

# **DISTILLATE**

Improved Indicators for Sustainable Transport and  
Planning

## **Deliverable C3**

Improving Monitoring and Reporting for Local  
Authorities: Lessons from the Transport Sector

Greg Marsden, Mary Kimble  
Institute for Transport Studies, University of Leeds

Angela Hull, Reginald Tricker  
University of West of England

Karen Lucas, Michael Brookes  
Transport Studies Group, University of Westminster

Carolyn Snell, John Forrester  
SEI, University of York

Version 9  
05/03/08

## 1 Executive Summary

In the UK, performance monitoring and reporting have become an essential part of the accountability process between central and local government and their delivery agencies and with the media and general public. The policy agenda is also becoming increasingly integrated with a need for more cross-sectoral working.

The DISTILLATE<sup>1</sup> project is seeking to develop, through a focused, interdisciplinary research programme, ways of overcoming the barriers to the effective development and delivery of sustainable urban transport and land use strategies and, through them, enhanced quality of life. Two surveys of local authorities have identified indicators to be a problem area in developing and delivering effective strategies. The “specification of core, statutory multi-sector indicators/targets for transport that can be adopted in all sectors at the local level in their policy and operational decisions” was highlighted as a key need to permit the development of more integrated strategies.

Initial work in this project (Marsden et al., 2005) developed a core list of outcome indicators from existing sources and a process for selecting sub-sets of these indicators and for establishing a coherent and efficient monitoring framework to understand progress towards these key outcomes. This deliverable describes work to test the application of that framework and those processes in the current decision-making framework. In particular it addresses three key objectives:

1. To understand the extent to which there is a common understanding of sustainability and quality of life across local authority departments and to what extent this understanding is achieved through shared monitoring processes
2. To examine key barriers relating to indicators identified by the cross-authority survey, namely:
  - a. The role of information exchange in integrating land-use and transport
  - b. The ability of authorities to set targets and monitor progress in their delivery
3. To test the indicators and processes for selecting indicators developed in the initial stages of this project through practical applications

To answer these objectives four case studies were established taking a ‘partnered enquiry’ approach which involves working with local and regional government employees that have an involvement in (either through development, measurement, use or impact on) indicators. The key methods employed to facilitate the partnered enquiry were:

- Desktop review
- Interviews
- Workshops

---

<sup>1</sup> Design and Implementation Support Tools for Integrated Local Land use, Transport and the Environment

In order to consider the broader integration of information across local authorities the approach has involved participants from a range of local government functions.

The studies reported above have examined the processes for setting indicators and their use across a range of applications and governmental levels. Whilst each case study is an individual application of the DISTILLATE approach, taken together they allow us to make the following observations and recommendations.

## **Monitoring Processes (Section 5)**

### *General Issues*

1. A holistic approach is needed to the development of indicators for sustainable development. Those for transport (or any other sector) should be determined within this context.
2. This in turn implies that indicators should be determined through collaboration between government departments (at any level) rather than by individual departments alone. The latter will create a silo effect, and lead to duplication and inconsistency.
3. The indicators required, and their level of detail, will vary by level of government and between local authorities depending, for example, on their demography. It is therefore inappropriate to specify too broad a set of mandatory indicators. Instead, higher levels of government should focus on advice on how to specify indicators.
4. To be useful, the definition of indicators needs to remain stable over a period of several years. Governments should, where possible, avoid seeking re-specification as policies change.
5. Indicators, and particularly outcome indicators, should relate to government (national, regional or local) objectives. As additional objectives are introduced there will be a case for additional indicators.

### *National government*

1. Government departments should collaborate in the development of national level indicators, to avoid the silo effect, which can lead to redundancy and gaps in coverage.
2. Government departments should only specify mandatory indicators where there is a national need for the information. Over-use of mandatory indicators can lead local government to question their relevance.
3. To an even greater extent, government departments should be aware of the problems created by mandatory targets. This is particularly true when targets relate to outputs and intermediate outcomes. Such targets often fail to reflect the diversity of conditions in local government, and remove from local government the responsibility for, and ownership of, appropriate targets.

4. The definition of the reduced set of mandatory local authority indicators should be accompanied by guidance on how to apply these within a local context.
5. There is a particular mismatch at present between the use of output indicators in land use planning (e.g. % of decisions within 8 weeks) and outcome indicators in transport. This makes it harder to develop consistent land use and transport strategies.

#### *Regional bodies*

1. Regions should focus principally on the indicators which are relevant at the regional scale. For example, CO<sub>2</sub> emissions are relevant at this scale, while accessibility levels are not.
2. It is not clear how responsibility for indicator selection and collection will fall with the abolition of the Regional Assemblies. This needs to be clarified. Regional Assemblies have not had sufficient resource to coordinate the specification and collection of (higher level) indicators for their regions. If there are changes to responsibilities for regional planning as anticipated then a review of the role of monitoring should be conducted.

#### *Higher tier local authorities*

1. In two tier authorities the upper tier is responsible for the LTP and the lower tier for the LDF. Unless these, and the indicators on which they are based, are consistent it will be difficult to formulate coherent strategies.
2. There is a related tendency for higher tier authorities to focus on environmental and economic indicators, while lower tier authorities deal with social indicators. This can lead to an undue emphasis on particular objectives in each authority's actions. It is possible and, indeed, sensible, to maintain these different foci, but only if each tier considers the other's objectives and indicators in developing its strategies and in assessing performance.
3. In two tier authorities, there should ideally be a clear link between responsibility for collecting data for a given indicator and responsibility for any remedial action prompted by that indicator. Where this cannot be achieved, continued collaboration is needed to ensure that the value of the information collected is clear to those responsible.

#### *Lower tier and unitary authorities*

1. Local authorities are currently required to produce too many plans, with overlapping and conflicting requirements for indicators. This in turn results in failure to perceive the synergies between different policy sectors.
2. The LAA should be used to provide a high level overview of the authority's sustainable development strategy, and the indicators relevant to its full set of sustainable development objectives. Indicators for particular policy sectors such as transport should be developed in this context.

3. The New Performance Framework indicators should be used as part of, rather than defining, the monitoring frameworks used in LAAs and supporting strategies.
4. Local authorities have a particular responsibility for involving other agencies in the collection of data and in the development of strategic responses. The process of accessibility planning has been quite successful in this regard, but has served to demonstrate the growing complexity of the policy environment.
5. Both formal and informal channels will need to be established and maintained to agree on suitable indicators, to collect the necessary information, to review the trends which these indicators demonstrate, and to agree on appropriate policy responses.

### **Land-Use and Transport Integration (Section 6)**

The review of the role of indicators in integrating transport and land-use suggests the key metrics which bring together the two policy areas are density of development and public transport accessibility. Whilst these are conceptually well linked in the prioritisation of land to be released for development several practical barriers exist to fully integrating transport and land-use:

1. The sequential approach to development can lead to the identification of sites for development which have poor accessibility relative to other areas which are excluded from consideration.
2. Good public transport accessibility occurs in areas which suffer from other transport problems (such as congestion, overcrowding and unreliability). Transport Assessments are local in nature and are not intended to overcome 'whole corridor' issues.
3. Accessibility is a relative concept (what constitutes good accessibility is likely to vary across contexts e.g. urban vs. rural). A range of approaches to assessing accessibility for planning purposes are emerging. Accessibility assessments offer the opportunity to act as a lever for developer contributions and shared best practice in the area would be helpful.
4. The timescales for the delivery of strategic transport interventions are long and often uncertain. This makes the achievement of strategic land-use transport integration difficult. Examples of integrated delivery demonstrate the added value that joint implementation can bring.

### **Key Features of Best Practice in Monitoring (Section 7)**

The production of lists of recommended indicators will never satisfy nor be appropriate to all partners, particularly when one considers the diversity of spatial scales and policy functions to which such a list might have to talk. We therefore conclude that whatever external requirements exist for monitoring certain pre-specified national indicators should not dictate the monitoring strategy for a local authority. Our research shows that the internal and external processes adopted for identifying and rationalising indicators will dictate the credibility and

acceptability of a monitoring strategy and ensure that is clearly linked to the aims of the authority.

Whilst monitoring is often seen as the preserve of a few technical experts, we have found that a major role of the indicator selection process is in communicating the importance and rationale of monitoring to other stakeholders including local politicians and obtaining buy in to the achievement of targets and goals related to those same indicators. In particular, we identify the following key elements to achieving best practice in integrated monitoring.

1. A clear mapping of the relationship between different strategies (both within an organisation and between organisations at different scales)
2. A process for identifying what needs to be monitored and why in support of each strategy
3. A process to identify where it is important to share information across sectors
4. Establishment of formal mechanisms through which information sharing is discussed
5. Work to develop informal mechanisms to support progress between formal meetings

## Table of Contents

<b>1</b>	<b><u>EXECUTIVE SUMMARY</u></b>	<b>2</b>
<b>2</b>	<b><u>CONTEXT</u></b>	<b>9</b>
<b>3</b>	<b><u>OBJECTIVES AND STRUCTURE</u></b>	<b>12</b>
<b>3.1</b>	<b>OBJECTIVES</b>	<b>12</b>
<b>3.2</b>	<b>DELIVERABLE STRUCTURE</b>	<b>12</b>
<b>3.3</b>	<b>DEFINITIONS</b>	<b>12</b>
<b>3.4</b>	<b>INITIATIVES AND INDICATOR SETS</b>	<b>13</b>
3.4.1	<i>LOCAL TRANSPORT PLANS</i>	13
3.4.2	<i>REGIONAL SPATIAL STRATEGY</i>	14
3.4.3	<i>LOCAL DEVELOPMENT FRAMEWORKS</i>	14
3.4.4	<i>COMPREHENSIVE PERFORMANCE ASSESSMENT</i>	14
3.4.5	<i>PUBLIC SERVICE AGREEMENTS</i>	15
3.4.6	<i>LOCAL AREA AGREEMENTS</i>	15
3.4.7	<i>QUALITY OF LIFE</i>	15
<b>4</b>	<b><u>METHODOLOGY AND CASE STUDIES</u></b>	<b>17</b>
<b>4.1</b>	<b>METHODOLOGY</b>	<b>17</b>
<b>4.2</b>	<b>CASE STUDY 1: REVIEW OF SUSTAINABLE TRANSPORT INDICATORS</b>	<b>17</b>
<b>4.3</b>	<b>ASSESSING THE VALUE OF THE DISTILLATE INDICATOR SET FOR LAND-USE TRANSPORT DECISIONS IN A TWO-TIER AUTHORITY</b>	<b>18</b>
<b>4.4</b>	<b>REGIONAL SPATIAL STRATEGIES AND REGIONAL MONITORING: IMPACTS ON LOCAL DECISIONS</b>	<b>20</b>
<b>4.5</b>	<b>MONITORING AND TARGET SETTING ACROSS A METROPOLITAN AREA</b>	<b>21</b>
<b>5</b>	<b><u>FINDINGS: MONITORING PROCESSES</u></b>	<b>23</b>
<b>5.1</b>	<b>GOVERNMENTAL LAYERS</b>	<b>23</b>
5.1.1	<i>INFORMATION REQUESTS ARE PREDOMINANTLY TOP-DOWN WITH SOME REDUNDANCY</i>	23
5.1.2	<i>THERE IS INSUFFICIENT INTEGRATION OF INDICATORS AT A NATIONAL LEVEL</i>	24
5.1.3	<i>CONFLICTING SPATIAL SCALES AND TIMING OF PLANS REDUCES SYNERGY</i>	25
5.1.4	<i>SUMMARY</i>	26
<b>5.2</b>	<b>AUTHORITY FUNCTIONS</b>	<b>27</b>
5.2.1	<i>EVIDENCE BASE</i>	27
5.2.2	<i>SUMMARY</i>	30
<b>5.3</b>	<b>DIFFERENT ORGANISATIONS</b>	<b>31</b>
5.3.1	<i>ORGANISATIONS WITH SOLE RESPONSIBILITY FOR TARGETS</i>	31
5.3.2	<i>MONITORING AND TARGET SETTING WITH EXTERNAL PARTNERS</i>	32
5.3.3	<i>COORDINATION BETWEEN ORGANISATIONS WITH RESPONSIBILITY FOR STRATEGIC LAND-USE AND TRANSPORT PLANS</i>	33
5.3.4	<i>SUMMARY</i>	33
<b>5.4</b>	<b>SUMMARY</b>	<b>34</b>

5.4.1	GENERAL ISSUES	34
5.4.2	NATIONAL GOVERNMENT	34
5.4.3	REGIONAL BODIES	35
5.4.4	HIGHER TIER LOCAL AUTHORITIES	35
5.4.4	LOWER TIER AND UNITARY AUTHORITIES	36
<b>6</b>	<b><u>LAND-USE TRANSPORT INTEGRATION</u></b>	<b><u>37</u></b>
<b>6.1</b>	<b>FORMAL PROCESSES</b>	<b>37</b>
<b>6.2</b>	<b>STRATEGIC SPATIAL PLANNING</b>	<b>39</b>
<b>6.3</b>	<b>DEVELOPMENT CONTROL</b>	<b>41</b>
<b>6.4</b>	<b>SUMMARY</b>	<b>42</b>
<b>7</b>	<b><u>DISTILLATE INDICATORS</u></b>	<b><u>44</u></b>
<b>7.1</b>	<b>REVIEW OF PROCESS FOR INDICATOR SELECTION</b>	<b>44</b>
<b>7.2</b>	<b>CASE STUDY FEEDBACK ON LIST</b>	<b>45</b>
<b>7.3</b>	<b>CASE STUDY FEEDBACK ON INDICATOR SELECTION</b>	<b>47</b>
<b>7.4</b>	<b>CRITIQUE</b>	<b>50</b>
<b>8.</b>	<b><u>CONCLUSIONS</u></b>	<b><u>51</u></b>
<b>8</b>	<b><u>REFERENCES</u></b>	<b><u>53</u></b>
	<b>ANNEX A</b>	<b>55</b>
	<b>ANNEX B</b>	<b>58</b>
	<b>Table of Tables</b>	
	TABLE 1: MAIN INDICATOR CLASSIFICATIONS	13
	TABLE 2: DOCUMENTS REVIEWED IN FIVE LOCAL TRANSPORT AUTHORITIES	18
	TABLE 3: TOTAL INDICATORS REPORTED BY POLICY AREA IN FIVE LOCAL AUTHORITIES	25
	TABLE 4: FACTORS AFFECTING PARTNERSHIP WORKING	36
	TABLE 5: SURREY COUNTY COUNCIL FRAMEWORK FOR PERMITTED DEVELOPMENT	38
	TABLE 6: INDICATORS AND STRATEGIC PRIORITIES (PTE)	47
	<b>Table of Figures</b>	
	FIGURE 1: IMPORTANCE OF DIFFERENT INDICATOR SETS TO DISTILLATE PARTNER AUTHORITIES	10
	FIGURE 2: TYPES OF INDICATOR REPORTED BY LOCAL GOVERNMENT REPORTING STREAM	28
	FIGURE 3: CORPORATE PYRAMID OF REPORTING WITHIN A METROPOLITAN COUNCIL (SOURCE: STOCKPORT CORPORATE PLAN)	29
	FIGURE 4: SUSTAINABLE TRANSPORT DEFINITION (SOURCE: ADAPTED FROM COUNCIL OF THE EUROPEAN UNION 2001)	44
	FIGURE 5: INDICATOR MAP (PTE AREA)	49



## 2 Context

The impacts of the significant shift to a target-driven approach to managing British Public Services have provoked strong debate (Hood, 2006). Some evidence suggests that the existence of targets leads to improved performance (Boyne and Chen, 2007, Marsden and Bonsall, 2006) whilst others identify potential side impacts resulting from organisations participating in gaming (Smith, 1995, Wiggins and Tymms, 2002). Whatever the rights and wrongs of these particular arguments it is clear that performance monitoring and reporting have become an essential part of the accountability process between central and local government and their delivery agencies and with the media and general public (Hodgson et al., 2007).

The performance monitoring machinery has been established from a top-down central government-led process. More than 300 headline national targets and performance indicators were introduced in 1998 and these have been interpreted into a vastly larger number of indicators at a lower level. Hood (2006) estimates that 30 lower level targets were created for every one of the 10 central health department targets whilst in transport, some authorities adopted up to 100 measures as part of their first Local Transport Plans in 2000 (Marsden and Wootton, 2001). This approach has resulted in a profusion of monitoring requirements across a whole range of more local functions with limited co-ordination between departments and sectors.

These issues have now been recognised by government and the 2006 Local Government White Paper (DCLG, 2006) suggested that there would be “a radical simplification of the performance framework. There will be around 35 priorities for each area, tailored to local needs through the Local Area Agreement. Instead of the many hundreds of indicators currently required by central government there will be a single set of about 200 outcome based indicators covering all important national priorities like climate change, social exclusion and anti-social behaviour.” (p11). The Lyons Inquiry into Local Government strongly supported the case for a more streamlined, locally-led performance management regime.

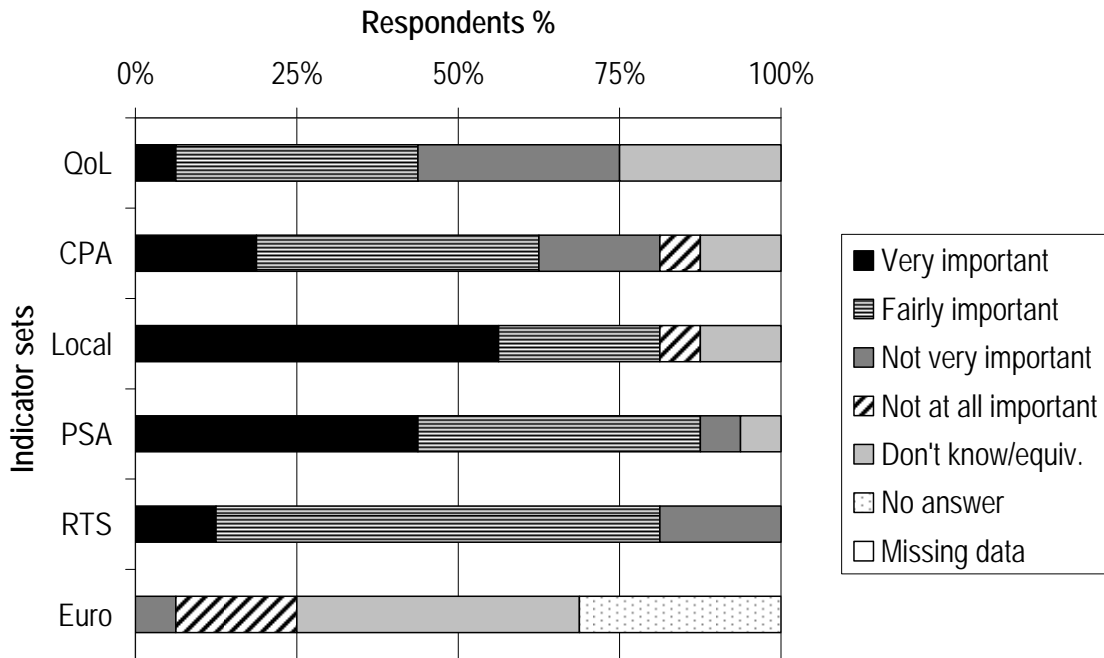
In the context of the changes described above, the DISTILLATE<sup>2</sup> project is seeking to develop, through a focused, inter-disciplinary research programme, ways of overcoming the barriers to the effective development and delivery of sustainable urban transport and land use strategies and, through them, enhanced quality of life. To inform the development of the technical work programme for the project a series of surveys of 16 local and regional government partners is being undertaken and these provide a more focussed résumé of the issues surrounding effective selection and use of indicators.

The first round of surveys was conducted in late 2004. Part of the survey looked at organisational barriers that reduce joined up working and effective delivery. Key amongst these were “time and resources, the timing of writing plans, divided responsibilities for delivery, and different stakeholder procedures” and these

---

<sup>2</sup> Design and Implementation Support Tools for Integrated Local Land use, Transport and the Environment

could be experienced within a discipline or department or across the authority (Hull and Tricker, 2006, p6). The survey also examined the main drivers of monitoring across authorities and the results are shown in Figure 1.



**Figure 1: Importance of different indicator sets to DISTILLATE partner authorities<sup>3</sup>**

This highlights the range of indicator sets in operation and the different degrees to which they impact on transport monitoring. Of course, Comprehensive Performance Assessment will be more important to other sectors since transport forms only a small part of the total local authority score in this regard. Similarly there is no obligation to adopt transport indicators within the Public Service Agreements although in practice many authorities have. The survey probed further about barriers to delivery and it was felt that whilst there was the greatest scope for improvements to indicators as part of the Comprehensive Performance Assessments and Public Service Agreements “target-setting and consistency with land-use planning and sustainable development are issues which need to be addressed in indicators” (Ibid., p6).

A follow up series of interviews was conducted between December 2005 and April 2006 “with six policy specialists, and a total of twenty-three officers from five local authority settings” (Hull, Tricker and Hills, 2006, pii). The survey covered the areas of land-use planning, environmental strategy, public health, corporate strategy officers as well as local transport planners. It found that there was an increasing need for cross-sectoral working and that one aspect that would help to

<sup>3</sup> QoL = Audit Commission Quality of Life Indicators, CPA = Comprehensive Performance Assessment, Local = local transport plan indicators, PSA = Public Service Agreements, RTS = Regional Transport Strategy indicators, Euro = European indicator sets

facilitate this was the “specification of core, statutory multi-sector indicators/targets for transport that can be adopted in all sectors at the local level in their policy and operational decisions” (Ibid, pv), in other words, greater integration of indicators across various sectors, particularly in bringing closer integration between transport and land-use planning decisions.

DISTILLATE is looking at a range of solutions to the problems identified through the surveys. This report forms part of a project which is seeking to promote improved indicators for sustainable transport and planning. Early work within this project developed a process for identifying and prioritising outcome indicators for use throughout the decision-making process (Marsden et al., 2005). Whilst the principles appear sound and have been adopted by one of the DISTILLATE partners to date, there are still concerns about the integration of information use across different layers of government and across departments within those governmental layers. This report addresses those issues with the key focus of understanding how we can achieve greater connection between monitoring across departments and be more efficient in developing monitoring frameworks.

### **3 Objectives and Structure**

#### **3.1 Objectives**

The key objectives of this deliverable are:

1. To understand the extent to which there is a common understanding of sustainability and quality of life across local authority departments and to what extent this understanding is achieved through shared monitoring processes
2. To examine key barriers relating to indicators identified by the cross-authority survey, namely:
  - a. The role of information exchange in integrating land-use and transport
  - b. The ability of authorities to set targets and monitor progress in their delivery
3. To test the indicators and processes for selecting indicators developed in the initial stages of this project through practical applications

#### **3.2 Deliverable structure**

The deliverable is structured as follows. This section concludes with some key definitions that will be used throughout the report. Section 4 presents the case studies used to meet the objectives. Section 5 synthesises the findings on monitoring across authority functions and on target setting. Section 6 presents the findings on integrated land-use transport planning. Section 7 reviews the validity of a set of core indicators in the light of the changing decision-making environment and the findings of this research. Section 8 provides some conclusions and recommendations.

#### **3.3 Definitions**

This section presents the main indicator definitions and describes, in outline, the origin and purpose of the main indicator sets that are referred to throughout the report.

Ott (1978, p1) described indicators as *“a means devised to reduce a large quantity of data down to its simplest form retaining essential meaning for the questions that are being asked of the data”*. Indicators can measure a large variety of different types of data. This can include financial data, changes to the infrastructure or service level provided or changes to the outcomes experienced by users. Indicators can also be communicated in a variety of forms from symbols (ticks and crosses) to numeric quantities. The review of principles for selecting indicators identified the importance of selecting the right types of indicators for the right part of the decision-making process (Marsden et al., 2005). Whilst the focus of debate is currently (rightly) on the adoption of meaningful outcome indicators it is important to understand how the system has changed and how this relates to the changing outcome (e.g. was the improvement in air quality because of transport policy changes or the weather).

Table 1 (taken from Marsden et al., 2005) summarises the key terms relating to indicators and different ways in which they can be classified.

**Table 1: Main indicator classifications**

CLASSIFICATION	INDICATOR DEFINITION	EXAMPLE (Public Transport)
QUALITATIVE INDICATOR	Uses words, symbols or colours to express attitudes and views	Green light if consumers are happy with the service
QUANTITATIVE INDICATOR	Uses numbers and expresses amounts or quantities	Number of journeys by public transport
INPUT INDICATOR	The resources (cost of Staff, materials and premises) employed to provide the service.	Cost of and resources used to subsidise the public transport
OUTPUT INDICATOR	The service provided to the public or the physical changes to the network	Number of journeys by public transport Or Number of new bus stops
INTERMEDIATE OUTCOME	Proxy measures for progress towards key outcomes	Bus mode share as a proxy for reduced CO <sub>2</sub> emissions
KEY OUTCOME INDICATOR	The actual impact and value of the service delivery	% customer satisfaction with the public transport service
QUANTIFIED OBJECTIVE / TARGET	A desired end state for a specific objective to be achieved by a specified time	90% customer satisfaction rating by 2010

Adapted from Audit Commission (2000) PASTILLE (2002)

### **3.4 Initiatives and Indicator Sets**

As Section 2 highlighted, there have been a number of government driven processes in the UK which require the adoption of indicator sets, largely from a top-down perspective. These are briefly described below.

#### **3.4.1 Local Transport Plans**

Local Transport Plans are five year transport strategy documents which, in part, determine the levels of capital funding given to local authorities. Authorities are required to adopt up to 15 mandatory indicators and are recommended to include local indicators to a combined total of no more than 40. Targets are set for each of the indicators. The mandatory indicators are almost entirely transport focussed although there is a requirement for an air quality target in areas experiencing air quality problems and the accessibility targets relate to access to key services (e.g. schools) and therefore imply cross-sectoral working. Further details on the requirements of Local Transport Plans can be found at <http://www.dft.gov.uk/pgr/regional/ltp/guidance/>

Local Transport Plans were submitted in draft in 2000. Further clarification on core national indicators was issued during the period of the LTP1. This was subsequently further amended with the addition of the negotiated shared priorities. Guidance on monitoring for LTP2 was issued in 2005. The mandatory indicators included within this guidance will be superseded by the New Performance Framework.

### *3.4.2 Regional Spatial Strategy*

Regional Assemblies are required to produce a Regional Spatial Strategy (RSS) in conjunction with key stakeholders. Planning Policy Statement 11 sets out the role of the RSS as bringing together and integrating “policies for the development and use of land with other policies and programmes which influence the nature of places and how they function” and thereby incorporating wider social, environmental, economic and physical objectives (ODPM, 2005, p3). An Annual Monitoring Report is required for the RSS covering the full scope of the strategy, including transport. The Department of Communities and Local Government specifies a set of core output indicators which must be reported details of which can be found at <http://www.communities.gov.uk/index.asp?id=1505460>

Guidance on monitoring for Regional Planning Guidance was issued in 2002. Amendments were signalled in 2004 with publication of PPS11 on Regional Spatial Strategies and a Good Practice Guide for monitoring Regional Spatial Strategies was issued in 2005.

### *3.4.3 Local Development Frameworks*

Local Development Frameworks are the local planning strategy and implementation documents for local government in the UK. An LDF must include “development plan documents, that are part of the statutory development plan and supplementary planning documents which expand policies set out in a development plan document or provide additional detail. The local development framework will also include the statement of community involvement, the local development scheme and the annual monitoring report.” (ODPM, 2004). The LDF also has a set of core indicators (ODPM, 2004) covering the areas of housing, transport, local services, minerals, waste, flood protection and water quality, biodiversity and renewable energy with strong synergy between regional and local indicators. Further details can be found at <http://www.communities.gov.uk/index.asp?id=1143905>

The LDFs replaced Structure Plans and Unitary Development Plans. The LDFs have been introduced from 2004. Guidance on monitoring and core indicators was issued in March 2005 and updated in October 2005.

### *3.4.4 Comprehensive Performance Assessment*

The Comprehensive Performance Assessment is a procedure put in place by the Audit Commission, an independent public body, to assess the performance of local authorities in serving local people. Once every three years an assessment of local authority performance is made, partly through visits but largely by relying on a set of common performance indicators.

The indicators used are largely the statutory set of 90 indicators developed by Government Departments to measure the performance of local authorities, that is, all local authorities must measure themselves against BVPIs. For transport these cover issues such as Killed and Seriously Injured casualties, roadway condition and bus passenger journeys whilst in planning these include issues such as planning appeals and amount of development on brownfield land. Many

of these indicators are used as part of other assessment frameworks (e.g. LTP and LDF). They are called Best Value Performance Indicators or 'BVPI's' as they derive from the duty of Best Value on local authorities, which came into effect under the Local Government Act 1999 and they are set by the Department of Communities and Local Government. In 2009 Comprehensive Area Assessment (CAA) will take over from the Comprehensive Performance Assessment (CPA) of local government. Further details can be found at <http://www.audit-commission.gov.uk/performance/>

#### *3.4.5 Public Service Agreements*

“Local PSAs were designed as voluntary agreements between upper-tier local authorities and government...The overall aim of LPSAs is to improve the delivery of local public services by focusing on targeted outcomes with support from Government” (DCLG, 2007a). 23 national targets were initially specified across the full range of service areas which can be used to form part of a package of improvements that a local authority commits to. In return for successful delivery the local authority negotiates extra funding and freedoms from central government. Transport targets focussed on highway maintenance, road safety improvements and increasing bus use. Further details are available at

<http://www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/localareaagreements/localpublicservice/>

#### *3.4.6 Local Area Agreements*

A Local Area Agreement is a three year agreement, based on local Sustainable Community Strategies, that sets out the priorities for a local area agreed between Central Government and local authorities (DCLG, 2007b). All top tier local authorities are to have an LAA by 2007. As one of the goals of LAAs is to devolve strategic responsibility to a more local level there is a large degree of variability between the content and focus of the LAAs despite the overarching framework of children and young people, safer and stronger communities, healthier communities and older people, and economic development and enterprise. Each LAA is accompanied by a performance monitoring regime which covers the range of issues described above and only some of which are related to transport. Further details can be found at <http://www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/localareaagreements/>

#### *3.4.7 Quality of Life*

The Audit Commission has also developed a set of 45 voluntary quality of life indicators that have been available since autumn 2000 and were refined in 2005. The indicators were “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.” (Audit Commission, 2007).

Further details of the quality of life indicators is available at <http://ww2.audit-commission.gov.uk/pis/quality-of-life-indicators.shtml>



## **4 Methodology and case studies**

This chapter begins by summarising the methods adopted in this study and then presents each of the four case studies in more detail. Full details of each of the case studies can be found in a series of separate case study reports.<sup>4</sup>

### **4.1 Methodology**

To answer the objectives of the research set out in Section 3.1 an appropriate series of methods needed to be adopted. The central approach adopted has been one of partnered enquiry which involves working with local and regional government employees that have an involvement in indicators (either through development, measurement, use or impact on). The key methods employed to facilitate the partnered enquiry were:

- Desktop review
- Interviews
- Workshops

In order to consider the broader integration of information across local authorities the approach has involved participants from a range of local government functions. The findings presented here are anonymised.

### **4.2 Case Study 1: Review of Sustainable Transport Indicators**

Local authorities are asked and advised to collect a number of indicators relating to sustainable transport across their service functions. Some of these are statutory, and others are used for specific local monitoring purposes. This case study reviewed five local authorities' monitoring plans for sustainable transport. It compares the current measured data sets to the set of DISTILLATE indicators proposed in Project C to identify gaps and areas of overlap across local authorities' monitoring activity.

Five local authority areas were selected as case study areas from the DISTILLATE set of 16 local authorities. In earlier research, these authorities had shown diverse and innovative monitoring activities, and exemplified transport planning practice within different types of urban government systems (i.e. one county, one unitary within a joint Local Transport Plan (LTP) area, and three metropolitan boroughs within different Passenger Transport Executives (PTEs)).

In each authority, five sets of documents were reviewed which reported on performance in transport-related indicators (see Table 2). It should be noted that, for the purposes of this study, the independent variable was the reporting of data collection rather than data collection itself (which may or may not be the same). This approach was felt to be more illustrative of the importance of the data (and indicators) reported in key council documents.

---

<sup>4</sup> The case study reports are available to DISTILLATE partner authorities from G.R.Marsden@its.leeds.ac.uk

**Table 2: Documents reviewed in five Local Transport Authorities**

Area of local authority activity	Documents examined
Land-use planning	Annual Monitoring Reports
Transport planning	Local Transport Plans
Community planning	Local Area Agreements
Corporate planning	Corporate and Council Plans
Environmental reporting	Strategic Environmental Assessments of LTPs Local Quality of Life Reports Local State of the Environment Reports

The indicators were audited against the pre-generated set of indicators which were identified to be relevant to sustainable transport and land-use planning (see DISTILLATE Deliverable C1). Data was collected in a tabular format as to which indicators were used to cover these various topic areas, if at all.

The following research questions were used to interrogate the data:

- What types of things were reported to assess the performance of different functions in a local authority related to transport?
- Which indicators did different reports tend to focus on?
- Was there evidence of integration between different local authority functions, as judged by their reporting activities?
- What issues tended to be commonly reported in particular reports, and to what extent did reporting practice vary across different local authorities, within functions between local authorities and across individual authorities?

#### ***4.3 Assessing the value of the DISTILLATE indicator set for land-use transport decisions in a two-tier authority***

As part of our efforts to examine the usefulness of the existing indicator set proposed and to study the integration of land-use and transport decisions a case study was conducted with a two-tier authority in the South East of England. A two-tier authority has a County Council with responsibility for the overall planning framework and for transport strategy and much of its delivery. The case study area has 11 District Councils which are responsible for overseeing Local Development Framework implementation.

The case study area selected is particularly interesting as it is close to London and there is considerable pressure for new housing. The South East plan proposes that more than 45,000 homes are needed in the County in the next twenty years. It has been suggested by the Government Office for the South East (GOSE) that there may be potential to double the allocation to more than 100,000 homes. However, many major roads are already at or near capacity and

there will be additional strain on water supplies. There are also concerns about additional pressures to build on flood plains and green belt. The County is one of the richest counties in England - indicators concerning cultural heritage and rural landscape are as significant politically as indicators on affordable housing and access to services.

The research methodology comprised a series of semi-structured interviews to ascertain the strengths and weaknesses of the DISTILLATE Project C indicators when applied to land use and transport decision making, particularly in the context of integrating these two areas.

The work had three phases:

- Background information on the district and borough councils and collation of key policy documents: political information, demographic, key economic factors, rural/urban factors;
- Interviews: the use of indicators in general, assessment of the DISTILLATE indicators, issues of cross-borough working;
- Feedback and further discussion with Policy Officers.

Information is based on a thorough review of relevant policy documents from each district and borough council, particularly the Local Development Framework Sustainability Appraisal.

The following questions and themes comprised the semi-structured interview:

The DISTILLATE indicators:

- General issues arising from the indicators list;
- Feasibility of using list - access to data, cost of monitoring, relevance to statutory requirements;
- Key areas missing from the list (remembering the list is transport-focused);
- Potential modifications;
- Which transport indicators have a bearing on land-use decisions?;
- Which land-use indicators have a bearing on transport decisions?;
- Extent to which the land-use and transport indicators might lead to different decisions;
- Extent to which a more complete set might lead to different decisions.

Use of indicators in policy-making and practice at the district level:

- Current use of indicators in the policy-making and monitoring process;
- Barriers to using indicators;
- Potential improvements from using indicators.

Role of indicators in the practical delivery of sustainable integrated transport and land use development:

- At what stage of the process is transport and access to services considered in deciding the location of new housing development?;
- Are any indicators used to assist these decisions? If, so what? If no, how are these decisions taken?;
- What are the procedures for engaging with transport planners concerning transport provision issues? Are there any practical difficulties that arise from these?;
- Would/could the use of indicators help to deliver more integrated decision-making? If so, what indicators would be the most useful e.g. accessibility, etc. If not, what else might help to deliver this?;

A Planning Working Group – a committee of Policy Officers from each of the boroughs in the study area, plus representatives from the County Council – meets every six weeks to discuss strategy. Members of the group were interviewed as part of the research process, with group feedback from the meetings also recorded to supplement the interviews.

#### **4.4 Regional Spatial Strategies and Regional Monitoring: Impacts on local decisions**

Regional Spatial Strategies (RSS) are currently at the final stages of preparation. The RSS process has been designed so that the RSS go “...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 function.” (PPS11, para 1.6). Guidance on monitoring of the RSS suggests that the Regional Assemblies should “explore how to coordinate RSS monitoring with the national, regional and local monitoring of these strategies, plans and programmes. This should help to promote the exchange of information, achieve some degree of consistency between different planning and monitoring activities and reduce overall resource requirements. It should also assist RPBs in gaining a greater understanding of the changes taking place in their regions.” (ODPM, 2005, p3)<sup>5</sup>

This case study has examined the monitoring framework at a Regional level, working with a Regional Assembly and at a local level through the examination of a Metropolitan District and a PTE. It is important to note that the RSS has only recently been through public inquiry and that the District has yet to complete the transition from its Unitary Development Plan (UDP) to the new Local Development Framework (LDF). There is therefore still some degree of lag in the system which may impact on consistency. The key objectives of the study were to:

- understand the compatibility of the Regional and Local monitoring frameworks;

---

<sup>5</sup> Regional Spatial Strategy Monitoring: A good practice guide

- examine what information is used in individual planning proposals and their associated transport assessments;
- examine the use and usefulness of information through the planning process. In particular, the extent to which guidance at a regional level influenced the development of the UDP and LDF;
- identify the various requirements for information at different levels, to examine their compatibility; and
- consider options for reducing the burden of information or connecting the information better.

The research methodology consisted first of a scoping exercise with the Regional Assembly. A document review was then conducted of the Regional Spatial Strategy, Regional Transport Strategy, Regional Annual Monitoring Report, Unitary Development Plan, Local Development Framework proposals and the Local Transport Plans. Following this two interviews were conducted with key council staff members to investigate the realities of the planning and development process. Reviews of four Transport Assessments for recent or current planning applications were also conducted. Further investigations were then conducted through an interview with a PTE with a lead on accessibility and planning information in an adjacent area.

#### ***4.5 Monitoring and target setting across a Metropolitan area***

The fourth case study involved one of the Passenger Transport Executives (PTE) in England and the partners they work with in the development and delivery of their indicators and targets in support of their second Local Transport Plan. There are seven PTEs (Passenger Transport Executive) in the UK which were set up to oversee passenger transport for the metropolitan urbanised areas of the UK (outside of London). Therefore, there is no such thing as a standard PTE as there is no standardised urban area but, for the most part, PTEs can be grouped along a continuum ranging from ones that are largely urban across their entire areas through those that have one or more metropolitan centres to those that have a single metropolitan centre and less urbanised hinterlands surrounding. The PTE concerned has one major city and covers the area of five local authorities. Arrangements for the responsibility for policy and delivery can be quite complex in a PTE area as PTEs only have responsibility for certain public transport related activities whilst delivery of roads policy rests with the local authorities. It is therefore an interesting case study for monitoring where different agencies might be responsible for collecting data and acting on that data. In the first round of LTPs the PTE had identified too many indicators, many of which it subsequently was unable to track progress on.

The PTE was keen to ensure that the suite of LTP2 indicators developed were appropriate. The DISTILLATE researcher team applied the indicator selection methodology from DISTILLATE project deliverable C1 (Marsden et al., 2005) in order to suggest ways that the PTE might rationalise its indicator list in advance

of the LTP2 submission. Gaps and evidence of imbalance in the indicator suite were highlighted and fed back to the PTE. This work was conducted in 2005-6, and the outputs were discussed with the PTE who used the resulting conceptual map in the final LTP2 plan.

Following the submission of the LTP2 document, and given the range of organisations involved in the LTP there was some concern within the PTE about 'indicator ownership' and whether or not targets had sufficient cooperation, support and buy-in from these organisations. Each of the LTP2 indicators has an 'owner' from either the PTE, a local authority or in some cases an independent company responsible for data collection across the area. Indicator owners were interviewed in order to consider their views about the effectiveness of the indicators and targets, the interaction between indicators, targets and policy, the link between indicators, targets and joint working, and the implications of being an indicator owner. Out of 13 named LTP2 indicator owners, 8 were interviewed using a semi-structured interview approach. 7 out of 8 interviews were recorded and transcribed, the remaining interviewee declined to be recorded.

## **5 Findings: Monitoring Processes**

This Section brings together the findings from the four case studies with respect to monitoring processes. The analysis is cut in three different ways. First from a governmental layer perspective (national to local) then from a functional perspective (environmental, economic, etc.) and finally from an organisational perspective, recognising that for any one layer and function, multiple organisations might be responsible for or influence a particular data set.

### **5.1 Governmental layers**

This sub-section reviews the findings on requirements for and flows of information between different layers of government. We identify up to five tiers of government through which information may flow:

- National
- Regional (e.g. Regional Assemblies)
- County
- Metropolitan
- Metropolitan or County District

There are clearly differences between the situation in England, Scotland and Wales but all of the case studies were confined to England so the findings must be interpreted for other contexts. Information requirements from the European level exist but are primarily interpreted through national governments (e.g. the requirements for Strategic Environmental Assessment and the Noise Mapping Directive). Evidence from the first survey of local authorities suggested little direct emphasis is placed on pan-European indicator sets.

#### *5.1.1 Information requests are predominantly top-down with some redundancy*

There is a hierarchy of information with national government being primary within this exerting both direct control (through mandating indicator collection and rewarding (penalising) authorities for reporting (failing to report) the data) and indirectly (through mandating collection processes for intermediate tiers of government). Examples of direct control include the Local Transport Plan and Annual Monitoring Reports for Planning. The Local Transport Plan has a suite of mandatory indicators and performance reporting on a bi-annual cycle. Rewards are given for quality of planning and achievement of aims and targets. In the planning sector the government awards planning delivery grant for 'plan making' and achieving 'sustainable development outcomes'. Planning authorities have to show that they collect information about prescribed indicators and have both set targets in certain key areas of planning and met those targets. The indicators are usually numerical or percentage achievement indicators – for example 'Did the planning authority achieve the housing numbers in their housing trajectory?', 'Are they collecting information about the amount of commercial floor space completed in the Borough?', 'What proportion of planning applications are

decided on within 8 weeks?' If all the sustainable development criteria are met then the planning authority receives the maximum planning delivery grant from the government. We heard evidence that the pressure to deliver planning decisions within 8 weeks worked against the use of mechanisms such as the Section 106 agreements which can be complicated to negotiate.

Other mechanisms for interchange of information are often statutory but with limited or no enforcement. For example, it might be a requirement for an Annual Monitoring Report to be submitted to central Government by a Regional Assembly but the constituent local authorities may shirk collection of some of the information where it is seen to be irrelevant. One example from a metropolitan district annual monitoring report describing why it did not report the % of developments compliant with regional parking standards was that "It is considered that the majority of developments comply with the standards and only in special circumstances are the guidelines exceeded. Due to the large number of applications and the very infrequent proposed over-provision it is felt inappropriate to devote further resources to this issue." Another example suggested that as local parking standards were more stringent than regional standards it was not important for local control to monitor compliance to the regional figures. At a regional level there is a recognition that their framework should be built where possible on what is collected locally. Here we note a possible impact of the move to a smaller set of 200 indicators. This potentially changes the degree to which regional indicators will, as a matter of course, be collected locally. Discussions on the impacts on regional bodies of changes to mandatory indicators for local authorities had yet to take place in the case study area examined.

Several examples of local authorities and districts monitoring additional information that was useful in local decision-making and of splitting down reporting to smaller spatial scales were observed. This suggests that local authorities recognise the value of monitoring. However, it appears that national requirements have a potentially disproportionate importance. One local authority implied that the ODPM and Regional Assembly requirements for 39 indicators and pieces of information made the Annual Monitoring Report guide's recommendation of a maximum of a total of 50 indicators slightly arbitrary when local authorities' needs for local indicators was taken into account. Whilst local authorities reported collecting a range of contextual indicators for local transport plans few were selected as additional local targets perhaps because they would then feature directly in the performance assessment. This appears counterproductive.

Interestingly the problems of a top-down approach to monitoring specification also seem to exist at a more local level as discussed further in Section 5.3.

### *5.1.2 There is insufficient integration of indicators at a national level*

The culture of performance management that has pervaded national government has led to each department having its own set of Public Service Agreement targets. These, in turn appear to proliferate through the reporting requirements



each department puts on local authorities. Whilst recently there has been a move to greater integration between departments and shared target setting (for example with air quality and climate change targets involving two or three departments) the reality is that too many requirements are made of local authorities with little coordination between central government departments on what they are asking local authorities to monitor. Table 3 shows the results of the analysis of reporting from 5 local authorities, grouped by policy areas across the range of transport, planning, economic and environmental documents studied. Even within the areas studied there were 269 indicators which is more than the Local Authority 200 which central government is now working towards.

At a County District level one Policy Officer interviewed estimated that there is often up to 50% duplication between data sets and that it would, therefore, be more efficient for all central government departments and bodies to provide Local Authorities with one coherent source of information that covers all their statutory obligations.

**Table 3: Total indicators reported by policy area in five local authorities**

Indicator grouping (n=11)	Number of discernibly different indicators within each grouping (n=269)
Accessibility	31
Land-use	21
Safety	21
Maintenance	25
Modes	40
Natural environment	81
Cultural and economic activity	5
Healthy living	6
Public perception	18
Process and participation	8
Built environment and 'quality of life'	13

There is also a sense of mandatory indicators achieving a status of elevated importance. This has some advantages but these must be tempered by the observation that several important aspects of policy are difficult to measure and therefore can become marginalised (Marsden et al., 2005). One example can be seen by comparing the indicators included in the five Local Area Agreements examined. Two out of five included an indicator reporting CO<sub>2</sub> from transport whilst all five corporate plans had a footway maintenance indicator.

### *5.1.3 Conflicting spatial scales and timing of plans reduces synergy*

One of the aims of revisions to the planning process has been to bring about greater connectivity between national, regional and local planning processes. However, there are still numerous operational obstacles to integration of plans and therefore of monitoring across the policy spectrum.

The Local Transport Plan 2 documents have been developed and submitted largely in advance of the complete Regional Spatial Strategies. One County said the lack of contemporaneous agreement being reached on regional targets meant that they were unable to include them in the LTP2. In some localities previously agreed Unitary Development Plans are still in operation and it will be some time before new Local Development Frameworks are in place to replace them.

There is also a mismatch of scales with districts being responsible for planning arrangements and County or Metropolitan bodies being responsible for transport decisions and, whilst we observed a considerable degree of joint working there are still some areas that are less co-operative. In the study of housing decisions in a two-tier authority it was found that most of the economic and environmental indicators are only monitored at county level, whereas most of the social indicators are only monitored at district and borough level. In terms of integrated land use and transport decisions, there appears to be little link up between the transport obligations for the county authorities set out in the LTP and the land use obligations for district and borough level authorities set out in the LDF. This is despite the fact that increased housing development will have serious implications for the road network.

Some indicators bring a question of appropriate spatial scale with them. Should carbon dioxide be monitored or estimated at a district level, county or region? How are emissions from freight and commuting trips apportioned between areas? If there is no logic behind a regional target for accessibility to key services (e.g. due to the large differences in urban/rural natures of a region) should the results on accessibility be reported at a regional level?

Each new process brings with it a new or modified monitoring framework. One metropolitan authority commented that it would take "some years for practices to converge" so that authorities make returns using consistent indicators, so that local data could then be aggregated at the regional and national levels. That is of course, presuming that time will be allowed for practices to converge. It is also possible to observe that there are differences in the degree to which each sector reports outcomes and processes. Reporting within the planning sector tends to be more process oriented with adoption of planning standards seen as the key metrics whilst transport has moved to a more outcome focussed set of measures (e.g. air quality). Section 6 reviews the extent to which this philosophy creates barriers.

#### *5.1.4 Summary*

At the heart of the integrated planning process is a desire to promote more sustainable patterns of development. Sustainable development requires the promotion of strategies that are consistent across many sectors. Despite a shared intention to promote more sustainable development, the current process of plan development and indicator specification is through policy silos. It tells us little about the synergistic relationship between indicators or their significance in assessing overall system performance. The ability of local authorities to identify

these synergies is hampered by over-specified requirements from national government for reporting.

The development of the Local Authority 200 offers an opportunity to correct some of the deficiencies of the current approach. However, it is not clear whose responsibility it is to ensure that the package of indicators is well integrated rather than simply representing the combination of a smaller sub-set of central government departmentally focussed interests. A smaller sub-set of up to 35 targets will also be chosen. Again the criteria for selecting these targets and how they relate to the achievement of sustainable development objectives will be crucial to the promotion of policies that support these objectives over coming years.

In developing LA200 it will also be important to consider at what scale the data should be collected and reported and how this might differ in different institutional settings. The monitoring requirements for planning, transport, environment and corporate governance have been through a substantial period of change. Even proponents of monitoring accept the losses of efficiency that this can generate with the need to establish new measurement techniques and time-series. In developing LA200 it is incumbent on central government and local authorities to negotiate a set of priority indicators that is stable.

## **5.2 Authority functions**

This sub-section reviews the findings on the information requirements of different local authority functions (e.g. transport, housing, environment). In particular it highlights current integration and the processes whereby greater integration could occur.

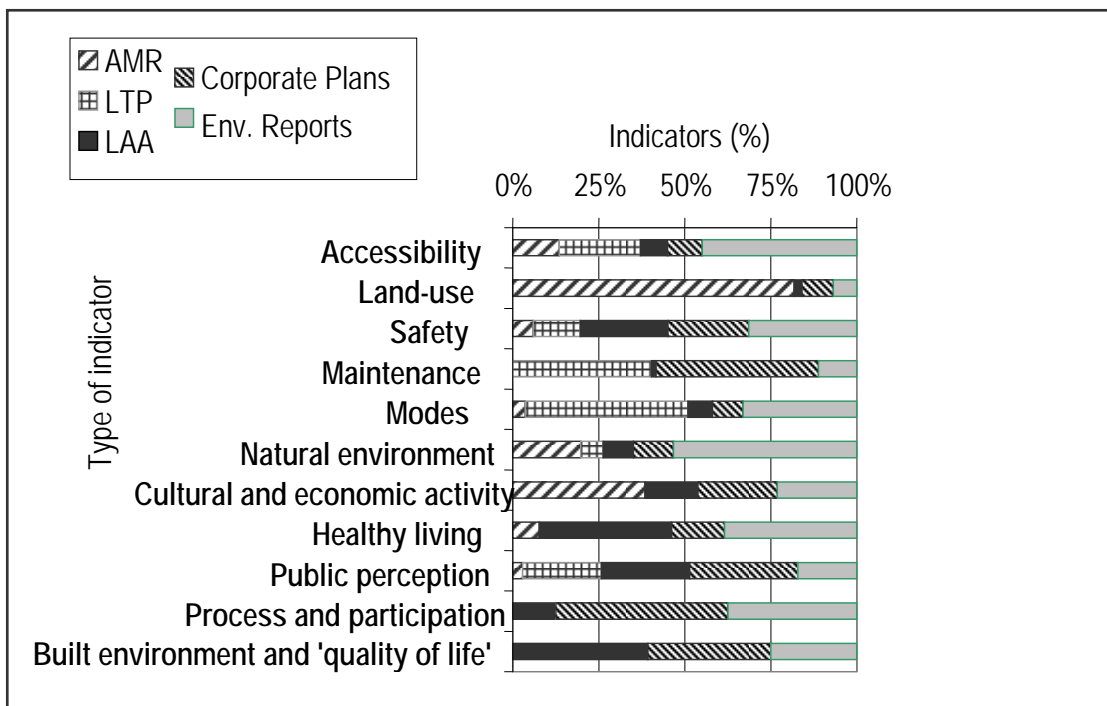
### *5.2.1 Evidence base*

The new Regional and LDF process are making clearer the need for integration of policy areas within the planning process. One unitary AMR for example states that "...monitoring of the core output indicators will also be reliant upon colleagues within other teams, especially development control, transport, housing, nature conservation, waste and minerals, economic development, regeneration and renewal."

However, there are now so many plans and layers of plan making that it seems almost impossible to keep control of the monitoring requirements of each of them. The Bristol City Council AMR notes that "...in accordance with Government guidance, links have been made between the key objectives of the Bristol *Local Plan* and the aims, objectives and targets of the City Council's *Corporate Plan 2006-2009* and Bristol's *Community Strategy 2006...* Relationships will be developed between the AMR and other corporate strategies including the Local Strategic Partnership's *Community Strategy*, the *Corporate Plan Priorities*, the *Housing Strategy*, *Regeneration Strategy* and *Economic Strategy*." Whilst this highlights a range of strategies it does not include the *Local Transport Plan* process or the *Regional Spatial Strategy*.

One of the inevitable downsides of plan and monitoring proliferation is likely to be a duplication of monitoring. Authorities are already working towards greater coordination between departments with one observing that “Monitoring information can be an expensive resource. ... It will often be possible to use the same information in different contexts and to avoid cases where essentially the same information is collected for different purpose using slightly different definitions.” The PTE case study found that different or outdated storage systems, siloed ways of working and different priorities and timeframes, and a lack of openness between departments all caused problems with monitoring.

Section 5.1.2 reported on the numbers of indicators reported for different policy areas for a sample of five authorities. This analysis has been further broken down by the relative importance of each policy area in five different reporting streams (AMR, LTP, LAA, Corporate Plans and Environmental Reports). The results are shown in Figure 2.

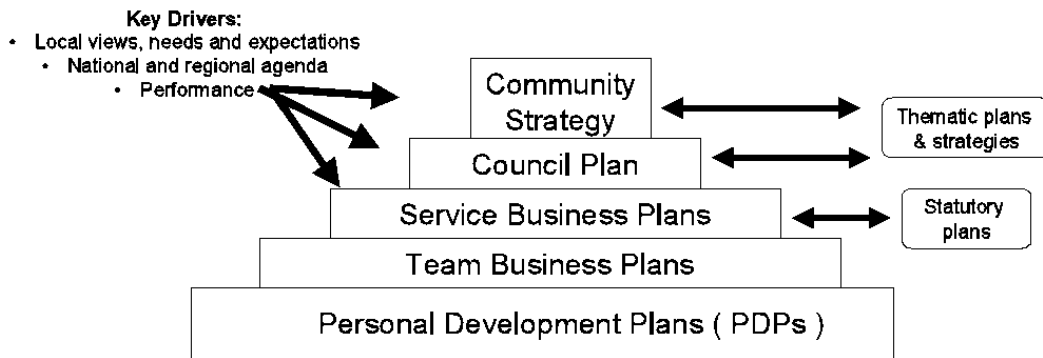


**Figure 2: Types of indicator reported by Local Government reporting stream**

The chart suggests that there remain considerable gaps in reporting of certain types of indicators across different reporting streams. For example, there is no land-use reporting in the LTP nor reporting on healthy living or built environment and quality of life. Equally it might be concluded that some areas have a disproportionate importance (e.g. maintenance in corporate plans relative to accessibility or land-use). In drawing conclusions about this it is important to consider what the purpose of each plan is for. The corporate strategy is used to

assess overall local authority delivery and is strongly conditioned by the best value regime with a focus on efficiency in delivery of services. There is a difference in emphasis compared to LAA where there is more of a focus on progress towards achievement of agreed outcomes. There is no requirement for any one sector plan to take a completely holistic approach to monitoring sustainable development as this would create duplication but this integration must happen somewhere within an authority if sustainability is to be a serious proposition. It is the intention that the LAA take this role but we do not see a holistic approach from our study of the indicator suites adopted.

The relationship between the purpose of the plan and the monitoring requirements seems critical. Figure 3 shows a pyramid structure adopted by Stockport Borough Council to try and integrate top level strategy to delivery within each of the delivery teams it has. This type of approach could be effective in integrating sustainability across the local authority reporting structure if the corporate plans and community strategies are aligned to this agenda.



**Figure 3: Corporate Pyramid of reporting within a Metropolitan Council (Source: Stockport Corporate Plan)**

Evidence from the review of practice in five authorities suggests that there is no clear overarching approach evident from the corporate plans (see Table 4). In total, only five indicators were monitored in all of the corporate plans at the time of the survey in mid-2006. These were the following BVPIs for safety and road maintenance:

- People/ children killed/ seriously injured/ slightly injured (BV 99)
- Road maintenance needed on principal roads
- Road maintenance needed on non-principal classified roads
- Road maintenance needed on non- classified roads
- Footway maintenance needed

Two of the case studies highlighted some strain in relationships between transport and planning and economic development departments due to the perceived conflict between development and the objectives of LTP2. Again, this

implies that the corporate strategies are not providing a clear route to mitigate these conflicts.

**Table 4: Number of indicators by category in five LA corporate plans (CP)**

Indicator	Total by category	CP1	CP2	CP3	CP4	CP5
Accessibility	3	3	2	2		2
Land use	2	1		2		1
Safety	5	5	1	2	2	2
Maintenance	12	5	7	9	4	9
Modes	9	9	1			
Built environment/ QoL	7			6		4
Natural environment quality	12	3	1	9		3
Cultural and economic activity	3			3		
Healthy living	1	1		1		
Public perception with LA services	7	2	4	3		2
Process and participation	4			4		
Total	65	29	16	41	6	23

### 5.2.2 Summary

Whilst it is clear that several reporting streams have some responsibility for helping to deliver sustainable development no one process steers the others. Whilst corporate management systems might offer a route through this, the overlapping role of policy delivery monitoring and policy process monitoring confounds this. The primacy of the central government department to local authority department relationship in other plan development (e.g. Department of Communities and Local Government to local planning department) means that some indicators get crowded out leaving only a partial picture of sustainability. A very narrow set of mandatory transport indicators are included for example. Whilst the emerging Local Development Frameworks require a sustainability appraisal and Strategic Environmental Assessment to be conducted (ODPM, 2004) this is still an emerging area and the degree to which integration is achieved with transport is not yet clear.

Local authorities have been developing new processes to try and reduce the amount of duplication in the monitoring processes they adopt. However, the large number of local strategies and national reporting streams makes taking a coherent and integrated view of what sustainable development means and how it can be monitored for a particular area challenging. Whilst it is not the role of this deliverable to propose amendments to the plan-making environment we can observe that recent developments such as the introduction of Local Area Agreements has not led to a more complete or comprehensive coverage of sustainable development issues despite the locally negotiated nature of the indicator sets chosen.

### **5.3 Different organisations**

This sub-section reviews the findings on the role that organisational responsibility plays in monitoring practice. In particular the section examines the interaction between responsibilities for collecting information and policy delivery and how this affects the reporting and delivery processes. This section also considers the extent to which an organisation's degree of control over the indicator motivates the organisation to work to modify performance against targets for that indicator.

#### *5.3.1 Organisations with sole responsibility for targets*

In the PTE study area those people working within the PTE or the LTP Support Unit were more likely to be working directly in the policy area related to the indicator they were responsible for. This meant that they had a direct input into policy development, and were therefore more likely to have a direct responsibility for meeting targets. Some had more control than others over the setting of targets and where necessary their renegotiation. On the other hand, indicator owners working in organisations external to the PTE (such as the local authorities) had less responsibility over indicator development, target setting, or meeting targets. Amongst the four non-PTE interviewees there was no sense of individual responsibility for missed targets or poor performance. The main task for these actors was to collect and consolidate data, often in partnership with other organisations. Several of the indicator owners based within local authorities were responsible for data collection across the whole of the PTE area.

The department that local authority based indicator owners were in also affected their relationship with meeting targets and policy outcomes. Where actors are based in departments with a direct interaction with the LTP2 process (e.g. transport or planning) they were more likely to have responsibility over the development and assessment of targets. However, where they are based in departments with limited interaction with the LTP (e.g. environmental health) there were limited ways in which they could interact with policy and targets.

Two other factors driving the impetus to monitor and report were national and local priorities. Several national level requirements were considered too far removed from local realities both in terms of local problems and priorities. Where there is no local support for particular policy developments, targets may have to

be set (in order to gain support at the LTP2 submission stage) but indicator owners felt that such targets stood less chance of being met. Where teams are required to take ownership of targets and are expected to contribute to the meeting of these – but are not equipped with the tools to achieve them (e.g. resources and high level support) – there is a serious mismatch between policy, indicator ownership and targets. The availability of local discretion to set targets different from those recommended by central government was seen as very important.

On the other hand, where national priorities matched local priorities (in this case the strong regeneration agenda) experiences of target setting were very different. The accessibility planning indicators and targets (some of which were nationally mandatory) provided an excellent example of strong multi sector working in the PTE area. Targets were partly agreed through national guidelines, but also through negotiations with steering groups set up with the Job Centre Plus and Learning and Skills Council. Over and above the official working groups, individual relationships were developed with nominated contacts within these organisations.

More mixed success was observed with wholly local indicators where the need to adopt the indicators could be challenged and enforcement of monitoring was more difficult. In such cases, the presence of high-level policy support and cross-sector working appears particularly important.

### *5.3.2 Monitoring and target setting with external partners*

A variety of partnership groups have been established in order to allow transport bodies to work collaboratively with the Local Authorities, and other sectors such as health, education and employment. These were largely viewed positively as they were thought to provide a formal way for such organisations to work together (especially between sectors without existing working relationships), allowed the negotiation of indicators and targets, and encouraged other organisations to buy in to indicators and targets. However, these formal structures did not necessarily ensure effective collaborative working. Where organisations shared similar priorities, targets and timeframes, collaborative working was more likely to be driven forward. For example, Strategic Accessibility Partnerships were developed to enable employment, education and health sectors to work with the PTE area studied, and the more successful forms of partnership working were thought to have been bolstered by informal meetings and discussions through designated representatives. These meetings were said to be driven by common ground and similar priorities. Where formal structures do not exist collaborative working was considered more challenging, particularly where an indicator owner required data from another organisation (and there was no formal mechanism in place to allow this).

According to our interviews different organisational structures also play a role in the way in which organisations interact, in some instances inhibiting this. For example, the Job Centre Plus has two areas within the PTE area studied, whereas there are five planning authorities, five local authorities, five local



educational authorities, and five Primary Care Trusts (although this number has changed in the last couple of years, and the administrative boundaries may vary). Understanding how different organisations work, and identifying how to match administrative areas is essential to effective partnership working.

### *5.3.3 Coordination between organisations with responsibility for strategic land-use and transport plans*

The regional to local level study highlighted gaps in the system in both formal and informal levels of communication. At a formal level, the timescales for development of the draft RSS and LTP2 have not been fully aligned and so indicator sharing has been more difficult. Previous Regional Planning Guidance was not an effective part of the UDP and Structure Plan process except in a few cases where timing of reviews coincided. The Regional Spatial Strategy will be a mandatory part of any LDFs for the region and the Regional Assemblies will be able to monitor and take action on compliance issues. More tools will therefore be available to ensure compliance between different administrative tiers. However, a key message from the case study was the need for the monitoring arrangements to be more strongly steered by local best practice and consensus building. The Regional Assembly did not appear to have sufficient staff resources to facilitate this given the many other tasks the relevant people were engaged with.

In the study of a two-tier authority it is interesting to contrast the responsibilities of the County and the Districts. The County is required to assess area wide traffic levels (and potentially congestion). These are, in part, determined by the planning decisions that are taken at a District level. The Districts do not have responsibility for congestion so base their decisions on the criteria which suit their area. Again, the Local Development Framework might act to overcome potential inconsistencies. However, congestion is one measure that appears to have little leverage in limiting new development except at a local junction level. This is in contrast to the current position of the Highways Agency which can object to development that will adversely affect congestion levels on its network. The Highways Agency has a direct PSA target for congestion reduction. Developments which affect a Highways Agency A road of strategic national importance and those which affect a County Council A road are therefore currently subject to different, and potentially inconsistent assessment processes.

### *5.3.4 Summary*

Clarity over the purpose and policy rationale for indicators is essential if there is to be meaningful buy-in to the monitoring process. It also appears important that there are clear channels for reporting and using the data if it is not to be seen as an additional and irrelevant burden. When these conditions are not met then the most likely outcome is for the indicator to be abandoned.

Indicators appear to form part of the shared agenda and dialogue with external partners. It is however, the presence of both formal and informal channels of

communication that will lead to more effective partnerships and data sharing arrangements.

It is important to understand the trade-off between the practicalities of collecting and using information for decision-making and the sophistication of the measure. In this respect we have observed insufficient engagement with the good practice that exists and an over-emphasis on top-down initiatives to achieve similar means.

#### **5.4 Summary**

The studies reported above have examined the processes for setting indicators and their use across a range of applications and governmental levels. Whilst each case study is an individual application of the DISTILLATE approach, taken together they allow us to make the following observations and recommendations.

##### *5.4.1 General Issues*

6. A holistic approach is needed to the development of indicators for sustainable development. Those for transport (or any other sector) should be determined within this context.
7. This in turn implies that indicators should be determined through collaboration between government departments (at any level) rather than by individual departments alone. The latter will create a silo effect, and lead to duplication and inconsistency.
8. The indicators required, and their level of detail, will vary by level of government and between local authorities depending, for example, on their demography. It is therefore inappropriate to specify too broad a set of mandatory indicators. Instead, higher levels of government should focus on advice on how to specify indicators.
9. To be useful, the definition of indicators needs to remain stable over a period of several years. Governments should, where possible, avoid seeking re-specification as policies change.
10. Indicators, and particularly outcome indicators, should relate to government (national, regional or local) objectives. As additional objectives are introduced there will be a case for additional indicators.

##### *5.4.2 National government*

6. Government departments should collaborate in the development of national level indicators, to avoid the silo effect, which can lead to redundancy and gaps in coverage.
7. Government departments should only specify mandatory indicators where there is a national need for the information. Over-use of mandatory indicators can lead local government to question their relevance.
8. To an even greater extent, government departments should be aware of the problems created by mandatory targets. This is particularly true when

- targets relate to outputs and intermediate outcomes. Such targets often fail to reflect the diversity of conditions in local government, and remove from local government the responsibility for, and ownership of, appropriate targets.
9. The definition of the reduced set of mandatory local authority indicators should be accompanied by guidance on how to apply these within a local context.
  10. There is a particular mismatch at present between the use of output indicators in land use planning (e.g. % of decisions within 8 weeks) and outcome indicators in transport. This makes it harder to develop consistent land use and transport strategies.

#### *5.4.3 Regional bodies*

3. Regions should focus principally on the indicators which are relevant at the regional scale. For example, CO<sub>2</sub> emissions are relevant at this scale, while accessibility levels are not.
4. It is not clear how responsibility for indicator selection and collection will fall with the abolition of the Regional Assemblies. This needs to be clarified. Regional Assemblies have not had sufficient resource to coordinate the specification and collection of (higher level) indicators for their regions. If there are changes to responsibilities for regional planning as anticipated then a review of the role of monitoring should be conducted.


#### *5.4.4 Higher tier local authorities*

4. In two tier authorities the upper tier is responsible for the LTP and the lower tier for the LDF. Unless these, and the indicators on which they are based, are consistent it will be difficult to formulate coherent strategies.
5. There is a related tendency for higher tier authorities to focus on environmental and economic indicators, while lower tier authorities deal with social indicators. This can lead to an undue emphasis on particular objectives in each authority's actions. It is possible and, indeed, sensible, to maintain these different foci, but only if each tier considers the other's objectives and indicators in developing its strategies and in assessing performance.
6. In two tier authorities, there should ideally be a clear link between responsibility for collecting data for a given indicator and responsibility for any remedial action prompted by that indicator. Where this cannot be achieved, continued collaboration is needed to ensure that the value of the information collected is clear to those responsible.

#### 5.4.4 Lower tier and unitary authorities

6. Local authorities are currently required to produce too many plans, with overlapping and conflicting requirements for indicators. This in turn results in failure to perceive the synergies between different policy sectors.
7. The LAA should be used to provide a high level overview of the authority's sustainable development strategy, and the indicators relevant to its full set of sustainable development objectives. Indicators for particular policy sectors such as transport should be developed in this context.
8. The New Performance Framework indicators should be used as part of, rather than defining, the monitoring frameworks used in LAAs and supporting strategies.
9. Local authorities have a particular responsibility for involving other agencies in the collection of data and in the development of strategic responses. The process of accessibility planning has been quite successful in this regard, but has served to demonstrate the growing complexity of the policy environment.
10. Both formal and informal channels will need to be established and maintained to agree on suitable indicators, to collect the necessary information, to review the trends which these indicators demonstrate, and to agree on appropriate policy responses. We identify conditions which are more and less favourable to achieving effective partnership working below in Table 4.

**Table 4: Factors affecting partnership working**

<b>Motivation for joint working</b>	<b>Features</b>	<b>Environment for joint working</b>
Recognition that <b>joint working is necessary</b>	Time and resources likely to be put in, support from a high level	Favourable    Less favourable
Joint working is <b>mandatory</b>	Time and resources allocated, but high level support may be absent.	
Joint working is recognised as <b>necessary for one organisation</b> but not others	Time and resources allocated by one organisation but not others.	
Joint working is viewed as <b>optional</b> or an add on	Ad hoc, variable, unstructured	

## **6 Land-Use Transport Integration**

Integration of transport and land-use planning is at the heart of policies to reduce the need to travel. Although the exact nature of the relationship between urban form and travel patterns is the source of considerable debate (Stead, 2001; Giuliano and Narayan, 2003 and Mindali et al., 2004) there is evidence to suggest that, when accompanied by some demand restraint measures, land-use policy can support less transport intensive and more sustainable patterns of living (TRANSLAND, 2000). This section reviews the degree to which the processes and information exchange observed through relevant case studies is acting to support integration. It acts as a case study in considering the principles of indicator application discussed above.

### **6.1 Formal processes**

The principal processes for the achievement of local transport objectives are:

- Local Transport Plans – five year strategy and delivery plans for transport expenditure in an area. Targets are set for specified national indicators and locally derived indicators
- Regional Transport Strategies – these provide the framework for the development of compatible transport strategies across a region and also provide the framework for deciding on how to prioritise major transport schemes of regional importance. These are now funded through the Regional Funding Allocation process and decisions on what to promote are put forward to the Secretary of State by the Regional Assemblies and Regional Development Agencies.

The principal processes for the achievement of planning objectives are defined by:

- Planning Policy Guidance and, latterly, Planning Policy Statements. These include PPS11 on Regional Spatial Strategies, PPS12 on Local Development Frameworks and PPS 3 (Housing) and PPG13 (Transport).

All of these documents seek to promote a common approach to planning, based on a series of core minimum national standards (e.g. parking standards for new developments) which can be tailored to local needs. The approach attempts to balance the need for some consistency to avoid spatial competition promoting unsustainable patterns of development (e.g. due to lax parking standards) whilst allowing local priorities to shape planning processes. However, there are inconsistencies in approach. For example, PPS 3 encourages Policy Officers to look at environmental sustainability first, before addressing access to key services. This differs from PPG 13 on transport, which looks at transport and access from the beginning.


The interactions between transport and planning policy happen first at the point at which Strategic Plans (formerly Structure Plans and Unitary Development Plans and more recently Local Development Frameworks) are developed. Here, areas within an authority are zoned for new development. The aim is to match


development with high trip generating or trip attracting potential to areas with good public transport services and good accessibility to key facilities. This then provides the basis against which developers can bring forward proposals.

An example of this approach taken from Surrey County Council is shown in Table 5.

**Table 5: Surrey County Council framework for permitted development**

The characteristics of parking package areas	Area 1	Area 2	Area 3	Area 4
Description	Regional or major town centres	Larger town centres and periphery of Area 1 centres	Smaller town centres, urban fringes or inner suburbs	Outer residential areas and isolated built-up areas
Public Transport Accessibility	High – hub for frequent bus and rail services	Good – extensive network of bus routes and possibly suburban rail	Moderate – close proximity to suburban or radial bus or rail corridors	Low – infrequent bus services or long walks to bus stops/rail stations
Parking Reduction % of maximum Standards	0 – 25%	25 – 50%	50 – 75%	75 – 100%
Land Uses Permitted				
Residential (Density)	high	high/medium	low/medium	Low
Large National /Regional	yes			
Medium Urban Function	yes			
Small/Medium Specialised	yes	Yes		
Small Localised Function	yes	Yes	Yes	

 Development permitted subject to acceptable accessibility package

 Development not permitted in such locations

Once a proposal is brought forward the next stage at which transport and land-use interact is through the Development Control process. Any significant development (where significant is defined by locally set criteria – e.g. number of daily trips generated) must be accompanied by a Transport Assessment (TA). In

the first stage of the process a developer will meet with the planning department for a scoping study to decide what areas (geographically) the developer needs to address in the TA. The TA must then look at the existing state of access and transport provision and forecast the likely impacts if the development is approved. The Transport Assessment should promote solutions to mitigate any negative impacts (including junction redesigns, developer contributions and travel plans for the site).

We can see therefore that the processes appear to exist for an integrated approach to land-use transport decisions to be taken. However, it is important to note that transport is only one area of concern in monitoring the impacts of land-use plans. For example, around a quarter of indicators from the land-use plans reviewed in five local authorities related to the natural environment.

## **6.2 Strategic Spatial Planning**

Section 6.1 suggests that the process for zoning land use allocations should be driven in large part from the perspective of matching the type of land-use with the public transport accessibility for the area. Whilst this principle has been observed to operate within the case study areas it is subject to a series of constraints.

First, long-standing approaches to strategic planning, political constraints and environmental issues constrain the degree to which an accessibility-led approach is adopted.

- The current planning system rewards authorities for achieving more than 60% of applications on brownfield sites. Both case study areas are very constrained in the amount of non-brownfield sites available. One approved more than 90% of applications on brownfield sites, the other relied heavily on so-called 'windfall sites' where factories or offices were closed and the land, which was not in the plan, could be re-used. The brownfield logic sprang from an ideal of renewal and regeneration. Whilst it is sometimes the case that brownfield sites have good access it is also the case that they may not and examples such as collieries, dairies and old mental hospitals were all identified.
- Political influence can steer the priorities of the planning department. This can range from influence over where new housing might be located through which development sites are priorities to approve and which sites should be protected from development. We do not seek to question the importance of the political process, simply to observe that indicators concerning cultural heritage and rural landscape can be as significant politically as indicators on affordable housing and access to services. The role of the officers is then to assist in the trade-off of these indicators.
- Environmental constraints were a particular issue in the South East of England where pressure for new housing is high. An LDF reviewed had objectives to 'Protect public wellbeing by minimising the harm from flooding', incorporating the indicators 'number of properties at risk from flooding' and 'number of properties built with sustainable drainage

installed' and 'To maintain and improve the water quality of the region's rivers and groundwater, and to encourage the sustainable use of water'. Flooding and drought risk are both major constraints on where to locate housing. Transport accessibility concerns come behind these.

Second, there is a mismatch between strategic transport plans, delivery of schemes and planning applications. Several examples of high level strategies setting out visions for transport investment were provided in one case study area. The planning and transport team, co-located in the same department, worked together to put together the current Unitary Development Plan based around a series of planned investments. Few of the major public transport investments envisaged have been delivered but the zoning was agreed and the planning applications have been brought forward. A levy was made on developers within the corridors to assist with the investment but this has not been spent. The view of the strategic planners was that the timescales for delivery of major transport schemes were too long compared with the need to open up areas for development. There are of course good examples of where there has been integration of this nature, for example around the Manchester Metrolink extensions but the issue of timescales remains critical.

Third, there is no agreement on what accessibility standards are. Until comparatively recently, with the advent of easy to use GIS tools, accessibility has largely been measured by means of access to the public transport network, irrespective of whether it takes you where you want to go. Several examples of relatively crude (and different) indicators were provided by the Boroughs within a two-tier authority setting (e.g. density, proximity to town centres). In the two tier authority setting many policy officers felt that if indicators were used consistently across all boroughs in a sub region or more widely, then there would be more informed decision making between and across local authority boundaries.

We are now in a position where we can assess the accessibility of any site, in terms of the population that can access it or the services that can be reached from it. Local accessibility plans are now formally required as part of LTP2 and assessments are made of the proportion of the population that can access key services within given time periods. However, turning that approach into one which can dictate what sort of development is suitable on what type of site is more difficult. What constitutes a good level of accessibility? How does accessibility to a basket of key services add up? What population should be within a defined journey time of a site by public transport if a site is to be classified as good? Whilst the Regional Assembly had tried to work out a framework it was not clear to local bodies how this would be fully operationalised. Much good practice already exists in this area within authorities charged with the operational business of taking these decisions, for example with zoning and linking developer contributions to accessibility and the costs of providing adequate levels of access to new sites. South Yorkshire PTE provided one such example.

The new approaches to regional and local planning may curb some of the worst impacts of the current sequential approach to planning which is evident as a



result of the issues highlighted above. It appears, however, that we will continue to operate within a constrained set of politically acceptable sites from within which attempts can be made to try and maximise the sustainability potential of developments. Elsewhere within DISTILLATE Brannigan et al. (2006) have found some excellent examples where these issues have been overcome to extract large amounts of developer contributions which other authorities could learn from.

### **6.3 Development Control**

The glue between transport and land-use during the development control process is on parking standards adopted and the completion of satisfactory Transport Assessments (TAs). We have not come across authorities adopting parking standards less stringent than either national or regional standards in our case studies. Our case study reviewed only a small sample of TAs but these and discussions about issues surrounding the TAs with a development control officer uncover some important issues.

As highlighted in Section 6.1 developers agree a geographic scope for their TA. This is typically one or maybe two junctions either side of the new development location. All of the TAs reviewed provide similar information:

1. current traffic counts
2. current accident levels
3. current condition of junctions
4. current trip generation
5. A sustainability assessment consisting of current public transport service, and bike/pedestrian access
6. modelled future traffic counts (both of these just for the site, not taking into account the road/corridor conditions with this addition)
7. modelled trip generation
8. proposed changes to junctions and site access to account for any increased trips to site.

Some TAs also included travel plans and indicative targets they might adopt, additional facilities added for pedestrian and cycle access and records of discussions with public transport providers to see if they would provide a service to the site. Where measures such as travel plans are proposed the authority concerned accepted that it was not resourced to monitor and enforce these plans.

Whilst the additional trips generated are assessed, the limited geographic area for the assessment limits the developer's interest and responsibility for the wider impacts of the development. The TA approach seems mostly a paper exercise as far as keeping check on congestion. We were told of sites being approved on corridors which already have junctions 17-30% over capacity on the corridor. We were also told that developments might be on corridors with apparently good

public transport services but where the services were already operating at capacity in the peak. It seems that the development control process is therefore only loosely supporting the LTP indicators at a local junction level and probably working against them at a more macro level. Whilst efforts had been made to further link transport and land-use objectives, a corridor development embargo instigated for congestion management reasons had been ruled unlawful. The process of development control appears to be one in which development happens and transport should plan its indicator changes in the light of this development rather than a mutual approach to achieving more sustainable development patterns.

There has to be a practical focus on the development control process. However, it seems clear that developments that are not consistent with sustainable development strategies are being approved. For a large part, this problem stems from the Strategic Plan process described above (Sections 6.1 and 6.2). The emphasis in Strategic Plan development is on public transport accessibility. This is only part of the story and if better sites are to be selected for development, the strategic planning stage needs to broaden its concerns to matters of congestion, service capacity and energy use for example. If it does not then there is a mismatch between the way in which the shared objectives of sustainable development are put into practice in transport plans and land-use plans.

Our review evidence also points to a lack of broader consideration of land-use issues within the LTP context. Of the five local authorities reviewed in the comparative case study no authorities included land-use, cultural and economic activity, healthy living, process and participation, or built environment/quality of life indicators in their LTP reporting, indicating that the LTP process is highly sector specific. In 79% of cases studied, authorities were found to collect transport-relevant information which was not used to support reporting on progress towards transport objectives in their LTP (including measures such as CO<sub>2</sub> levels, housing density, parking standard compliance). There is an opportunity for Local Area Agreements to bring a more holistic approach to planning for sustainable development and for Local Transport Plans to be better linked to them.

## **6.4 Summary**

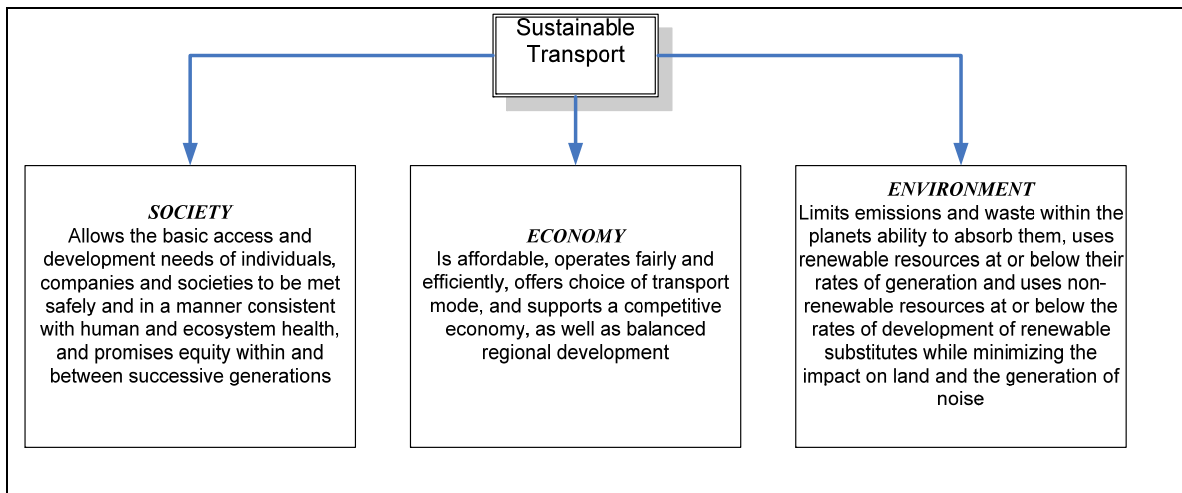
The review of the role of indicators in integrating transport and land-use suggests the key metrics which bring together the two policy areas are density of development and public transport accessibility. Whilst these are conceptually well linked in the prioritisation of land to be released for development several practical barriers exist to fully integrating transport and land-use:

1. The sequential approach to development can lead to the identification of sites for development which have poor accessibility relative to other areas which are excluded from consideration.

2. Good public transport accessibility occurs in areas which suffer from other transport problems (such as congestion, overcrowding and unreliability). Transport Assessments are local in nature and are not intended to overcome 'whole corridor' issues.
3. Accessibility is a relative concept (what constitutes good accessibility is likely to vary across contexts e.g. urban vs. rural). A range of approaches to assessing accessibility for planning purposes are emerging. Accessibility assessments offer the opportunity to act as a lever for developer contributions and shared best practice in the area would be helpful.
4. The timescales for the delivery of strategic transport interventions are long and often uncertain. This makes the achievement of strategic land-use transport integration difficult. Examples of integrated delivery demonstrate the added value that joint implementation can bring.

## 7 DISTILLATE indicators

One of the objectives of this part of the DISTILLATE research programme was to identify a set of core outcome indicators that corresponded to stakeholders understanding of sustainability. We adopted the definition of sustainable transport provided by the European Council of Ministers as shown in Figure 4. It is organised according to the commonly used three pillars of sustainability. This provides a series of key outcomes under each heading and also a structure for organising the current indicator sets promoted by central and local government.



**Figure 4: Sustainable Transport Definition** (Source: Adapted from Council of the European Union 2001)

A key constraint on the activity was that the indicators had to be chosen from existing suites of indicators in use within the UK to avoid indicator proliferation. An earlier deliverable developed a methodology to do this (Marsden et al., 2005) which resulted in a list of 26 key outcome indicators and 40 connected supporting intermediate outcome indicators that could be used (shown in Annex A). This Section reviews the process for their selection, reports the findings of the case studies with regards their relevance and makes suggestions for improvement to the list.

### 7.1 Review of process for indicator selection

In developing the initial list of core indicators, we limited ourselves to indicators which may already be in use as a result of requirements by the Department for Transport, the then Office of the Deputy Prime Minister (Planning), the Department of Environment, Food and Rural Affairs, the Audit Commission and the European Union as listed below:

- Mandatory LTP indicators
- LTP APR Guidance
- Headline/National/Regional and Local Quality of Life Indicators

- Regional Spatial Strategies
- European Common Indicators
- Sustainable Communities
- Comprehensive Performance Assessment

A series of tests was then carried out on each indicator to determine first, whether the indicator was an outcome indicator and if so whether it was clearly defined, controllable (substantially affected by transport policy), measurable, responsive and easy to understand. If all of these tests were met then the indicator was included. As the initial indicator work had identified the importance of having supporting evidence to help understand trends in key outcomes, intermediate outcome indicators were then selected that were felt to best connect to these outcomes.

We identified a range of possible indicators that were not available through the confined methodology chosen that were likely to be highly pertinent to the sustainability of transport. These included use of fossil fuel energy, indices of household transport costs and the energy intensity of travel.

A methodology was also developed to select appropriate supporting indicators to the key outcomes that were identified. This involved developing causal chain diagrams back from the outcome indicators, through the intermediate outcomes to output and input indicators.

## **7.2 Case Study Feedback on list**

The study of a two-tier authority highlighted some difficulties with the initial list. In particular, from a Borough or District level there were too many indicators and they were too cumbersome for use at the District and Borough level (for example where there is little responsibility for transport strategy). Too few of the indicators were relevant to the borough level. Five district and borough councils in Surrey use a set of 25 objectives as part of the sustainability appraisal of their respective Local Development Frameworks. However, these appear to be a mix of output, intermediate outcome and outcome indicators including measures such as % new housing which is affordable.

The following indicators from the DISTILLATE list are monitored at both levels of government:

- Buildings of grade 1 or grade 2 at risk of decay (Env)
- Loss or damage to historic landscapes and their settings (Env)
- Loss or damage to historic view lines or vistas (Env)
- Loss or damage to listed buildings and their settings (Env)
- Loss or damage to scheduled ancient monuments and their settings (Env)
- Index of local deprivation (Social)

- Percentage of population who live in wards that rank within the most deprived 10% and 25% of wards in the country (Social)
- Total killed and seriously injured casualties (Social)
- Child killed and seriously injured casualties (Social)
- Percentage of residents surveyed finding it easy to access key local services (Social)

There is considerable potential for duplication in monitoring the five environmental indicators listed above. Not only is this duplication unnecessary, according to the policy officers interviewed, but the information is gathered at both levels. In the interests of 'stream-lining' the indicators suite, the following indicators which are not monitored at either county or district and borough level could be taken off the list:

- Work fatalities and injury rates / working days lost through illness (Econ)<sup>6</sup>
- Rail passenger satisfaction (Econ)
- Social participation / sport / learning (Social)
- Percentage of highways that are either of a high or acceptable level of cleanliness (Social)

Most of the economic and environmental indicators are only monitored at county level, whereas most of the social indicators are only monitored at district and borough level. In terms of integrated land use and transport decisions, there appears to be little link up between the transport obligations for the county authorities set out in the LTP and the land use obligations for district and borough level authorities set out in the LDF.

Indicators that describe both flooding risk and access to adequate water supply are critical in an integrated indicators suite.

The review of policy documents across five authorities came to a number of conclusions which can inform the core indicator list:

- There appears to be concentration on a relatively narrowly defined set of transport indicators in LTPs (outputs) with less attention given to indicators that reflect the public's experience of travel/ traffic, health and quality of life issues (outcomes).
- Whilst there has been some improvement in the consistency of reporting of core transport indicators in the Local Transport Plan, led by DfT, this collection and reporting of data does not appear to be shared to any great extent by other policy sectors, as witnessed by their reports.

---

<sup>6</sup> This indicator is a sub-set of information derived from road accident and casualty figures that are collected but would require further interpretation.

- There is no statutory requirement for Local Area Agreements to include targets/indicators for transport and these were virtually absent in the LAAs reviewed.

Several examples of potentially relevant indicators which are in use in some authorities were identified. For example, ecological footprint measures were being used (to which transport contributes), the number of people taking exercise 5 times a week, % of journeys under 2km made by car and density of housing. Indicators from the list which do not appear in local transport plans but which are highly relevant to transport were also identified including satisfaction with local environmental quality in neighbourhood renewal areas, CO<sub>2</sub> emissions per capita and safety of residents. Perhaps unsurprisingly, given the pool from which the DISTILLATE indicators were picked, examples of most of the list were found in a reporting stream in at least one of the authorities examined.

Concerns were expressed in several places, borne out by the land-use transport case studies, about the accessibility indicators. It is accepted that the new tools available offer the potential to bring together transport and land-use but as yet there is no clear idea of what to measure and how to apply the tools. Although the Department for Transport has established a set of national indicators for which baselines can be established these are not necessarily useful in making policy decisions. The debate about what an acceptable standard of accessibility is in different contexts has yet to happen, at least in a consistent manner, and this makes integration of transport and land-use decisions difficult.

### 7.3 Case study feedback on indicator selection

The methods developed for indicator selection were applied to an initial list of indicators that had already been developed for LTP2 by the PTE area studied. An analysis was conducted of the balance of indicators across indicator types (Table 6) and a mapping exercise conducted to examine the connectivity between indicators (Figure 5).

**Table 6: Indicators and strategic priorities (PTE)**

Output (out of 11 indicators)	Intermediate outcome (out of 15 indicators)	Key outcome (out of 8 indicators)
1 congestion	14 congestion	1 congestion
8 accessibility	11 accessibility	6 accessibility
2 air quality	9 air quality	1 air quality
6 safer roads	2 safer roads	3 safer roads
6 quality of life	7 quality of life	7 quality of life
0 local priority	7 local priority	3 local priority

On Figure 5, the output indicators are on the left, intermediate outcomes in the middle, and key outcomes on the right. The number of strategic priorities an indicator meets (as defined by Merseytravel) are represented by coloured dots:

- Congestion (green)
- Accessibility (red)

- Safer Roads (blue)
- Air quality (yellow)
- Quality of life (black)
- Local priority (white)

The lines on the diagram represent the links we have drawn between output, intermediate outcome, and key outcome indicators. A full list of indicators to which the various labels correspond can be found in Annex B.

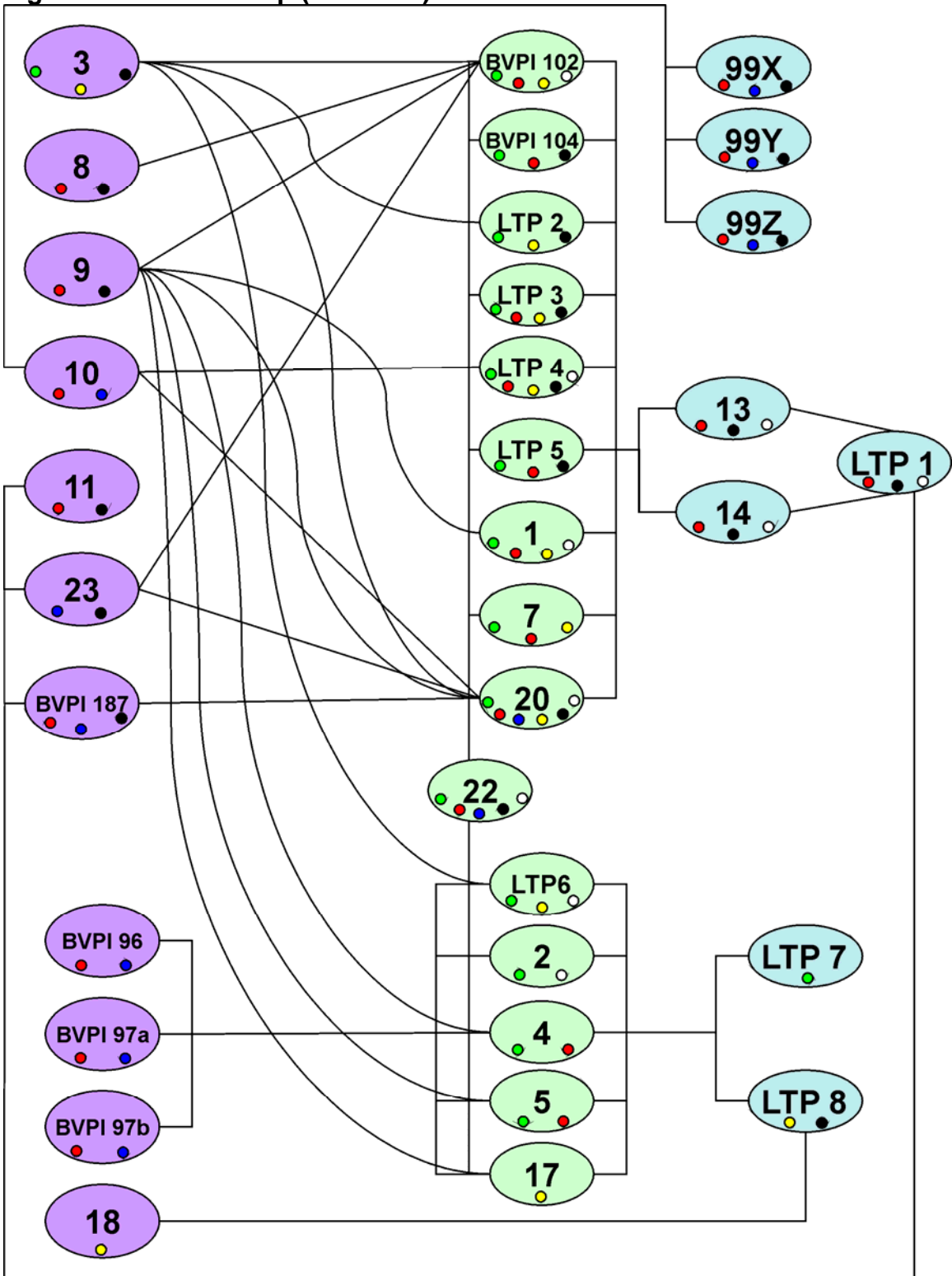
The mapping exercise demonstrated the need to place greater emphasis on the linkages between congestion reduction and environmental improvements, highlighted indicators which performed a very similar role (and could have been removed) and shows where some indicators lack connections (e.g. where no outputs are monitored to support achievement of an intermediate or key outcome). Three examples that illustrate how the map works:

1. The only indicator connecting to road safety indicators BVPI 99x, y and z is Local Indicator 10 on accessibility to pedestrian crossings. This would suggest a gap in connecting the policies that will actually be delivered on safety and the monitoring of these policies to the outcomes in this area.
2. Local Indicator 11 relates to % of fleet with low floor buses and % bus stops with low floor kerbs. It connects only to the outcome indicator on accessibility to key services (LTP 1) and could potentially connect with user perceptions from target user groups.
3. Local Indicator 22 relates to the percentage of developments meeting standards for all modes of transport. This is an output of the planning process. The indicator map suggests that it connects to all of the other intermediate outcomes. In reality the connections might be weak and the indicator may simply be a context indicator.

The PTE found the indicator map to be useful in several ways. First it allows an analysis of any gaps and overlaps in indicators at the indicator development stage. Secondly, as the indicators are measured and targets are reviewed, it will help to identify how improvements in one area may have a knock on effect in another. The analysis of gaps and overlaps will inform future work as and when the indicators are next reviewed. The map also acts as a checklist on whether the organisation is actually measuring what needs to be measured. In turn, this helps policy delivery (because if the indicators are right in the first place it will be easier to deliver policy aims). It was also found to be helpful in discussions with elected members and for use within the organisation and with the constituent district authorities, and the map was also reproduced in the LTP2 document. A similar process would be adopted for any future LTPs but at an earlier stage.



Figure 5: Indicator Map (PTE area)



## 7.4 Critique

What has the development of a core list of outcome indicators related to sustainable transport done for the process of encouraging more sustainable patterns of travel and land-use development? The process of developing and debating such a list has highlighted strengths and weaknesses in the list but, more importantly, it has highlighted the difficulty in applying such a list in the current policy environment.

It is clear that there is a very strong policy silo influence on what is monitored. Nowhere is that more obvious than within the LTP process where there is an almost total absence of integration with land-use planning. Whilst such an approach *might* work in an environment where there exists a strong corporate local authority commitment to sustainable transport we have found very little evidence of this through corporate strategies and Local Area Agreements. This potentially reflects the comparative weakness of transport in the corporate assessment process and its place behind economic progress and other sectors such as education and social care in the local political process.

Core central government defined indicators appear to have greatest application across multiple policy documents. The adoption of a smaller list of centrally defined indicators (The New Performance Framework) will reduce the list of required indicators. This potentially increases the risk of marginalising some indicators. However, it also opens up the opportunity for more integrated local processes to emerge although this will require leadership at a local level if the local indicators are to be seen to be important.

In retrospect, the approach of trying to define a set of core outcome indicators relevant to “sustainable transport” runs the risk of reinforcing the type of silo outcomes criticised above. In reality we created a half-way house by using indicators across many sectors but by relating them to transport. This is perhaps part of the picture. A clear definition of what sustainable development means to a local authority seems the logical first step to defining a monitoring framework. Transport is a part of that process and key transport outcomes can be identified. Only through fuller consideration of transport through full corporate strategies can we expect to see real integration of information requirements to support the strategy.

The production of lists of recommended indicators will never satisfy nor be appropriate to all partners, particularly when one considers the diversity of spatial scales and policy functions to which such a list might have to talk. We therefore conclude that whatever external requirements exist for monitoring certain pre-specified local indicators should not dictate the monitoring strategy for a local authority. Our research shows that the internal and external processes adopted for identifying and rationalising indicators will dictate the credibility and acceptability of a monitoring strategy that is clearly linked to the aims of the authority.

Whilst monitoring is often seen as the preserve of a few technical experts, we have found that a major role of the indicator selection process is in

communicating the importance and rationale of monitoring to other stakeholders including local politicians and obtaining buy in to the achievement of targets and goals related to those same indicators.

## **8. Conclusions**

The current approach to indicator development is burdensome on local authorities, sometimes disconnected from their priorities and, as a result not as efficient as it should be. It also does not support the development of strategies that clearly promote sustainable development in an integrated manner. There is duplication of effort and a lack of sharing of resources due to a variety of factors including a lack of incentives to co-ordinate effectively, different priorities pulling in different directions and differing agendas and timescales. There is also too much churn in the system.

One of the main criticisms of the current processes for generating indicator sets is a failure to adequately consider why something should be monitored (from the perspective of both the organisation/department wanting the information and the organisation/department that has to provide it) and how it is currently or could be monitored. This has led to gaps in monitoring programmes and the withdrawal of indicators. Top-down initiatives can help to standardise processes but they can equally easily overlook practical needs.

It is also important to understand how national requirements for reporting dictate local behaviours. For example, aligning planning delivery grant with the speed of development decisions potentially compromises the ability of authorities to extract developer contributions on some sites.

More generally it appears that although there is integration between land-use and transport departments, developments are still being approved that will work against key transport indicators. The projected housing demand suggests that this will continue into the future. Unless the key LTP transport indicators are seen to act as a constraint on development there seems little prospect of this changing. The silo approach to monitoring and reporting allows for 'artificial' hierarchies of importance of different indicators to emerge, linked largely to a particular department's delivery goals. A more integrated approach to monitoring "sustainable development" is required if transport and land-use indicators are to work on a more even keel.

We strongly recommend that the New Performance Framework should be subjected to an audit to assess whether there is comprehensive coverage of sustainability across the whole set of local authority functions. If the list, or a subset of the list, can be identified as the key outcome measures of sustainable development then it would follow that transport and land-use planning departments could develop their indicator suites to connect to the overall aims of sustainable development.

The process developed in our earlier work for identifying appropriate supporting indicators from a local perspective seems to be both effective and a useful communication aid. It is only with a clear rationale supporting the need for

monitoring that the process will be credible. Whilst we have identified a number of problems with integrating indicators across multiple functions and between different layers of government and organisations, we have also seen some good practice. Indicators can act as part of the process of establishing a common commitment between organisations. Well designed monitoring processes can be used to justify and 'sell' the need to collect data to decision-makers and data collection agencies.

In particular, we identify the following key elements to achieving best practice in integrated monitoring.

1. A clear mapping of the relationship between strategies (both within an organisation and between organisations at different scales)
2. A process for identifying what needs to be monitored and why in support of each strategy
3. A process to identify where it is important to share information across sectors
4. Establishment of formal mechanisms through which information sharing is discussed
5. Work to develop informal mechanisms to support progress between formal meetings

The production of lists of recommended indicators will never satisfy nor be appropriate to all partners, particularly when one considers the diversity of spatial scales and policy functions to which such a list might have to talk. We therefore conclude that whatever external requirements exist for monitoring certain pre-specified indicators should not dictate the monitoring strategy for a local authority.

Our research shows that the internal and external processes adopted for identifying and rationalising indicators will dictate the credibility and acceptability of a monitoring strategy, enabling officers and politicians to demonstrate clear links to the aims of the authority. Whilst monitoring is often seen as the preserve of a few technical experts, we have found that a major role of the indicator selection process is in communicating the importance and rationale of monitoring to other stakeholders including local politicians, and obtaining buy in to the achievement of targets and goals related to those same indicators.

## 8 References

Audit Commission (2000). On target: The Practice of Performance Indicators. Management Paper, Audit Commission. <http://www.audit-commission.gov.uk>

Audit Commission (2007) Quality of Life Indicators, <http://ww2.audit-commission.gov.uk/pis/quality-of-life-indicators.shtml>

Boyne, G.A. and Chen, A.A. (2007) Performance Targets and Public Service Improvement, *Journal of Public Administration Research and Theory*, **17**(3), 455-477

Department of Communities and Local Government (2006) Strong and Prosperous Communities: The Local Government White Paper, 26<sup>th</sup> October 2006, TSO, London, ISBN 9 780101 693929

Department of Communities and Local Government (2007a) Local Public Service Agreements,

<http://www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/localareaagreements/localpublicservice/>

Department of Communities and Local Government (2007b) Local Area Agreements,

<http://www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/localareaagreements/localareaagreements/>

Giuliano, G. and Narayan, D. (2003) Another look at travel patterns and urban form: The US and Great Britain, *Urban Studies*, **40** (11) pp2295-2312

Hodgson, L., Farrell, C.M. and Connolly, M. (2007) Improving UK Public Services: A Review of the Evidence, *Public Administration*, **85**(2), 355-382

Hood, C. (2006) Gaming in Targetworld: The Targets Approach to Managing British Public Services, *Public Administration Review*, **66**(4), 515-521

Hull, A.D. and Tricker, R. (2006)

Hull, A.D., Tricker, R. and Hills, XXX (2006)

Marsden, G. and Bonsall, P. (2006) Understanding the role of performance targets in transport policy, *Transport Policy* **13** (3), 191-203

Marsden, G. and Wootton, J. (2001) *A review of Local Transport Plans in England*, Proc. AET European Transport Conference, 10-12 September 2001, Homerton College, Cambridge, UK, CD-ROM, PTRC, London, CD-ROM

Marsden, G., Kelly, C., Snell, C. and Forrester, J. (2005) Improved Indicators for Sustainable Transport and Planning, DISTILLATE Deliverable C1, [www.distillate.ac.uk](http://www.distillate.ac.uk)

Mindali, O., Raveh, A. and Salomon, I. (2004) Urban density and energy consumption: a new look at old statistics, *Transportation Research Part A*, **38**, pp143-162

ODPM (2004) Planning Policy Statement 12: Local Development Frameworks, Office of the Deputy Prime Minister, London, available at:  
<http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement4>

ODPM (2005) Planning Policy Statement 11: Regional Spatial Strategies, Office of the Deputy Prime Minister, London, available at:  
<http://www.communities.gov.uk/publications/planningandbuilding/planningpolicystatement3>

Ott, W. R. (1978). *Environmental Indices: Theory and Practice*, Ann Arbor Science Publishers Inc.

PASTILLE (2002) Indicators into action: local sustainability indicator sets in their context 5th framework.

Smith, P. (1995). On the Unintended consequences of publishing data in the public sector, *International Journal of Public Administration* **18**(2/3): 277-310.

Stead, D. (2001) Relationships between land use, socioeconomic factors and travel patterns in Britain, *Environment and Planning B: Planning and Design*, **28**, pp499-528

Transland (2000) Deliverable 4, Final Report, Integration of Transport and Land Use Planning, <http://www.inro.tno.nl/transland/>

Wiggins, A. and P. Tymms (2002). "Dysfunctional effects of League Tables : A comparison between English and Scottish Primary schools." *Public performance and management Review* **25**(3): 267-281.

## Annex A: Initial List of DISTILLATE Indicators

Environment				
ECMT area	Key outcome	Current Indicator	Intermediate Outcome	Current Indicator
Limits emissions within planet's ability to absorb them	CO2 emissions by end user/per capita	QoL N3	Change in area wide road traffic mileage	LTP2
	Local CO2 emissions	Audit commission Local quality of life indicators		
	Acidification			
Protects human health	Days when the pollution is moderate or high	QoL H10	Emissions of particulate matter	QoL P2
	Number of days when air pollution is moderate or higher for PM10	LTP8		
	For rural sites, number of days per year when air pollution is moderate or higher for ozone		Change in area wide road traffic mileage	LTP2
Uses of renewable resources	Energy Efficiency of transport industry/economy	QoL D15 QoL A2	Change in area wide road traffic mileage Mode share of journeys to school Congestion (vehicle delay) Public transport patronage	LTP2 LTP4 LTP7 BVPI102
Minimises noise generation	People rating the level of transport related noise as unacceptable	LTP APR Guidance	Noise levels	TAG UNIT 3.3.2 National QoL k8
			Change in area wide road traffic mileage	LTP2
Minimizing the impact on land/ water	Net loss to sites of importance (historical)	TAG UNIT 3.3.9	Buildings of grade 1 or grade II at risk of decay	QoL K5
			Loss or damage to historic landscapes and their settings	Sustainability Appraisal of regional spatial strategies
			Loss or damage to historic view lines and vistas	Sustainability Appraisal of regional spatial strategies
			Loss or damage to listed buildings and their settings	Sustainability Appraisal of regional spatial strategies
	Net Loss to land	TAG UNIT 3.3.7	Loss or damage to scheduled ancient monuments and their settings	Sustainability Appraisal of regional spatial strategies
			% of conservation area demolished or otherwise lost	Sustainability Appraisal of regional spatial strategies
			Construction and demolition waste going to landfill	Sustainability Appraisal of regional spatial strategies
Net Loss to Habitat/ air pollution/ loss of land	TAG UNIT 3.3.10	Net change in natural/ semi natural habitats	Sustainability Appraisal of	

				regional spatial strategies
			Changes in populations of selected characteristics species	
			Population of wild birds	National QoL H13
	Net loss to water	TAG UNIT 3.3.11	River lengths of good or fair chemical quality	National QoL H12
			Biodiversity in coastal/ marine areas* for coastal sites only	QoL R3
<b>Economy</b>				
ECMT area	Key outcome	Current Indicator	Intermediate Outcome	Current Indicator
Supports a competitive economy	<ul style="list-style-type: none"> <li>Total output of the economy (GDP and GDP per capita)</li> <li>Regional GDP/GVA</li> </ul>	QoLc H1	Congestion - average time lost per vehicle km	LTP7
Supports balanced regional growth			Work Fatalities and injury rates; working days lost through illness	QoLc C10
			Real changes in the cost of transport	QoLc T4
			Principal Road Condition	BVPI 196
Operates efficiently	Transport efficiency	Webtag Methods	Congestion - average time lost per vehicle km	LTP 7
			Bus Punctuality	LTP 5
			Pedestrian Delay (access of pedestrian crossing facilities)	BV 165
<b>Social</b>				
ECMT area	Key outcome	Current Indicator	Intermediate Outcome	Current Indicator
Meeting society's needs safely	Total killed and seriously injured casualties	BVPI99(x)	Principal Road Condition Non-principal Classified Road Condition Unclassified Road Condition Footway condition	BVPI 196
	Child killed and seriously injured casualties	BVPI99(y)		BVPI97a
	Total slight casualties	BVPI99(z)		BVPI97b BVPI87
	Death rates from cancer, circulatory disease, accidents and suicides	QoLc F1	Cycling trips (annualised index)	LTP3
	Fear of crime	QoLc k9		
	% of residents surveyed who feel 'fairly safe' or 'very safe' after dark whilst outside in their local area	BVPI QB Q36		
	% of residents surveyed who feel 'fairly safe' or 'very safe' during the day whilst outside in their local area	Audit Commission voluntary quality of life indicators		
	People who think it is easy and safe to walk in	LTP APR		



	their area			
Quality of life	% of residents who are satisfied with their neighbourhood as a place to live	QoL 18	Footway condition	BVP187
	Average satisfaction with the local community	European common Indicators		
End user satisfaction			% of highways that are either of a high or acceptable level of cleanliness	QoLc 34
			Bus Satisfaction	BVPI 104
			Rail passenger satisfaction	Methodology as bus
			% of users satisfied with local authority provided district transport services	BVPI Gen QB Q16
			Principal Road Condition Non-principal Classified Road Condition Unclassified Road Condition Footway condition	BVPI 196 BVPI97a BVPI97b BVPI87
Basic Access	Social participation/ sport/ learning	QoLc J4	% of rural households within 13 min walk of an hourly or better bus service	LTP APR
		Appraisal of regional spatial strategies	Working age people in workless households (access to employment)	QoLc C5
			% of residents defined as within a distance of 500m (15min walk) of key local services	QoLc 22/ BVPI QB Q6
Fairness	Accessibility	LTP requirement	% of a) households b) households without access to a car within 30 and 60 minutes of a hospital by public transport % of a) households b) households without access to a car within 15 and 30 minutes of a GP by public transport	LTP1 accessibility
			Changes in peak period traffic flows to urban centres	LTP6

## Annex B: Indicators used in PTE area (Figure 6)

LTP1	National Accessibility Indicators (Key Outcome)
LTP2	Change in area wide road traffic (Intermediate Outcome)
LTP3	Cycling - Index of usage (Intermediate Outcome)
LTP4	Mode Share of Journeys to School (Intermediate Outcome)
LTP5	Bus Punctuality (Intermediate Outcome)
LTP6	Changes in peak period traffic flows to City Centre (Intermediate Outcome)
LTP7	Congestion (person delay) (Key Outcome)
LTP8	Pollutant concentrations within Air Quality Management Areas (Key Outcome)
BVPI102	Public transport patronage (Bus, Rail) (Intermediate Outcome)
BVPI104	Satisfaction with local bus services (Intermediate Outcome)
BVPI187	Footway condition (Output)
BVPI223 (96)	Principal Road condition (Output)
BVPI224a (97a)	Non-Principal Classified Road condition (Output)
BVPI224b (97b)	Unclassified Road condition (Output)
BVPI99 (x)	Total killed and seriously injured casualties (Key Outcome)
BVPI99 (y)	Child killed and seriously injured casualties (Key Outcome)
BVPI99 (z)	Total slight casualties (Key Outcome)
L1	Sustainable transport as the final mode for air passengers (Intermediate Outcome)
L2	HGV journey times on designated freight routes (Intermediate Outcome)

	Outcome)
L3	Limit current number of car parking spaces available in City Centre (Output)
L4	% of network below threshold speeds during peak periods (Intermediate Outcome)
L5	Extent of peak spreading (Intermediate Outcome)
L6	Roadworks coverage and impacts (Monitoring Only)
L7	Park and Ride – usage (Intermediate Outcome)
L8	Number % of rural households within 800m of an hourly or better bus service (Other Outcome/output)
L9a	Number of rail stations upgraded to meet preset standards for facilities (Other Outcome/output)
L9b	Number of rail stations upgraded to meet preset standards for access (Other Outcome/output)
L10	BV165 (accessibility of pedestrian crossings) (Output)
L11	Bus based Physical access a) % low floor vehicles b) Infrastructure - % near level boarding via access kerbs (Other Outcome/output)
L12	Affordability - Index of transport usage costs (Monitoring)
L13	Accessibility - Economic impact: Accessibility of workless residents to employment location (Key outcome)
L14	Accessibility - Education: % NEET group to access post 16 establishment (Key Outcome)
L15	Crime / fear of crime on and around public transport a) Number of broken window incidents recorded on public transport; b) Proportion of people who are discouraged from PT use at night (Monitoring)
L16	Estimated transport related emissions (tonnes/year) of CO, nitrogen oxides & particulate matter (Monitoring)

L17	Vehicle mileage in the AQMA or area of exceedence (Intermediate Outcome)
L18	Environmental Standard of Bus Fleet (Euro III or equivalent) (Output)
L19	Physical Activity Indicator (Monitoring)
L20	Travel to Work Modal Share indicator (Intermediate Outcome)
L21	Economic indicator a) GVA per head b) b) Worklessness (Monitoring)
L22	Percentage of new developments meeting minimum standards for all transport modes as defined by SPD (Intermediate Outcome)
L23	Street Lighting Condition (Other Outcome/output)
L24	Tourism Activity a) TIC Footfall b) b) BID Footfall (Monitoring)