution issues. Of the 20 identified outcome indicators, SPO1.5 'change in inter- and intra-regional transport infrastructure capacity and connections', SPO2.3 'job density' and SPO2.4 'change in the level of commuting independence' are spatial indicators as they explicitly measure the linkage between different spatial areas. Box 5.2 illustrates the importance of examining commuting flows along the M62 corridor in North West England (Hincks and Wong, 2007). The analysis points to the fact that northern and southern parts of the region are two highly self-contained areas in terms of the daily interaction of housing and labour markets. This will have policy implications over future transport infrastructure provision and the spatial distribution of housing, employment sites and other key services.
- 5.13 As discussed earlier, indicators do not necessarily have to be collected for all locations; some may be needed for particular targeted areas such as the part of a region or a particular local authority where the reduction in derelict and vacant land is seen as critical to achieving wider sustainable development outcomes. For instance, it will be much more meaningful to examine the change of vacant and derelict land in the three northern English regions where the large majority of dereliction lies, as a national planning outcome to be achieved. Likewise, within a region and a particular local authority there will be certain areas where the reduction in derelict and vacant land will be seen as critical to achieve the wider sustainable development outcomes.
- 5.14 Alternatively, indices measuring spatial disparities, such as spatial Gini coefficients and indices of dissimilarity (see Annex 4), could be used to gauge differential change on indicators such as employment change and small firm formations across a region. For instance, the Gini coefficient was used in Box 5.3 to provide a summary of the commuting flow patterns in the North West (Hincks and Wong, 2007).

Box 5.1 Simple Models of Spatial Effects for Area-based Policy Intervention

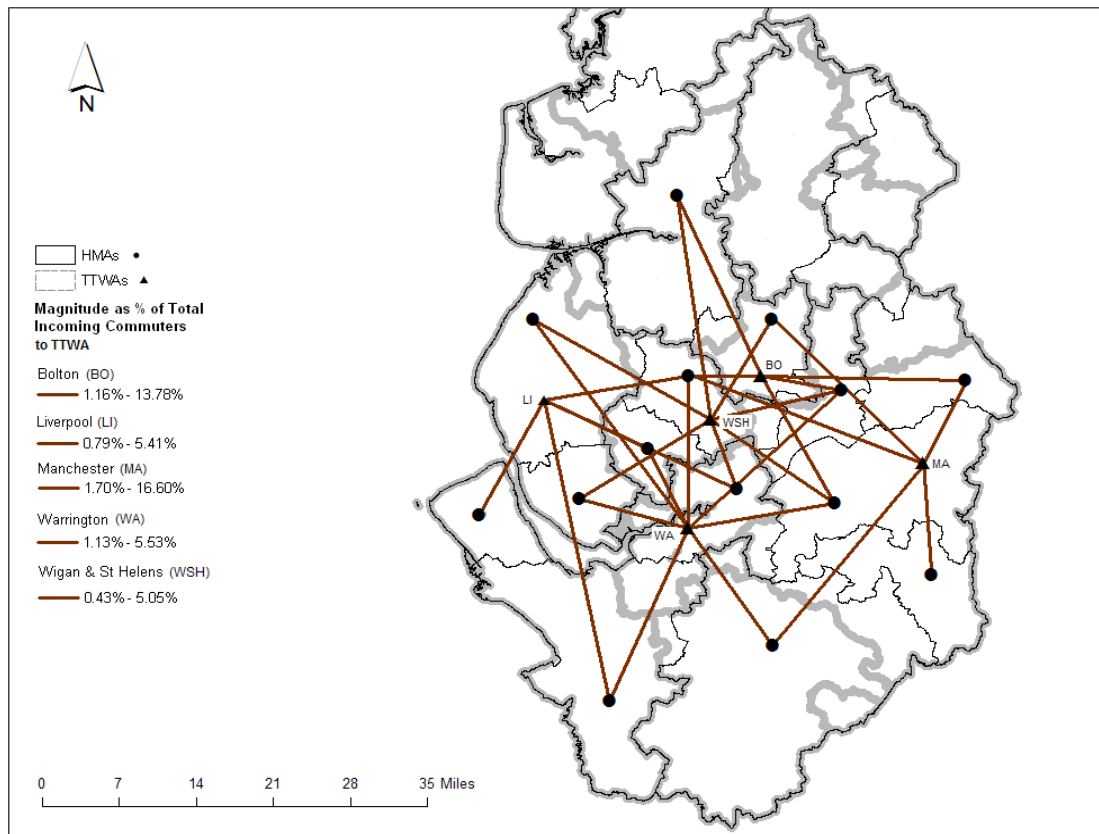
Model	Explanation	Regional Assessment
1	 <p>Area Additionality, Regional Additonality Positive outcomes for the target area and also positive for the wider region. This is the best possible result.</p>	<p>Good Result. The initiative has produced a positive 'spread effect', and done its job in the target area.</p>
2	 <p>Area Additionality, Regional Neutrality Positive outcomes for the target area, but negligible or zero for areas outside target area boundaries.</p>	<p>Good Result. No 'spread effect', but the area-based initiative had the desired effect in its target area.</p>
3	 <p>Area Additionality, Regional Displacement Positive outcomes for the target area at the expense of the neighbouring region. Locally, this is a success, but not at a regional level.</p>	<p>Bad Result. At a strategic, regional level, this is not good. Negative contribution to regional dynamics.</p>
<p>  Positive Effect  No Effect  Negative Effect </p>		

Three separate models of spatial effects are presented here where the areas targeted by policy intervention experience positive outcomes (the inner box). However, when taking a wider region perspective, the analysis will extend to the immediately surrounding of the targeted area (the outer box) to detect the broader spatial outcomes created by the policy.

In Model 1, there are also positive outcomes in the surrounding area; a situation indicative of positive 'spread effects', the kind of which are always keenly sought after in spatial policy intervention. In Model 2, there are no positive 'spread effects' but the targeted area experiences a positive outcome and the goals of the intervention have been met. In Model 3, however, there have been negative impacts in the wider region, in contrast to positive outcomes in the targeted area. This scenario is indicative of a regional displacement effect whereby positive outcomes in one location come at the expense of negative outcomes in another area. In terms of making a regional and more strategic assessment of these outcomes, only two can truly be seen as positive since Model 3 is indicative of negative regional dynamics and displacement. If we had only considered the locally targeted area as an appropriate spatial unit of analysis, however, a different conclusion could have been reached.

Source: Rae, 2007

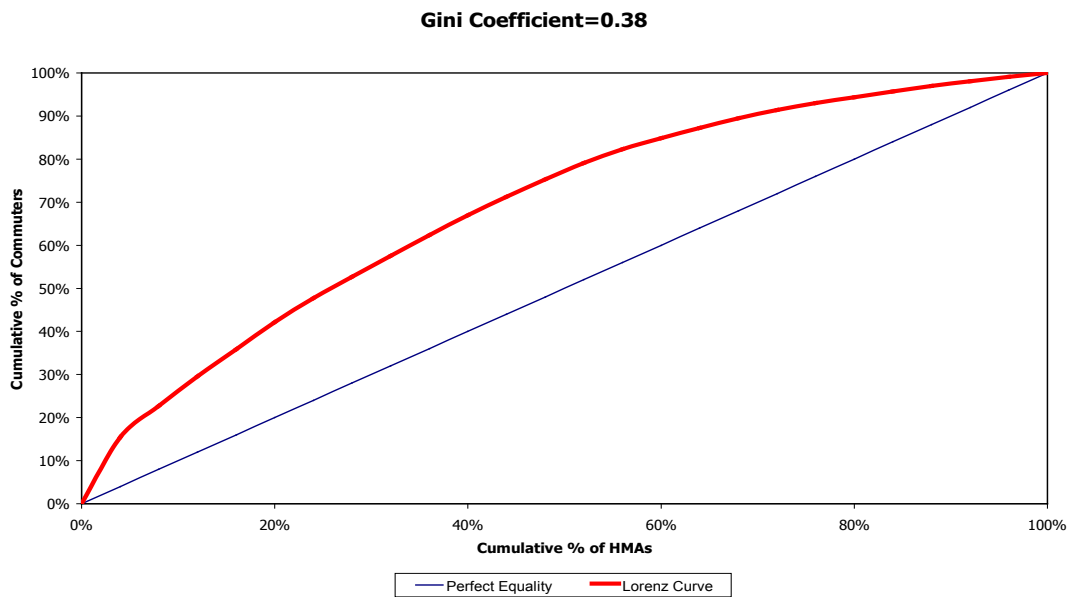
Box 5.2 Second Order Commuting Flows into the Travel to Work Areas of the Urban-Industrial Belt in the North West



The analysis of second order commuting suggests that there is a degree of balanced cross-commuting taking place between the housing and labour markets of the urban-industrial belt and Lancashire. However, this contrasts significantly to the interaction between the urban-industrial belt and Cheshire in which the labour markets in the urban-industrial belt attract significant proportions of workers from Cheshire housing market areas. This shows the importance of Cheshire as a hinterland for the two metropolitan areas, and the practice whereby workers locate in a desirable residential location for quality of life benefits and take up jobs located in the older industrial areas. Another key finding is that the urban-industrial belt appears to act as a buffer between the housing and labour market areas of Lancashire and Cheshire. There is no interaction between the shire sub-regions (Cheshire and Lancashire) in terms of second order commuting flows. Taking this with the first order flows together (constitutes 94 per cent of total commuting flows), the findings point to the fact that the northern and southern parts of the region are two highly self-contained areas in terms of the daily interaction of housing and labour markets.

Source: Hincks and Wong, 2007

Box 5.3 Gini Coefficient and Lorenz Curve for Outgoing Commuting from Housing Market Areas in the North West



According to the 2001 Census, the average outgoing commuters in the North West is 112, 282 workers per Housing Market Area (HMA) and 12 out of the 25 HMAs have a higher than regional average level of out-flows. An important issue to be explored in this research is the distribution of outgoing commuting (labour supply) across the HMAs to ascertain whether the outflows tend to concentrate in a few dominant HMAs or more evenly dispersed. The Gini coefficient of 0.38 suggests that there is some degree of concentration of outgoing commuting in the North West. Indeed, 50 per cent of all outgoing commuting in the region originates from just 7 HMAs, which tend to serve the urban-industrial belt. The Manchester HMA alone accounts for over 15 per cent of outgoing commuting in the region. (Where the Gini coefficient is equal to 0, each of the HMAs would have an equal share of outgoing commuting and where the coefficient is 1, outgoing commuting would be dominated by a single HMA.)

Source: Hincks and Wong, 2007

Functional Area Analysis:

- 5.15 The analysis of many indicators will only be meaningful if the measures genuinely reflect the functional remit of the issues concerned. This reinforces the earlier discussion that the choice of appropriate spatial units of analysis is crucial, so that outcomes can be captured regardless of whether or not they occur within local administrative boundaries. For instance, in terms of commuting, using Travel to Work Areas will include a high percentage of persons within a defined labour market area (e.g. for 2007 TTWAs the criterion is 75 per cent of people in each TTWA also live there). An even more pertinent example here might be the evaluation of outcomes relating to the natural environment (e.g. air pollution, flooding) which are even less likely to be contained within local administrative boundaries and therefore must be dealt with in a more spatially sensitive manner than has previously been attempted.
- 5.16 In order to ascertain robust spatial outcomes, the alignment between the space over which a particular policy is able to have an effect and the appropriate functional area is thus very important. One of the consequences of failing to adequately reflect functional areas within measures of the spatial planning system is that policies can unwittingly encourage displacement activities, as illustrated in Box 5.1. For example, a policy that seeks to balance the size and tenure

mix of new housing development will be limited in its effectiveness if the market for housing extends beyond the local authority area and housing mix policy in an adjacent area has different objectives. This is, nevertheless, often the case as Figure 6.1 shows that the boundaries of many housing market areas along the M62 corridor in the North West do not coincide with the local authority administrative boundaries. Hence, most of the proposed indicators should be collected, reported and interpreted with reference to some forms of functional area.

5.17 It is thus helpful to quickly assess the potential application of different functional areas to the prospective outcome indicators. Box 5.4 offers a summary for each prospective outcome indicator. However, there are some indicators for which there does not appear to be any convincing theoretical or technical justification for this. This is especially the case with indicators of process-driven outcomes such as planning appeals.

Box 5.4 Examples of Application of Functional Areas	
Outcome indicator	Potential application of functional areas
Number of new homes completed	Assessed against RSS targets, which could be specified with reference to Sub Regional Housing Market Areas
Amount of new commercial floor space developed	Assessed against RSS targets, which could be specified with reference to TTWAs and/or economic regeneration zones.
Employment change	Change calculated for Local Labour Market Areas (or proxy such as TTWA)
Small business formation	Calculated for Local Labour Market Areas (or proxy such as TTWA)
Loss of protected land (SSSI, ESA, etc.)	<i>Potentially not applicable</i>
Qualitative assessment of built environment	<i>Potentially not applicable</i>
Zero carbon homes	<i>Potentially not applicable</i>
Commuting mode	The modal split of commuting journeys could be assessed at the TTWA level.
Road congestion	This could potentially 'autocorrelate' with functional areas, so it may be more appropriate to calculate congestion time using GIS.
% change in people living in the 10% most deprived areas	<i>Potentially not applicable</i>
Population change	Care would be needed to ensure that the application of functional area to analysis reflected the underlying policy concern: change in population as an underlying measure of area 'competitiveness' ought to use a functional area such as TTWA or city region to assess this. At other scales, or to pick up on trends such as counter-urbanisation, use of a functional area would mask outcomes.
Number of lost appeals	<i>Potentially not applicable</i>

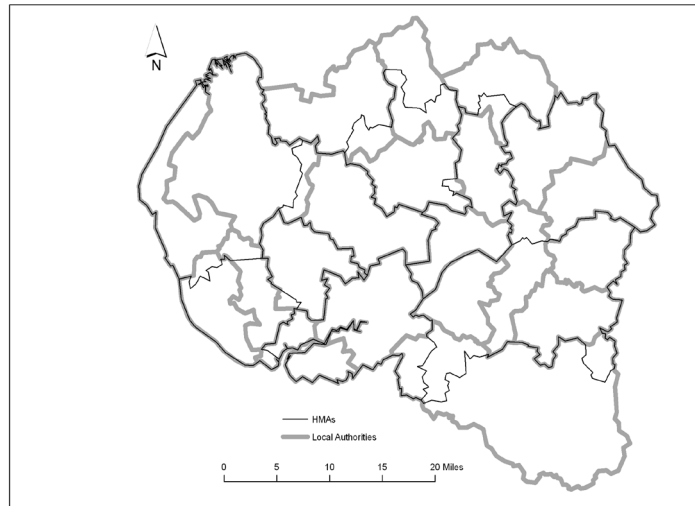


Figure 5.1 Comparison of Housing Market Area and Local Authority Boundaries in the North West Urban Industrial Belt

Contextual Analysis:

- 5.18 Since spatial planning outcomes are closely related to the wider operation context, it is important to interpret planning outcomes against the contextual indicators in order to have a more meaningful picture of performance and achievement. For instance, during an economic downturn or in instances of environmental disaster, even when the outcome indicators exhibit negative values, it may be that planning policy has already been performing by mitigating more damaging effects. A structure-performance model (Carlisle, 1972) is, therefore, proposed to monitor spatial policy. The distinction made here is between the more descriptive nature of the complex social, economic and environmental conditions in the wider spatial context (i.e. structure), against which the objective-oriented spatial policies are making an effect (i.e. performance).
- 5.19 An example is provided in Box 5.5 to illustrate how the contextual information helps to interpret the findings of output and outcome indicators. Such an analytical framework aims to provide a sound and realistic basis for planning authorities to interpret the performance of spatial policies (Wong, 2006). This approach is particularly powerful when taking the spatial areas within a region into consideration, appropriate policy options and scenarios can be developed to inform continuous adjustment of policy needs. The use of contextual indicators tends to be associated with the need to establish baselines for the rigorous evaluation of progress and change (EC, 2000; DTLR, 2002; ODPM, 2003).

Indicator Bundle Analysis:

- 5.20 Given the complexity of spatial policy implementation, the analytical bundle approach is an essential tool for providing a more rounded view of different aspects of policy. The emphasis is on developing a bundle of indicators within each theme and analysing them collectively to understand the broader thematic spatial planning outcomes. However, it is often more important to do cross-cutting analysis by combining indicators across different themes, as well as including other types of indicator (e.g. contextual and output indicators) to develop new indicator bundles to express an area’s policy visions.
- 5.21 For instance, if a region delivers its housing targets in sustainable locations over a period of 5-10 years, it should serve as an intermediate step to contribute towards the outcome of delivering liveable communities. However, there may be unanticipated outcomes brought by

the housing policy. For instance, if many of these new houses are built at the edge of the flood plain or in low-lying coastal areas, and the effects of climate change worsen over time increasing potential flooding problems, this could result in the unanticipated outcome of having inhabitable communities. We can only measure such outcomes if LPAs include extra contextual indicators on environmental issues and analyse the indicators together to get a more holistic picture.

- 5.22 The essence is, therefore, on using an 'analytical' oriented approach rather than a simple technical synthesis of indicators to bring out the merit of analysis rather than just having technical synthesis of indicators. Commentaries on the spatial patterns emerging from the indicator values within the bundle will provide a mini-profile of the spatial planning outcome being measured (examples are given in Box 3.6 and Box 4.2).

Box 5.5 Example of a Structure-Performance Model

Contextual information:

The contextual indicator on stock composition for borough M shows that over 60 per cent of the housing stock is made up of pre-1919 terraced housing. A local housing assessment survey shows that there is a need for more semi-detached and detached properties in the borough to cater for households at different stages in their family life cycles.

Output indicator:

Within a sub-area J (5 hectare of land) of the borough, the density of new build is 30-35 per hectare compared with a borough-wide target for this output indicator of 40-45 dwellings per hectare.

Outcome indicator:

The total number of additional new homes completed in sub-area J is 170 dwellings.

Interpretation:

The density of development in the sub-area J appears to conflict with the wider objective of more compact, sustainable development. However, in this part of the borough, it accords with the strategy to diversify the portfolio of housing stock to meet the needs of local households. This will help to prevent further outward migration of the local population to more affluent neighbouring boroughs that have suitable low density housing stock.

Source: ODPM, 2005a: 52

Benchmarking and Trend Analysis:

- 5.23 Benchmarking with other comparator areas and longitudinal trend analysis are the two common approaches used to find out the nature and patterns of change (Wong, 2006). Since the identified outcome indicators are largely dynamic indicators that examine changes, trend analysis has already been incorporated into the monitoring framework. The proposed timeframe of analysis is of at least a five-year time period to allow planning strategies to work their way through the system.
- 5.24 Interpreting policy implementation can be undertaken in absolute and relative terms. Traditionally, the analysis of indicator values focus on whether they are meeting set targets in absolute terms. It is, however, more useful to compare policy performance with the wider spatial context (e.g. the sub-region and the region) and other areas operating within a similar social, economic and environmental context. Such a benchmarking exercise within a regional framework helps to determine what the best policy is and what standards should be set for different LPAs, particularly to inform the development of their core spatial strategies. It also helps to reveal progress by controlling for the interruptive effects created by external events such as an economic downturn or natural environmental events.

An Illustrative Example

5.25 In order to demonstrate how the SPO will work in practice, particularly in relation to the extent to which their analytical power can be enhanced by considering them at nested spatial scales and over the appropriate time frame, 4 hypothetical local authorities are used as illustrative examples (see Figure 5.2). They are:

- LPA1 – Inner-urban Metropolitan District;
- LPA2 – Deprived coastal Unitary Authority;
- LPA3 – Rural Local Authority District; and
- LPA4 – Unitary Authority situated between major urban centres.

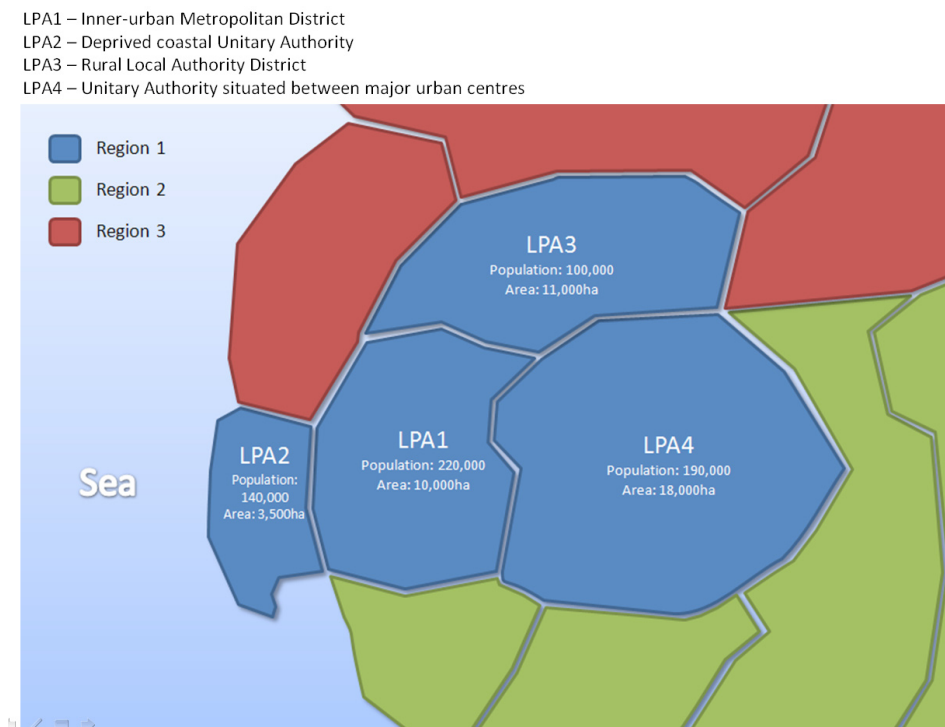


Figure 5.2 Boundary Map of Hypothetical LPAs

5.26 The 20 proposed outcome indicators were compiled for four English LPAs, using real data wherever possible. Where this was not possible, estimates were used based on the type of local authority selected for analysis, of which there are four. In addition to data for the four LPAs, the regional totals or averages were calculated and compared to national totals (see Figure 5.3). The purpose of this approach is to demonstrate not only how the outcome indicators look for different types of area, but how they are useful to consider as 'bundles' and how they might inter-relate (or benchmark) at different spatial scales. In relation to the latter point, we ought to consider the most appropriate scale for interpretation of each SPO and whether differences in outcomes ought to be assessed at multiple spatial scales simultaneously in order to ensure strategic evaluation rather than more tightly-focused localism which is not likely to allow the identification of successful planning outcomes more broadly.



Figure 5.3 Time Series Data of the 20 Outcome Indicators

5.27 From the data in Figure 5.3 we can observe that local changes in outcomes (either positive or negative) can be interpreted in relation to the wider region and in a national context if we are to make sense of them. Furthermore, we must also take into account how these compare with changes in other outcome indicators. For example, if significant additional commercial floorspace is developed in LPA1, but the percentage of working age persons in employment falls, we might assume that this has been a negative outcome. However, this in itself must be taken in the context of other changes over the relevant time frame and related to changes at other spatial scales. In short, then, we need to take a wider view of the consequences of spatial planning and its outcomes if we are to properly understand outcomes beyond local boundaries.

5.28 The final consideration in relation to spatial scale and the assessment of outcome indicators relates to functional areas. For example, those indicators relating to either housing or labour market activities (e.g. SPO1.2 and SPO2.1) cannot logically be interpreted at the local authority level in isolation since such market areas rarely mirror local political boundaries. For example, in LPA1 the number of additional new homes completed over a five year period might meet existing targets. However, if the sub-regional functional housing market actually includes LPA4 as well, which built far fewer new homes during the same period, then we must interpret these two indicator values in combination and reconsider the spatial impacts. Furthermore, it may also be the case that a functional housing market includes only part of LPA1 and part of LPA4, so it is imperative that we understand these multi-scalar spatial relationships if we are to capture at a strategic level the outcomes of spatial planning. There is a strong need, therefore, to ensure that future analyses take these strategic issues into consideration.

- 5.29 This illustrative example of 4 LPAs was used by the team to conduct a simulation exercise in the final workshop to test both the robustness of the indicators as well as the overall SPO framework. Details of the workshop findings are provided in Annex 8. The active engagement and the use of the full set of indicators by the workshop participants to create different indicator bundles across different themes to analyse different policy issues shows that the SPO framework works well. Based on the analysis, they were able to pinpoint the need to seek more information on certain areas to improve their understanding of the issues: some of these are contextual indicators, some are related to the planning process and others are related to have better qualitative and survey based data (as suggested in this report). There was also a strong sense of awareness of cross-boundary issues and the need to examine functional areas to get the big picture. Again, this demonstrates the effectiveness of the analytical indicator bundle method and the SPO framework as a 'double-loop' learning approach to stimulate strategic thinking among different individuals.
- 5.30 In summary, the proposed indicators serve as the basic structure, but it is the analysis of a basket of indicators that enables stakeholders to have a grasp of the need to select other relevant indicators to improve the bundle analysis to serve the policy requirements of their LPAs. It is this in-built flexibility and interactive learning approach of the framework that embed monitoring into spatial planning, rather than an extra add-on or parallel activities of the planning process.

Moving the Agenda Forward

- 6.1 The proposed framework here aims to address the long-standing challenges of measuring the effectiveness and outcomes of spatial planning strategy. Past evaluation studies of planning tend to focus on a particular planning instrument or policy such as green belt, transport, town centre vitality and viability. The exception was Hall's 1974 study of urban containment, which is seen as the only comprehensive evidence-based study of the land use planning system. It is, however, important to point out that this study only focused on one planning theme. In the early 1990s, the DoE commissioned Pineda et al. (1992) to develop a methodology to evaluate the effectiveness in land use planning; and towards the end of 1990s the DETR again commissioned a pilot study of developing planning effectiveness indicators. In spite of these attempts, measurement of the effectiveness and outcomes of planning remains a challenging task.
- 6.2 Carmona (2007) has recently made another attempt to explore different ways of measuring planning quality, and he comes up with a qualitative self-assessment approach. However, he also concludes that 'It would certainly be preferable to measure nothing at all, rather than run the risk of developing another (albeit different) distortionary measurement system' (2007: 12). All these demonstrate that the search for a perfect and valid set of indicators to measure the effectiveness of planning and the higher level planning outcome is a holy grail.
- 6.3 While accepting that no single set of indicators will ever be optimal and perfect, the SPO framework proposed here could be seen as culture shift of policy monitoring from the traditional approach of measuring a fixed set of indicators separately for different levels of administrative area. A fixed set of indicators in the SPO framework serves to provide a strong platform for stakeholders to develop their own integrated and communicative monitoring framework. The SPO framework aims to address two key issues: (1) to have a monitoring system that fully reflect the importance of vertical and horizontal integration of policies and (2) to incorporate the spirit of the tests of soundness of developing a monitoring framework that contributes to the delivery of justifiable and effective policy-making. As discussed earlier, there are shared objectives of the *UK Sustainable Development Strategy* and spatial planning, the SPO framework in England should be transferable across the UK and form a strong backbone to link up with other sectoral policy monitoring in the region.

- 6.4 To achieve these will require stakeholders in the region to think about the critical development issues in different parts of the region and allow them to exercise the flexibility to choose extra outcome indicators that are deemed as most useful to gauge intelligence to inform the progress of their spatial plans collectively. Hence, monitoring should no longer focus on single indicator values, but should be more about how to flexibility combine indicators to yield meaningful policy intelligence that will inform policy formulation. The proposed framework, unlike earlier ones, includes 'spatiality' in the analysis by emphasising the importance of functional areas and spatial linkages and connections. The spatial planning outcome framework and the analytical principles set out here should provide a cornerstone to allow effective monitoring of spatial strategies over time. It focuses on how to make use of those indicators to help planners and key stakeholders to question the values, assumptions, and core strategies that led to the policy actions in the first place and will then be able to modify policy and actions to address the new issues identified. This provides a communicative and iterative learning approach of monitoring and embeds monitoring right at the heart of the policy-making process.
- 6.5 In order to take the SPO framework forward, major challenges associated with causality, measurability, data constraints, spatial coverage, and the interaction between variables still have to be overcome. For example, there are still gaps in identifying suitable indicators to measure the quality of the built and natural environment. The analytical framework proposed here should be seen as a starting point and, over time, we should seek to refine the framework and make adjustments when better information and data sources are available and more monitoring experience has been gained. The discussion here, however, focuses on a number of key issues that merit more future attention.

Other Capacity and Process-Related Indicators

- 6.6 Recent research and benchmarking exercises suggest that the input capacity and competence process activities of spatial plan-making are important to the delivery of outcomes. As such it seems reasonable to expect the framework to encompass indicators that capture both 'capacity' and 'process' effectiveness. There is, however, a lack of adequate existing data. The best option, at present, is to use rather crude proxies. Possible indicators include Best Value indicators such as the number of planning applications processed within target times (8 and 13 weeks for minor and major applications respectively). Although these have been shown to be a good indicator of the efficiency of planning authorities in dealing with planning obligations (Crook et al, 2006), it is less likely that they will adequately capture effectiveness in a broader sense. It is, nevertheless, interesting to note that the planning application efficiency indicator is included as one of the two national indicators to measure the planning specific DSO. So, this indicator can be used in conjunction with other indicators to ascertain overall planning performance.
- 6.7 Alternatively the number of qualified planners in employment was found to be a good predictor of plan quality in some parts of America (see for example, Brody et al., 2004). This indicator has, however, not been tested in the British context. Further investigation and analysis of the membership data held by the Royal Town Planning Institute may help to shed light on the use of this indicator in the future. Capacity and quality of policy monitoring is also seen as an important part of the process. As found in our E-survey, workshops and in-depth interviews of practitioners, the resources available for monitoring of LDFs and the quality of the AMR reports vary widely from LPA to LPA, it would be a useful area to examine whether there is a strong relationship between these capacity and process factors with the quality of their plans and the outcomes achieved.
- 6.8 The use of bespoke 'attitudinal' data is potentially desirable. Qualitative factors, such as the degree of 'proactive' planning, have been measured by administering carefully designed survey instruments to capture Planning Officers attitudes to particular land use planning challenges (Jackson and Watkins, 2006). Similar approaches could be used to gauge political views and

resident views on the localised outcomes of planning. This would require regular surveys of local resident's perceptions of planning 'performance'. Although expensive, several local authorities undertake satisfaction surveys for a variety of other purposes (including augmentation of the AMR process) and it may be possible to expand the scope of existing survey work. However, as discussed earlier, the questions asked have to be properly piloted and tested to make sure that they will yield valid answers.

Quality and Attitudinal Indicators

- 6.9 Our findings show that there is a need to include indicators that can genuinely measure the aesthetic quality of the built environment and a wider use of attitudinal-based indicators. The concern is how to improve the methodology used to gauge attitudinal survey data to develop qualitative outcome indicators. As discussed earlier, most monitoring approaches are not good at picking up those policy outcomes that are invisible and where spatial policy is more about protecting the positives of existing assets and/or mitigating the negative impacts brought by development. The crux of the issue is that there is no straightforward solution to the monitoring of environmental qualities that are central to spatial planning other than via expensive survey and opinion-based, perceptual indicators (Wong et al., 2006a). The accuracy of such data is highly influenced by the design of the survey and the sampling methodology, which are particularly important if the data is to be attributed to particular spatial areas. If such attitudinal data is deemed important, concerted effort should then be made to develop robust sampling methodologies and to identify valid questions that can help to improve the quality and coverage of such surveys.

Spatial Level of Analysis

- 6.10 It will remain important to monitor issues at different spatial levels within a coherent SPO framework. This is, however, constrained by the use of convenient administrative boundaries. Administrative boundaries do not necessarily reflect functional areas in terms of social, economic and environmental linkages. It is particularly in cases of cross-boundary linkage where there will be added benefits when authorities and other key partners work together in information gathering and in developing a shared evidence base when assessing policy outcomes. Examples of such practice already exist in terms of monitoring policy implementation in national parks, coastal management areas and sub-regional housing market areas. Geographical information systems are an important tool in developing flexible analytical structures to assess policy implementation at different spatial levels. This indicates that there is a need to build up the monitoring capability to organise, analyse and display data at varying spatial scales.

Joint-Working and Capacity Building

- 6.11 The SPO framework has been shown, through our validation exercises, to serve as a robust framework to take spatial strategy monitoring forward. However, to take this forward will require major buy-in from LPAs, RPBs and other key stakeholders. The final set of indicators to be included as the core platform will have to be subject to a political process to get this buy-in. More importantly, to be able to perform the analysis required for such a strategic monitoring approach will require commitment and competency from all parties. This has implications on training and professional development over different analytical skills and that resources have to be committed within each region to make this framework at the heart of policy-making.
- 6.12 While there is a strong desire to strengthen the involvement of different layers of government in policy monitoring, there is not a straightforward model as different actors have their own view on what works and what does not. In general, it is clear that planning partners at all levels have a role to play; the crux is to avoid duplication and to streamline the process. To roll out this process, there is a need to consider the complexity and difficulty of getting all partners to work together. From our in-depth interviews, it is not difficult to identify innovative

practice and strengths in different regions. For example, close partnership working with the Regional Observatory and the Regional Strategic Information Providers Group was found in the South West Region and there is genuine data sharing among different partners in the region. Likewise, the set up of the London Development Database has facilitated partnership working and provided a coherent approach of monitoring across the region. These successful experiences, as well as commonly identified pitfalls, should be widely disseminated and shared through the development of good practice guidance. This is particularly important if the move towards the development of a SPO framework is to be successful.

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Annex 1

Data Collection Methodology of E-Survey and Workshops

I. Online questionnaire survey with LPAs

Key persons in all LPAs at regional and sub-regional level in England were invited to participate in the survey. A total of 186 valid questionnaires (out of 394) were completed, which results in a rather high response rate of 47 per cent within the 8 working day survey period between 1st and 13th June. Since the questionnaire has very precise, close-end questions as well as some open-end boxes for comments, the findings provides a representative and comprehensive picture of the views and experience over AMR monitoring and the use and value of the core indicators, as well as their experience so far in monitoring the outcomes of planning.

II. In-depth Interviews with RPBs, GOs and LPAs

In-depth telephone interviews, with an aide-memoire of key questions, were made to key persons in RPBs and GOs over the experience of AMR monitoring practice. Altogether 7 interviews were completed with RPBs and 6 with GOs.

A total of 11 follow-up interviews were made via telephone calls with LPAs after the closure of the e-survey to ascertain more details of their experience and views over various issues.

III. Manchester and London Workshops on AMR monitoring

Based on some interim findings of the e-survey, further consultation with LPAs were carried out in two workshop sessions at Manchester (June 5, 2007) and London (June 8, 2007). There were 45 participants in the Manchester workshop and 25 in the London workshop.

IV. Spatial Planning Outcomes Workshop

A special workshop focusing on the discussion of the outcomes of spatial planning in England was held in London on June 8, 2007.

Participants: Jo Blaire (English Heritage), Jenny Crawford (RTPI), Jonathon Davies (CABE), Murray Graham (TCPA), Susannah Guest (Planning Inspectorate), Kathy MacEwan (CABE), Hamish McGillivray (CLG), Mark Southgate (Environment Agency), Martin Tugwell (South East Regional Assembly), Craig Watkins (University of Sheffield), Cecilia Wong (University of Manchester)

The project team conducted a workshop with key stakeholders and experts. The workshop was designed to seek different views on the desired outcomes of spatial planning and on elements of the draft strategic performance framework. The participants represented a range of different interests in the planning system and different spatial levels. This annex summarises the discussion.

V. Validating the 'Spatial Planning Outcome Framework' Workshop

Key persons from a range of different local, regional and national government agencies, as well as individuals from independent bodies, were invited to participate in the final spatial planning outcome indicators consultation workshop at Woburn House, 20 Tavistock Square, Euston, London on Friday 22nd February 2008.

Participants: Lynda Addison (Addison and Associates), Tim Barrow (Department for Transport), Alison Blom-Cooper (Addison and Associates), Ian Achurch (Northamptonshire County Council), Jenny Crawford (RTPI), David Dale (Derbyshire CC), Simon Edwards (CLG), Vincent Goodstadt (RTPI), Kelvin Hinton (ATLAS, English Partnerships), Kelvin Macdonald (Kelvin Macdonald and Associates), Claire McAllister (Department for Transport), Hamish McGillivray (CLG), David Morris (CLG), James Perry (East of England Regional Assembly), Kay Powell (National Planning Forum), Alasdair Rae (University of Manchester), Trevor Steeples (CLG), Sarah Stevens (Audit Commission), Robert Upton (RTPI), Cecilia Wong (University of Manchester).

The workshop was designed to allow as much feedback and contribution from participants as possible over the indicators and analytical approach adopted in the proposed 'Spatial Planning Outcome Framework'. The members of the research team, Communities and Local Government and the Royal Town Planning Institute adopting a facilitating and listening role.

Annex 2

Key Findings from the Spatial Planning Outcomes Workshop, June 8 2007

The desired outcomes of spatial planning

The group discussed what might reasonably be expected from the spatial planning system. The discussion highlighted the tension between outcomes associated with place-making, which may not entirely be determined by planning activities, and outcomes that might be measurable and identifiably driven by the planning system. It was argued that there is a relationship between the two and that the measurable outcomes need to be framed by the wider place-making vision.

The participants suggested that, to be meaningful, desired outcomes ought to be related to policy documents - although it was acknowledged that this involves 'joining up' strategies. There was agreement that these outcomes needed to be assessed and understood in order to achieve broader goals. It was agreed that, for example, it may difficult to determine the extent to which planning contributes to carbon reduction but this remains a desired outcome, even if success depends on the combined effects of a whole range of strategies operation at local and regional level.

It was acknowledged that, at present, monitoring tends to focus on plan implementation and, as a consequence, the broader goals are lost. This practice allows a continued focus on 'old style' plans. It was argued that while there is an overlap between plan outcomes and the desired outcomes of the system as a whole, a culture change is needed in order to broaden the vision of plans. Now, however, LPAs feel they need to focus on deliverables. It will take time to break the link between delivery and outcome assessment – culture change is slow and the new system needs to be allowed to go through a cycle.

There was a suggestion that the indicators might reflect the responsiveness of the plan. Is there a plan B? And if the evidence (e.g. AMR) suggests that outputs are not desirable, will change happen? This depends on process.

There was also some agreement that public and political perception matters. This might, in part, be assessed using surveys.

Key points:

- The general view was that the desired outcomes ought to be derived from the objectives set for the system but these should also be related to broader place-making goals.
- It was suggested that when it comes to identifying indicators then it may be desirable to find some way of measuring 'vision'. It would be helpful to make some attempt to explore changes in 'process' that reflects the extent to which plans are informed by (and changed in response to) wider goals. These measures might be assessed against perceptions (including political views).

Spatial Scale

Spatial effects are complicated by the interaction between policies within localities and the existence of overlapping 'spatial' strategies. It was acknowledged that strategies implemented at different scales do not always line up. There is challenge to integrate scale e.g. heritage issues to need to be explored from the bottom-up and cannot be monitored at the regional level. It was suggested that there might be lessons from international contexts. For instance in the Netherlands there is considerable expertise in environmental monitoring and this is applied at an intermediate level that encompasses local differences. There may also be useful lessons about the use of 'footprinting' as an indicator.

Some participants highlighted the problems associated with assessing desired spatial outcomes in the absence of a national spatial plan. It was also acknowledged that functionality was important but

different functions operate at different scales (e.g. bio-regions versus Travel to work). The dynamic nature of functional boundaries was also recognised (e.g. changing housing market search patterns and commuting behaviour).

There are some areas that present definitional problems. For instance, environmental protection plays out spatially in a variety of different ways (and in different localities).

The scale and boundaries for delivery were seen as important as these tended to drive data collection and current monitoring processes. There are some positive examples of data sharing and cross boundary cooperation (e.g. South Hants) that have been driven by concerns about economic functionality. In general, however, there was agreement that coordination between LAs needs to be better. There needs to be greater recognition of functionality and more investment in collection of data at different and appropriate scales.

Key points:

- The LA is an important unit for analysis but that this is pragmatic rather than functional.
- The scale of analysis should be tailored to mesh with functional issues and that different scales are appropriate for different issues
- In the longer term, there needs to be investment in data collection in order to rationalise processes and improve quality and fitness for purpose of data

Time and timeframes

It was suggested that the outcomes of planning took a long time to emerge and were, in fact, cumulative effects of a range of strategies. There was some discussion about whether looking at incremental change is useful.

It was argued that indicators need to be durable. They need to remain relevant, even as policy priorities change.

Key points:

- The outcomes of planning need to be explored over an extended time period and indicators need to remain relevant

Unseen effects

The group discussed the difficulties involved in assessing planning's contribution to regulating undesired outcomes. It was agreed that much of what spatial planning does is about maintaining quality of life and that this is a forgotten or over-looked positive.

There is also hidden 'value added' to be derived from protecting landscape quality. Again it was suggested that this might be measured using 'perception' indicators.

Key points:

It may be desirable to consider quality of life measures and/or to explore personal perceptions of changes in quality of life and liveability.

Annex 3

The Purpose and Objectives of the Planning System: Sectoral Objectives

This annex reviews the priorities set out in key sectoral policy documents. For the purposes of this review, all extant PPS and PPG were examined although not all contained statements that are sufficiently over-arching to highlight here. This was particularly the case for some of the older PPG statements which addressed fairly specialist areas of planning (e.g. development of unstable land, planning and noise) or were more procedural guidance on the operation of an aspect of the system (such as outdoor advertising). Generally, the more recent PPSs provide a clearer statement, upfront of the objectives of the advice for the particular topic being addressed. An annex to this paper contains a more detailed list of potentially relevant extracts from these policy statements.

Those considered most relevant are highlighted below on a sectoral basis:

Housing supply has always been considered one of the key tasks of the planning system and *PPS3: Housing* (2006) (para. 10) sets out a set of specific outcomes that the planning system should deliver in this sector:

- High quality housing that is *well-designed* and built to a high standard.
- A *mix* of housing, both market and affordable, particularly in terms of tenure and price, to support a wide variety of households in all areas, both urban and rural.
- A *sufficient quantity* of housing taking into account need and demand and seeking to improve choice.
- Housing developments in *suitable locations*, which offer a good range of community facilities and with good access to jobs, key services and infrastructure.
- A flexible, responsive *supply of land* – managed in a way that makes efficient and effective use of land, including re-use of previously-developed land, where appropriate.

In terms of **town centres (and retailing)** Paragraph 1.3 of *PPS6: Town Centres* (2005) emphasises the government's key objective for town centres is to promote their vitality and viability by:

- planning for the growth and development of existing centres; and
- promoting and enhancing existing centres, by focusing development in such centres and
- encouraging a wide range of services in a good environment, accessible to all.

It then goes on to highlight (in paras. 1.4 and 1.5) other Government objectives which need to be taken account of in the context of this key objective (vitality and viability):

- *enhancing consumer choice* by making provision for a range of shopping, leisure and local services, which allow genuine choice to meet the needs of the entire community, and particularly socially-excluded groups;
- *supporting efficient, competitive and innovative retail, leisure, tourism and other sectors*, with improving productivity; and
- *improving accessibility*, ensuring that existing or new development is, or will be, accessible and well-served by a choice of means of transport.
- to *promote social inclusion*, ensuring that communities have access to a range of main town centre uses, and that deficiencies in provision in areas with poor access to facilities are remedied;
- to *encourage investment to regenerate deprived areas*, creating additional employment opportunities and an improved physical environment;
- to *promote economic growth* of regional, sub-regional and local economies;
- to *deliver more sustainable patterns of development*, ensuring that locations are fully exploited through high-density, mixed-use development and promoting sustainable transport choices, including reducing the need to travel and providing alternatives to car use; and
- to *promote high quality and inclusive design*, improve the quality of the public realm and open spaces, protect and enhance the architectural and historic heritage of centres, provide

a sense of place and a focus for the community and for civic activity and ensure that town centres provide an attractive, accessible and safe environment for businesses, shoppers and residents.

The government's objectives for **rural areas** are set out in *PPS7: Rural Areas* (2004). In summary, these are:

- (i) to raise the quality of life and the environment in rural areas through the promotion of:
 - thriving, inclusive and sustainable rural communities...
 - sustainable economic growth and diversification...
 - good quality, sustainable development...
 - continued protection of the open countryside...
 - protection for our most valued landscapes and environmental resources.
- (ii) to promote more sustainable patterns of development by:
 - focusing most development in, or next to, existing towns and villages
 - preventing urban sprawl;
 - discouraging the development of 'greenfield' land...
 - promoting a range of uses to maximise the potential benefits of the countryside fringing urban areas
 - providing appropriate leisure opportunities...
- (iii) promoting the development of the English regions by improving their economic performance...
- (iv) to promote sustainable, diverse and adaptable agriculture sectors...

PPS9: Biodiversity and Geological Conservation (2005) makes reference to the government's **biodiversity** strategy (*Working with the grain of nature: a biodiversity strategy for England*) which includes the broad aim that planning, construction, development and regeneration should have minimal impacts on biodiversity and enhance it wherever possible. In moving towards this vision, the government's objectives for planning are stated as:

- to *promote sustainable development by ensuring that biological and geological diversity are conserved and enhanced* as an integral part of social, environmental and economic development...
- to *conserve, enhance and restore the diversity of England's wildlife and geology* by sustaining, and where possible improving, the quality and extent of natural habitat and geological and geomorphological sites; the natural physical processes on which they depend; and the populations of naturally occurring species which they support.
- to *contribute to rural renewal and urban renaissance by enhancing biodiversity* in green spaces and among developments so that they are used by wildlife and valued by people...and ensuring that developments take account of the role and value of biodiversity in supporting economic diversification and contributing to a high quality environment. This PPS also emphasizes that the planning system has a significant part to play in meeting the Government's international commitments and domestic policies for habitats, species and ecosystems.

In respect of **waste management**, *PPS10: Sustainable Waste Management* (2005) advises that (para. 3), regional planning bodies and all planning authorities should, to the extent appropriate to their responsibilities, prepare and deliver planning strategies that:

- help deliver sustainable development through driving waste management up the waste hierarchy...
- provide a framework in which communities take more responsibility for their own waste, and enable sufficient and timely provision of waste management facilities to meet the needs of their communities
- help implement the national waste strategy...
- help secure the recovery or disposal of waste without endangering human health and without harming the environment....

- reflect the concerns and interests of communities, the needs of waste collection authorities, waste disposal authorities and business, and encourage competitiveness
- protect green belts but recognise the particular locational needs of some types of waste management facilities....
- ensure the design and layout of new development supports sustainable waste management.

PPS22: Renewable Energy (2004) doesn't explicitly set out objectives of the planning system, but paragraph 1 of this document does outline the following key principles to be followed by regional bodies and local planning authorities in their approach to planning for **renewable energy**:

- (i) renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.
- (ii) regional spatial strategies and local development documents should contain policies designed to promote and encourage, rather than restrict, the development of renewable energy resources.
- (iii) at the local level, planning authorities should set out the criteria that will be applied in assessing applications for planning permission for renewable energy projects.
- (iv) the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.
- (v) regional planning bodies and local planning authorities should not make assumptions about the technical and commercial feasibility of renewable energy projects.
- (vi) small-scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and to meeting energy needs both locally and nationally.
- (vii) local planning authorities, regional stakeholders and Local Strategic Partnerships should foster community involvement in renewable energy projects³ and seek to promote knowledge of and greater acceptance by the public of prospective renewable energy developments that are appropriately located.
- (viii) development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimized through careful consideration of location, scale, design and other measures.

Similarly, paragraph 2 of *PPS23: Planning and Pollution Control (2004)* sets out principles in respect of the links between **planning and pollution**:

- any consideration of the quality of land, air or water and potential impacts arising from development, possibly leading to impacts on health, is capable of being a material planning consideration, in so far as it arises or may arise from or may affect any land use;
- the planning system plays a key role in determining the location of development which may give rise to pollution, either directly or indirectly, and in ensuring that other uses and developments are not, as far as possible, affected by major existing or potential sources of pollution;
- the controls under the planning and pollution control regimes should complement rather than duplicate each other;
- the presence of contamination in land can present risks to human health and the environment, which adversely affect or restrict the beneficial use of land but development presents an opportunity to deal with these risks successfully;
- contamination is not restricted to land with previous industrial uses, it can occur on greenfield as well as previously developed land and it can arise from natural sources as well as from human activities;
- where pollution issues are likely to arise, intending developers should hold informal pre-application discussions with the LPA, the relevant pollution control authority and/or the environmental health departments of local authorities (LAs), and other authorities and stakeholders with a legitimate interest; and

- where it will save time and money, consideration should be given to submitting applications for planning permission and pollution control permits in parallel and co-ordinating their consideration by the relevant authorities.

Finally, in terms of the review of PPSs, *PPS25: Planning and Flood Risk* (2006) states that (para. 6) regional planning bodies (RPBs) and local planning authorities (LPAs) should prepare and implement planning strategies that help to deliver sustainable development by:

Appraising risk: identifying land at risk and the degree of risk of flooding from river, sea and other sources in their areas; preparing Regional Flood Risk Appraisals (RFRAs) or Strategic Flood Risk Assessments (SFRAs) as appropriate, as freestanding assessments that contribute to the Sustainability Appraisal of their plans.

Managing risk: framing policies for the location of development which avoid flood risk to people and property where possible, and manage any residual risk, taking account of the impacts of climate change; only permitting development in areas of flood risk when there are no reasonably available sites in areas of lower flood risk and benefits of the development outweigh the risks from flooding.

Reducing risk: safeguarding land from development that is required for current and future flood management; reducing flood risk to and from new development through location, layout and design, incorporating sustainable drainage systems (SUDS); using opportunities offered by new development to reduce the causes and impacts of flooding (e.g. surface water management plans); making the most of the benefits of green infrastructure for flood storage, conveyance and SUDS; re-creating functional floodplain; and setting back defences.

The first of the earlier PPG series to be examined was *PPG2: Green Belts* (amended, 2001). This states that (para. 1.4) the fundamental aim of **green belt** policy is to prevent urban sprawl by keeping land permanently open and that the most important attribute of Green Belts is their openness. Reference is made to the role of green belts in shaping patterns of urban development at sub-regional and regional scales; helping to ensure that development occurs in locations allocated in development plans; helping protect the countryside; and assisting in moving towards more sustainable patterns of urban development. The five purposes of including land in Green Belts are set out in paragraph 1.5:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns from merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

Once Green Belts have been defined, paragraph 1.6 states that the use of land in them has a positive role to play in fulfilling the following objectives:

- to provide opportunities for access to the open countryside for the urban population;
- to provide opportunities for outdoor sport and outdoor recreation near urban areas;
- to retain attractive landscapes, and enhance landscapes, near to where people live;
- to improve damaged and derelict land around towns;
- to secure nature conservation interest; and
- to retain land in agricultural, forestry and related uses.

PPG4: Industrial and Commercial Development and Small Firms (1992) emphasizes that one of the Government's key aims is to encourage continued **economic development** in a way which is compatible with its stated environmental objectives. Economic growth and a high quality environment are seen as having to be pursued together, and thus paragraph 2 states that:

'...the planning system plays an important role integrating environmental and economic objectives. Development plans provide the policy framework, weighing the importance of industrial and

commercial development with that of maintaining and improving environmental quality. The principles of sustainable development require the responsible use of man-made and natural resources by all concerned in a way that ensures future generations are not worse off. Careful attention to environmental issues makes good economic sense for business and industry...'

More specific advice (paras. 2-10) on plan-making includes:

- development plans should give industrial and commercial developers and local communities greater *certainty* about the types of development that will or will not be permitted in a given location.
- development plans (should) contain clear land-use policies for different types of industrial and commercial development and positive policies to provide for the needs of *small businesses*.
- policies should provide for *choice, flexibility and competition*. In allocating land for industry and commerce, planning authorities should be realistic in their assessment of the needs of business. They should aim to ensure that there is *sufficient land available* which is readily capable of development and well served by infrastructure.
- they should ensure that there is a *variety of sites* available to meet differing needs.
- plans should provide specifically for the *types of industry* which, although necessary, may be detrimental to amenity or a potential source of pollution.
- the *location demands* of businesses are a key input to the preparation of development plans. Development plan policies must take account of these needs and at the same time seek to achieve wider objectives in the public interest: encourage new development in locations which minimise the length and number of trips; encourage new development in locations that can be served by more energy efficient modes of transport; discourage new development where it would be likely to add unacceptably to congestion; locate development requiring access mainly to local roads away from trunk roads

These themes are echoed in *PPG13: Transport* (2001) which states that (para. 4) the objectives of this guidance are to integrate planning and transport at the national, regional, strategic and local level to:

- *promote more sustainable transport choices* for both people and for moving freight;
- *promote accessibility* to jobs, shopping, leisure facilities and services by public transport, walking and cycling, and
- *reduce the need to travel*, especially by car.

Paragraph 6 of this PPG on **transport** elaborates further with cross-cutting guidance of relevance to a number of topics. It states that, when preparing development plans and considering planning applications, local authorities should:

- actively manage the pattern of urban growth to make the fullest use of public transport, and focus major generators of travel demand in city, town and district centres and near to major public transport interchanges;
- locate day to day facilities which need to be near their clients in local centres so that they are accessible by walking and cycling;
- accommodate housing principally within existing urban areas, planning for increased intensity of development for both housing and other uses at locations which are highly accessible by public transport, walking and cycling;
- ensure that development comprising jobs, shopping, leisure and services offers a realistic choice of access by public transport, walking, and cycling, recognising that this may be less achievable in some rural areas;
- in rural areas, locate most development for housing, jobs, shopping, leisure and services in local service centres which are designated in the development plan to act as focal points for housing, transport and other services, and encourage better transport provision in the countryside;
- ensure that strategies in the development and local transport plan complement each other and that consideration of development plan allocations and local transport investment and priorities are closely linked;

- use parking policies, alongside other planning and transport measures, to promote sustainable transport choices and reduce reliance on the car for work and other journeys;
- give priority to people over ease of traffic movement and plan to provide more road space to pedestrians, cyclists and public transport in town centres, local neighbourhoods and other areas with a mixture of land uses;
- ensure that the needs of disabled people as pedestrians, public transport users and motorists are taken into account in the implementation of planning policies and traffic management schemes, and in the design of individual developments;
- consider how best to reduce crime and the fear of crime, and seek by the design and layout of developments and areas, to secure community safety and road safety; and
- protect sites and routes which could be critical in developing infrastructure to widen transport choices for both passenger and freight movements.

PPG15: Planning and the Historic Environment (1994) emphasises (para. 1.2) that the function of the planning system is to regulate the development and use of land in the public interest. Planning is seen as an important instrument for ‘... *protecting and enhancing the environment in town and country, and preserving the built and natural heritage. The objective of planning processes should be to reconcile the need for economic growth with the need to protect the natural and historic environment*’. Paragraph 1.3 continues by emphasizing the government’s commitment to the concept of sustainable development and explains that this commitment has particular relevance to the preservation of the **historic environment**, which by its nature is irreplaceable.

PPG20: Coastal Planning (1992) similarly highlights the **coast** as an important national resource as well as broader concerns about rising sea levels and the need for development to be sustainable, which are focusing increased attention on the special value of the coast. Against this background, the role of the planning system (paragraph 1.2) is stated as ‘...*to reconcile development requirements with the need to protect, conserve and, where appropriate, improve the landscape, environmental quality, wildlife habitats and recreational opportunities of the coast. This is achieved through development plans and planning decisions, which implement policies for the conservation and improvement of the coastal environment, acknowledging the special character of the coast*’.

Finally, a rather specialist PPG on **telecommunications**, *PPG8: Telecommunications* (2001), highlights the government’s general policy to facilitate the growth of new and existing telecommunications systems whilst keeping the environmental impact to a minimum as well as its responsibilities for protecting public health. This leads onto some more general statements of how the planning system should respond to proposed telecommunications developments, urging that (paras. 4-6), ‘...*local planning authorities are encouraged to respond positively to telecommunications development proposals ...material considerations include the significance of the proposed development as part of a national network ... authorities should not seek to prevent competition between different operators and should not question the need for the telecommunications system which the proposed development is to support*’.

Key issues

This review has drawn from a wide range of national policy statements on various aspects of the operation of the planning system. In many cases, the sectoral guidance was quite detailed and often more obviously relevant to the development of ‘output’ rather than ‘outcome’ indicators. The overarching role of the planning system in contributing to the government’s sustainable development objectives is a common theme of all guidance since at least the late 1990s and this has recently been given even greater emphasis by the new statutory requirements of section 39 of the PCPA 2004. Highlighting the emerging themes is not easy but the key themes can be related back to the desired outcomes of sustainable development. These are summarised in the Box 2.1 in section 2 of the report.

Annex 4

Spatial Gini Coefficients and Indices of Dissimilarity

This annex provides brief information on the application of statistics to represent internal spatial variation of phenomena.

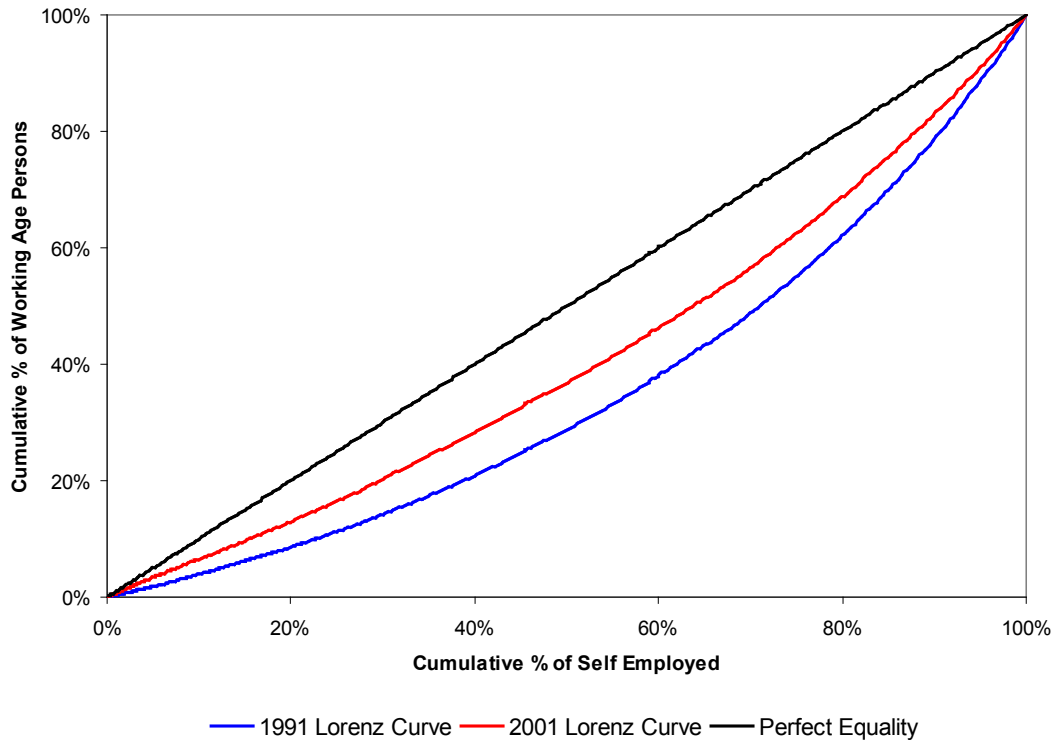
Spatial Gini coefficients

The implementation of a spatial, or locational, Gini coefficient follows in the footsteps of Krugman (1991), Audretsch and Feldman (1996), and more recently Sohn (2004) and Greenbaum and Desai (2005). Traditionally applied to illustrate levels of income inequality, it has also been used effectively to measure geographic concentration. The technique is simply a modification of the Gini inequality index where individuals are replaced by regions and weights are given by the regional shares in total population or employment, for example. If activities are evenly distributed across zones (or the share of a certain sector is equal to the total share in all zones), the coefficient equals 0. On the other hand, when all the activities of a certain sector are concentrated in one zone, the coefficient approaches 1.0. Between the two numbers, a higher value implies a higher level of concentration and a lower value reflects a higher

$$G = 1 - \sum_{i=0}^N (\sigma Y_{i-1} + \sigma Y_i) (\alpha X_{i-1} + \alpha X_i)$$

where σX and σY are cumulative percentages of Xs and Ys (in fractions) and N represents the number of elements (in this case the number of wards). This is similar to the traditional Gini calculation with the exception that cumulative percentages are spatially standardised against other spatial units in the study area. The associated Lorenz curve can also be effectively used to demonstrate the level of spatial concentration at one point in time and for future time periods.

In the example below, the spatial Gini coefficient in 1991 was 0.29 and by 2001 had decreased to 0.19. Although the total number of self-employed and working age persons may have changed during this period at an aggregate level (which could indicate a successful entrepreneurial climate), it is clear that there was a fairly significant degree of deconcentration in terms of their geographic location. Such changes are indicative of processes that cannot be captured by static, place-based indicators alone, hence the need to take a spatial approach.



Indices of Dissimilarity

The literature on spatial segregation (especially along income, poverty and economic lines) has a tradition of employing Indices of Dissimilarity (ID) to measure the extent of segregation (e.g. Green, 1996). The 'dissimilarity' refers to the aggregate extent to which small areas are different from one another within a larger area. Thus, degrees of internal heterogeneity within areas can be effectively reduced to a single measure. A low ID score would suggest that there is little variation, while a high score would suggest greater differences between places. An ID is usually interpreted as the proportion of an area's population that would have to move to lead to an unsegregated (i.e., totally even) spread of the phenomenon under study. For this reason, the ID is especially suited to understanding processes of social mobility. In terms of outcomes of Spatial Planning, it might be suited to measuring phenomena that could be expected to depend on mobility (e.g., of people, capital, goods, or opportunities). The ID is, however, dependent on being able to reduce the phenomenon under investigation to a binary classification (e.g., employed/unemployed; BME/non-BME; residential/non-residential).

The index, ID is calculated as follows:

$$ID_{Zone} = \frac{1}{2} \sum_{i=1}^{N_{Zone}} \left(\frac{a_i}{A} - \frac{b_i}{B} \right)$$

where

- ID_{Zone} = Index of Dissimilarity for Zone
- a_i = the population with characteristic a in sub-zone i of Zone
- A = the total population with characteristic a in Zone
- b_i = the population with characteristic b in sub-zone i of Zone
- B = the total population with characteristic b in Zone
- N = the number of sub-zones in Zone

Key References

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Annex 5

Use of Functional Areas

This annex here considers the potential application of ‘functional areas’ to the assessment of the outcomes of spatial planning. We consider two broad thematic areas – housing and economic development and local labour market areas – and suggest possible ways in which functional areas can be used for the reporting and interpretation of outcomes.

Housing and economic development outcomes

One of the clearest candidates for an outcome indicator based on functional areas is housing. As the Planning White Paper affirmed, increasing the supply of housing is a key challenge for the planning system and one of the outcomes it is expected to contribute to (CLG 2007a, p. 12). The recent Housing Green Paper (CLG 2007b) provides more detail on the quantum of expectation: government with and through its partners (including the planning system) propose to deliver an additional two million houses by 2016, and three million by 2020.

But it is clear that the planning system will not have fully succeeded if it merely ‘delivers the numbers.’ The sustainability of new supply will partly reflect its characteristics and its location. Ensuring that the right amount of new housing is built in the right locations is the main spatial planning challenge and should form an important element of the outcomes that are measured.

Yet it has long been recognised that England’s administrative geography has a poor fit with housing market areas. Understanding “where the right locations are” is far from straightforward. This is why one of the emphases of the Housing Market Renewal (HMR) programme has been to foster a better understanding of sub-regional housing markets and to instigate strategic partnerships equipped to respond to them (Leather et al. 2007). Indeed, Cole (2007) considers that such an approach is essential throughout the country and not just in areas of ‘low demand’ for housing. CLG’s guidance on undertaking Strategic Housing Market Assessments in support of PPS3 states specifically that it ‘encourages local authorities to assess housing need and demand in terms of housing market areas’ (CLG, 2007c: 8).

It is perhaps less clear how precisely the extent of housing market areas should be defined. One of the earliest examples of practice guidance was published in Scotland by Scottish Homes (1993). This stressed the concept of functional areas for housing and proposed migration based tests for ‘self containment.’ Approaches of this kind have formed the basis for much practice in determining housing market areas since, although there are outstanding theoretical objections and some weaknesses in the setting of apparently arbitrary thresholds for containment (the value of 70% is often used). Supplementary guidance associated with PPS3 (CLG 2007d) cites the migration self-containment test as one of three potential methods that can be deployed.

Other methods build on alternative theoretical and conceptual standpoints, each with strengths and weaknesses.

A relatively simple approach might analyse Census data on travel to work to estimate the influence that different employment centres exert on surrounding areas of housing. This is conceptually intuitive and permits quite sophisticated analyses of the overlaps of different housing market areas. However, there are some fundamental theoretical weaknesses with the approach. Primarily, the approach fails to adequately deal with the complexity of motivations for housing transactions and the tradeoffs made by movers in evaluating travel to work against other aspects of location. Such approaches may also underweight important parts of the housing market which do not respond to workplace-residence linkages such as retirement markets. Furthermore, they tend to assume the existence of a hierarchical pattern of separate settlements with highly centralised labour markets and clear nuclei of employment. The success which such approaches might have in determining linkages between areas with poor conventional ties to city centres (such as some rural areas with highly mobile but relatively ‘footloose’ commuters) is less clear.

A third and final broad approach identified in the guidance is relates to the *outcomes of the market* — as evident primarily through house prices. The classic definition of a market is a space over which similar products command similar prices and hence over which housing products may be substitutable for one another. Assuming that a set of information on or proxies for the housing product can be assembled, it is possible to determine the areas over which similar housing commands similar prices. This was the approach that was used to inform the definition of sub-regional housing markets in the West Midlands undertaken by Sheffield University, and endorsed by CLG (2007d). Such approaches can be relatively complex and resource-intensive, although they have some distinct advantages. By examining market outcomes, they can internalise all forms of demand for housing regardless of demand groups. They can also provide an indication of ‘fuzzy’ boundaries or areas of overlap. Finally, they are not dependent on the definition of centres of employment and consequently are able to deal with a variety of settlement types, including rural areas with weak attachments to any one employment centre. Weaknesses of the approach that require further development include the resolving the problem that different processes (and patterns of household mobility) could in theory lead to similar price outcomes). An innovative approach might therefore look to fuse an outcomes-based approach with an analysis of migration, although this may be too complex for an outcomes framework for spatial planning. Instead, it may be appropriate for such a framework to make use of ongoing regional work on the definition of sub-regional housing markets.

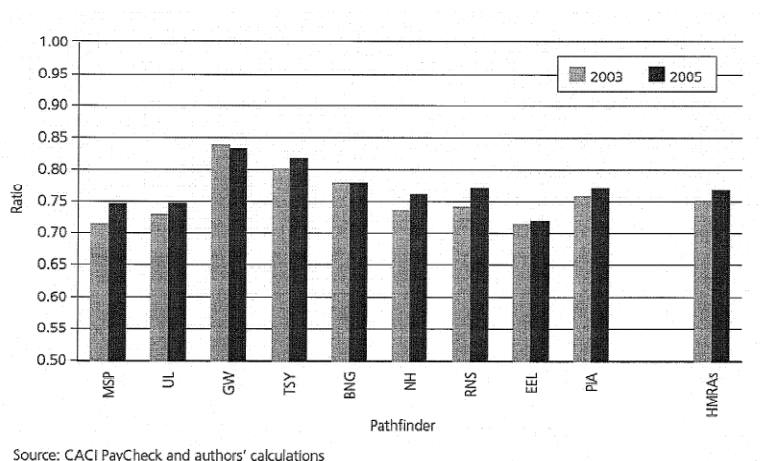
Regardless of the precise methodology adopted, it is clear that outcome measures relating to housing need to relate to the housing market area as a whole. The Scottish Homes guidance perhaps expressed this more succinctly:

If planning recommends action in one area, it is essential to know whether that locality can be viewed in isolation or whether there will be positive or negative effects in other places. (Scottish Homes, 1993: 19)

The West Midlands have adopted an innovative approach to the definition of sub-regional housing markets that examines both housing market outcomes and travel to work ‘attachment’. This informed the setting of four sub-regional housing market areas, which are now used for setting strategic housing priorities in the region. There would appear to be a strong case for extending their use into outcomes monitoring. For example, while RSS will be concerned to direct the broad strategic location of housing among housing markets in the region (and will set thematic policies in addition to locational policies), the precise distribution of new housing *within* housing market areas is potentially a matter for a partnership of local authorities in those areas. An example would the preparation of joint LDF core strategy in the Black Country.

The national evaluation of HMR’s baseline assessment tracked a number of indicators with reference to wider City Regional areas (Leather et al., 2007). City Regions were selected as a practical surrogate for functional areas as they form the basis of developing administrative partnerships; may have some similarities to areas covered by emerging Multi Area Agreements (MAAs) and are based on functional economic relationships, which have some relationship to housing markets. Figure A4.1 shows how local socio-economic indicators can be expressed as ratios of those in a wider functional area.

Figure A4.1 Mean gross household income as ratio of City Region average, 2003 and 2005 (example of socio-economic indicator assessed within context of functional region).



Source: Leather et al. (2007).

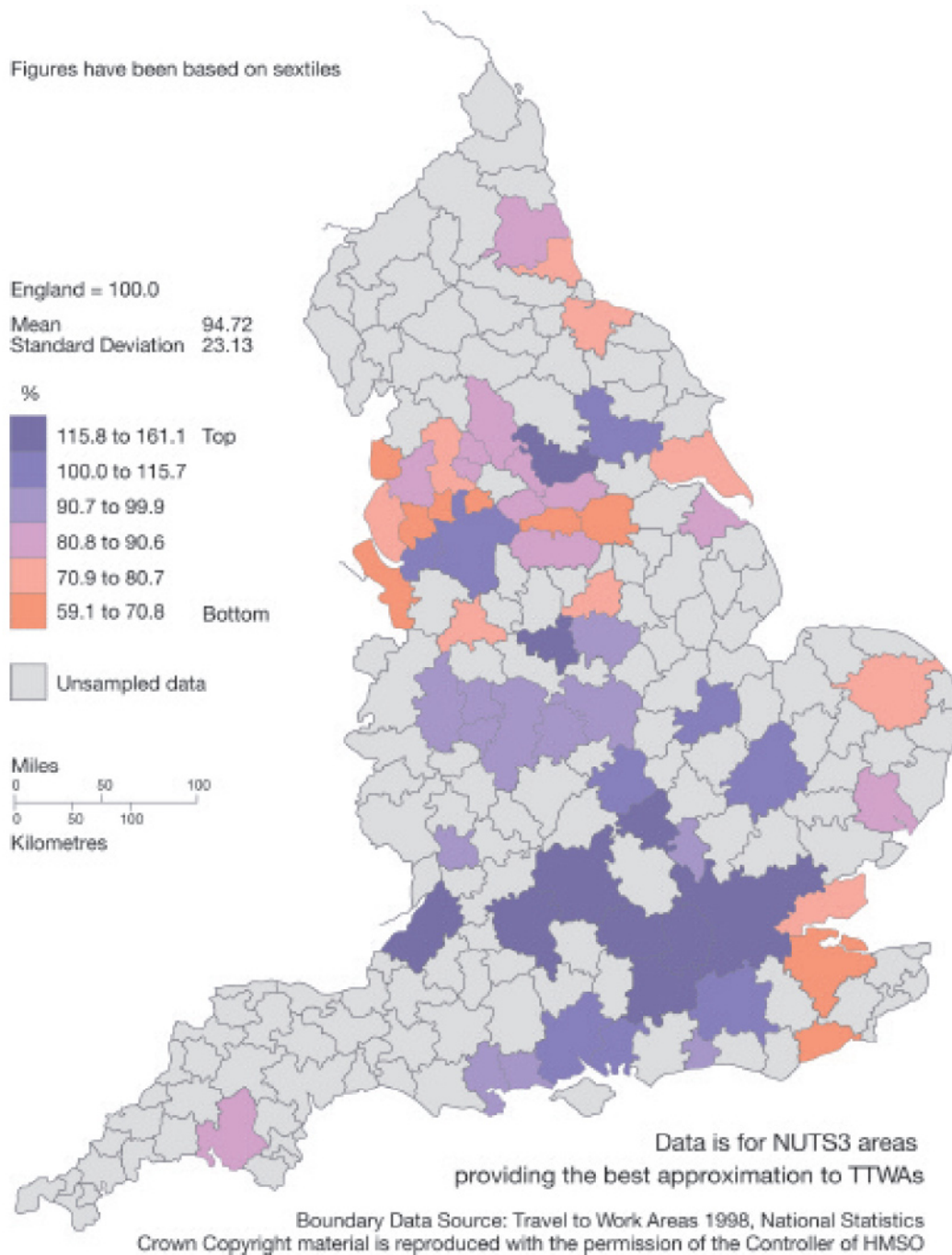
Local Labour Markets

In the early 1980s, serious attempts were made to understand changes in the employment pattern of the UK within the context of differentiated 'functional regions' (Owen et al 1983). This literature built upon Coombes et al.'s (1982) definition of Local Labour Market Areas, a set of functional regions defined using travel to work interactions, in many ways similar to methods employed by some housing market analysts. Officially-produced Travel to Work Areas (TTWAs) now perform a similar function. They are currently produced by ONS based on a methodology by ONS and Coombes (1998) and using 1991 Census data. A revision, based on the 2001 Census, is to be released in autumn 2007.

There are many examples of research reports that use TTWA as the basis for interpreting economic change. Parkinson et al.'s (2006) *State of the English Cities* report for the then ODPM made extensive use of TTWAs or analogues to understand the influence of economic activity within English cities within the context of the wider 'city region' and to develop a database of their economic performance (Figure A4.2).

Notwithstanding other policies with a spatial implication (such as the encouragement of mixed use developments), outcomes of spatial planning that contribute towards economic development do so within the constraints implied by local labour markets. These constraints also inform the relationship between economic development outcomes and those related to the housing market. Broadly speaking, this means that at the local level the measurement of planning outcomes should be framed not by the LPA area but by the wider extent of the market related to the economic use in question. This presents two difficulties. First, the market areas may be highly complex and differentiated by land use. For some uses (e.g. office space), the market area may be essentially national or supranational but with highly localised constraints related to supporting services. Others (e.g. retail) will be related to accessibility, perhaps measured using drive times. Yet others (e.g. logistics) will have large market areas but will be related to market areas for other land uses such as manufacturing and retail. In summary, pertinent market areas may be highly complex and it may be necessary to seek a generalised and pragmatic proxy for them. The second difficulty is that labour market areas determine the extent to which new economic land uses might be 'feasible' in terms of drawing on an adequate pool of labour.

Figure A4.2 Gross Value Added (GVA) per head, 2002 (example of use of functional areas for analysis of economic performance).



Source: Parkinson et al. (2006: 76)

The conclusion might be that TTWAs offer a reasonable way of operationalising both local labour market areas and a generalised proxy for other market areas. However, for the purposes of developing outcome indicators for spatial planning, these areas may need to be adjusted to conform to LPA boundaries.

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Annex 6 Scoping and Appraisal of Potential Outcome Indicators: Meta Data

Key Indicator Data Set	Brief Description	Reference/URL/Notes
1. LDF and RSS output and process monitoring indicators (CLG)	LDF and RSS indicators are complementary and designed to achieve cost-effective approach to data collection. Indicators selected after objectives, policies and targets agreed.	http://www.communities.gov.uk/pub/906/LocalDevelopmentFrameworkMonitoringAGoodPracticeGuide_id1143906.pdf LDF monitoring - good practice guide. http://www.communities.gov.uk/pub/810/RegionalSpatialStrategyMonitoringAGoodPracticeGuidePDF413Kb_id1162810.pdf RSS monitoring - good practice guide.
2. National Land Use Database (CLG)	National, Regional and local results and analyses from the NLUD-PDL surveys from 2001 to 2005.	http://www.nlud.org.uk/draft_one/results/results_index.htm
3. Land Use Change Statistics (CLG)	LUCS have been used in formulating and monitoring a national target for the percentage of housing that should be built on reused sites. Land use change data have been obtained from Ordnance Survey (OS) since 1985. They are now analysed by the CLG and previously ODPM	Live Tables on Land Use Change Statistics (http://www.communities.gov.uk/index.asp?Id=1508476) ODPM (2004) Land Use Change Statistics. London, ODPM.
4. Planning Applications and Development Control Statistics (CLG)	Provides a compendium of statistics on development control activities - planning applications, decisions, planning appeals, enforcement and 'county matter' applications and decisions - and also contains historic series of summary statistics for earlier years.	http://www.communities.gov.uk/index.asp?Id=1503632 Link to compendium http://www.communities.gov.uk/pub/633/TablesDevelopmentControlStatisticsEngland2006_id1503633.xls Link to spreadsheet.
5. Commercial Floorspace Statistics (CLG)	Data on commercial floorspace and rateable values from 1998-2005.	http://www.communities.gov.uk/index.asp?Id=1163773
6. Valuation Statistics (Valuation Office)	Compiles and maintains the business rating and council tax valuation lists for England and Wales. Value property in England, Wales and Scotland for the purposes of taxes administered by HM Revenue & Customs provide statutory and non-statutory property valuation services in England, Wales and Scotland.	http://www.voa.gov.uk/index.htm
7. Land Registry House Price Data (Land Registry)	Provides 'price paid' data for properties sold in England and Wales, down to the individual address level.	http://www.landreg.gov.uk/propertyprice/interactive/
8. Housing Statistics and Construction Statistics (ONS)	Range of data available on housing market indicators from ONS and CLG. CLG data includes data such as stock, house building, etc (tend to be at regional and LA level but data is often historical). ONS data is at a more local scale (ward, OA) and includes variables such as tenure, accommodation type and demand indicators (LA level).	http://www.communities.gov.uk/index.asp?Id=1155982 (CLG data) http://neighbourhood.statistics.gov.uk/dissemination/Download1.do?hpcp=1 (ONS data)
9. Labour Market Statistics (ONS)	Range of data available on labour market indicators from NOMIS and Labour Force Survey. LFS is based on a sample population, collected quarterly and data is not released below LA level, NOMIS contains more local data at LA and ward level.	http://neighbourhood.statistics.gov.uk/dissemination/Download1.do?hpcp=1 (ONS data) http://www.nomisweb.co.uk/

10. Migration Statistics (NHS Central Register)	Estimates of internal migration in England and Wales based on patients moving and informing their doctor as they change residential address. Data compiled in NHS Central Register. Family Health Service Authority level data available 1975-1998 (pre-NHSCR data). Pre-2000 no estimates were published below FHS/HA level.	www.statistics.gov.uk Published in Population Trends, Key Population and Vital Statistics, Social Trends and Regional Trends
11. Regional Competitiveness and State of the Region Indicators (DTI)	Indicators to measure competitiveness and productivity of UK and regional economies. Contains updated data on the UK's relative performance in investment, innovation, skills, enterprise and competition (the five drivers of productivity). Available 1999-2005. State of the Regions indicators available in State of the Regions Report which covers: Overall Competitiveness, Labour Market, Education and Training, Capital, Land and Infrastructure. Scope to also use statistics related to construction, science, technology and innovation, business competitiveness indicators (VAT registrations etc). Tend to be available at UK and regional level.	http://www.dti.gov.uk/competitiveness/ DTI (2006) <i>Regional Competitiveness and State of the Regions</i> . London, HMSO. (also 2001, 2003, 2005 versions)
12. Statistics on transport and infrastructure (ONS and others)	Various statistics on transport and infrastructure, such as freight, maritime and personal travel. Several different agencies and government departments are involved in the collection of transport and infrastructure data.	http://www.dft.gov.uk/pwr/statistics/ DFT http://www.caa.co.uk/default.aspx?catid=80 Civil Aviation Authority http://www.statistics.gov.uk/cc/nscl.asp?id=5001 ONS
13. 2004 Index of Multiple Deprivation (ONS)	Composite index of deprivation in England, classified by lower layer Super Output Areas and by Local Authority. The IMD 2004 (revised) contains seven different 'domains', comprised of a number of different indicators.	http://www.communities.gov.uk/index.asp?id=1128440
14. Town and City Indicators (CLG)	The indicators form part of a wider evaluation strategy for urban policy, put together in the aftermath of the Urban White Paper (2000). It provided the basis for the analysis presented in the State of Cities Report (2005). The database makes use of existing datasets in the public domain. The research is ongoing and involves the collation, analysis and presentation of a large volume of data for urban areas.	http://www.communities.gov.uk/index.asp?id=1128600
15. Egan's Sustainable Communities Indicators (CLG)	Reviewed the skills and training that built environment professionals require to deliver sustainable communities. The Review looked at the skills and training required by professionals, planning authorities and developers and how they can work together in achieving measurable improvements to the communities they serve. It also considered how any skills gap can best be bridged. Identified a number of indicators to measuring progress. Includes overarching indicator, social and cultural, governance, environmental, housing and built environment, transport and connectivity, economy & services	http://www.communities.gov.uk/index.asp?id=11502251
16. Audit Commission's Quality of Life indicators (Audit Commission)	The Commission consulted on a set of voluntary quality of life indicators for local authorities during autumn 2000. The exercise was prompted by the new powers given to local authorities in the Local Government Act 2000 to promote the social, economic and environmental well-being of their area, and their new duty to work with partners to prepare a community strategy. Quality of life indicators are different from the statutory best value performance indicators (BVPIs). However it is worth noting that some of the BVPIs already cover sustainable development and quality of life issues - for example recycling levels and educational achievement, and authorities may wish to include them in their community strategies.	http://www2.audit-commission.gov.uk/pis/quality-of-life-indicators.shtml

17. Sustainable Development Indicators (DEFRA)	Indicators are available here at different levels, from international to local. They were outlined in the UK Government Sustainable Development Strategy: Securing the future, in March 2005. A baseline assessment of all the indicators, for which data were available, was published in June 2005.	http://www.sustainable-development.gov.uk/progress/data-resources/sdip.htm
18. National Atmospheric Emissions Inventory	This is the source for the UK's National Atmospheric Emissions Inventory (NAEI). The NAEI is funded by Defra, The National Assembly for Wales, The Scottish Executive and The Department of Environment, Northern Ireland. The NAEI compiles estimates of emissions to the atmosphere from UK sources such as cars, trucks, power stations and industrial plant. These emissions are estimated to help to find ways of reducing the impact of human activities on the environment and our health.	http://www.naei.org.uk/
19. European Common indicators (Eurostat)	The European Common Indicators initiative is focused on monitoring environmental sustainability at the local level. A set of 10 environmental sustainability indicators have been developed in conjunction with stakeholders and methodologies for collecting the data for each indicator have also been produced in different European languages.	http://ec.europa.eu/environment/urban/common_indicators.htm
20. Heritage Counts (English Heritage)	Annual survey of the state of England's historic environment. Is undertaken nationally and disaggregated to regions. The first count was undertaken in 2002 with the most recent in 2006	http://www.english-heritage.org.uk/hc2006/
21. PSA Targets of Central Government Departments	Since they were first introduced in 1998, PSAs have been an integral part of the Government's public expenditure framework, helping to ensure value for money from public services, and that outcomes are delivered in return for resources. The number of PSA targets has fallen from over 250 to 110 to increase focus on the Government's highest priorities.	http://www.hm-treasury.gov.uk/spending_review/spend_srf04/psa/spend_srf04_psa/index.cfm
22. Best Value Indicators (CLG)	BV/PI have been applied to government departments since 1 April 2000. Cover a range of services education, health, transport, planning etc. Indicators are used to derive targets for local authorities based on previous performance levels of LAs and are designed to improve service delivery.	http://www.bvpi.gov.uk/pages/Index.asp
Additional Indicator Sets...		
23. State of the Cities Database (CLG)	The State of the Cities Database (SOCD) has been created to provide access to updated data that underpins the State of the English Cities Report (SOCR), published by the department in March 2006. The database contains all the key indicators of urban performance used in the report and allows users to identify in greater detail recent changes in English cities and will allow future monitoring of cities and the impact of policies. The indicators are available for 56 cities in England (built up or urban areas with a population of 125,000 or more).	http://www.communities.gov.uk/index.asp?id=1504763 CLG intro page http://www.socd.communities.gov.uk/socd/ CLG State of the Cities page
24. Environmental Indicators (Environment Agency)	The Environment Agency uses about 70 indicators in order to shed light on the overall state of the Environment. The indicators are grouped by environmental topic and broadly match the agency's environmental themes.	http://www.environment-agency.gov.uk/yourenv/432430/?lang_e&version=1

Annex 7

Findings of Data Validation Exercise

Data Availability and Usefulness

The use of AMR indicators was significantly hindered by lack of complete datasets with which to work. Although the research team had some success in the validation exercise a full scale correlation was not possible owing to this critical issue. From a total number of 22 indicators, 10 could be used in the statistical validation exercise since they were complete, 3 indicators were somewhat incomplete and therefore not totally reliable and a total of 9 indicators were not available at all (see Table A8.1). The issues relating to the latter set have been well documented by local authority respondents in a previous strand of this research but it emphasizes once again the need for full and complete datasets with which to work. Without the data infrastructure in place future attempts at this kind of causal validation are likely to be continually restricted.

Table A7.1: Indicator Availability from AMR Data

Indicator	Validity
1a Amount of land developed for employment by type: by local authority 2005/06	Complete
1b Amount of land developed for employment by type which is in development and regeneration areas defined by RSS 2005/06	Complete
1c Percentage of 1a which is on PDL: by local authority area 2005/06	Complete
1d Employment land supply by type: by local authority area 2005/06	Complete
2ai Net Additional Dwellings over 5 year period	Incomplete
2aii Total Net Additional Dwellings 2004/05	Complete
2aiii Projected Net Additional Dwellings	Complete
2aiv Draft RSS Target	
2b % of New and Converted Dwellings on PDL	Complete
2c % of new dwellings 2005/06 completed at:	Complete

2d Number of Affordable Housing Completions 2005/06	Complete
3 Percentage of completed non-residential development complying with car parking standards set out in RTS by LA	Incomplete
4a Amount of completed retail office and leisure development respectively: by local authority	Complete
4b % of completed retail, office and leisure development respectively in town centres	Missing
5a Production of Primary Land Won aggregates	Missing
5b Production of Secondary/recycled aggregates	Missing
6a Capacity of new waste management facilities by type (Cubic metres)	Missing
6b Amount of municipal waste arising and managed by management type (tonnes)	Missing
7 Number of planning permissions by LA Area granted contrary to the advice of the Environment Agency	Missing
8 Areas designated for their intrinsic environmental value including sites of international, national, regional or sub regional significance	Missing
8a Priority habitats and species by type:	Incomplete
8a(b) Wild Bird Indicators	Missing
9 Renewable Energy Capacity (MW) installed by type	Missing

Table of data received from Regional Assembly

Validation and Outcome Groups

Given the aforementioned challenges, there was then a need to consolidate available data for the analysis into the five groups identified on page 40 of the main report (see Table A8.2). There was also a need to introduce some proxy indicators in place of the proposed outcome indicators owing to the fact that many of them cannot yet be easily obtained. However, where these were used they were assessed for compatibility with the broad groupings in order that any causal relationship identified would most likely also exist when the full set of data becomes available in future. A number of extra supplementary proxy indicators were also tested in the analysis. The alignment of the groups and themes are of course to some extent overlapping in terms of causal relationships with the indicators used in the analysis but the validation exercise did produce some encouraging initial results despite the aforementioned data deficiencies. Indicators from the output and outcome sets which have some of the more significant correlation values (above 0.4 and below -0.4) are displayed below in Table A8.3, demonstrating the potential utility of this approach as a validation exercise.

Table A7.2: Spatial Outcome Groups and Correlation Indicators

	Grouping	Further Details of Indicators Tested
(1)	<i>Making suitable land available and its efficient use for development</i>	<ul style="list-style-type: none"> ■ Floorspace Developed in Schemes of 1000sq.m or more for Industrial and/or Commercial Use Floorspace (sq.m) ■ Factory floorspace per 1000 economically active persons ■ Office floorspace per 1000 economically active persons ■ Land Use Statistics (Previously-Developed Land) Hectares ■ Additional commercial floorspace developed ■ Urban land per 1000 economically active persons
(2)	<i>Sustainable economic development</i>	<ul style="list-style-type: none"> ■ Economic activity rate ■ Long-term youth unemployment rate ■ Population Indicator ■ VAT Stock 2000-2005 ■ Employment Rate ■ Location quotient of information-based service employment (against England) ■ Factory floorspace per 1000 economically active persons ■ Job density
(3)	<i>Protecting and enhancing the natural and historic environment</i>	<ul style="list-style-type: none"> ■ Percentage of local area designed as Area of Outstanding Natural Beauty ■ Areas designated for their intrinsic environmental value including sites of international, national, regional or sub regional significance
(4)	<i>High quality development and efficient use of resources</i>	<ul style="list-style-type: none"> ■ Index of commuting independence (core resident workers as a ratio of inward and outward commuters) ■ Railway journey time to London index ■ Average journey length per local car in weekday
(5)	<i>Inclusive and liveable communities</i>	<ul style="list-style-type: none"> ■ Average house price ■ Standardised mortality rate ■ Percentage of households who live in the 10% most deprived areas ■ Supply-side over-qualification index

Table A7.3 Validation Exercise: Correlation Analysis

1a Amount of land developed for employment by type: by local authority 2005/06	Floorspace	0.06	0.20	0.20	0.04	1.00	-0.31	-0.16	0.44	-0.15	0.00	-0.03	0.07	-0.01	0.43	-0.13	0.07
1b Amount of land developed for employment by type which is in development and regeneration areas defined by RSS 2005/06	Floorspace	-0.02	0.43	0.36	-0.06	0.63	-0.13	-0.09	0.17	-0.03	-0.03	0.03	0.09	-0.22	-0.12	-0.07	-0.05
1c Percentage of 1a which is on PDL: by local authority area 2005/06	Floorspace	0.24	0.39	0.30	0.13	0.33	-0.05	-0.25	0.46	-0.03	0.11	0.24	0.32	-0.13	0.27	0.03	0.03
1d Employment land supply by type: by local authority area 2005/06	Floorspace	0.26	0.55	0.45	0.01	0.41	-0.15	-0.11	0.26	-0.18	-0.01	0.16	0.14	-0.08	0.11	-0.13	0.16

Za11 Total Net Additional Dwellings 2004/05	-0.51	0.18	0.05	0.11	0.05	-0.18	0.11	0.20	0.00	0.16	0.11	-0.04	0.03	0.05	0.12	-0.04
Za11 Projected Net Additional Dwellings	-0.18	0.75	0.38	-0.17	0.26	-0.10	0.08	0.16	-0.01	0.07	0.09	0.08	0.01	-0.08	0.03	0.04
Zb % of New and Converted Dwellings on PDL	0.05	0.45	0.16	0.17	0.30	0.07	0.01	0.40	-0.02	0.09	0.28	0.18	-0.18	0.08	0.04	0.17
Zc % of new dwellings completed at: (i) less than 30 dwellings per hectare	0.06	-0.28	-0.16	0.22	-0.08	0.07	0.49	-0.09	0.44	0.12	0.10	0.20	0.25	0.06	0.40	0.14
Zc % of new dwellings completed at: (ii) between 30 and 50 dwellings per hectare	0.16	0.03	0.22	0.18	0.01	0.05	-0.18	0.29	-0.03	0.05	0.24	0.19	-0.24	-0.05	0.03	0.09
Zc % of new dwellings completed at: (iii) above 50 dwellings per hectare	-0.04	0.38	0.01	0.18	0.12	0.04	-0.15	0.07	-0.10	0.25	0.26	0.21	-0.05	0.02	-0.13	0.27

2d Number of Affordable Housing Completions 2005/06	-0.15	0.72	0.24	-0.12	0.40	-0.09	-0.04	0.19	-0.04	-0.06	0.05	0.07	0.03	0.02	-0.02	0.06
4a Amount of completed retail office and leisure development respectively: by local authority	-0.07	0.62	0.28	-0.16	0.31	0.06	-0.02	-0.01	0.00	-0.15	0.06	0.05	0.05	-0.05	-0.04	0.12
8 Areas designated for their intrinsic environmental value including sites of international, national, regional or sub regional significance	-0.08	-0.26	0.03	0.13	-0.05	0.19	-0.24	0.10	0.06	-0.02	-0.01	0.09	-0.21	0.14	0.00	0.06

Further Comments on Indicator Validation Exercise

As stated in the main body of the report, the research team were able to establish a number of encouraging relationships between the set of output indicators and the proposed set of outcome indicators (including proxies). Strong positive relationships are highlighted in Table A7.3 above, as are some strong negative correlations. Overall, however, the relationships highlighted in this part of the analysis are more tantalising than definitive and there is a pressing need to have more data available upon which a more thorough understanding of spatial planning outcomes and processes could be constructed. Broadly speaking, the data deficiency issues can be most adequately explained in relation to the following key points:

- Time-series availability of the data is not of suitable quality to ensure compatibility and comparability;
- The spatial scale at which was available for the analysis does not necessarily match the one preferred in relation to the measurement of outcomes;
- The reliability of the data at a broad level, including the issue of non-reporting of certain indicators by individual local authorities (owing to lack of capacity) results in some indicators being excluded from the analysis on ground of incompleteness rather than quality issues;
- The availability and consistency of survey-based data is at present seriously deficient and need to be improved if spatial planning outcomes are to be properly assessed; and
- At a broad level, the infrastructure for compiling data from a local authority to a regional and national level is does not yet seem to be properly in place across the regions as a whole. This is reflected in the gaps in AMR datasets made available and in the responses to the earlier e-survey.

In summary, then, the presumed relationships between spatial planning outputs and outcomes need to be explored with more updated data to ensure full validation of the output-outcome relationship. This should be seen as a priority. There is great potential here for more meaningful insights to emerge from the validation exercise and there is cause for optimism given the preliminary results provided in the report, but more work still needs to be done in terms of constructing a complete and consistent data framework.

Annex 8

Findings of the ‘Spatial Planning Outcome Framework’ Workshop

The workshop was designed to allow as much feedback and contribution from participants as possible, with members of the research team, Communities and Local Government and the Royal Town Planning Institute adopting a facilitating and listening role. The workshop was based around two different parts:

- Part 1: Using the Indicators
- Part 2: Assessing the Framework

Part 1: Using the Indicators

Participants were divided into four smaller groups. Each participant was given a short briefing sheet, the list of key questions to be discussed, and some contextual information on indicators for four hypothetical local planning authorities. The key issues emerged from the group sessions were then reported back to the plenary session.

Workshop Briefing Sheet

The purpose of this part of the workshop is to engage each group in a discussion about the ways in which indicators can be used in ‘bundles’ in order to shed more light on the nature of spatial planning outcomes at different spatial scales. For example, how might a lack of new housing provision in one LPA be related to other indicators in other LPAs, such as additional commercial floorspace developed, change in total resident population, or congestion? What spatial scales might we consider when looking at these issues? Using the charts, data, definitions and maps as reference tools, please carefully consider the following questions from the perspective of your assigned LPA.

1. In your LPA, which indicators are likely to be related to, or have an influence upon, the number of additional new homes completed?
2. How might dynamic processes (such as commuting and migration) have an impact upon spatial outcomes in your LPA, and which indicators could be bundled to capture this?
3. Which indicators are likely to be related to the change in carbon footprint and at which spatial scales are any changes likely to occur?
4. Are there any particular issues that your LPA might face which can be highlighted by a particular bundle of indicators (bearing in mind the type of area it is, and its location)?
5. Which indicators might you include in a bundle relating to land use for your LPA?
6. Thinking about the provision of infrastructure, which indicators might you consider in combination with changes in the level of commuting independence (n.b. an area becoming more independent is more self-contained over time, and vice versa)?
7. Are there any additional contextual indicators which your LPA would benefit from including in the measurement of spatial planning outcomes? (e.g. issues related to coastal management, deprivation, labour market catchments, rural development...)

Part 2: Assessing the framework

The second part of the workshop followed a similar format to the first part. The intention of Part 2 was to gauge how participants thought the framework might work in practice and identify barriers to its successful implementation, as well as issues surrounding the measurement of spatial planning outcomes more generally. This discussion was based on the contents of the Project Summary which was circulated to the participants before the workshop.

Workshop Briefing Sheet

The purpose of this part of the workshop is to begin to think about the potential uses of such a spatial planning outcomes framework in practice. Therefore, it would be useful if each group could discuss a number of key questions arising from the Executive Summary and the measurement of spatial planning outcomes in general. With reference to the documents provided, please consider the following key questions.

1. Is the proposed outcome indicators framework coherent and robust?
2. Are there any key gaps and, if so, what are the implications for the use of the framework as a whole?
3. What are the implications for its use as:
 - a. *An analytical framework?*
 - b. *A learning framework for development?*
 - c. *A performance framework at the national, regional and local levels?*
4. What are the implications for:
 - a. *Understanding and buy-in across government levels and sectors?*
 - b. *The development, coordination and use of databases, including collection, GIS and software systems?*
 - c. *Skills and communication?*
5. How can we most effectively promote it to stakeholders?
6. It may be especially useful to test the robustness of the framework in relation to different sets of priorities within the overall objectives of sustainable development. For example, how would we use the indicator set in relation to the objectives of:
 - a. *Available and affordable housing*
 - b. *High levels of employment*
 - c. *Cleaner environment*
 - d. *Tackling climate change*
 - e. *Healthcare to meet individual needs and improved social services*

Key points from workshop feedback

Overall, the general feeling among workshop participants was that the proposed spatial planning outcome indicators framework was workable and realistic, but that barriers to successful implementation did exist. A summary of some key points discussed during the feedback sessions is provided below, in relation to each of the questions posed (Part 1) and general comments (Part 2).

Part 1: Using the Indicators – A Simulation Exercise

1. *In your LPA, which indicators are likely to be related to, or have an influence upon, the number of additional new homes completed?*

Population change, deprived areas, economic context is also important here, jobs density, housing completions needs to be more sensitive to type of housing – e.g. affordable housing, etc. Congestion important, where the additional new homes are seen to be important and is new homes an outcome is another question considered in the group.

2. *How might dynamic processes (such as commuting and migration) have an impact upon spatial outcomes in your LPA, and which indicators could be bundled to capture this?*

Population change, loss over time important as is the jobs/skills balance (i.e. spatial and skills mismatch issues), other stakeholders and their perceptions of areas are important here. Outcomes in a wider context are important, particularly in relation to things like the RSS, RES. The vision for an area is important in determining how it interacts with other places in dynamic ways. Also need to think about how challenges can be turned into opportunities here (making areas more self-contained one aspect of this).

3. *Which indicators are likely to be related to the change in carbon footprint and at which spatial scales are any changes likely to occur?*

Congestion, many spatial scales, hard to define. All transport indicators seen to be related. New homes an important factor – how eco-friendly are they? More choice to live locally would be good. Context of different areas important, for example what about in areas with lots of worklessness and perhaps lower carbon footprint but not a desirable connection. Location of homes important – are the close to where people want to live/work.

4. *Are there any particular issues that your LPA might face which can be highlighted by a particular bundle of indicators (bearing in mind the type of area it is, and its location)?*

Derelict land perhaps an important one for LPA4. Greenfield land also with it being between two larger urban areas. Local conditions and housing important if LPA4 in shared labour/housing market areas. Supply and demand issues important here but difficult to assess fully. Lack of land could be an issue.

5. *Which indicators might you include in a bundle relating to land use for your LPA?*

The group felt all or almost all indicators were related to land use.

6. *Thinking about the provision of infrastructure, which indicators might you consider in combination with changes in the level of commuting independence (n.b. an area becoming more independent is more self-contained over time, and vice versa)?*

Jobs density, congestion, floorspace, access to services, commuting, usage of green space and parks. There is a query over whether 'infrastructure' includes 'green infrastructure'.

7. *Are there any additional contextual indicators which your LPA would benefit from including in the measurement of spatial planning outcomes? (e.g. issues related to coastal management, deprivation, labour market catchments, rural development...)*

Change in vacancy rates, accessibility with it being LPA4, change in occupied areas subject to flood risk, and the distinctiveness and quality of places seen to be important. Positive area change needs to be accounted for, but this is often relative and hard to equate to national processes of change. Investor confidence in areas and perceptions are important. This means that a large survey and qualitative perceptual data has to be collected.

Part 2: Assessing the Framework

This section of feedback was less structured than Part 1 since participants were more concerned to discuss general points rather than question-specific points. The key findings are summarised as below:

- The indicator framework needs to be easily understood by stakeholders in terms of 'what can it do for me'? Why would it be useful? Hence, getting the point across is very important.
- The indicator framework needs to be flexible for all places and that it can relate to all areas. This was felt to be especially important, given the diversity of LPAs in England.
- Some participants were keen to incorporate some elements that measured or took account of health and well-being and planning's contribution to it. However, it does not fit well into the 5 themes, but could be included as other contextual indicators to bundle in the analysis.
- In general, the set of indicators and the framework were found robust and coherent, but that it needs to be workable and able to capture the places that it is used to assess. It needs to pass the test of time.
- The indicators, on the whole, are coherent and robust but obviously not complete, in relation to indicators. This, however, provides a good starting point.
- Need to understand how the framework squares with the individual objectives of LPAs which are different across England. Also, seen to be very important to engage people/users of the framework from the beginning.
- Some suggested that more emphasis ought to be placed on reducing waste as this ought to be an outcome of sensible planning. A huge issue which has not yet been suitably dealt with.
- Issue of how to capture the 'quality' of places. Discussion of using CABE's star rating system but some thought this was far too limited or subjective.
- Too much 'hard' data in general being proposed, perhaps a need to 'soften' things with more qualitative /surveys data etc.
- Measuring change is not always the best approach. Since no change at all might actually be a very good thing, this will not be captured with the current system proposed. There is a need to avoid chasing indicators and improvements for the sake of it.
- Perhaps more perception indicators would be useful. These would capture how people feel about their area locally and would not be skewed by national comparisons which might not make sense.
- Not much is talked about data management issues. However, any capture of data should be sensitive enough to understand internal variations in LPAs so as not to mask issues of spatial

concentration which might be more serious than national polarisation. So, the system needs to be sensitive to local variations, basically.

- Buy-in? Not all departments, but ones that were seen as most likely were Education, DEFRA, CLG, Transport and Health. Others deemed more difficult include BERR, HMT, DCMS and DWP. A difficult issue achieving buy-in and most likely an exercise in diplomacy/political manoeuvring.
- Overall, the framework needs longevity and should be put forward as such.

The feedback and discussion was largely positive. There was some rigorous discussion about which indicators would be most useful and some interesting angles on what is important but very useful overall. Understanding the audience for the spatial planning framework was seen to be critical to its success. A workable communication strategy is therefore seen as very important. How it is used also very important and this will require training of planners in the methods and concepts proposed here. Definitions of indicators need to be understood easily. Also a need to aid understanding of how such a framework links to MAAs and LAAs and such things as tests of soundness.

Annex 9

Definition of Proposed Spatial Planning Outcome Indicators

Theme 1 - Making suitable land available and its efficient use for development

SPO1.1 Additional commercial floorspace developed

Rationale: Managing the availability of land and the way in which it is used is a central function of spatial planning. This indicator is concerned with the extent to which land is being used to enhance the capacity for commercial and industrial activities. It is an outcome of planning and market interaction. The indicator needs to be interpreted in the context of other economic, social and environmental outcomes.

Definition: Total amount of new floorspace developed for employment, retail and leisure over the assessment period. Employment floorspace is defined by the total of Use Class Orders (UCOs) B1 (a), (b) and (c), B2 and B8. Amounts should be defined in terms of completed gross internal floorspace (m²). Retail and leisure development is the total completed amount of gross internal floorspace (m²) for UCOs A1, A2 and D2. Where development is for UCO A1 the amount (m²) of trading floorspace (of the total gross internal floorspace) should be provided. Trading floorspace is defined as sales space which customers have access to (excluding areas such as storage).

Data Source: AMR and CLG Commercial and Industrial Floorspace and Rateable Value Statistics.

Spatial scale: Data are available and reliable at Regional level, and should also be available at local level via the AMR. Functional economic area would be the preferable reporting spatial unit.

SPO1.2 Additional new homes completed

Rationale: This indicator is concerned with extent to which land is contributing to residential development. This indicator is not a measure of the performance of the planning system. Rather additional new homes are also the outcome of the behaviour of house builders. This indicator needs to be considered in its wider context.

Definition: Net additional domestic dwellings over the assessment period. Net additional dwellings are defined as new dwellings completed, plus gains from conversions less losses from conversions, plus gains from change of use less losses from change of use and less demolitions.

Data Source: AMR and CLG statistics.

Spatial Scale: Available at Local and Regional level. Functional housing market area would be preferable as the reporting spatial unit.

SPO1.3 Percentage change in derelict land stock

Rationale: This indicator is intended to complement SPO1.1 and SPO1.2. It provides a proxy measure for the extent to which former urban land is being re-used in the delivery of additional residential and commercial space. It aims to ascertain the outcome of managing and use of resources efficiently.

Definition: Percentage change in the total amount of land stock that is defined as 'derelict land and building' in the National Land Use Database over the assessment period.

Data Source: data collected and submitted by local authorities to CLG's National Land Use Database.

Spatial Scale: Available at Local and Regional level. Functional economic area would be preferable.

SPO1.4 Percentage of appeals allowed against refusal of planning permission

Rationale: This indicator seeks to provide a proxy for the process efficiency of the planning system in meeting land use objectives. The indicator is imperfect but will be helpful when examined alongside the related 'land use' measures.

Definition: Percentage change over the number of planning appeals allowed over the assessment period.

Data Source: Planning Inspectorate and local authority statistics.

Spatial Scale: Local authority area

SPO1.5 Inter- and Intra-regional transport infrastructure capacity and connections

Rationale: The physical-spatial system of places is characterised by interrelated networks of nodes and flows and such connectivity has created spatial order in a functional way. In order to examine the spatial structure of different regions, the layers of infrastructural networks such as roads, rail time, airport passenger flows and port tonnage can be mapped to illustrate how they connect the key functional nodes of our towns and cities, and what is the infrastructure capacity for intra- and inter-regional connectivities.

Definition: Road and rail network density; time of direct inter-city rail links to key destinations; accessibility to major international airports: scheduled and charter flights; access to major ports and tonnage of traffic.

Data Source: Road – Edina/UK Borders; Rail - National Rail Enquiries; Air - CAA UK Airport Statistics; Port statistics - Department for Business, Enterprise and Regulatory Reform

Spatial Scale: grid referenced locations

Theme 2 – Sustainable Economic Development

SPO2.1 Percentage change of working age people in employment

Rationale: Sustainable development indicators are less clearly attributable to planning activities than those in theme 1 but they do provide a useful proxy for the economic competitiveness of places. This indicator is used as a measure of business growth. It is assumed that business growth will be accompanied by employment growth and that this will have a wider impact on local and regional economies.

Definition: Percentage change of people of working age (i.e. 16-64 for men and 16-59 for women) who are in employment over the assessment period.

Data Source: quarterly Labour Force Survey (can be accessed via NOMIS).

Spatial Scale: Data are available at local level but less reliable in areas with small sample size. Although it is currently most reliable and robust at regional level, functional economic area would be preferable.

SPO2.2 Percentage change in the total number of VAT registered businesses

Rationale: This indicator complements SPO2.2. Economic growth (and decline) will relate to both the growth

(dissolution) of existing businesses within an area and to new business formation. This indicator captures the net change in business formation.

Definition: Percentage change of new business registrations over the assessment period. This will only cover businesses register for VAT and will exclude very small businesses.

Data Source: Inter-Departmental Business Register (can be accessed via NOMIS).

Spatial Scale: Data are available at local and regional level. Functional economic area would be preferable.

SPO2.3 Change in job density

Rationale: Relatively high job densities indicate that an area can provide potential employment opportunity for it local residents. However, it may also highlight the fact that there is a mismatch between the type of jobs in an area and the skills of the local residents, which then trigger long-distance commuting. Hence, this has to be interpreted with other labour market information e.g. skills, qualifications and commuting patterns.

Definition: Job density is defined by the ONS as the number of filled jobs in an area divided by the working-age residential population in that area.

Data Source: ONS

Spatial Scale: local planning authorities (to highlight the issue of skill mismatch and the need to integrate with the wider functional area)

SPO2.4 Change in the level of commuting independence

Rationale: The local population's sense of belonging to an area is important because their concerns can convert into enthusiasm and help to restore confidence. However, unlike local residents, mobile commuters' connections with a place are less attached. The changing ratio between the two groups of people helps to highlight the degree of self-containment of a locality and the key issues of skills mismatch and the labour market process of commuting.

Definition: Index of commuting independence is a ratio of the core residential workers to the sum of inward and outward commuters.

Data Source: Population Census Special Workplace Statistics

Spatial Scale: Local planning authority areas (to test the degree of self-containment and the need to integrate with the wider functional area)

Theme 3 - Protecting and Enhancing the Natural and Historic Environment

SPO3.1 Loss of protected land (SSSI, ESA etc.)

Rationale: This indicator is concerned with the extent to which land of intrinsic environmental value is protected.

Definition: Change in areas (in hectares) designated for their intrinsic environmental value including sites of

international, national, regional, sub-regional or local significance.

Data Source: AMR and Natural England Statistics.

Spatial Scale: Local Authority and Regional Level

SPO3.2 Percentage of residents surveyed satisfied with their neighbourhood as a place to live

Rationale: It is difficult to measure the quality of the built environment. Individuals consider a wide range of factors. This survey-based indicator provides a reasonable proxy for neighbourhood quality. The respondents reflect on the combined influences of the quality of the natural, historic and built environment.

Definition: This is a survey-based indicator and the question is recommended by the Audit Commission to be included in local authority's usual consultation processes. The question asked is, '*How satisfied are you with your neighbourhood as a place to live?*' For those who choose the answer of 'very satisfied' and 'fairly satisfied' are interpreted as satisfied with their neighbourhood as a place to live.

Data Source: Survey data as recommended in Audit Commission's Quality of Life Indicators.

Spatial Scale: Local level

SPO3.3 Change in area of parks and green spaces per 1,000 head of population

Rationale: This indicator seeks to capture the extent to which green space is being protected. It does not provide a clear indication of the quality of space lost or gained but, when interpreted in combination with other indicators, it provides useful insights into a key driver of public perceptions of wider environmental objectives.

Definition: Change in the areas (hectares) of urban parks and open spaces per 1000 population over the previous five years. Open and amenity spaces include freely accessible public parks, formal gardens, nature reserves, local nature reserves, cemetery and crematoria, water parks, open spaces, millennium greens, sites of special scientific interest, woodlands, and playgrounds.

Data Source: CLG Land Use Change Statistics

Spatial Scale: Local level

Theme 4 - High Quality Development and Efficient Use of Resources

SPO4.1 Change in carbon footprint

Rationale: Environmental quality is difficult to measure. This indicator seeks to examine the carbon footprint to ascertain policy contribution made towards tackling climate change.

Definition: Change in per capita CO2 emissions in the LPA area

Data Source: to be collected by local authorities, NI 186 and PSA 27

Spatial Scale: Local and regional level

SPO4.2 Change in commuting mode (public transport)

Rationale: Increases in car usage and commuting distances have had a considerable impact on carbon emissions. This indicator explores the extent to which car usage is changing. It does not capture changes in travel distance and should be interpreted in combination with related indicators.

Definition: measure the change in the number of journeys to work using non motor-car based commuting modes over the previous five years. This is based on the Census Special Work Place Statistics which is only available on a 10 year basis. The alternative measure is based on survey information to find out the percentage of residents surveyed using different mode of transport and distance of, travel.

Data Source: Population Census Special Workplace Statistics and survey data.

Spatial Scale: Local and Regional level

SPO4.3 Congestion: average journey time per mile during morning peak

Rationale: This indicator complements SPO4.2. It is intended to explore changes in journey time in order to reveal the extent to which congestion is being managed.

Definition: measure the change in average travel to time (resident based) during the peak hours in the morning. This is proposed in the CLG Local Government Performance Framework (NI 167) and is a PSA target. The data is likely to be based on traffic survey data of local authorities.

Data Source: Local authority's own transport statistics, or data collected by DoT.

Spatial Scale: Local level

SPO4.4 Percentage of residents surveyed finding it easy to access key local services

Rationale: This indicator is also concerned with sustainable transport. It explores the extent to which public services are accessible.

Definition: Survey based question, which is used in Best Value and Audit Commission QoL Indicators. The question is, 'From your home, how easy is it for you to get to the following using your usual form of transport?' and the list of services include: local shop, shopping centres/supermarket, post office, GP, chemist/pharmacy, local hospital, publicly accessible green space e.g. park, public transport facility, recycling facility, sports/leisure centre, bank/cashpoint, Council/neighbourhood office, childcare facilities. The answer options are: very easy, fairly easy, neither easy nor difficult, fairly difficult, very difficult, does not apply.

The suggestion is to modify the question by asking them the easy access to the services by using public transport and on foot to reflect the importance of sustainable development.

For those that answer either very or fairly easy, they are interpreted as satisfied with ease of access. Since there is a long list of services, it is possible to create a composite index to summarise the value.

Data Source: Survey data as recommended in Audit Commission's Quality of Life Indicators and Best Value Resident's Survey.

Spatial Scale: Local level

Theme 5 – Inclusive and Liveable Communities

SPO5.1 Percentage change in total resident population

Rationale: Population change is a key indicator of the status of different localities and their overall attractiveness. Declining neighbourhoods are often associated with population decline. This indicator explores net change in population over an extended time period. Local level changes should be examined against regional trends.

Definition: percentage change in total resident population over the previous five years.

Data Source: ONS statistics

Spatial Scale: Local and regional level

SPO5.2 Percentage change of population who live in the 10% most deprived areas

Rationale: This indicator complements SPO5.1. It is intended to capture the more specific effectiveness of policies targeted at addressing the social and economic problems in the most deprived areas.

Definition: Percentage of population who live in wards (for LPAs and RPBs) or in districts (for national monitoring) that rank within the most deprived 10% according to the Index of Multiple Deprivation. The timeframe will depend on the publication of IMD.

Data Source: ONS and CLG Index of Multiple Deprivation.

Spatial Scale: Local level

SPO5.3 Percentage of households that can afford to purchase the average first time buyer's property in the area

Rationale: This indicator is concerned with the balance between incomes and housing costs. The extent to which new households can access housing of sufficient quality is an important proxy for the inclusiveness of localities.

Definition: Percentage of households that can afford to purchase the average first-time buyers' property in the area.

Data Source: CLG and Land Registry Data

Spatial Scale: Available at local and regional level. Functional housing market area would be preferable.

SPO5.4 Supply-side Over-qualification Index

Rationale: The Supply-Side Over-Qualification Index is used to measure the supply and demand of the high skilled end of the labour market. It is a ratio of the total number of residential population with degree and above qualifications (as a proxy measure for labour skills supply) to the total number of professional and managerial jobs (as a proxy for skills demand). When the index value is 1, there is a good match of the supply and demand of high skilled labour; when the value is above 1, there is an over-supply of the qualified workforce; and when the index has a value of less than 1, it indicates a shortage of skilled workforce to meet the needs of the job market.

Definition: The supply-side over-qualification index is the ratio of residential population with degree and above qualifications to the number of professional and managerial jobs in the area.

Data Source: Population Census

Spatial Scale: local planning authority (to highlight skills mismatch and the need to integrate with the wider functional area)