REVIEW OF LAND USE PLANNING INDICATORS
FINAL REPORT

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- EXECUTIVE SUMMARY -

1. Devolution in Wales has provided the Welsh Assembly Government with new opportunities to discover distinctly Welsh responses to improving the quality of life for all those who live and work in Wales. Sections 120 and 121 of the *Government of Wales Act 1998* sets a requirement for the Assembly to implement sustainable development and equality of opportunity in all its decisions. This statutory requirement, unique within the United Kingdom, encourages the Assembly to put sustainability at the heart of the Assembly's decision-making process and anticipates policy developments at EU level.

2. This report summarises research on land use planning indicators carried out by the University of the West of England, Bristol, for the Welsh Assembly Government between November 2001 and April 2002. The purpose of the research was to advise the Welsh Assembly Government about the data and information requirements in order to effectively monitor the planning system in Wales. This has involved both a comprehensive audit of land use data collected by Local Planning Authorities (88% response rate), a scoping of the policy changes at the European level and within the United Kingdom, and interviews with national bodies and local authority officers responsible for data collection.

3. The report finds the Assembly's commitment to sustainable development is very timely given the policy developments at EU level on the European Spatial Development Perspective, the Strategic Environmental Assessment of plans and projects that came into force in June 2001, and the obligations to gather new kinds of data for Structural Fund projects. The 'spatial' planning approach, supported by the European Commission and the EU member states, promotes the integration and monitoring of crosscutting policies on economic and social cohesion, the conservation of natural resources and cultural heritage, and balanced regional development.

4. The land use planning system has a key role in setting the framework for delivering the more sustainable use and development of land. The policy context in Wales is set by *Planning Policy Wales* (2002), the Assembly's emerging (draft) policies on sustainable development in *The Plan for Wales* (2001) and *The Wales Spatial Plan: The Pathway to Sustainable Development* (2001). *The Plan for Wales* sets ten targets for 2003/4 and 2010 that, although cutting across local authority service functions, encourage the sustainable use of land, resources and patterns of movement between developments. The report identifies appropriate indicators with which to measure these targets.

5. This vision of a sustainable land use planning system in the Assembly's draft policy documentation goes much further than the narrow definition of land use planning used for development control purposes. The Assembly needs to prepare local planning authorities for this wider task through creating a clearer framework in the Technical Advice Notes for the data collection needs of monitoring sustainable development.

6. The data audit of local planning authority data sets found a significant amount of information being collected on land use issues and, in particular, ten key data sets were identified that could form the basis for monitoring the sustainability of land use planning decisions. Of these, data on planning applications and the housing land availability studies are the most robust data sets in terms of the standardisation and periodicity of data collection, and coverage across the Welsh authorities. The report suggests a

strengthening of the housing land availability study to include data on housing needs and brownfield land. In addition, there is increasing coverage of data on employment land, the LANDMAP landscape assessment, air quality and habitats and species. More local authorities need to be encouraged to collect these data sets since they will prove useful in the medium to long term in monitoring sustainability. Finally, additional resources must be found to extend coverage of the register of potentially contaminated land, and data on modal split and public transport use. Just over a third of local authorities currently collect this information.

7. Data collected by local planning authorities often serve a number of policy functions, and are used particularly by national bodies. This emphasises the significance of common standards of data collection and storage that local planning authorities need to adhere to in order to allow aggregation of information at a different spatial scale. In the future the availability of data at the regional level in Wales will be important for waste, housing, transport, economic development and tourism planning.

8. The interviews undertaken with local authority officers raised several issues about the data management systems in place. The research found wide variation in how data are collected, recorded, managed and how frequently data sets are updated, and what is included in the data set held by a local authority. This was the same regarding the electronic management systems in place. Whereas some authorities have comprehensive and corporate data management systems, the situation is much less advanced in the other authorities. This will require significant resource input by the Assembly to achieve eGovernment and data sharing via GIS. In particular, the Assembly will need to actively address both the duplication of data demands on local authorities as well as assisting to improve their capacity to handle data electronically. Rationalising the demands on the data holdings of local authorities is an enormous task and will require detailed consultation with all stakeholders. There are substantial resource issues for the local authorities in this, including staff expertise and the purchase cost of hard and software.

9. The report, finally, makes a number of specific recommendations, identifying and allocating responsibilities and tasks to the Assembly, the Local Government Data Unit (Wales) and to the Local Authorities.

10. **The Assembly:**

(1) Review Technical Advice Notes in line with the data and monitoring needs of *Planning Policy Wales* and the *Wales Spatial Plan* and provide clear unequivocal guidance. Use TANs to give advice on methods for data reliability and comparability.

(2) Identify sufficient resources to rationalise and improve the quality, consistency and relevance of local authority statistical data. Give priority to the training of elected members and senior managers in data management and GIS use. Support the aim in the *Wales Spatial Plan* for evidence-based decision-making and resource the potential of GIS for the display and use of data. Provide financial support for initiatives such as the National Land and Property Gazetteer as a means to establish data standards across all the operations of local authorities.

(3) Link the present performance monitoring of land use planning with the sustainable land use appraisal to give a better balance between the process of planning and the policy outcomes (impacts on the ground). In view of the Assembly's remit to deliver sustainable development and the essential role of the land use planning system in realising this it would seem that the case for bringing these two strands of work together is growing ever stronger. Support the integration of the Best Value and Sustainable Development teams.

(4) Rationalise the demands on the data holdings of local authorities from the Welsh Development Agency, Assembly divisions, and other central agencies such as CIPFA and the Audit Commission to ensure the efficient transmission of data sets and remove the duplicated requests for large amounts of information that is frequently the same, or varies only slightly from other data demands. Rationalisation is an enormous task and will require detailed consultation with all stakeholders.

(5) Continue and expand resourcing of the Local Government Data Unit Wales as a data hub, a data management facility and as a point of reference for the developmental and training work with local government. The LGDU is well positioned to provide the Assembly with knowledge of the data environment at local level and to work with the Statistical Directorate, local authorities and other agencies who can provide the building blocks for delivering more accessible, higher quality, relevant data.

(6) Liase with Local Authorities through the Local Government Data Unit over the appropriate selection of sustainable land use indicators. We recommend a period of voluntary use of the indicators through a pilot study to help local authorities develop local sustainability indicators and their integration into the Best Value regime, before specifying a statutory core set of indicators for all local authorities. Baseline data are not yet available for all the indicators in every local authority. Local authorities may wish to add further locally derived targets and indicators to this list as part of their own corporate diagnosis of the services they deliver.

11. **The Local Government Data Unit (Wales):**

(1) The Data Unit has a key role in the future to work with local planning authorities to harmonise data collection and submission procedures. The Data Unit already has a developmental role managing the Welsh Household Survey.

(2) In the long term the Data Unit should become a repository of all returns (the Core Data Set) that local authorities in Wales are required to make to the national government. This would ensure that the data are collected once only, and all subsequent demands on a local authority can be dealt with from one central resource – the Data Unit. Achieving this will mean that the LGDU will have to have a role in the rationalisation and co-ordination of existing data collections for local authorities. It should also become the first place local authorities look, or contact, to access information.

(3) The Data Unit should lead the rationalisation of data sets on behalf of the Assembly working with expert groups from local authorities to assist with the detailed work on targets, indicators, definitions, standards and GIS.

12. **Local Authorities:**

(1) Express plan policies in a form that facilitates monitoring and review. Identify local data needs and establish suitable monitoring systems. Review the spatial impacts of the Unitary Development Plan and development control decisions regularly and publish monitoring reports.

(2) Work with the Assembly and the Local Government Data Unit to agree standard definitions for the monitoring of key sustainable land use policy indicators such as contaminated land, traffic and air quality monitoring standards, and to improve the quality of data.

1. INTRODUCTION AND RESEARCH OBJECTIVES

1.1 Introduction

1.1.1. The land use planning system has managed the use and development of land and buildings in response to societal preferences since the 1947 Town and Country Planning Act. This has involved providing space for economic growth and housing demand whilst promoting the particular qualities of specific places and protecting environmental resources. Over the last decades, global economic pressures on land, labour and finance have made the efficient management of land and buildings an increasingly complex task involving more stakeholders than previously.

1.1.2. Devolution in Wales has provided the Welsh Assembly Government with new opportunities to discover distinctly Welsh responses to improving the quality of life for all those who live and work in Wales. Sections 120 and 121 of the *Government of Wales Act 1998* sets a requirement for the Assembly to implement sustainable development and equality of opportunity in all its decisions. This statutory requirement, unique within the United Kingdom, encourages the Assembly to put sustainability at the heart of the Assembly's decision-making process and anticipates the direction of policy changes at EU level.

1.1.3. The development of the Assembly's policy on sustainable development is a continuous process. The Sustainable Development Scheme *A Sustainable Wales – Learning to Live Differently* (2000) is a statutory document setting out how the Assembly proposes to secure sustainable development in the exercise of all its functions. These ideas are further elaborated in the *Plan for Wales 2001* and the *Wales Spatial Plan: Pathway to Sustainable Development*, which was issued in 2001 as a consultation document. Topic plans on economic development (*A Winning Wales*, 2002d), transport (*The Transport Framework for Wales*, 2001), rural development (*Rural Development Plan for Wales*, 2001 draft) and community governance (*Communities First*, 2001 consultation draft) have also been published by the Assembly.

1.1.4. Land use planning is a key component in delivering sustainable development in Wales. Land use planning policy for Wales is contained in *Planning Policy Wales* (PPW) (Welsh Assembly Government 2002a) which provides the strategic policy framework for the preparation of local planning authorities' land use development plans. This is supplemented by 20 topic-based Technical Advice Notes, which will in due course be revised to bring them up to date with *Planning Policy Wales*. These core strategy documents are establishing the national framework for a new approach to sustainable development that will shape the future of land use planning in Wales.

1.2 Research Objectives

1.2.1. The research project was carried out by the Centre for Environment and Planning at the University of the West of England in collaboration with an independent consultant on behalf of the Welsh Assembly Government. The study was carried out between November 2001 and April 2002. The original brief for the study stated that:

> *The purpose of the project is to advise the Welsh Assembly Government about data and information requirements in order to effectively monitor the planning system in Wales.*

1.2.2. The scope and objectives of the research were:

- to identify information gaps at national, regional and local levels to monitor the planning system in Wales, and how policy requirements for new sustainable development indicators may best be met;
- to undertake an audit of planning and land use related information currently collected by local planning authorities and other organisations, and to consider its utility; and
- to advise on the feasibility of improving data collection systems, on collecting new information and on the periodicity of data.

1.2.3. This report is structured according to the research objectives as set out above. Full details of the methodology followed can be found in Appendix 1.

1.2.4. Chapter two explains the policy context for the planning system in Wales describing the statutory responsibilities of land use planning to address spatial development in a sustainable way. Chapter three analyses the new indicators and targets in the adopted and draft Assembly policy documents and compares these to the current performance indicators for planning in Wales. Chapter four summarises the monitoring and information systems that are currently available to the Assembly. The results of the audit of land use data collected by the 22 Welsh unitary local authorities and 3 National Park authorities are presented in chapter five, commenting on the breadth of, and different approaches to, data collection and management. Chapter six summarises the key themes in the report and makes recommendations for the monitoring of the Assembly's planning policy, the collection and the rationalisation of data sets.

2. LAND USE PLANNING IN WALES

2.1 Introduction

2.1.1. The land use planning system has a key role to play in setting the framework for the sustainable use and development of land. The legal basis of the planning system is the control of certain types of development in line with the local planning authorities' statutory Unitary Development Plan. Development is defined as the:

> *'carrying out of building, engineering, mining or other operations in, on, over or under land, or the making of any material change in the use of any buildings or other land'.* (S. 55 (1) of TCPA 1990).

2.1.2. There are certain maintenance activities not included in this definition as well as a number of 'development' activities that do not require planning permission. Local authority elected councillors make planning decisions advised by their professional planning officers. The UK Government has laid down statutory procedures about how planning decisions should be made and who should be involved.

2.1.3. The Welsh Assembly Government has produced *Planning Policy Wales* and 20 *Technical Advice Notes* to advise local planning authorities when preparing their Unitary Development Plan and making planning decisions on individual applications (see section 2.4). *Planning Policy Wales* sets the context for sustainable land use planning policy in a comprehensive way, whilst the *Technical Advice Notes* provide more specific information on the detailed considerations that should be taken into account. The land use planning system can make a significant contribution to achieving the Assembly's Sustainable Development Scheme, through both the Unitary Development Plan and the development control process, by providing homes, infrastructure, investment and jobs in a way which is consistent with the sustainability principles identified in *Planning Policy Wales*.

2.1.4. The remaining sections of this chapter set out the planning policy context in Wales, firstly addressing the influence of European and UK planning policy on data collection and monitoring in Wales. The last sections discuss the Welsh Planning Policy context, including an analysis of national strategy documents for sustainable development, and the legal and advisory framework for data collection by local planning authorities.

2.2 The European Planning Framework

2.2.1. Land use planning in Wales needs to keep pace with, and ideally anticipate, the emergence of policy developments at EU level, in particular the *European Spatial Development Perspective* (ESDP) (CEC 1999) and important themes within the United Kingdom planning framework.

2.2.2. The European Union has had a direct influence on land use planning at the local authority level in a number of ways. Firstly, local planning authorities need to incorporate legal requirements from specific EU measures into their planning policies, and to

identify critical areas for the special protection of habitats and birds. Secondly, the European Union has influenced development control procedures through the Environmental Impact Assessment Directive, which has obliged all local planning authorities to require and evaluate environmental statements with respect to certain categories of development. Thirdly, the European Union has set new obligations to gather new kinds of data for Structural Fund applications and other action programmes which have broadened the knowledge base of planners and helped to influence the context of development plan preparation. This work will increase in the future since the European Union Directive on Strategic Environmental Assessment came into force in June 2001 and will require a strategic environmental assessment of certain types of plans and projects in all member states by 2004.

2.2.3. Although the *European Spatial Development Perspective* is a non-binding document, it is influencing thinking about how planning should be defined. In particular, it defines 'spatial planning' as incorporating and integrating a broader number of policy areas than the narrow land use regulation definition used in the United Kingdom. This broader definition promotes a consideration of the wider social, economic, environmental and cultural issues of sustainability, many of which are often problematic in attempts to take them into account within the narrow legal definition of land use planning. The Council of Ministers adopted the European Union Sustainable Development Strategy in 2001, which aims to ensure that all policies have sustainability as their core objective. A joint initiative by the European Commission (DG Environment), the European Environment Agency and the European Union Expert Group on the Urban Environment was launched in 2000 to develop European Common Indicators to measure local sustainability. This tool is being piloted in 97 local authorities across Europe.

2.2.4. The spatial planning approach thus promotes the integration of sectoral policies and emphasises the monitoring of cross-cutting policies on economic and social cohesion, the conservation of natural resources and cultural heritage, and balanced regional development.

2.3 Planning and Monitoring in the United Kingdom

2.3.1. There is a wide range of systems of governance in the United Kingdom:

- England, including its eight regions which are in the process of partial devolution;
- Scotland;
- Wales;
- Northern Ireland; and
- other territories: Channel Islands, Isle of Man and others.

2.3.2. The primary legislation related to land-use planning in England and Wales is contained in:

- The Town and Country Planning Act 1990;
- The Planning (Listed Buildings and Conservation Areas) Act 1990; and

- The Planning (Hazardous Substances) Act 1990.

2.3.3. Each of these Acts has been amended by the Planning and Compensation Act 1991. Due to the devolution of planning functions and decision-making to Scotland, Wales and Northern Ireland since 1997, planning systems in the United Kingdom are diverging from the English model. Scotland and Northern Ireland are using their devolved powers for legislation to develop their own national planning frameworks.

2.3.4. Whilst many of the statutory instruments on permitted development, development procedure, use classes, the development plan, and general regulations are common to both England and Wales, there are differences in other areas of land use policy. In particular, there are differences in approach to the release of housing land with *Planning Policy Guidance Note 3: Housing* (2000) in England advising local planning authorities to prepare both an urban capacity study and a housing needs assessment to support the housing policies in their development plan. There are also slight differences in emphasis in policies towards the modernisation of the planning system and in the performance monitoring of the planning service required under the *Local Government Act 1999*.

2.3.5. This Act placed a duty of best value on English local authorities, as well as the police, fire and national park authorities to deliver services to clear standards of cost and quality by the most economic, efficient and effective means available. In England the practice has been to set national targets for a number of the Best Value Performance Indicators, for example that 80% of all planning applications should be determined within eight weeks. There are expectations that local planning authorities will, within five years, strive to reach the performance level achieved by the top performing 25% of authorities.

2.3.6. The Department for Transport, Local Government and the Regions (DTLR) published a Green Paper in December 2001 setting out suggestions for changing the planning system in England. With regards to Best Value, the Green Paper, *Planning: Delivering a Fundamental Change* (DTLR 2002), proposes that high performing authorities will have more flexibility to determine their own Best Value review programmes, with the highest achievers being awarded with additional grants. This contrasts with the approach in Wales, where mandatory indicators have been resisted as inappropriate. The Green Paper includes proposals to rationalise the planning hierarchy with the abolition of county structure plans, the introduction of regional spatial strategies produced by a coalition of public, business and voluntary sector partners, and the designation of business planning zones. Local plans would be replaced by Local Development Frameworks, which would set out the core policies and more detailed action plans for towns and neighbourhoods in need of specific attention. The DTLR has also recently published consultation documents on related issues, such as planning obligations, compulsory purchase, major infrastructure projects and the Use Classes Order.

2.4 Welsh Planning Policy Context

Land Use Planning and Sustainable Development in Wales

2.4.1. Devolution in Wales has given the Welsh Assembly Government the right to implement secondary legislation. The Assembly adopted a Sustainable Development Strategy, *Learning to Live Differently (*2000) as required by *The Government of Wales Act 1998.* The strategy is being monitored on an annual basis with a full evaluation of its effectiveness on a four-year cycle. This section summarises the role that land use planning can play in achieving the vision of a sustainable Wales in *Learning to Live Differently.* The material for this analysis comes from a series of strategy documents and consultation papers, published by the Assembly, covering the management of land use, transport and the promotion of economic and social development.

2.4.2. Two strategic action plans have been published to spell out how the commitments in *Learning to Live Differently* are to be met. The first action plan, *BetterWales.com* (National Assembly for Wales 2000a), was published in April 2000. This set out a wide range of commitments endorsed by the Assembly as a whole, along with a suite of detailed performance measures to be assessed and reported on annually. *The Plan for Wales* (National Assembly for Wales 2001a) supersedes *BetterWales.com* and provides a long-term strategy setting out commitments for the remainder of the current session of the Assembly and a vision for the future. Specific targets are established for both the medium (by 2003/4) and long term (by 2010). Although no measurable indicators are suggested, these targets lend themselves to a number of planning-related sustainable development indicators (see section 3.4).

2.4.3. An objective of *The Plan for Wales* is to 'link together the Assembly's policies and set out a balanced vision for development that benefits all parts of Wales'. The Welsh Assembly Government is committed to establishing a spatial planning framework by 2003 to carry through this strategy, and is currently consulting on the *Wales Spatial Plan: Pathway to Sustainable Development* (National Assembly for Wales 2001b). The function of the Wales Spatial Plan is succinctly set out in the Foreword to this consultation document:

> *Spatial planning helps manage the location of human activities and their relationship to the environment …a spatial plan for Wales is needed to address the strengths and weaknesses of present development patterns, and provide the land use context for achieving the environmental, social and economic objectives identified in the [Plan for Wales 2001].*

2.4.4. The place of the Wales Spatial Plan in the land use planning system is established in section 2.1 of the document, where it is stated that the Plan will, amongst other things:

- support and influence the spatial expression of the policies and programmes of the Welsh Assembly Government and others; and
- provide a strategic context for local planning authority plan-making and decisions, assisting the preparation of unitary development plans, local transport plans and community plans.

2.4.5. *The Wales Spatial Plan* has identified a role for land use planning in enhancing biodiversity, protecting the natural and historic environment, economic development, telecommunications, ensuring that appropriate transport infrastructure is in place, encouraging waste recycling and energy efficiency. The report also identifies those areas where the absence of information on land use change and capability makes forward planning and impact monitoring difficult. Once the content of the Plan is established, the potential for monitoring it, and the associated land use data needs, will become much clearer. It is only through the process of monitoring progress toward sustainability that the Assembly will be able to gauge the successful implementation of its policies and to this end the Assembly is currently developing a range of sustainability indicators.

2.4.6. National Planning Policy in Wales comprises *Planning Policy Wales* together with a series of Technical Advice Notes (TANs), and procedural advice given through circulars. The revised *Planning Policy Wales* (Welsh Assembly Government 2002) was published in March 2002, and sets out the land use planning policies of the Welsh Assembly Government. The purpose of PPW is stated in the foreword as

> *To set the context for sustainable land use planning policy, within which local planning authorities' statutory Unitary Development Plans are prepared and development control decisions on individual applications are being taken* (Welsh Assembly Government 2002a:foreword).

2.4.7. *Planning Policy Wales* establishes some specific objectives and spatial policies for urban and rural areas (such as the promotion of sustainable patterns of development utilising public transport hubs and interchanges, and fostering development approaches which link towns and their rural surroundings) to which local planning authorities should have regard.

2.4.8. Furthermore, the Welsh Assembly Government has also prepared, or is in the process of doing so; several other sectoral strategies with an impact on land use planning. Land use planning has a role in supporting and co-ordinating all the strategies of the Welsh Assembly Government, which relate to the use and sustainable development of land. For example, *The Transport Framework for Wales* (National Assembly for Wales 2001c) has recently been published, and the Welsh Assembly Government is in the process of preparing National Economic Development and Rural Development Strategies. The Assembly intends that its key strategies should not only be underpinned by sustainable development principles but also linked together through spatial planning.

2.4.9. *The Transport Framework for Wales* establishes a vision and a strategy which aims to change travel patterns and transport usage through promoting sustainable transport and working with the land-use planning process to assist the growth of walking and cycling. The Assembly has recently entered into Policy Agreements with all local authorities to monitor bus usage over the next 5 years and to develop the methodology to measure modal shift.

2.4.10. Economic development is also an area with strong implications for land use, travel patterns, and the relationship between housing and employment provision. *A Winning Wales* (Welsh Assembly Government 2002d) is the national strategy for economic development which proposes specific targets for job creation, energy

production from clean sources, and educational achievement. Substantial funds are allocated for road building, enhancing the attractiveness of the countryside and supporting educational initiatives. The overall vision is that society, the strength of the economy and the quality of the environment are inseparable. The strategy will be subject to a sustainability appraisal and broader quality of life indicators of progress will be developed.

2.4.11. The draft *Rural Development Plan for Wales 2000-2006* (National Assembly for Wales 2000b) aims to integrate the rural development strategies with EU funding measures. The Assembly has recognised the need to establish a set of baseline indicators for rural Wales, against which the overall impact of rural development policies can be measured, including indicators on the state of the rural economy and the quality of life of those living and working in the countryside. For 2001/2002, the Assembly has planned a statistical digest on rural Wales on the basis of a range of data (e.g. the new Welsh Index of Deprivation). The collation of this information will particularly focus on those indicators against which the impact of the overall rural development strategy in all regions of Wales can be measured.

2.4.12. Land use planners also have a contribution in implementing the new statutory requirements to review and assess whether Air Quality Management Areas should be designated and to set targets for reducing the overall level of traffic, or the rate of growth in the level of traffic, where appropriate. There is a key role, as well, for planners to contribute to the formulation of a number of local authority strategies, including the Community Strategy, the Local Transport Plan, the Local Agenda 21 Strategy, the Housing Strategy and Operational Plan, the Economic Development Strategy, the Local Biodiversity Action Plan, the Recycling Plan, the Waste Strategy, the Objective 1 Plan, the National Park Management Plan, the Crime and Disorder Act Strategy, and countryside and coastal management strategies. All of these strategies will need to demonstrate good sustainable development practice. They all have planning and spatial impacts.

2.4.13. Local planning authorities in Wales are already significantly involved in monitoring and data collection. The preparation of statutory Unitary Development Plans involves monitoring the size, composition and distribution of the population within the area, their employment, housing, education and leisure needs, and the communications, transport system and traffic of the area. Local planning authorities are also obliged to set performance standards for the planning service in their Best Value Performance Plan and to review their performance against the targets set. To undertake these tasks local authorities need to establish suitable data collection and monitoring systems. The reorganisation of local government in 1996, replacing the 45 county and district councils with 22 unitary and 3 national park authorities, has displaced key staff and expertise in crucial areas such as data collection or GIS, and led to a break in the continuity and comparability of data collection for some authorities.

2.4.14. Following the lead of the DTLR, the Assembly has also been considering the future direction of the planning system in Wales. In the recent consultation document, entitled *Planning: Delivering for Wales* (Welsh Assembly Government 2002b), the Assembly sets out proposals for changes to improve the operation of the plan preparation and planning decision making processes. The Assembly wants to ensure that the planning system is as effective and efficient as possible:

- through open, fair and transparent decisions
- inspire public and business confidence
- deliver improved quality and speed
- integrate with other plans, processes and actions, and
- meet the objectives in *The Plan for Wales*.

2.4.15. The consultation document considers the need for change and proposes shorter development plans to be known as Local Development Plans supplemented with action plans where required. Plans would be prepared to an agreed timetable with new approaches to community involvement, and a full plan review every five years. There are proposals for local planning authorities to review and report annually on the speed of their decision making and the outcomes of the Plan implementation and development control process.

2.4.16. The Assembly has also chosen to accept the principles of the e-Government agenda being developed by the United Kingdom Government to exploit the potential of Information Communications Technology (ICT). This will have a positive aspect on data collection for policy formulation through the sharing of expertise and data and reducing duplication between public sector organisations. New technologies can be used to support the delivery of services to residents and businesses. These service improvements are seen as a public sector target, to join-up government and provide seamless and efficient services.

2.4.17. Ultimately eBusiness needs to be implemented in the public sector throughout Wales, linking the work of the Assembly, local authorities, Whitehall Departments and Agencies and other public bodies to create seamless, informed, and efficient public administration. The aim is also to promote collaboration and joint working with private sector organisations where that would provide access to particular skills, resources, or expertise.

Local Authority Data Collection Requirements

2.4.18. Local authorities in Wales, and in particular local planning authorities (LPAs), have been set specific duties that require the collection and monitoring of data on land use change in order to carry out their responsibilities effectively. Primary and secondary legislation has imposed the preparation of plans and strategies, the reviewing and assessing of land use components, the responsibility for setting targets and finally the duty to maintain specific land-type registers.

2.4.19. On the first of these, local planning authorities have to prepare a Unitary Development Plan (*Town and Country Planning Act, 1990*) and local authorities are charged with preparing a community safety strategy (*Crime and Disorder Act, 1998*), a community strategy (*Local Government Act, 2000*), and a Local Transport Plan and bus strategy (*Transport Act 2000 Commencement No 1 (Wales) Order 2001*).

2.4.20. Local planning authorities must include policies in their development plans that relate to the conservation of the natural beauty and amenity of the land. This includes the protection of wildlife (*Town and Country Planning Act, 1990*) and policies encouraging the management of features of the landscape of major importance for wild flora and

fauna (*Habitats Regulations, 1994*). Local planning authorities have a mandatory responsibility to keep under review whether a Simplified Planning Zone (*Town and Country Planning Act, 1990*) or a Conservation Area designation (*Planning (Listed Buildings and Conservation Areas) Act 1990*) is called for in their area and to review extant planning permissions which are likely to have a significant effect on Special Protection Areas and Special Areas of Conservation (*Conservation (Natural Habitats) Regulations, 1994*). LPAs have a duty to protect trees and woodland using Tree Preservation Orders. Local authorities have a duty to review and assess air quality in their area and where areas are unlikely to meet UK air quality objectives they are required to designate an Air Quality Management Area and to draw up an Action Plan (*Environment Act, 199*5).

2.4.21. Local authorities, thirdly, have responsibility for setting targets for reducing the overall level of traffic, or the rate of growth in the level of traffic, where appropriate (*Road Traffic Reduction Act, 1997*). Finally they must maintain a register of contaminated land (*The Contaminated Land (Wales) Regulations, 2001*).

2.4.22. As part of the national planning policy framework, there are 20 Technical Advice Notes (TANs) that provide guidance on the Assembly's land use planning policies and should be taken into account by local planning authorities in preparing development plans and in determining planning applications. All of the TANs will be reviewed in due course following the recent publication of *Planning Policy Wales* in March 2002. Figure 1 lists the type of information mentioned in each TAN as important for LPAs to consider when formulating their policies for each topic area. The need for data collection is often implicit rather than explicit in these TANs. At present, the TANs do not encourage a holistic or joined-up approach to territorial impact.

2.4.23. The *Unitary Development Plans* guidance (2001), however, advises local planning authorities to undertake a systematic appraisal of the environmental objectives of the plan and an evaluation of the effects of the plan's policies and proposals on the environment. To implement the Minerals Planning Policy guidance, authorities must make an assessment of local, regional and UK needs for minerals, and of the noise and visual impact of workings.

2.4.24. There are furthermore other requirements in place that promote more integrative approaches. For example, in order to implement the Assembly's Waste Strategy voluntary joint regional arrangements have been put in place to prepare regional waste plans by 2003. *The Countryside and Rights of Way Act 2000* for England and Wales places a duty on the Assembly to have regard to biodiversity conservation and to promote conservation action by others.

2.4.25. The Assembly also recognises the need to integrate sectoral policies to achieve sustainable development. The recent consultation paper *Planning: Delivering for Wales* (2002b), in considering the way that planning is delivered, suggests:

- The integration of *Minerals Planning Policy Wales* and *Planning Policy Wales*.
- In the future, Local Development Plans should be backed by rigorous analysis so that they can provide an objective basis for the consideration of planning applications.

- The *Wales Spatial Plan* should have a strong sub-regional context in order to assist decision-making and provide an input to development plans.

Figure 1: Data Collection Advice in Technical Advice Notes

Technical Advice Notes	Advice on Survey and Data Requirements
1. Joint Housing Land Availability Studies	To identify a five-year supply of generally available land for housing using the residual method or past building rates. Criteria used: sites with planning permission for housing or identified in the adopted plan for residential use; availability of necessary infrastructure; market assessment of site including number of residential units.
2. Planning and Affordable Housing	Assessments of need should be based on factors such as local house prices and rents, local incomes, the supply and suitability of existing local affordable housing (low cost market and subsidised housing), the size and type of local households, and the types of housing best suited to meeting local needs.
3. Simplified Planning Zones	No specific surveys or data requirements mentioned.
4. Retailing and Town Centres	Area-wide information which might be useful includes: Population change; Retail provision expressed as total gross floorspace for convenience and comparison or durable goods (clothes, DIY, electrical components, etc). Outstanding planning permissions and known commitments should also be monitored. Retail expenditure in total or per person within the catchment area for a development, a centre, or local authority area. Information of value in measuring vitality, attractiveness and viability of town centres includes: turnover in relation to floorspace, commercial yield on non-domestic property, shopping rents, retailer representation and change, the diversity of uses, accessibility, pedestrian flow, the proportion of vacant street level property, customer views, environmental quality, and perception of safety/occurrence of crime.
5. Nature Conservation and Planning	Nature conservation issues (geology, landform, habitats and species) should be included in surveys of local authority areas.
6. Agricultural and Rural Development	The quality of agricultural land and other agricultural factors, and environmental impacts. For individual sites a re-survey at a larger scale than the Agricultural Land Classification map is necessary to obtain a definitive grade.
7. Outdoor Advertisement Control	Assessment of the advert's impact on public safety and on the behaviour of vehicle drivers.
8. Renewable Energy	For all technologies an assessment on noise and visual impact, and the particular character and sensitivity of the area.
9. Enforcement of Planning Control	The impact on public amenity.
10. Tree Preservation Orders	The interests of amenity.
11. Noise	Implies some noise monitoring at noise sensitive developments

12. Design	A proper assessment of the character of the surrounding built and natural environment; the defining characteristics of each local area; and the needs of disabled people.
13. Tourism	An investigation of the adequacy of facilities for both the static and touring caravanner, and the need to protect the environment
14. Coastal Planning	A general assessment of coastal physical and biological conditions, concentrating on risk, sediment budget and sensitivity issues. Consideration of the quality and character of sites of nature conservation and landscape importance.
15. Development and Flood Risk	The use of section 105 surveys provided by the Environment Agency.
16. Sport and Recreation	Authorities should consider the use made of sites in their ownership.
18. Transport	Studies of the movement of pedestrians should be undertaken, where appropriate, to identify conflicts with vehicular and other traffic, and spare capacity. Data on vehicle emissions and the provision and management of on-street and off-street parking.
19. Telecommunications	Visual issues of siting.
20.The Welsh Language – UDPs and Planning Control	Authorities should consider whether they have communities where the use of the Welsh language is part of the social fabric. Where this is the case, the needs and interests of the language should be taken into account in the formulation of the policies set out in UDPs.
21. Waste	Suggests a strategic and regional approach to data collection work and monitoring of waste. Data required on the type, quantity and origins of waste arisings and existing waste facilities.

3. MONITORING PLANNING DECISIONS AND THE ROLE OF INDICATORS

3.1 Introduction

3.1.1. Monitoring the impact of local planning authority decisions on the way people use land and buildings will be crucial to achieving the Assembly's policies on sustainable development. Monitoring involves the regular collection of information on appropriate variables such as traffic flows, air quality, housing demand and employment levels. If the measurement and recording have been to an agreed standard, this information can then be used to assess whether plan policies are producing more sustainable outcomes.

3.1.2. A set of indicators should be selected, in line with current thinking on sustainability, that emphasise policy actions (quantity of waste recycled, number of protected habitats, use of public transport, reduced CO2 emissions) rather than policy 'processes'. These indicators should measure the direction of change (whether things are getting better or worse). This information could be a powerful tool to demonstrate achievements and inform the review of the UDP.

3.1.3. Technical Advice Notes (see figure 1) identify factors that may be material to the assessment of planning applications and to understand the dynamics of socio-spatial processes within the area. In most cases, there is no specific requirement for the collection of land use planning data, although the collection of certain data, compilation of important statistics and the regular monitoring of key factors (such as housing land, industrial sites, etc.) is fundamental to the effective implementation of statutory responsibilities. The Assembly is currently updating the TANs and Minerals TANs and will publish a good practice guide on sustainability appraisal of the UDP later in the year.

3.1.4. The land use planning system can make a significant contribution to the Assembly's cross cutting themes of sustainability.

3.1.5. The arrangements for assessing the 'best value' performance of local planning authorities should not be confused with indicators for monitoring and the data requirements for implementing *Planning Policy Wales* (2002). Policy and performance indicators do, however, share similar purposes, namely:

a) to measure the extent to which the planning system in Wales contributes to Assembly objectives and priorities, and

b) to enable local planning authorities to compare their planning services accurately and consistently over time.

3.1.6. This chapter, first, summarises the evolution of the performance monitoring of local planning authorities and then goes on to identify the planning policy topics identified in recent Assembly consultation documents as significant measures of sustainability.

3.2 Best Value Performance Indicators

3.2.1. *The Local Government Act 1999* requires local authorities to make arrangements to secure continuous improvements in the provision of services. Authorities are expected to publish an annual Best Value performance plan and to review all its functions every five years. The content of performance plans and the nature of reviews in Wales has been shaped by secondary legislation and guidance. The Welsh Assembly Government has used these powers to set in motion a distinctive 'Welsh Way' to secure service improvements with local authorities through the Partnership Council. Specific agreements include targets for improvements in education, social services, transport and the environment throughout Wales. These agreements last until 2004. The Wales Programme for Improvement will come into effect from April 2002. This will encourage each local authority, with customer input, to carry out an in-depth assessment of its 'fitness to achieve' continuous improvement across all its functions (Welsh Assembly Government 2002c).

3.2.2. Since 2001 the number of best value performance indicators in Wales have been reduced from 172 to 86 to reduce the burden of information collection on local authorities. Figure 2 shows that the number of Welsh Planning Performance Indicators has been reduced in the three financial years from 1999/2000. The indicators cover procedural matters such as speed, efficiency and transparency rather than policy content and implementation.

3.2.3. Two new performance indicators for local planning authorities have been included for 2002-2003, which monitor the existence of a policy document. These are a biodiversity action plan for all local planning authorities and a crime and disorder policy within National Park Authority areas. This is a move towards monitoring the outputs of the planning service rather than the policy process. *Planning: Delivering for Wales* (Welsh Assembly Government 2002b) promises a debate about targets for speed of decision-making and calls for local planning authorities to produce an annual review and a monitoring report on their plan and decision making outcomes.

Figure 2: Selected Best Value Performance Indicators (Wales) with relevance for planning: 1999-2002

Performance Indicators	1999/2000	2000/2001	2001/2002	2002/2003
Development plan (a) adopted or (b) on deposit, and (c) % population covered by local plans adopted in the last 5 years.	(c)	(c)	✓	✓
No. of advertised departures from the adopted plan as % total permissions granted	✓	✓	✓	✓
% total applications determined in 8 weeks	✓	✓	✓	✓
Quality in customer service (10 point Planning Officers Society Wales checklist)	-	✓	✓	✓
% standard (statutory) searches answered in 10 days	✓	-	✓	✓
Planning cost per head of population	✓	✓	-	-
Average time taken to develop all applications	-	✓	-	-
No appeal decisions reported	✓	-	-	-
% appeals that were successful	✓	-	-	-
Standard search fee	✓	-	-	-
Local Biodiversity Action Plan in place?	-	-	-	✓

Source: National Assembly of Wales. The Local Government (Best Value Performance Indicators) (Wales) Orders 1999- 2002

3.2.4. The Planning Officers Society for Wales supports improvements to the planning service in Wales and has been working with the Audit Commission, the Improvement and Development Agency and Syniad to agree a total quality delivery framework. They recommend in *Local Indicators for the Policy Planning Service* (The Planning Officers Society Wales 2002) that land use planning indicators should have a more balanced mix of indicators that include inputs, process and output measures (Figure 3).

3.2.5. They suggest that local planning authorities should pick 10 indicators from across the three categories of process, output and outcomes. Some of the outputs suggested in Figure 3 could be used as proxy measures that a local planning authority was adhering to a particular Assembly policy requirement. For example, asking questions about the range of criteria included within a Sustainability Appraisal or whether the broad policies in Part 1 of the Unitary Development Plan meet the guidance in *Planning Policy Wales*. These do not, however, go far enough. They do not help us to answer the question: What difference has the plan made to the sustainable management of land and buildings?

Figure 3: Planning Officers Society for Wales: Indicators to Monitor Planning in Wales

Process	Output	Outcome
Cost: Printing plan Total cost of UDP Inquiry Labour cost of preparing each stage	**Consultation:** Number of different modes used? Customer satisfaction survey results	**Policy Monitoring:** To determine their effectiveness every 2 years? To determine their impact on equal opportunity? To determine their impact on sustainability? Are they meeting their objectives?
Speed: Time of each stage and adoption For a new plan To modify an existing plan	**Environmental/Sustainability Appraisal:** Range of criteria use? Was there policy re-appraisal with policy changes?	**Is the plan up to date?** Replaced or altered in the last 5 years if necessary?
Managing the Process: Is project management evident? Are timescales/tables met? Has a best value approach to preparation been adopted?	**Monitoring:** How often reviewed? Monitoring report annually?	**Consultation:** How far have objections been taken into account? How many responses? What range of responses? Number per individual policy as % of total received?
	Quality of Policy Effectiveness: Part 1 policies meet government guidance? Part 2 policies meeting individual objectives? Plan meeting Corporate aims? % of all policy areas having targets? Is the plan on the web site?	

Source: The Planning Officers Society in Wales 2002

3.3 Emerging Planning Policy Indicators in Wales

3.3.1. *The Plan for Wales 2001* and *Planning Policy Wales* (2002) set a broad agenda for the planning system in Wales. The Assembly is consulting on new priorities for the land use planning system through the ideas contained within the draft *Wales Spatial Plan - Pathway to Sustainable Development* (2001). This section introduces the priorities, the indicators and targets identified so far by the Assembly.

3.3.2. *Planning Policy Wales* identifies 18 key planning policy objectives which local planning authorities should take into account in the preparation of their Unitary Development Plan and in the control of development. These are summarised in Figure 4. *Planning Policy Wales*, thus, establishes a framework on which the systematic monitoring of planning policy content might be based in that it sets out:

- principles (such as respect for environmental limits and the precautionary principle),
- key general policies that emphasise outcomes (such as contributing to climate protection by encouraging land uses that result in reduced emissions of greenhouse gases), and
- a range of objectives relating to the natural and built environment, housing, the economy, retailing and town centres, tourism, sport and recreation, transport, environmental infrastructure and telecommunications and environmental risks and pollution.

Figure 4: Planning Policy Wales (2002): Key Planning Policy Objectives

- Promote resource-efficient settlement patterns that minimise land-take and urban sprawl.
- Locate developments so as to minimise the demand for travel, especially by private car.
- Contribute to climate protection by encouraging land uses that result in reduced emissions of greenhouse gases.
- Minimise the risks posed by, or to, development on or adjacent to, unstable or contaminated land and land liable to flooding.
- Play an appropriate role in securing the provision of infrastructure (e.g. water, waste facilities, energy, telecommunications) whilst ensuring proper assessment of their sustainability impacts.
- Contribute to the protection and improvement of the environment, so as to improve the quality of life, and protect local and global ecosystems.
- Help to ensure the conservation of the historic environment and cultural heritage, acknowledging and fostering local diversity.
- Minimise the use of non-renewable resources, and, where it is judged necessary to use them, maximise efficiencies in their use.
- Encourage opportunities to reduce waste and all forms of pollution and promote good environmental management and best environmental practice.
- Ensure that all local communities have sufficient good quality housing for their needs, including affordable housing for local needs and for special needs where appropriate, in safe neighbourhoods.
- Promote access for employment, shopping, education, health, community, leisure and sport facilities and open and green space, maximising opportunities for community development and social welfare.
- Foster improvements to transport facilities and services, which maintain or improve accessibility to services and facilities, secure employment, economic and environmental objectives, and improve safety and amenity.
- Foster social inclusion by ensuring that full advantage is taken of the opportunities to secure a more accessible environment for everyone which the development of land and buildings provides.
- Promote quality, lasting, environmentally sound and flexible employment opportunities.
- Support initiative and innovation and avoid placing unnecessary burdens on enterprises, helping businesses to maximise their competitiveness.
- Respect and encourage diversity in the local economy.
- Promote a greener economy and social enterprises.
- Contribute to the protection and, where possible, people's health and well-being as a core component of sustainable development.

Source: Welsh Assembly Government 2002a: 12-14

3.3.3. *The Plan for Wales 2001* identifies specific targets and sets timescales for the achievement of some of these objectives. In particular, the land use planning system is identified as having a contribution to make to achieve the following targets:

By 2003/4:

- Support Rural Wales by promoting integrated tourism, leisure, community regeneration and environmental projects. One suggestion is to increase substantially the area of land covered by an agri-environmental scheme or registered as an organic scheme.
- Reduce number of days falling below air quality standards from 29 days to 22 days.
- Increase the percentage of municipal waste being recycled or composted to 15%; with a minimum of 5% being either composted or recycled.
- Ensure all new social housing meets Lifetime Home standards.

By 2010:

- Ensure the number of days below national air quality standards falls sharply.
- Recycle at least 40% of municipal waste (3% recycled in 2001).
- Enable about a quarter of commuting to work to take place by means other than the car, compared to about a fifth in the late 1990s;
- The populations of wild birds that are now in decline must have stabilised or started to rise.
- 10% of electricity production in Wales to come from clean energy sources.
- Complete the Natura 2000 Network in Wales to protect the most important habitats.

3.3.4. *The Transport Framework for Wales* (2001) adopts 4 key indicators to monitor the annual progress of the Assembly's transport policy. These are changes in:

- travel time variability and journey times for all journeys
- how people travel to work or school
- road casualties
- accessibility to bus services or essential services.

3.3.5. These are the current objectives, targets and indicators the Assembly proposes to use to give direction and to monitor the spatial impacts at national, the regional (jointly), and the Unitary or local level. They are influenced by the broad definition of spatial planning in the *European Spatial Development Perspective* and the new Welsh statutory responsibilities to achieve sustainable development.

3.4 Sustainable Development Indicators for Land Use Planning

3.4.1. Figure 5 lists the sustainable development targets suggested in *The Plan for Wales*, which relate to the tasks and responsibilities of land use planning identified in *Planning Policy Wales*. This is presented as a framework to aid the selection of indicators.

3.4.2. As yet, these new priorities have not been translated into indicators or targets and are not yet contained in any agreements with local planning authorities. Many of the new statutory responsibilities at local level for air quality monitoring and reducing traffic growth are local authority corporate responsibilities and will need to be driven by a Local Authority's Corporate Management System and the Corporate Plan with data requirements and monitoring provided by specified services. Many of these objectives are shared with other partner agencies. For example, the Environment Agency (Wales) includes waste arisings as one of their headline indicators to measure the overall state of the environment[1].

3.4.3. One possible addition to this list could be an indicator monitoring the amount of new housing that is built on previously developed land. This is a key indicator for land use planning in England. The UK Government's strategy for sustainable development (DETR 1999a) has 15 headline indicators to measure the progress in achieving national priorities and a menu of 150 sustainable development indicators (DETR 1999b, DETR 2000). The Audit Commission in co-operation with the Improvement and Development Agency has sponsored a UK pilot study to test 32 crosscutting quality of life indicators. A report on the project is due later this year. The Audit Commission and Improvement and Development Agency website[2] provides a library of performance indicators with definitions that has proved helpful to local authorities wishing to develop appropriate local sustainability Performance Indicators for inclusion in their performance plans and community strategies.

[1] http://www.environment-agency.gov.uk/yourenv/indicators/
[2] www.idea.gov.uk

Figure 5: Possible Land Use Planning Indicators

Topic Areas	Land Use Planning Targets	Possible indicators
Rural Issues	• Increase substantially the area of land covered by an agri-environmental scheme or registered as organic	• Area of land covered by agri-environmental or organic schemes.
Transport	• 25% of commuting to work by means other than the car by 2010. • Increase by 80% the amount of freight moved by rail • Increase the amount of walking and cycling for necessary journeys	• Proportion of commuting to work by means other than the car • Total volumes of traffic by type. • Average distance travelled by person per mode. • Access to public transport. • Travel time variability and journey times for all journeys.
Housing	• Ensure all new social housing meets Lifetime Home standards by 2003/4.	• Proportion of new social housing meeting Lifetime Home standards
Environmental Quality	• Reduce the number of days falling below air quality standards from 29 days to 22 days by 2003/4 and ensure the number continues to fall sharply by 2010. • The populations of wild birds now in decline must have stabilised/ started to rise by 2010 • Complete the Natura 2000 Network	• No days falling below the air quality standards • Number of protected habitats in the Natura 2000 Network • Population of wild birds
Waste Planning and Energy	• Recycle at least 40% municipal waste by 2010 • 10% of energy to come from clean sources by 2010	• Proportion of municipal waste being recycled or composted. • % total energy generation from renewables.

Source: Derived from National Assembly for Wales 2001a

3.5 Co-ordinating Data Collection and Monitoring in Local Authorities

3.5.1. Local planning authorities are required to report on a range of performance indicators under the best value regime and it is important to ensure that there is strong inter-connection between the performance and policy monitoring regimes they may have to report to. Some Welsh authorities are using their own crosscutting performance indicators as a diagnostic tool to secure continuous improvements in corporate services. There is value in having a small core of national sustainable development performance indicators complemented by locally defined performance indicators. Local planning authorities are operating in an increasingly complex data environment, and in an era where evidence based decision-making has rightly put a premium on good quality data. The need for a systematic approach to the multiple requests and uses of data from all sides of the statutory sector has never been more apparent. The Local

Government Data Unit (Wales) will have a key role in co-ordinating the approach to indicators selection and data collection (see figure 6).

Figure 6: The Local Government Data Unit (Wales)

In May 2000, the Partnership Council (between the National Assembly for Wales and Welsh local authorities) agreed that a Local Government Statistical Unit should be established. This decision was made as a result of responses to the consultation paper on local government data that had been issued earlier in the year. The Local Government Data Unit (Wales) has been in operation since April 2001 and from January 2002 became the definitive source for advice and guidance on performance indicators – co-ordinating the responses of the National Assembly, Syniad, the Audit Commission and auditors.

The Local Government Data Unit will have a central role for advice, guidance and clarification of performance indicators in Wales. The current focus of the Unit's work is to provide direct support for local authority interest in statistical issues, but without compromising the autonomy of local authorities. This means the Unit is currently concentrating on:

- Advisory services;
- Managing and developing work on benchmarking databases;
- Rationalising the data gathered by national organisations;
- Co-ordinating the collection and dissemination of performance indicators;
- Liasing with national and other bodies on matters relating to the collection, analysis, and dissemination of local government statistics;
- Setting up mechanisms for producing consistent and meaningful small area statistics across Wales;
- Undertaking and publishing findings from the April 2001 Census of Population relevant for local authorities in Wales;
- Updating and refining the Welsh Index of Multiple Deprivation;
- Adding value to existing and new data through research and specifically commissioned analyses.

4. LAND USE DATA, MONITORING AND INFORMATION SYSTEMS IN WALES

4.1 Introduction

4.1.1. There are a number of land use data, monitoring and information systems currently in operation at the national and regional level in Wales. Many of these have a statutory basis, and provide well-resourced and understood systems of data collection. The responsibility for aggregating or collecting the data lies with different bodies, which are in turn discussed in the following sections.

4.1.2. The material for this chapter has been collected from interviews with national agencies and a review of key documentation. It is essentially a descriptive chapter that sets the context for the analysis of data collection at local authority level in chapter five.

4.2 Welsh Assembly Government

Development Control Statistics

4.2.1. The concept of collecting data on planning applications goes back to the 1980s. The Assembly Government's Planning Division undertakes a quarterly survey of all 25 local planning authorities to ascertain the number of applications received and the number and the dates at which applications were determined by the local authority. Local planning authorities are asked to compile information for major and minor developments by type (dwellings, offices, industry, retail/distribution, waste disposal, other) and for minerals, general regulations, householder, and advertisements applications.

4.2.2. This is a systematic survey with a procedure note that briefly defines the terms used and with a statutory requirement to return the forms. The Planning Division calculates the percentage of applications determined in 8 weeks and this information forms the basis of a report published via the Assembly's Web site. These data exchange transactions between local authorities are carried out in a paper format, although most local authorities hold their data on a database and/or GIS (see sections 5.5 and 5.6). The information is then extracted by a planning officer in the LPA, and submitted to the Assembly, which introduces the possibility of human error during the manual completion of forms in the authority and the transference from form to database in the Planning Division. Virtually all local authorities complete the form. As it is the case in England, arithmetic and consistency checks are undertaken on the returns.

Housing

4.2.3. The Assembly holds a variety of information on housing in the form of the Welsh Housing Statistics, Welsh Housing Condition Survey and the Registered Social Landlord indicator returns, although not all of them are strictly speaking land use data. The Statistical Directorate is responsible for these data sets. The Welsh Housing Statistics is an annual publication of statistics, which includes information derived from the housing returns made by local authorities and registered social landlords. The statistics cover stock, rent levels, housebuilding, grants and clearances. The time series goes back to 1980/81 and is available at local authority and aggregated levels.

4.2.4. The Welsh Housing Condition Survey is published by the Statistical Directorate and is based on a sample household survey, which has been published almost on a five yearly basis since 1976. The last year of survey was in 1998 when 40,000 households were covered and 12,000 dwellings were surveyed. The next survey is planned to start in 2003. Although the survey is useful for monitoring at the national level, its value is limited for local authorities because definitions have changed, the lack of data below local authority level, and because of the relatively small sample size. The next survey is being undertaken by the LGDU using seconded expertise from the Assembly.

4.2.5. The Planning Division within the Welsh Assembly Government also maintains the records on Welsh Housing completions. One general point about the new build figures in this data set is that they include conversion gains arising from changes in use of previously commercial buildings. They do not include figures for conversion gains (or losses) from adapting existing dwelling stock. Another general point is that there is a recognised problem in identifying the precise number of dwellings completed. Partly because of the slight variations in the definition of a 'completed dwelling' used, but mainly because of the reliance on estimating this through building completion certificates which are sometimes completed after the dwelling has been occupied, or even not completed at all. There are also problems in identifying new build for Registered Social Landlords (RSLs) for rent; there are no figures for other types of provision of affordable housing.

Commercial Property Registers

4.2.6. At national level there are two data sets on industrial sites. The Assembly Planning Division carries out a periodic survey of industrial sites to monitor the availability of industrial development land. The Welsh Development Agency's Land Division updates the Wales Property Register on a quarterly basis as an inward marketing tool (see section 4.3).

4.2.7. The Planning Division of the Welsh Assembly has for many years carried out Industrial Sites surveys, the most recent in 1997 and 2001. The survey is used to inform policy development and development control decision-making on the availability of industrial land throughout Wales, and is available on request. The latest survey results were intended also to inform work on the *Wales Spatial Plan*. Every local planning authority was asked to complete a data audit form, in paper format, and to submit an Ordnance Survey site plan for each industrial site. This asked for information on grid reference, net site area, availability (immediately, within one year, within two-three years,

upwards of three years), ownership (WDA, local authority, other public sector, other), local authority site classification (strategic, contingency, hi-tech, greenfield, redeveloped), planning status (structure plan, local plan, use class, planning permission) and constraints on development. No specific guidelines were given to local authorities on how to define the different categories on the form. The data will be analysed and site plans input in a GIS package for use as a database within the Assembly.

Transport

4.2.8. The Assembly has statutory responsibility for the maintenance and improvement of the trunk road and motorway network in Wales and the unitary authorities for the remaining public highways. The UK Government has the statutory responsibility for rail, shipping and air services. There is good national coverage of statistics on road length, road accidents and motoring offences (National Assembly for Wales 2001d). This is supplemented by road counts collected by the Department of Transport, Local Government and the Regions to estimate changes in the volume of traffic by unitary authority, road type and vehicle type.

4.2.9. The DTLR provides the Assembly with data on new registrations and licensed vehicles annually. Their Vehicle Information Database is updated monthly from the Driving and Vehicle Licensing Agency records. The data can be disaggregated into body-type and taxation class. Additional data on engine size would be a useful indicator of policies encouraging people to buy smaller, more environmentally friendly cars if this was collected.

4.2.10. Taking public transport, there is a range of information available about bus transport in Wales, with some gaps about quality of service and users' views. There is little publicly available data about rail transport in Wales. This is because the data collected by rail companies is considered to be too commercially sensitive for public release (National Assembly for Wales 2001d). The increase in the sample size in Wales of the DTLR's National Travel Survey from 2002 will give scope for more reliable estimates of personal travel behaviour, attitudes towards bus services and the time to nearest bus and rail services.

The Census

4.2.11. The 2001 Census of Population will be available in early 2003 and will provide a new benchmark for several indicators relevant to land use planning. New themes on modes of travel to work, ethnicity, gender, religion and local area data have been added. The census data will also include information on towns and cities defined on a land use basis and for the rural areas outside them, as distinct from administrative areas.

4.2.12. The Statistical Directorate intends to create a small area database for Wales comparable with other parts of the UK, which can be extended using estimation techniques, to provide a wider range of estimates.

Neighbourhood Statistics

4.2.13. The need for better small-area data in Wales is a recurring theme in many areas of policy and has been raised in public consultations and by Assembly Committees. The proposed *Wales Spatial Plan* will need to draw on small area statistical data wherever possible. The Welsh Assembly Government has therefore decided to participate in the Neighbourhood Statistics project, an interdepartmental initiative under the National Strategy for Neighbourhood Renewal in England. The principle of Neighbourhood Statistics is to freely provide public sector bodies with advanced computer software that will allow administrative records to be accurately and easily allocated to precise geographical locations, with the aim to have data for areas as small as 100 households.

Welsh Index of Multiple Deprivation

4.2.14. The Statistical Directorate is also responsible for the LGDU Welsh Index of Multiple Deprivation. This is derived from administrative data as far as possible with gaps covered with estimates modelled from household survey of figures taken directly from 1991 Census data. This provides multiple deprivation rankings on the 6 dimensions (low income, worklessness, poor health, low educational attainment and housing deprivation, geographical access to services) for the 865 electoral divisions. One edition has been published so far in 2000. It gives data down to community level for 865 communities across Wales.

4.3 Government Agencies

Housing Land Availability Studies

4.3.1. This is a joint centralised process of data collection and an analysis against assessments of housing need and consensual commentary, managed by the Welsh Development Agency (WDA) for the Welsh Assembly Government with data sets going back to the 1980s. Joint Housing Land Availability Studies (JHLAS) are undertaken throughout Wales, and play an important role in carrying forward UDPs and decision-making in planning inquiries. A revised format for collection and a more rigorous process was introduced in 1997 when *TAN1: Joint Housing Land Availability Studies* (Welsh Office 1997) 'set clear guidelines for partnership working and the inclusion and categorisation of sites to be considered'. There have been various improvements in data reporting and definitions following the publication of TAN1. The aim of this study (annual for urban or biennial for rural areas) is to ensure that local planning authorities meet the Assembly's requirement to provide a five year supply of housing land for release within each local authority area. The JHLAS provide more than just data collection and include interpretation and commentary.

4.3.2. Only sites above a certain size (10 units in urban areas, 5 in rural) that have been identified for housing through planning permission or inclusion in an adopted plan or programme are considered. The Welsh Development Agency has a dedicated officer for this work who sends out a paper proforma of every site agreed in the authority's previous years schedule which is then amended by the local planning authority. Authorities are contacted throughout the year using staggered survey base dates. Once

the revised list of housing sites is received the Welsh Development Agency organise a meeting with the local planning authority and housebuilders to agree the site classification. Where consensus cannot be reached any dissension is recorded within the report. There are four categories based on market demand, site availability and the likelihood of completing the units within five years. Sites with section 106 agreements can be tracked through the database and increasingly local authorities are classifying sites as either greenfield or brownfield. The WDA has recently agreed that a distinction between greenfield and brownfield land will be included for all future studies, based on the definition in *Planning Policy Wales* (see figure 7). Although a decision has not yet been made for Wales to undertake a similar exercise to the National Land Use Database (NLUD) – Previously Developed Land project in England[3], the inclusion of brownfield and greenfield sites in the JHLAS will possibly partly compensate for this. Furthermore, there will be more consistency regarding the inclusion and reporting of conversions.

Figure 7: Planning Policy Wales: Definition of Previously Developed Land

Previously developed land is that which is or was occupied by a permanent structure (excluding agricultural or forestry buildings) and associated fixed surface infrastructure. The curtilage […] of the development is included, as are defence buildings, and land used for mineral extraction and waste disposal […] where provision for restoration has not been made through development control procedures.

Excluded from the definition are:

- land and buildings currently in use for agricultural or forestry purposes;
- land in built-up areas which has not been developed previously, for example parks, recreation grounds and allotments, even though these areas may contain certain urban features such as paths, pavilions and other buildings;
- land where the remains of any structure or activity have blended into the landscape over time so that they can reasonably be considered part of the natural surroundings;
- previously developed land the nature conservation value of which could outweigh the re-use of the site; and
- previously developed land subsequently put to an amenity use.

Source: Welsh Assembly Government 2002: 24

4.3.3. The Welsh Development Agency also use the weekly lists of planning application details, sent by local authorities, to update the information on housing sites they hold. They aim to publish each study within nine months of its base date. The bespoke Welsh Development Agency database (Property and Planning System) has no capability to let

[3] NLUD is a partnership project between the Department of Transport, Local Government and the Regions, English Partnerships, Improvement and Development Agency (representing the interests of local government) and Ordnance Survey, and is currently undergoing an update in English local authorities. The vision of NLUD is to establish a complete, consistent and detailed geographical record of land use in England.

local authorities update information electronically, nor does it lend itself to electronic exchange of draft studies. Site maps are available but these are not currently in a GIS format. There are some differences in approach between local authorities regarding the estimation of 'windfalls' and whether the use of past building rates or the residual method should be used to identify the housing supply figure. These differences are clearly drawn out in the reporting process, but inconsistencies detract the potential for aggregation of data. Technical Advice Note 1 provides guidance on Housing Land Availability Studies, but local planning authorities would welcome more detailed advice on recording information in order to facilitate the aggregation of data at regional and national level.

Wales Property Database

4.3.4. The Wales Property Database is maintained by the Welsh Development Agency. Unlike the Welsh Assembly Government's Industrial Sites Register, this information is not publicly available. The database was set up around 1990 to support the Welsh Development Agency divisions in their marketing of sites and property. The database has now expanded to include 'all properties being marketed in Wales' and which are in an adopted development plan or have planning permission, above certain site and premises thresholds.

4.3.5. Information is stored by each Welsh Development Agency division (Mid Wales, North, South West, South East) and by local authority area. The emphasis is on offices and industrial land and property, but they also hold information on retail and leisure. Each quarter the Welsh Development Agency circulates their database on sites and property for updating to their divisions, agents, local authorities and landowners in a paper format. Each site and property has a unique reference number, address and postcode but no Ordnance Survey grid reference. Each unit (site/property) is classified by type (office, industrial warehouse, miscellaneous/non-commercial properties, sites, miscellaneous/non-commercial sites, strategic sites), by owner (private, WDA, local authority, joint venture), by market status (available, let, sold, under offer, etc), and by market demand (standard, top drawer, etc).

4.3.6. There are many uncertainties in Welsh local authorities as to what this database contains, and how exactly the information is used. Issues are to do with concern about the duplication of effort with the Assembly's register of Industrial Land, and generally a lack of transparency.

4.4 Environmental Statistics

4.4.1. Environmental data are collected by a variety of public bodies, including the Environment Agency and the Countryside Council for Wales. The Environment Agency collects and publishes a wide range of information on the environment[4] with relation to land use, covering areas such as business and industry, natural forces, pollution, water,

[4] http://www.environment-agency.gov.uk/yourenv/eff/

air, land (landscape, land use and soil), people and lifestyles, resources and waste, and wildlife (Environment Agency 2000). Co-ordinated by the Environment Agency Wales, 17 areas have been identified in Wales for the preparation of *Local Environment Agency Plans*, which aim to produce a local agenda of integrated action for environmental improvement[5]. In addition, the work also includes an environmental overview with relevant development, employment and local environmental data for the area. Many local authorities in Wales are working on *Local Agenda 21 strategies*. As yet, there is little comparative data on their progress with these strategies.

4.4.2. The development of the National Flood and Coastal Defence Database (NFCDD) is a requirement under the DEFRA High Level Targets for flood and coastal defence operating authorities. The Environment Agency has been leading the development of the database since April 2000 and is working in partnership with local authorities and internal drainage boards to ensure its completion. The aim of the NFCDD project is to provide a single easily accessible and definitive store for all data on flood and coastal defences in England and Wales in order to make better-informed decisions on defence needs and measures. NFCDD will be developed in a number of phases over a period of 5 to 10 years, in line with developing knowledge and research in this area. The link between flood risk and land use planning is widely recognised (see TAN 15), and Welsh local authorities increasingly use the available data from the Environment Agency in determining planning applications. However, in many cases the current data set proves not detailed enough to evaluate future impacts on new developments. In these cases the local authorities have to undertake site-specific modelling of flood risk. In order to support these efforts, the Welsh Assembly Government has commissioned research into flood risk assessment methods.

4.4.3. The National Automated Air Quality Monitoring Network has six 'automatic' installations in Wales monitoring air quality as part of the UK urban and rural network of pollutant monitoring. These were set up between 1992-1997 to measure ozone (5 sites), sulphur dioxide (4), PM10 particulate matter (4), nitrogen dioxide (4), carbon monoxide (3), and hydrocarbon (1) levels. Four of the sites are in urban areas (Cardiff (2), Swansea, Port Talbot) and two are in rural areas (Pembrokeshire and Powys).

4.4.4. The Department of Environment, Food and Rural Affairs and the Welsh Assembly Government publish surveys of agriculture, land prices, and municipal waste management. Some of the data are currently only available at an all Wales level.

4.4.5. A comprehensive landscape assessment initiative, *LANDMAP* (CCW 2001), was launched in October 2001, which aims to integrate the ecological, landscape and cultural aspects of the countryside in Wales. Devised by the Countryside Council for Wales with the Wales Landscape Partnership Group, *LANDMAP* identifies and evaluates areas of landscape in five ways: its landforms and rocks, its vegetation and habitats, how it looks and feels, its history and archaeology, and its culture. This information is then used to help decide how best to manage particular localities. It is already underway in sixteen local authority areas and the three National Parks in Wales. Information on various subjects (Visual, Wildlife, History, Culture, Earth Science, and also socio-economics and agricultural land) is collected either by or on behalf of local authorities and presented as separate layers within the GIS package MapInfo.

[5] http://216.31.193.173/leaps/index.htm

4.5 Regional Working Groups

4.5.1. Local authorities in Wales have formed transport consortia to co-ordinate a response to transport issues across local authority boundaries where there are common regional interests. For example, in the Greater Gwent sub-region, TIGER (Transport Integration in the Gwent Economic Region) comprises five local authorities. SWIFT (South Wales Integrated Fast Transport) serves six local authorities and includes various transport operators. SWITCH (South Wales West Integrated Transport Consortium) covers five unitary authorities. The Mid-Wales Partnership includes three authorities and the TAITH Consortium in North Wales includes six authorities.

4.5.2. There appear to be various practices followed for the collection of transport data. The Gwent Consultancy, for example, collects certain data, collates them, and distributes them to the constituent local authorities. In other cases, local authorities collect and submit data to the consortium for collation and use at the sub-regional level. There is evidence of a tendency for transport data to be collected on an ad-hoc basis as and when required. In contrast, the SWIFT authorities are establishing a new programme of transport data collection, to be updated on an annual basis.

4.5.3. Regional Working Groups in four Welsh regions (i.e. South East, South West, North and Mid Wales) also exist on planning, aggregates, economic development and air quality matters. The bodies assemble and collate data, collected either by themselves or, in some instances, the constituent local authorities. The police provide data on accidents and personal injury. There are also a number of agencies that evaluate data initially collected at local authority level (e.g. Glamorgan Engineering Consultancy). All these different sources of data need then to be streamlined and compiled for a higher spatial level. These bodies therefore require data to be compatible across local authority boundaries (see chapter 5).

4.5.4. The agencies and local authorities are largely dependent on the private operators for data on public transport. Data are collected principally for those services, which are subsidised by the local authority. Some of the agencies have commissioned data collection on aspects of public transport through consultants.

5. LOCAL AUTHORITY DATA COLLECTION

5.1 Introduction

5.1.1. As part of the research a data audit was undertaken covering all 22 unitary and three National Park authorities in Wales to establish the extent and current practice of land use data collection and management at local level. The research methodology is explained in more detail in appendix 1. Two local authorities did not participate in the research and for another, third authority, no group interview was carried out although data audit forms were received. The responses to the data audit varied widely across Wales, and partly reflected varying definitions of 'land use planning', and the local urban or rural context. The number of data audit forms returned by the planning liaison officers in each authority varied between a minimum of three forms and a maximum of 39. The differences in the return rate can be partly explained by the staff and time resources available, and the perceived importance of the audit to other departments, in particular transport, economic development and environmental health. Group discussions on the data audit forms were held in each authority with staff from different departments participating. The findings of this research project therefore present an important snapshot of the situation, but they may not necessarily represent the entire set of data collected by Welsh local planning authorities.

5.1.2. A full summary of data collected by Welsh local planning authorities is included in figure 14 in the appendix. This is quite extensive and includes data sets collected in other departments of the authority, such as transport, economic development, countryside services, and environmental quality. It demonstrates the integrative nature of planning, and the reliance on data sharing between departments of the same authority, as well as with outside bodies in order to fulfil planning functions. Many of the data sets are necessary because of national requirements (for example the planning register, Housing Land Availability Study, Air Quality or Tree Preservation Orders), or because they are central to the planning function (for example population projections or traffic counts). The data audit, however, also revealed that each LPA holds data sets, which are particular to the individual authority, such as site specific monitoring of visitor numbers, applicants for funding schemes, or Townscape Heritage Initiatives.

5.1.3. Because of the breadth of data collected by local planning authorities, the analysis of the data audit returns has focussed on the 10 data sets that are collected by the **majority** of local planning authorities (see figures 14 and 15 in the appendix). The remainder of this chapter, therefore, focuses on these data sets, highlighting issues of coverage and gaps, frequency of updates, and the geographical scale at which data are collected. The final two sections of this chapter examine the data management systems in place before making suggestions on the way forward and the help the Assembly can give to local authorities.

5.2 Key Data Sets: Coverage by Topic Area

5.2.1. Data coverage of planning application details, housing land availability and employment land is generally good across Wales (see figures 14 and 15 in the appendix) since these data sets are regularly updated to meet the requirements of the Assembly and the WDA. In many cases, the returns to the Welsh Assembly Government or the WDA on Development Control Quarterly Surveys, Housing Land Availability or Industrial Land are only extracts of far more comprehensive in-house data sets. For example, some authorities have included their own greenfield / brownfield definitions in the data sets on Housing Land Availability (e.g. Cardiff, Conwy).

5.2.2. There are significant gaps, however, in planning data, which respond to new requirements (e.g. Housing Needs, Brownfield Land or contaminated land data sets). Less than half of the authorities are collecting these data sets. There are, however, several initiatives for data collection underway or planned by local authorities which will increase the coverage of these data sets. For example, a Housing Needs Survey is currently underway or planned in Powys County Council and Flintshire County Council. Where the study has been undertaken already, there have sometimes been problems with the methodology used, and ultimately with the reliability of the data (e.g. Pembrokeshire County Council). Work is also being done on collecting data on potentially contaminated land in some authorities (e.g. Blaenau Gwent County Borough Council, Flintshire County Council). For some local planning authorities, however, contaminated land surveys might not fall into their remit, but will be the responsibility of other departments or agencies and then be shared with the LPA. Generally, however, undertaking a comprehensive countywide survey represents a significant strain on the limited resources of many local authorities.

5.2.3. The LANDMAP initiative, co-ordinated by the Countryside Council for Wales, has been underway since October 2001 (see section 4.4). Not all local authorities in Wales have decided to participate in the project, and to assess their landscape character using the LANDMAP methodology. Hence, a complete coverage of LANDMAP data for all of Wales will not be available at any stage. Work has been phased, and therefore some authorities have completed their first phase already (e.g. Snowdonia National Park Authority), whereas others are only now starting work on the project (e.g. Powys County Council). Some authorities are introducing CAMS - Countryside Access Management System at present, which will replace and modernise data on public rights of way.

5.2.4. However, relevant data for land use planning seems to be missing in several local planning authorities. In particular, data is missing in the field of transport, for example on modal split and the use of public transport information. Although this is data, which will be crucial for work on Local Transport Plans and for UDP reviews, many authorities do not hold sufficient information in this area. Similarly, information on sites, species and habitat is not available in every local authority in Wales (or, in some cases, has not been updated for 10 or 15 years), although these data are an important component of a Biodiversity Action Plan, and also relevant to development control in assessing planning applications.

5.3 Key Data Sets: Geographical Scale of Data Collection and Sharing of Data

5.3.1. Most local authority data are collected at land parcel or property level (see figure 8). In many cases, data collected by local planning authorities is used by a number of public and private sector agencies at national and regional level in Wales (see figure 9 and chapter 4). For example, air quality data, collected at local level, are passed on to both the Regional and National Air Quality Fora, where the data are aggregated. Information on Industrial or Employment Land and Housing Land Availability is passed on to both the Welsh Development Agency and the Welsh Assembly Government.

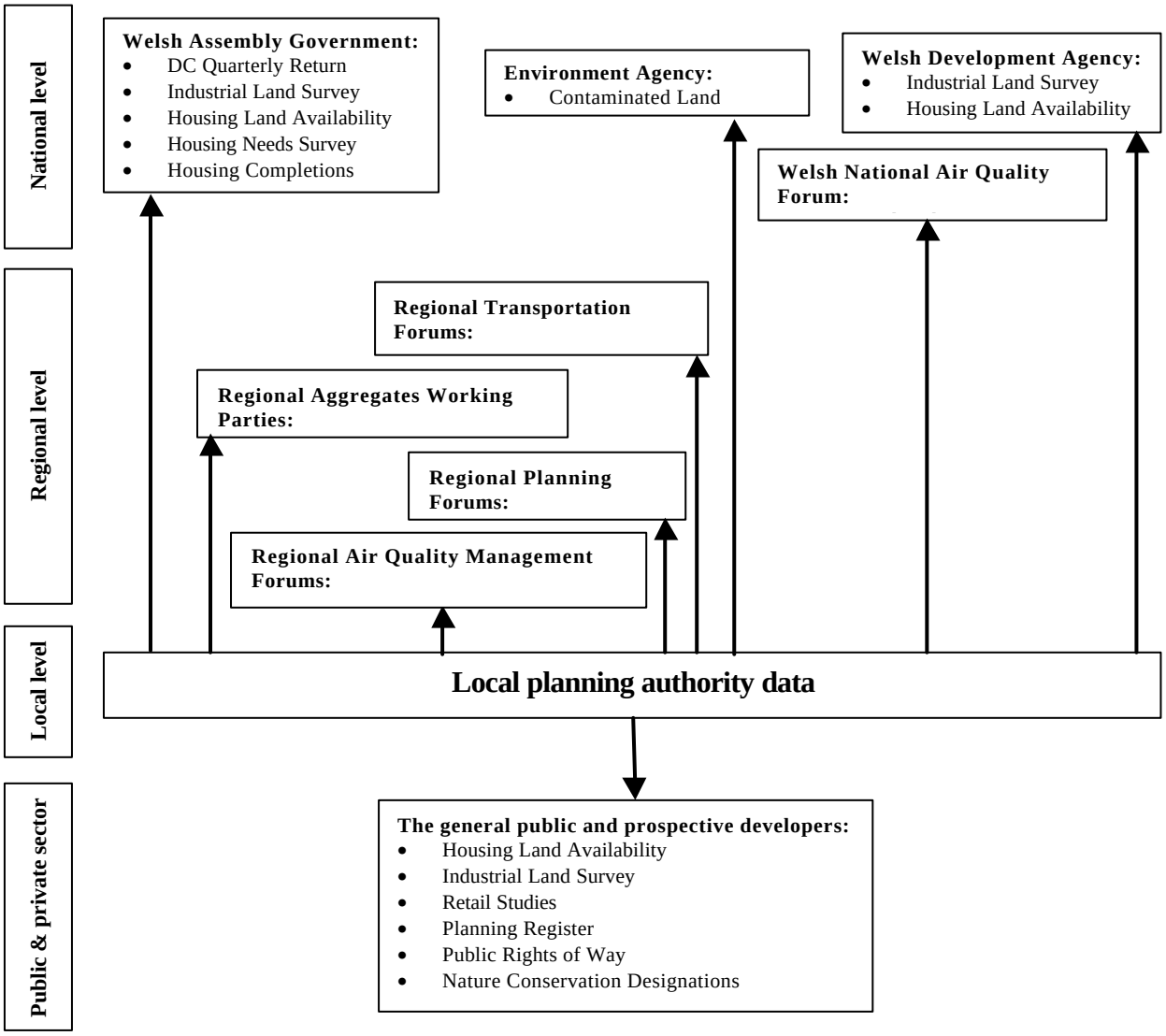
Figure 8: Geographical Scale of Data Collection by Key Data Set – Number of LPAs[6]

	Planning register	JHLAS	Housing Needs	Land Resources	Contamina-ted Land	Modal Split	Industrial Land	Landscape assessment	Air quality	Biodiversity information
Property or Land Parcel	10	10	0	3	3	1	9	5	2	2
Street	2	0	0	0	1	0	0	0	1	0
Unitary Authority	7	7	1	1	1	2	4	1	2	3
Not specified	2	3	3	4	1	1	1	6	3	4
No return	2	3	19	15	17	19	9	11	15	14

5.3.2. Although figure 9 is indicative, it gives a good impression of the growing importance of the regional level in Wales for data collection and storage. There are four Regional Planning Fora (i.e. South East Wales Strategic Planning Group, South West Wales Strategic Planning Group, North Wales Regional Planning Group, and Mid Wales Regional Planning Partnership) which are concerned with policies and impacts at supra-local scale, such as transport, air quality, minerals and economic development. Both the data flows to regional and national level emphasise the significance of common standards of data collection and storage that local planning authorities need to adhere to in order to allow aggregation of information for a larger spatial entity.

[6] Out of 23 participating local planning authorities. The return rate for data audit forms varied for each data set.

Figure 9: External Users of Data Collected by Welsh Local Planning Authorities[7]

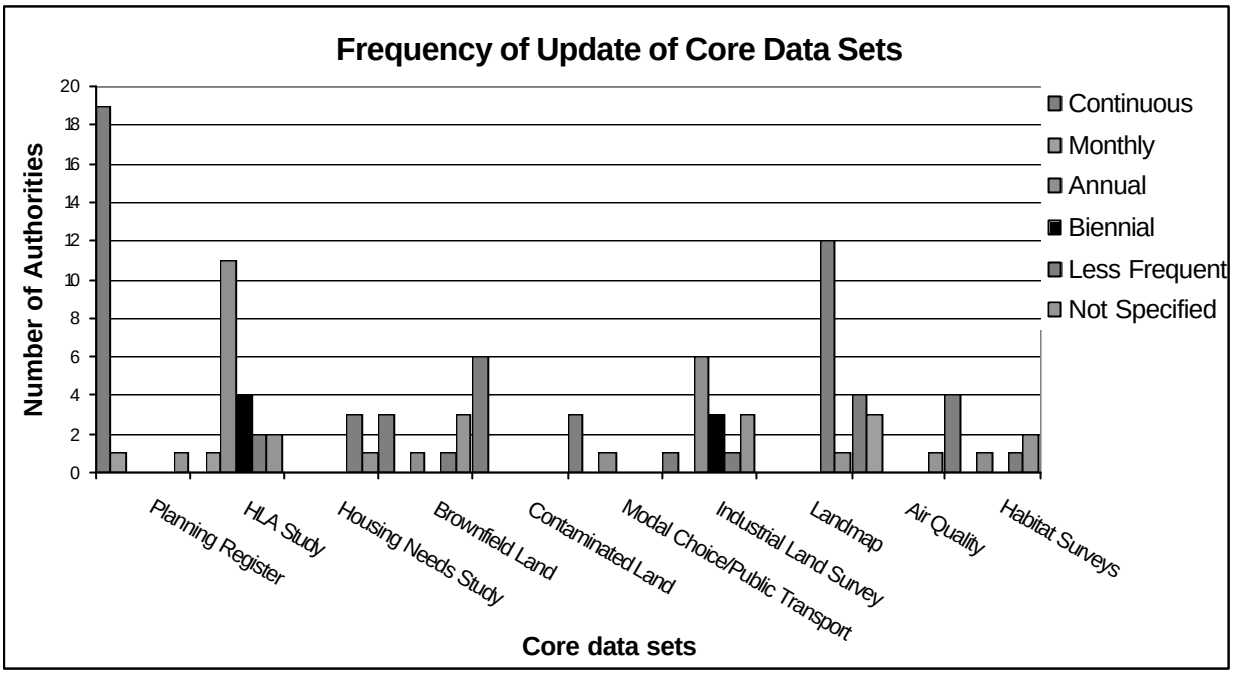


5.4 Key Data Sets: Frequency of Updates and Costs of Data Collection

5.4.1. There is wide variation in how often land use data sets are updated (see figure 10). Not surprisingly, the planning register is updated continuously when planning applications are processed. In contrast to this, the frequency of updates for LANDMAP data has yet to be determined. The data audit reveals that the frequency of update for the Housing Land Availability Study ranges from monthly, annual to biennial or less frequent updates. This is particularly surprising, as according to statutory requirements local authorities have to contribute to either a biennial (for rural areas) or annual (for urban areas) report.

[7] This is not a definitive list of bodies receiving and using local authority data. It reflects the data links identified in interviews with Welsh local planning authorities.

Figure 10: Frequency of Update of Key Data Sets



5.4.2. The cost of data collection and management is generally impossible or very difficult to quantify for local authorities. Updates and management are often part of the everyday process (e.g. input of planning application information), and according to planning officers no attempt has been made to calculate the time and cost implications. There are different mechanisms in place for data collection. Some authorities work together with volunteers and placement students to bring their data sets up-to-date and still keep their costs low. This seems to be particularly relevant in areas such as retail surveys (which are often done by placement students), or biodiversity, habitats and species information (for which some local authorities consult with interest groups and volunteers in the local area). In contrast, in most local planning authorities one dedicated officer is responsible for undertaking the Joint Housing Land Availability Studies (JHLAS). New and comprehensive surveys (rather than updates), as for example Housing Needs Studies, generally require a significant investment of funding and time resources. Local authorities are therefore generally able to quantify the cost for new surveys, or those areas which require one dedicated full-time member of staff such as the JHLAS. Costs are also quantifiable if data collection is undertaken by external consultants or companies. For example, most local authorities have out-sourced their traffic counts and are thus able to give detailed information on the cost of data collection.

5.5 Data Management Systems in Place

5.5.1. Some authorities have comprehensive and corporate data management systems in place, for example Cardiff, Denbighshire, Snowdonia, Swansea. The situation in other authorities is more complicated with different departments using different systems (which are not necessarily compatible or networked), or the authority still relying on a paper-based system of data management. Authorities are aware of these problems and are working to address the situation with GIS Working Groups, set up to decide and implement the corporate approach to purchasing and using a GIS package and giving advice to individual departments.

5.5.2. It should be noted that the area of data management and use of Geographic Information Systems has been significantly affected by local government re-organisation in 1996. Many LPAs lost expertise on data collection, management and storage in the process. Furthermore, in many cases the re-organisation also affected the financial situation of local authorities negatively, thus complicating the investment in a corporate GIS and staff training.

5.5.3. Figure 11 summarises the format in which data is held for the ten **most comprehensive** data sets. The majority of local authorities still hold their data on Housing Land Availability and Employment or Industrial Land Survey on paper only. In comparison, the Countryside Council for Wales provides financial assistance to LPAs for LANDMAP, and provides the data set in GIS format, which is therefore the most popular data format for this data set.

Figure 11: Format of Key Data Sets – Number of LPAs[8]

	Planning register	JHLAS	Housing Needs	Land Resources	Contamina-ted Land	Modal Split	Industrial Land	Landscape assessment	Air quality	Biodiversity information
Paper report only	4	5	1	2	2	2	6	0	3	3
Database only	3	3	1	0	0	0	1	0	3	1
Spreadsheet only	1	1	0	0	0	0	1	0	0	0
GIS only	0	2	0	4	1	0	1	5	0	1
Paper report & database	1	1	1	0	0	1	2	0	1	1
Paper report & GIS	0	3	0	0	2	0	0	3	0	0
Database & GIS	7	0	0	0	0	1	1	1	0	1
Paper, database & GIS	4	4	0	1	0	0	2	2	0	0
Not specified	1	1	1	1	1	0	0	1	1	2
No return	2	3	19	15	17	19	9	11	15	14

5.5.4. In addition to the formats listed here, several local authorities have also made some of their data sets publicly available on the Internet, in line with recent efforts to move towards e-government. This is particularly the case for data sets which are asked for frequently by the public (see figure 9). For example, Caerphilly County Borough

[8] Out of 23 participating local planning authorities. The return rate for data audit forms varied for each data set. Multiple answers were possible.

Council has made the planning register available on their website. In Conwy County Borough Council and Cardiff County Council, population estimates and projections are online, and Carmarthenshire County Council has made a variety of data sets available for download via their council website (e.g. the Welsh Index of Multiple Deprivation, Local Bus Service Information, Labour Market Statistics, VAT Business registrations and de-registrations and annual business inquiry data).

5.5.5. Despite the dominance of paper-based data formats (in many cases in the form of OS-based maps), the majority of the ten key data sets are geo-referenced using the national grid-reference system (see figure 12). As an exception to the rule, Ceredigion County Council uses polygons for geographical referencing. Generally, the geo-referencing of data will be a very valuable starting point for local authorities that wish to move their data sets onto a GIS. In many local authorities, planning officers seem to have been the driving force in introducing a GIS or digitising data. Often the responsibility for, or guidance on, cross-cutting data management issues has been promoted and informally taken over by the planning department, although in all authorities an IT department exists which is officially responsible for these matters. This has to do with the integrative nature of planning, and the benefits that joined-up data collection, management and storage will bring in particular for local authority planners.

Figure 12: Geographical Referencing of Key Data Sets – Number of LPAs[9]

	Planning register	JHLAS	Housing Needs	Land Resources	Contamina-ted Land	Modal Split	Industrial Land	Landscape assessment	Air quality	Biodiversity information
National Grid Reference	13	8	0	2	3	1	8	2	3	4
Polygon	0	1	0	1	0	0	1	1	0	1
Postcode	1	0	1	0	0	0	0	0	0	0
Address	1	7	0	3	0	1	1	0	2	0
Local Authority	2	1	2	1	0	1	1	3	1	2
Not specified	4	3	1	1	3	1	3	6	2	2
No return	2	3	19	15	17	19	9	11	15	14

5.5.6. Many local authorities have only recently begun to concentrate on decision monitoring, as a reaction to requirements set out in *Unitary Development Plans,* (NAW 2001e). However, the response varies between different authorities. Whereas some authorities (e.g. Flintshire County Council) are in the process of implementing a new and tailor-made comprehensive Development Control Monitoring System ('FLARE'), which will be subsequently linked to a new and tailor-made GIS ('DATAMAP'), other authorities take a much more piecemeal approach to monitoring.

[9] Out of 23 participating local planning authorities. The return rate for data audit forms varied for each data set.

5.6 Land Use Data Management using Geographic Information Systems (GIS)

5.6.1. Figure 16 in the appendix summarises the situation on the use of GIS and geo-referencing of data for the ten key data sets in each local authority. Despite the fact that all the data sets listed are spatially relevant and could thus be incorporated into a GIS, in the majority of cases the data are not as yet stored and managed using a GIS. For example, there is no corporate management system in place in Merthyr Tydfil County Borough Council and approaches to data storage and management thus vary widely between different departments within the authority and are not necessarily compatible. This situation is similar in Blaenau Gwent County Borough Council, where two systems at present operate in parallel (MapInfo and GGP), which are not networked. Data are therefore shared and exchanged between different departments by printing out the relevant information. The main reason for this situation is insufficient funding and time resources, especially as digitising historic data is a major task. Staff also will require training and a period of learning-on-the-job if GIS systems installed are to be used effectively.

5.6.2. There are initiatives underway in many authorities to move onto a corporate GIS in the near future. Flintshire County Council, for example, will move onto a corporate tailor-made GIS by autumn 2002, which will be closely linked to the new development control monitoring system. Pembrokeshire County Council is currently in the process of digitising data and inputting them into a GIS. Expected benefits of the use of GIS include the possibility of integrating a number of land use planning layers, such as site constraints, transport networks and environmental designations, thus ultimately speeding up and facilitating the planning process. However, in some cases local authorities have reported a lack of strategic direction and initiative at corporate level.

5.6.3. Figure 13 shows that MapInfo and ArcView are the most popular GIS packages in use in Welsh local planning authorities. The data audit revealed that where a corporate system has been in use for a while, this has in most cases proved very valuable and facilitated data sharing. Snowdonia National Park Authority, for example, since 1994 holds all data in either MapInfo or Access database format, which are all fully compatible and stored on an internal network drive, and for which access is unrestricted to all staff within the authority. Pembrokeshire National Park Authority also holds all their data sets on MapInfo. Denbighshire County Council has already in 1987 made the decision to digitise data and to use corporate GIS, and today most data sets are held on MapInfo. The authority has now moved on to investigating how the sharing of GIS-based information between different departments can be improved, and has made funding available for this. Conwy County Borough Council now hold the majority of all spatially relevant data on GIS (mostly MapInfo), and development control information on the MVM 20/20 system, which are well integrated. Most data sets are only available in electronic format, and hardcopies are only rarely produced. MapInfo is also the corporate GIS for Cardiff County Council, although other software such as ArcView and AutoCad is still used in some departments. In other authorities (e.g. Gwynedd, Brecon Beacons), the development control systems PACIS and BRACIS are linked to the planning department's GIS packages.

Figure 13: GIS Packages in Use in Welsh Local Planning Authorities

	Planning register	JHLAS	Land Resources	Contaminated Land	Industrial Land	Landscape assessment	Air quality	Biodiversity information
Caerphilly	ArcView							
Cardiff	MapInfo	MapInfo	?	MapInfo	MapInfo	?	ArcView	Recorder
Carmarthenshire						MapInfo		
Ceredigion	MapInfo	MapInfo	MapInfo		?			?
Conwy	MapInfo		MapInfo			MapInfo		
Denbighshire	MapInfo					MapInfo		
Merthyr Tydfil				ArcView		?		
Neath Port Talbot		ArcView						
Newport	Wings	Wings		?				
Pembrokeshire	?	?			MapInfo			
Swansea	ArcView		ArcView	ArcView				
Torfaen						MapInfo		
Pembr. Coast NP	MapInfo	MapInfo			MapInfo			
Snowdonia NP	MapInfo	MapInfo	MapInfo			MapInfo		MapInfo

? = not specified

5.6.4. Several local authorities which have been using GIS over a period of several years are currently investigating the possibility of providing map-based data on the web to be publicly available (e.g. Snowdonia, Conwy, Cardiff).

5.6.5. This picture of variety in data managing practice across Wales is even more pronounced when looking at the use of standards. Only a few local authorities (e.g. Conwy) report that all data sets are compatible to the National Land and Property Gazetteer standard (NLPG, BS7666) or any other. Most other authorities only partly, or not at all, comply with standards. However, most envisage a change in practice as NLPG becomes more common and local authorities will be required to adhere to the standard.

5.7 Future Land Use Policy and Data Requirements

5.7.1. The collection of new data in Welsh local authorities is in many cases an ad-hoc response to changing national or European requirements and guidance, as in the case of Housing Needs Studies and Contaminated Land Surveys, or the emerging European policy on noise, or on development and health impact assessments. However, other initiatives for data collection also stem from changing local policy context, i.e. work on the Local Transport Plan or Biodiversity Action Plan, and local authorities make funding available for surveys which they consider as crucial, or set up innovative working arrangements with volunteers and students to improve the quality of their data sets. Generally, local authorities are interested to collect data that serve a number of purposes both at local as well as regional and national levels in order to use their resources most efficiently.

5.7.2. Several local authorities plan to undertake housing-related surveys in the near future, for example on house prices or housing needs. Other initiatives to collect new data stem from new requirements, and cover areas such as potentially contaminated land, noise mapping, and computer records on transport movements (using GPS on buses for example).

5.7.3. The situation in Wales with regard to use of and access to GIS is somewhat different to England. Recent research in English planning authorities has found that few authorities report no access to GIS, and access to facilities is available to all staff in a significant number of authorities (DTLR 2002). In Wales, however, access to GIS and digital data seems to be restricted to a limited number of key members of staff even in the most advanced local authorities. In terms of the most popular GIS packages, the situation in England is reflected in Wales, with a strong emphasis on MapInfo and ArcView/ArcInfo. Insufficient financial resources are the main obstacle to introducing and / or mainstreaming the use of GIS in local authorities. The lack of resources relates to staff time, expertise and knowledge as well as the actual purchase of hard- and software. Even where a data management system is in place already, the software and data are in most cases not accessible to everybody because not all members of staff have access to a workstation or PC or the relevant experience. A notable exception to this are some smaller authorities with dedicated staff, as for example in Snowdonia National Park Authority, or well-resourced authorities such as Cardiff or Swansea, where all data are stored on a network drive and where there are no restrictions internally to data sharing and access. In the majority of cases, however, financial support and advice on which system to purchase and how to organise and manage spatial data would be highly appreciated.

5.7.4. Most local planning authorities have only recently started to discuss and develop their monitoring requirements and mechanisms. There will be data needed to monitor the effectiveness of the UDP and new strategies within the authority (e.g. Housing, Transport or Biodiversity Strategies). The monitoring of retail strategies and the availability of data on shopping floorspace is an issue for some rural authorities. While data on retail surveys can be purchased from the private sector (i.e. GOLD, or FOCUS) for larger urban areas, there is no such service available for smaller settlements. Collecting data on retail can therefore prove a time-consuming and expensive exercise for many rural authorities. In addition, data on retail turnover will be necessary soon in order to calculate impact assessments in town centres.

5.7.5. There is also a need for more reliable base data, on which projections and estimates are based. Most authorities feel that for example 1991 census data, which at present is still used for their population projections, are too old for any reliable assessment. In addition, census data are often not detailed enough to provide sufficient input into modelling at local level. It is hoped that these problems will partly be solved when new 2001 census data become available to local authorities in 2003. Some local authorities stated that population counts (as for example through NHSAR data) are much more valuable than mid-year estimate census data. However, there are also inconsistencies with the NHS counts, and the data will have to be improved to make it more reliable.

5.7.6. Using different data management systems within different departments of one authority, and also between different local authorities can cause serious problems for the compatibility of data when combined within the authority or aggregated at higher spatial scale. Furthermore, there are issues related to sharing GIS information between national bodies and local authorities, which relate to the scale in which data are digitised. Snowdonia National Park Authority, for example, digitise the majority of data in the scale 1:2,500. Data sets from national bodies (e.g. Countryside Council for Wales), are, however, often provided in the scale 1:10,000. Combining data sets from different sources thus often causes major problems, as boundaries do not match.

5.7.7. The recent release by Ordnance Survey of 'OS Master Map', which has been developed under the project title 'Digital National Framework' (DNF) is likely to affect service users in Wales. OS MasterMap is expected to offer more benefits for the GIS user than previous mapping data offered, for example in providing better flood warnings for Wales. OS MasterMap involves a completely new referencing system. This revised geo-referencing system, however, might cause unforeseen compliance problems with existing data sets in Welsh local planning authorities. It will furthermore require users to purchase third-party software, which will have financial implications for local authorities. In order to allow for a smooth move to the new system, local authorities might appreciate advice from the LGDU on how to proceed.

5.7.8. In short, local authorities indicated that they would appreciate best practice advice from the Welsh Assembly or other national bodies on data standards covering: the scale for digitising across Wales, data collection, measurement, storage, retrieval, and timescale issues. Related to this is the requirement for introducing standards on metadata across Wales. In terms of moving towards e-government, there are issues to do with the Data Protection Act and copyright issues (for example for ONS data) when trying to make information widely available for the public on the Internet. Advice from the Welsh Assembly Government would assist on how to handle these open questions. Some local authorities suggested that financial support should be provided for local authorities to establish protocols and standards, following the English example of promoting e-government through funding incentives for 'Implementing Electronic Government' (IEG) statements.

6. CONCLUSIONS

6.1 Introduction

6.1.1. This research has undertaken an extensive audit of the land use planning data sets collected at national, regional and local levels in order to make suggestions on how the planning system can contribute to the implementation and monitoring of the Assembly's new sustainability agenda for Wales. The baseline data, at the current time, does not support the Assembly's crosscutting approach to integrating social, economic, environmental and cultural issues when planning the use and development of land (or space). Thus, the data sets collected by local authorities need to be strengthened.

6.1.2. We conclude the report by summarising the way in which the land use planning system in Wales is changing as we enter the twenty-first century and draw out the new priorities that local planning authorities will be asked to take on board so that the Assembly can achieve its vision of a sustainable future. The report then summarises the analysis of the gaps in data collection required for monitoring *The Plan for Wales* and *Planning Policy Wales,* identifies appropriate indicators and suggests further data collection needs. The last section identifies tasks and responsibilities and recommendations for the way forward.

6.2 The Changing Context of Land Use Planning in Wales

6.2.1. There has been significant change in the organisation and administration of land use planning at the local level in Wales since 1996. Local government reorganisation has affected the internal structure, the available planning expertise and service provision in many authorities. At the same time local planning authorities have become accustomed to a new culture of performance audit. There is now a growing acceptance by local authorities and chief planning officers of the need to monitor performance, however this is defined. So far, however, the focus has been on the speed of decision-making and not on the quality of the decisions made.

6.2.2. In addition, at the national level, the Assembly has established a new policy environment encouraged by its statutory responsibilities for sustainable development and equal opportunities. The Assembly's policies for mainstreaming sustainable development have the capacity to re-shape the narrow regulatory focus of the land use planning system to take on the sustainable management of the spatial interconnections between people, land and buildings.

6.2.3. In fact, many of the planning policy priorities that the Assembly is proposing are not achievable unless local planning authorities take on this broader agenda and work strategically with other actors and stakeholders. The Welsh planning system is at the forefront of translating the European spatial planning approach into practice through the crosscutting sustainable development agenda, which the Assembly is now promoting.

6.3 Adapting to New Priorities

6.3.1. Land use planning is essentially concerned with the efficient release of land for development, facilitating integrated transport solutions to reduce road congestion and pollution and to encourage modes of transport besides the car, protecting natural resources through encouraging biodiversity, renewable energy and the recycling of waste, and facilitating the provision of affordable housing and community facilities. Local planning authorities have to consider how these topics link together when preparing their Unitary Development Plan. Sustainable development requires that the local authority is aware of the strategic connections in every decision they make and that they monitor the impact of their decisions. This new priority hinges on the understanding and measurement of change.

6.3.2. There is clearly scope to measure progress towards sustainability via the systems set up to monitor and review development plans and development control decisions. The Assembly will need to develop a set of nationally agreed indicators of sustainable development to assess policy effectiveness and gauge progress in achieving sustainability. Chapter two has summarised the various responsibilities local planning authorities have for preparing plans and strategies to inform development control decisions. The Technical Advice Notes advise on the factors to consider in carrying out these tasks but, in most cases, do not explicitly define the data requirements to support planning decisions. There is no advice to local planning authorities on how to monitor the changing distribution and the characteristics of land use activities against the content of individual policies, or the integrating concept of sustainable development. However, the Assembly is developing sustainability appraisal tools to encourage the mainstreaming of sustainable development.

6.3.3. The Assembly will need to consider the appropriate level (national, regional, local) for assessing sustainability outcomes. A regional approach may be necessary for policies on transport, waste, tourism, housing and economic development. This would have resource implications for the existing voluntary groupings of local authorities and partners. Local authorities have been given new responsibilities to review and assess air quality and traffic levels. The mandate for local authorities to address sustainability issues corporately has also been strengthened through the responsibilities they now have to establish partnership arrangements to prepare a community safety strategy, a community strategy, a local transport plan, a regional waste plan and a local biodiversity plan.

6.3.4. It is important that local authorities take an integrated approach to their responsibilities so that advances in one area are not working against others. It is imperative that they understand the complexity of the process that leads to sustainable or unsustainable trends and the importance of integrated corporate-level management. The responsibility of, and the way in which, the planning service in each authority contributes to the corporate sustainability agenda is likely to vary between local authorities unless the Assembly sets specific sustainability targets for the planning service.

6.4 Identification of Appropriate Indicators and Data Sets

6.4.1. Chapter three argued the case for more effort and resources to be expended on the monitoring of land use planning decisions. It was pointed out that the current performance indicators and the suggestions from the Planning Officers Society of Wales mainly focused on the process of decision-making and the inputs and outputs. Sustainable development monitoring requires a set of indicators, which measure the outcomes of policies that indicate the direction of change (whether things are getting better or worse). Sustainable development emphasises the integration of issues and by implication the measures of sustainability would need to be integrated measures too.

6.4.2. The analysis of *The Plan for Wales* identified ten targets related to the land use planning function and suggested indicators that could be used to measure progress towards the targets (Figure 5). Chapter five analysed the data audit of local authority data sets and identified ten land use planning data sets where there was the most coverage at local authority level (Figure 15 in the appendix).

6.4.3. There is considerable overlap on measures of environmental quality between these two tables. The notable differences are that two of the targets identified in *The Plan for Wales*, organically farmed land and social housing construction standards, are issues local planning authorities have not been asked to address previously. For two other targets on the recycling of waste and the renewable energy, local planning authorities tend to rely on data from other sources to inform planning policies. *The Plan for Wales* includes three targets for transport sustainability, which is a topic area that local authorities are only just starting to address. Conversely, of the ten most comprehensive data sets collected by local authorities, only five of the data sets support a specific target in the Assembly policy documents. Specific measures for addressing housing needs, potentially contaminated land, employment land availability, housing land availability and brownfield land are not mentioned in *The Plan for Wales* although data collection for the latter two are included in Technical Advice Note 1.

6.4.4. These ten data sets (Figure 15), with the most comprehensive coverage across Wales, should form the basis for the more detailed formulation of specific indicators capable of measuring the implementation of the Assembly's sustainable land use policies at local authority level over the next 5-10 years. More research will need to be carried out with local authorities to translate these into appropriate and sufficient measures for sustainability monitoring.

6.5 Gaps in Data Collection

6.5.1. Figure 15 in the appendix shows that there is poor coverage of some of the key data sets across the local authorities. The gaps are most notable in transport data, contaminated land, housing needs, and protected habitats and species. Only a third of authorities could confirm they collected (or used) data on modal split or public transport use. Similarly, a little over a third of authorities had a register of contaminated land or specific registers of protected habitats and species, despite these now being a statutory responsibility. Housing needs or affordable housing is a difficult issue for plan

policy and requires good quality local data to help support local plan policies and development control decisions.

6.5.2. We would also recommend improvements to the way existing data are collected by the WDA on behalf of the Assembly. In particular, the structured system for Joint Housing Land Availability Studies (JHLAS) between the local authority, the WDA and the House Builders Federation could be adapted to complement the house building information collected by the Assembly on the WHO2. Our empirical research has uncovered problems in producing definitive figures for housing supply in Wales and the robust WDA mechanism for identifying housing land supply could do this by simply adopting the same timing, the same reference periods and the same set of definitions for all local authorities in Wales. The JHLAS system is being revised to collect information on brownfield and greenfield housing development, and also to collect information on affordable housing that will be of use to the Assembly. These improvements can be implemented immediately.

6.5.3. These recommendations will place additional demands on local planning authorities at a time when they are being asked to support the preparation of Air Quality Management Plans, Local Biodiversity Action Plans, Community Plans, and Regional Waste Plans. Progress will depend on financial support from the Assembly for developing a more robust framework for improving the collection, collation and dissemination of information.

6.6 Mechanisms and Standards for data collection

6.6.1. The research has highlighted wide variations in the way data are collected, recorded, managed and updated. Within the same data set there is variation in the way information is extracted and submitted to national bodies. Only a few authorities have very comprehensive corporate data management systems in place. This contrasts particularly with smaller authorities amalgamated during local government reorganisation where several different systems now operate together. The research found significant sharing of data sets within local authorities with local planners taking a strategic management overview of data needs and a reliance on sharing data with outside bodies to fulfil planning functions.

6.6.2. Most local planning authorities are only just starting to discuss and develop their requirements for monitoring and mechanisms. They have identified additional data needs necessary for monitoring the effectiveness of the Unitary Development Plan and for new strategies on housing, transport and biodiversity. There is no indication that the expertise to deal with this mass of data is growing at the same rate. Nevertheless, the current delivery of data under such circumstances is fraught with problems. The same data may be collected by different people, definitions of similar data items may vary only slightly, requiring duplicated effort for little discernible difference in the outputs; and the timing of the requests may also be slightly different – again requiring duplicated effort for very little added value.

6.6.3. The compatibility of data collected is important when the data is aggregated at a higher spatial scale. *Planning Policy Wales* has provided a definition of “brownfield

land" (Figure 7). The next revision of TAN1 needs to encourage the use of this definition. Similarly, guidance on and definitions for the collection of data for Industrial or Employment Land should be clarified in order to ensure comparative data. The Housing Land Availability Studies and the Best Value performance monitoring provide robust examples of data collection mechanisms. All local planning authorities are used to these systems of data collection and virtually all co-operate within the deadlines set. It is important that before additional datasets are collected for the Assembly and national agencies the methodology and definitions are agreed beforehand with local authorities. Advice, guidance and training must underlie every aspect of the development of data sets.

6.6.4. Figure 16 (in the appendix) shows that the majority of the ten key data sets are geo-referenced using the national grid reference system. The geo-referencing of data is a very valuable starting point for local authorities that wish to move their data sets onto a GIS. The issue of compatibility of GIS needs to be addressed at the national level by the Assembly since the Welsh Development Agency does not have a GIS system. At the present moment information on housing and employment site grid references is not systematically collected.

6.6.5. Few authorities report that all data sets are compatible with the National Land and Property Gazetteer or any other standards. Definitions also present a considerable obstacle, particularly when metadata for some returns do not exist. Local authorities would appreciate best practice advice from the Assembly on data standards covering the scale for digitising across Wales, data collection, measurement, storage, retrieval and timescale issues. There might be a role here for the LGDU to advise LPAs on the appropriate GIS system for their needs, and standards for data collection and management.

6.6.6. The Assembly needs to actively seek ways to improve the capacity of local authorities in their data handling techniques. Rationalising demands on the data holdings of local authorities is an enormous task and will require detailed consultation with all stakeholders. The limited staff resources at local authority level are already fully occupied with other tasks. Authorities often lack the expertise and knowledge as well as the financial means to purchase hard- and software. Financial considerations outweigh everything else.

6.7 Recommendations

6.7.1. This final section presents the recommendations of the report, allocating responsibilities and tasks to the key agencies for change.

6.7.2. **The Assembly:**

(1) Develop a set of nationally agreed indicators of sustainable development to assess policy effectiveness and gauge progress in achieving sustainability at national, regional and local levels. The ten key data sets identified in Figure 15 (in the appendix) could form the basis for the formulation of sustainable land use planning

measures. Further research will be required to translate these measures into appropriate and sufficient indicators of sustainability. At present there are significant gaps in transport data, contaminated land, housing needs and protected habitats and species (cf. Section 5.2).

(2) Review Technical Advice Notes in line with the data and monitoring needs of *Planning Policy Wales* and *The Plan for Wales* and provide clear unequivocal guidance. Use TANs to give advice on methods for data reliability and comparability. These could include guidance on the definitions for the collection of data on industrial and employment land and the methodology to be used in Housing Needs Assessments (cf. figure 1 and section 4.3).

(3) Identify sufficient resources to rationalise and improve the quality, consistency and relevance of local authority statistical data. Give priority to the training of elected members and senior managers in data management and GIS use. Support the aim in the *Wales Spatial Plan* for evidence-based decision-making and resource the potential of GIS for the display and use of data. Support initiatives such as the National Land and Property Gazetteer as a means to establish data standards across all the operations of local authorities (cf. section 5.6).

(4) Link the present performance monitoring of land use planning with the sustainable land use appraisal to give a better balance between the process of planning and the policy outcomes (impacts on the ground). In view of the Assembly's remit to deliver sustainable development and the essential role of the land use planning system in realising this it would seem that the case for bringing these two strands of work together is growing ever stronger. Support the integration of the Best Value and Sustainable Development teams (cf. chapter 3).

(5) Rationalise the demands on the data holdings of local authorities from the Welsh Development Agency, Assembly divisions, and other central agencies such as CIPFA and the Audit Commission to ensure the efficient transmission of data sets and remove the duplicated requests for large amounts of information that is frequently the same, or varies only slightly from other data demands. Rationalisation is an enormous task and will require detailed consultation with all stakeholders (cf. chapter 4).

(6) Resource the Local Government Data Unit Wales as a data hub, a data management facility and as a point of reference for the developmental and training work with local government. The LGDU is well positioned to provide the Assembly with knowledge of the data environment at local level and to work with the Statistical Directorate, local authorities and other agencies who can provide the building blocks for delivering more accessible, higher quality, relevant data (cf. figure 6).

(7) Liase with Local Authorities through the Local Government Data Unit over the appropriate selection of sustainable land use indicators. We recommend a period of voluntary use of the indicators through a pilot study to help local authorities develop local sustainability indicators and their integration into the Best Value regime, before specifying a statutory key set of indicators for all local authorities. Baseline data are not yet available for all the indicators in every local authority. Local authorities may wish to add further locally derived targets and indicators to this list as part of their own corporate diagnosis of the services they deliver (cf. figure 5).

6.7.3. **The Local Government Data Unit (Wales):**

(1) The Data Unit has a key role in the future to work with local planning authorities to harmonise data collection and submission procedures. The issue of compatibility of GIS needs to be addressed at national level, and there might be a role here for the LGDU to advise LPAs on the appropriate system for their needs, and standards for data collection and management (cf. section 5.6).

(2) In the long term the Data Unit should become a repository of all returns (the Core Data Set) that local authorities in Wales are required to make to the national government. This would ensure that the data are collected once only, and all subsequent demands on local authority can be dealt with from one central resource – the Data Unit. Achieving this will mean that the LGDU will have to have a role in the rationalisation and co-ordination of existing data collections for local authorities. It should also become the first place local authorities look, or contact, to access information (cf. chapters 4 and 5).

(3) The Data Unit should lead the rationalisation of data sets on behalf of the Assembly working with expert groups from local authorities to assist with the detailed work on targets, indicators (cf. chapter 3), definitions, standards and GIS (cf. section 5.6).

6.7.4. **Local Authorities:**

(1) Express plan policies in a form that facilitates monitoring and review. Identify local data needs and establish suitable monitoring systems. Review the spatial impacts of the Unitary Development Plan and development control decisions regularly and publish monitoring reports (cf. section 3.5).

(2) Work with the Assembly and the Local Government Data Unit to agree standard definitions for the monitoring of key sustainable land use policy indicators such as contaminated land, traffic and air quality monitoring standards, and to improve the quality of data (cf. figure 5 and chapter 4).

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APPENDIX 1

Research Aims and Methodology

The research was commissioned by the Welsh Assembly Government as part of the Planning Research Programme. The research was undertaken by the Centre for Environment and Planning in the University of the West of England, Bristol, UK, and was carried out between November 2001 and April 2002. The research brief specified that the purpose of the project was to advise the Assembly about data and information requirements, in order to effectively monitor the Planning System in Wales.

The specific research objectives were:

1) To undertake an audit of planning and land use related information currently collected by government and other organisations, and to consider its utility
2) To identify information gaps at national, regional and local levels and to examine the feasibility of collecting new/additional information to fill any such gaps
3) To advise on the appropriate periodicity of data.

The methodology of the study included four main stages:

- A **Scoping study** including a review of Assembly reports on data availability and requirements and the nature of data collected. The systems for storage and retrieval of data by DTLR, and the Scottish and Northern Irish Executives are furthermore considered in this background report.
- A **Data Audit** including a questionnaire survey on the scope of current data collection and IT systems in place, and group interviews on future proposals for data collection, with a view to identifying problems and opportunities related to data collection and management in Welsh local authorities.

  A data audit questionnaire (see appendix 2) was sent to each of the 25 Chief planning officers in Welsh unitary and National Park authorities. Accompanying the audit form was a letter explaining the research, instructions and an example of a completed audit form. A list of topics to help define what should be included as 'land use planning data set' was sent to each planning liaison officer (see appendix 3) with the instruction that a separate audit form was to be completed for each land use and planning data set. The Welsh Assembly Steering Group for this research had previously explained the purpose of the research through a letter to all authorities. A planning liaison officer was appointed to act as a contact point and to help with the co-ordination of the data audit forms.

  Two local planning authorities did not participate in the data audit. For a third local planning authority, data audit forms were returned, but a group discussion was not held. In the other 22 LPAs, group discussions were held subsequently with relevant officers from Planning, Economic Development, Housing, Estates and Highway Departments. Meetings were also held with the five Welsh Assembly Government divisions and the Assembly Sponsored Public Bodies. The purpose of these meetings was to ascertain the survey methodology and data quality of each data set, to inquire into data management systems in place and to ascertain the degree to

which data are shared and collated at higher spatial scale. A common pro-forma of questions was used for each discussion within the local authorities (see appendix 4). The meetings with each local authority lasted between 90 minutes and 2 hours.

- An **Analysis of data collection** and future monitoring requirements including an analysis of strategy documents in Wales with a view to proposed land use planning indicators and data collection requirements. Gaps in data collected by Welsh local authorities, and the comparability and consistency of data collected across Wales were evaluated, and the use and potential of GIS and other electronic data management and storage systems were analysed. The analysis of the data has been shared with the Welsh Assembly Government and the local authorities participating in the research.
- **Policy Advice to the Welsh Assembly** through subsequent dissemination of the findings via a written report, the Assembly web-site and an interactive seminar.

Local authorities were advised that figures 15 and 16 would be published in the final report.

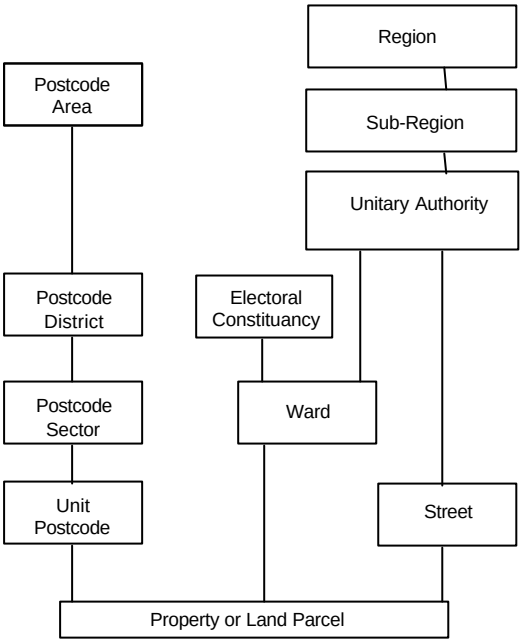
APPENDIX 2

Data Audit Questionnaire Form

Title of data set	
Brief description of data set	
Owner of data set	
Source of data	
User(s) of data set *(please circle)*	Transport; Economic development; Housing; Population and migration; Social exclusion; Planning; Culture; Tourism; Environmental quality; Sustainability; Urban and rural needs; Other (please specify)……
Use of data set	
Frequency of update	
Date of first issue	
Property sector *(please circle)*	Office; Retail; Industrial; Leisure; All; Other (please specify)…… ……
Geographical coverage	Whole of Wales; Region (please state which)……; Unitary Authority (please state which)……; City or town (please state which)……; Other (please specify)……

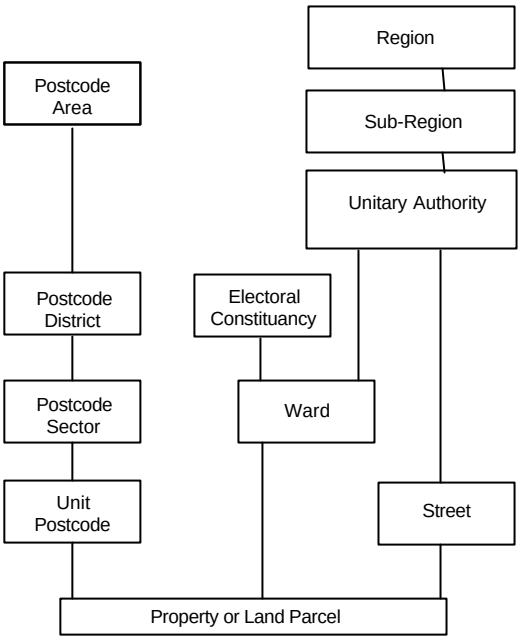
Geographical scale of data collection

Please indicate the geographical scale at which these data are collected on the diagram below by *circling* the most appropriate box



Geographical scale of data publication

Please indicate the geographical scale at which these data are published on the diagram below by *circling* the most appropriate box



Geographical reference *(please circle)*

National Grid co-ordinates
Address
Postcode
Ward
Local Authority
Region

Data format (please circle)

Paper — Report / Digest

Electronic — Internet / Database / GIS / Spreadsheet

Other (please specify)……

Approx. cost of collection

<£10 £10-£99 £100-£999 £1,000-£9,999 >£10,000

Access *(please circle)*

Generally available on request — to public bodies / to private sector

Subscription

Restricted circulation

Form completed by:

Contact details (telephone and email):

APPENDIX 3

Defining the Boundaries of Land Use Planning

TRANSPORT

Traffic accidents
Public Transport Routes/Accessibility
Modal Choice, Distances Travelled and Volume

PLANNING/HOUSING

Building Regulations
Planning Applications
Affordable Homes
Second Homes/ Holiday Accommodation
Listed Buildings Register
Schedule of Ancient Monuments
Conservation Areas
Commercial and Industrial Improvement Areas
Population Estimates
Housing Land Availability Studies
Housing Built on Previously Developed Land
Land Ownership, Building Details, Establishments, Deed
Countryside access management system / public rights of way

ECONOMIC DEVELOPMENT

Business and Industrial Land Surveys / Land Register
Small and Medium Sized Enterprises, Business Start-ups

ENVIRONMENT

Flood Risk Areas
Air Pollution Emissions
Trends in Natural Habitats
Population of wild birds
Quality of drinking, river and bathing waters
Waste Generation, Recycling and Landfill
Greenhouse Gas Emissions
Generation of Renewable Energy
Landscape assessment
Contaminated Land

APPENDIX 4

Questionnaire Pro-Forma for Local Authority Interviews

1. Discussion of data audit forms in order to establish:

- how data are used,
- where there are gaps and overlaps in data, and
- how and with whom data are shared.

2. Discussion of individual data sets

2.1 Standard definition of data set: how is collected, sample size, survey methodology, robustness of collection etc.?

2.2 Data quality: how accurate, current, and complete are the data? What is the coverage?

2.3 How useful is the data set for these purposes?

2.4. What improvements would be welcomed / are planned ('fitness for purpose' of specific data sets for specific functions)?
What is the current use of and planned adherence to standards for referencing land use planning and related data? (For example: use of BS7666 (Land and Property Gazetteer) for land parcel and property level data, use of postcodes or other standard geographical areas for aggregated data). Do you record information about the data sets in a standard way?

2.5 Do you have any idea of the cost of collecting these data sets? (estimates of person-time/actual cost)

3. Forward planning

3.1 Are there any gaps in land use data collection and availability?

3.2 What are the future proposals to collect new /additional data to inform policy design and the monitoring of planning decisions (e.g. with regards to PPW)?

3.3 Is a GIS or other computer database in place for data management? If yes, which? What are the future proposals to improve accessibility of stored data for both internal staff and external individuals and agencies? Do you envisage changes to your data management systems?

APPENDIX 5

Figures 14, 15 and 16

Figure 14: List of Data Collected by Welsh Local Authorities by Topic[10]

Topic	List of data collected (in order of number of returns)
Planning / Housing	• Housing Land Availability Study (TAN 1) (23) • Retail Survey (TAN 4) (17) • Population estimates or projections (16) • Brownfield Land / Land Resources (10) • Potentially contaminated land (9) • Land ownership information / Asset Register (9) • Housing Needs Study (9) • Landfill Sites (7) • Affordable Housing (6) • Minerals Sites and Wastes (6) • Settlement Facilities (6) • Hedgerow Regulations (5) • Out of town retail stores (4) • Welsh Housing Statistics (4) • Housing Built on Previously Developed Land (4) • Housing Completions (3) • Houses in Multiple Occupation (3) • Public and Recreation Open Space (3) • Development Plan progress / monitoring (3) • Quarries (2) • House Price Monitoring (2) • Urban Land Use (2) • Residential Conversions (2) • Second Homes (2) • Equipped Play facilities (1) • National Street Gazetteer (1) • Residential Occupancy Survey (1) • WH 04 – Housing Management Performance (1) • Local Plan Designations (1) • Townscape Heritage Initiative (1) • Household Estimates (1) • Commercial and Industrial Improvement Areas (1) • Quality of Life Report (1) • Best Value Performance Plan (1)
Development Control	• Planning register (23) • Conservation Areas (16) • Tree Preservation Orders (TAN 10) (14) • National Listed Buildings Register (CADW) (14) • Ancient Woodland (8) • Development Completions monitoring (7) • Ancient Monuments (7) • Enforcement Cases (6) • Register of traditional buildings of local significance (6) • Building Control Applications (5) • Common Land / Village Greens (4) • Historic Buildings Condition (3) • Buildings at Risk Survey (3)

[10] Out of a total of 23 participating local planning authorities in Wales. Numbers in brackets refer to information received on data set within the authority (either information on data audit forms or verbal information). A full account of the data audit is available in spreadsheet format (Excel) upon request.

	• Telecommunication masts (2) • Article 4: Restrictions on permitted development (1) • Canals (1) • Trunk Roads (1)
Transport	• Traffic accidents (11) • Traffic Counts (11) • Transport Network (10) • Modal Split / Public Transport Use (7) • Car Parks (1) • Satisfaction with public transport provision (1)
Economic Development	• Employment / Industrial Land Survey (18) • Labour Market Statistics (10) • STEAM – Model or Tourism Survey (4) • Caravans (3) • VAT business registrations / de-registrations (3) • Welsh Index of Multiple Deprivation (2) • Tourist Accommodation (2) • Information on Employers (2) • Outdoor Centres (1) • Town schemes (1) • Monitoring of visitor numbers (site specific) (1) • Current Spend for various grants (1) • Waiting List for various grants (1)
Countryside Services	• Public Rights of Way (16) • Landscape assessment and/or LANDMAP (16) • Biodiversity information (species and habitats) (11) • Local Nature Reserves (9) • Sites of Special Scientific Interest (7) • National Nature Reserves (6) • Candidate Special Areas of Conservation (6) • Historic Landscapes, Gardens and Parks (6) • Area of Outstanding Natural Beauty (5) • Special Protection Areas (4) • Wildlife Sites (4) • Heritage Coast (4) • Welsh Agricultural Census (2)
Environment and Environmental Health	• Air Quality (15) • Flood Risk Areas (7) • Waste (6) • Private Drinking Water (2) • Drinking Water Quality (2) • River Quality (2) • State of the Environment Report (2) • Noise Monitoring (2) • Marine Bathing Water (1) • Groundwater Catchment Zones (1) • Home Energy Conservation (1) • Recycling Facilities (1) • Main Rivers (1) • Water levels (1) • Habitat lost to development (1)

Figure 15: Data Audit of 10 Key Data Sets[11]

	Planning applica-tions / DC Quarterly Survey	Housing Land Availability Study (TAN 1)	Housing Needs Study	Brownfield Land / Land Resources	Potentially contami-nated land	Modal Split / Public Transport Use	Employ-ment or Industrial Land Survey	Landscape assess-ment / LANDMAP	Air quality	Recorder / Sites, species and habitats
Anglesey	✓	✓	✓	✓		(✓)	(✓)	✓	(✓)	(✓)
Blaenau Gwent	✓	(✓)					(✓)	(✓)		
Bridgend										
Caerphilly	✓	✓					✓			
Cardiff	✓	✓	(✓)	(✓)	✓	(✓)	✓	(✓)	✓	✓
Carmarthenshire	✓	✓					✓	✓	✓	
Ceredigion	✓	✓		✓	✓		✓			✓
Conwy	✓	✓	✓	✓				✓		
Denbighshire	✓	✓			✓			✓	✓	
Flintshire	✓	(✓)		✓	(✓)	(✓)	(✓)	✓	✓	✓
Gwynedd	✓	✓	(✓)			✓	✓	✓	(✓)	
Merthyr Tydfil	✓	✓	(✓)	✓	✓		✓	✓	✓	
Monmouthshire	✓	✓	✓				✓	✓	✓	
Neath Port Talbot	(✓)	✓		(✓)	(✓)		✓	(✓)	(✓)	✓
Newport	✓	✓		✓	✓	✓	✓	✓	(✓)	
Pembrokeshire	✓	✓					✓		(✓)	
Powys	(✓)	(✓)								✓
Rhondda Cynon Taff	✓	✓			(✓)		(✓)	✓	✓	
Swansea	✓	✓	(✓)	✓	✓	✓	✓	(✓)	✓	✓
Torfaen	✓	✓	✓				✓	✓	(✓)	✓
Vale of Glamorgan	✓	✓				✓				
Wrexham										
Brecon Beacons NP	✓	✓					✓			
Pembrokeshire Coast NP	✓	✓					✓		(✓)	✓
Snowdonia NP	✓	✓	(✓) (jointly with Gwynedd)	✓				✓		✓

[11] Wrexham County Borough Council and Bridgend County Borough Council did not participate in the research project.

(✓) Data are collected but form was not submitted

Figure 16: Use of GIS and Geo-Referencing of Key Data Sets by Local Authority[12]

	Planning applica-tions / DC Quarterly Survey		Housing Land Availability Study (TAN 1)		Housing Needs Study		Brownfield Land / Land Resources		Potentially contami-nated land		Modal Split / Public Transport Use		Employ-ment or Industrial Land Survey		Landscape assess-ment / LANDMAP		Air quality		Recorder / Habitat / biodiversity information	
	GR	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**	**GR**	**GIS**
Anglesey	?	?	?	?	?	?	?	✓							?	?				
Blaenau Gwent	×	×																		
Bridgend																				
Caerphilly	✓	✓	×	×									✓	×						
Cardiff	✓	✓	✓	✓	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carmarthenshire	✓	×	×	×									×	×	✓	✓	✓	×		
Ceredigion	✓	✓	✓	✓			✓	✓	✓	×			✓	✓					×	✓
Conwy	✓	✓	×	×	×	×	✓	✓							×	✓				
Denbighshire	✓	✓	×	×					×	×					×	✓	×	×		
Flintshire	✓	×					✓	×							×	×	✓	×	✓	×
Gwynedd	✓	✓	✓	✓							×	×	✓	✓	×	✓				
Merthyr Tydfil	✓	×	✓	×			✓	×	✓	✓			×	×	?	✓	✓	×		
Monmouthshire	×	×	×	×	×	×							×	×	×	✓	×	×		
Neath Port Talbot			×	✓									?	×					✓	×
Newport	✓	✓	✓	✓			×	×	?	✓	×	×	✓	×	×	×				
Pembrokeshire	×	✓	✓	✓									✓	✓						
Powys																			✓	✓
Rhondda Cynon Taff	×	×	✓	×											?	✓	×	×		
Swansea	✓	✓	✓	×			✓	✓	✓	✓	×	×	×	×	✓	×	✓	×	×	×
Torfaen	×	×	×	×	×	×							✓	×	×	✓			×	×
Vale of Glamorgan	×	×	×	×							×	×								
Wrexham																				
Brecon Beacons NP	✓	✓	✓	×									✓	×						
Pembrokeshire Coast NP	✓	✓	✓	✓									✓	✓					×	×
Snowdonia NP	✓	✓	✓	✓			✓	✓							✓	✓			✓	✓

GR = data are geo referenced to national grid co-ordinates × = No ? = form submitted but not specified
GIS = data are held on a GIS ✓ = Yes ☐ = no form submitted for data set

[12] Information in table on basis of returned data audit forms and verbal information from local authorities.

APPENDIX 6

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APPENDIX 7

Abbreviations

CCW	Countryside Council for Wales
CIPFA	The Chartered Institute of Public Finance and Accountancy
DETR	Department of Environment, Transport and the Regions
DNF	Digital National Framework
DTLR	Department for Transport, Local Government and the Regions
GIS	Geographic Information System
JHLAS	Joint Housing Land Availability Study
LGDU	Local Government Data Unit
LPA	Local Planning Authority
NLUD	National Land Use Database
OS	Ordnance Survey
PPW	Planning Policy Wales
TAN	Technical Advice Note
WDA	Welsh Development Agency
WLGA	Welsh Local Government Association

APPENDIX 8

List of Figures