URBAN DESIGN FOR SUSTAINABILITY

Final Report of the Working Group on Urban Design for Sustainability to the European Union Expert Group on the Urban Environment

23 January 2004

Contents: **Page**

Summary

Main report:

Annexes

A. National reporting framework

B. Expert contributions

C. National reports (Austria, Spain, Finland, Slovakia)

D. National good practices (Germany, Sweden, Hungary, Netherlands, France)

E. List of Working Group participants

F. Minutes of the meetings

G. Terms of Reference

lebensministerium.at

Summary

This is the interim report by the Working Group on Urban Design for Sustainability, reporting to the EU Expert Group of the Urban Environment. It should be read in conjunction with the reports of the Working Groups on Sustainable Urban Transport, Urban Management and Sustainable Construction. Together with the outputs of these other groups, its main objective is to deliver a set of recommendations to the European Commission to inform the Thematic Strategy on the Urban Environment. It should also be read in conjunction the earlier EU Expert Group report on Sustainable Urban Land Use as there is a large degree of overlap between the two study areas and this report draws on the contents of that earlier report.[1]

The report identifies models and strategies of good practice in urban design to support sustainability in EU and EU-accession countries, and presents a review of best practice and recommendations for action at all levels. It explores the themes of re-designing and retro-fitting existing urban areas, designing for greenfield sites, and knitting the urban fabric together to achieve an integrated city-wide vision. These themes are explored within the broader context of achieving sustainable urban development in Europe. The report sets out the main issues to be faced on a Europe-wide scale in response to a common set of 'mega trends'.

Globalisation includes the increasing spatial division of labour and economies of scale in the international economy, overriding any increase in transportation costs (which often, in any case, are highly subsidised). Large scale, single use developments outside the main urban areas are contributing to urban sprawl. The transport of goods and mobility of people continues to grow steadily every year adding to the pollution of the global environment, the depletion of fossil fuels and pollution and congestion at the local level. The development of transport infrastructure, and particularly roads, responds to the economic pressures and in turn increases mobility and accessibility, opening up rural areas to new urban development, with the demand for easing the long distance and international flow of goods over-riding local sustainability needs.

The growth of mobility, of the transport infrastructure and other infrastructures, especially in the area of information and communication technology (ICT) is also resulting in the emergence of new, more polycentric patterns of urban development, with a greater specialisation of functions between centres (as well as increased competition) and the growing importance of networks of cities. The challenge for urban design is to respond to these emerging patterns in a proactive way that overcomes negative effects such as excessive car-based mobility and urban sprawl.

Growing prosperity and wealth and increasing demands for an improved quality of life are reflected in the increasing consumption of land and space, demand for privacy and better living conditions and access to green space. Demographic trends, including an ageing population and the growth of smaller and single person households, are adding to the demands for new housing and to the pressures for suburbanisation in rural areas (as well as for improvements to the quality of the environment and everyday life in inner city areas). Valuable agricultural land, amenity space and natural reserves of biodiversity are being lost. At the same, increasing land values and property prices in cities make housing in locations that are accessible to livelihood opportunities and services increasingly unaffordable for many sections of the population. The relationship

---

[1] This work should also be seen in the context of the previous work of the Expert Group on the Urban Environment, which was set up in 1991 according to terms of reference set out in the Council of Ministers Resolution on the Urban Environment on the Green Paper on the Urban Environment (CEC 1990), in particular the European Sustainable Cities Report (1995).

between the housing market and public land and housing policies and urban design is critical. Urban design can provide the framework for achieving a good quality of life when the attempt to meet these challenges may require higher densities and better mixes of development.

Other impacts of globalisation include structural economic changes, with the decline of industrial activity in many European cities and the need to invest heavily in the regeneration of brown field sites and declining inner city neighbourhoods to overcome the high levels of unemployment and social deprivation and exclusion resulting from the changes. The concentration of social problems in inner city neighbourhoods, and in isolated or over-sized public housing estates, increases problems of crime and personal security leading to further spatial segregation and the 'flight of middle classes' to protected suburban enclaves. Impacts are also being felt in many rural areas and there is a need to review rural development policies to encourage development that is more sustainable as well as more closely linked with sustainable urban development.

 The increasing cross boundary movement of people associated with increasing international flows of goods, information and finance, along with regional economic imbalances, are adding to the pressures for mass migration. Many of the migrants to cities in the EU come from poorer countries beyond its borders, as well as poorer regions within the Union. Although there are many examples of successful mixed ethnic neighbourhoods in European cities, tensions between newcomers and existing residents remain. This can be exacerbated by cultural and ethnic differences, especially in neighbourhoods characterised by poverty and social exclusion. Urban design can help provide the physical framework for overcoming differences and segregating processes, as well accommodating the need for a variety of expressions of cultural and ethnic identity.

The overall aim of sustainable urban development is to achieve a healthy and high quality of life for all people in this and subsequent generations, with equitable and geographically balanced and socially cohesive economic development, which reduces the impact on the global and local environments.

This report draws on various reports on national good practice across Europe, as well the state of the art in concepts of sustainable urban design. It concludes that the Compact City Strategy advocated by the European Commission in its 1991 Green Paper on the Urban Environment as a basic model for sustainable urban design, is still essentially valid. However, it needs to be developed, paying closer attention to the need to establish a 'green structure' (the 'Green Compact City'). It should draw on other approaches such as 'decentralized concentration' at the urban regional scale (to create 'Sustainable City Regions') and specific integrated land use-transport planning strategies at the local and city-wide level, if it is to deal with the current transformation of patterns of urban development and emerging social demands.

The Report sets out a vision of Urban Design for Sustainability in the European context. It is an inclusive and participatory planning, design and management process that aims at creating beautiful, healthy and socially integrated and inclusive places; promotes equitable economic development; conserves land; looks at towns and cities in relation to one another and their hinterlands; ensures the strategic location of new developments in relation to the natural environment and transport systems; ensures development is mixed and of appropriate density; includes a well-developed green structure and a high quality and well-planned public infrastructure and respects and builds upon the existing cultural heritage and social capital.

Against this common vision of best practice in urban design for sustainable development the barriers for its achievement this vary from place to place, but cover common themes such as lack of political will and awareness; difficulties with planning and administrative systems, legislation and procedures, including slowness in the planning system, the need for appropriate training and education; lack of appropriate knowledge sharing systems; the persistence of the traditional, sector-based approach to urban planning and design; the complexity of the holistic vision of sustainable development and planners' and others' reluctance to accept it.

The following table summarises the recommendation for the EU and their degree (but not order) of priority and degree of feasibility, as assessed by the Working Group. The next to last column sets out who these recommendations are targeted at (EC – The Commission, MS – Member States or LG – Local Government).

Science Park in Viikki, Finland

Recommendations:	Priority	Feasibility	Target Organisations
Promoting urban design for sustainable development: in legislation at the EU and national levels			
1 – EU 'soft laws' (European Council decision), targets and guidance on specific urban design for sustainability issues	High	Low/ Medium	EC
2 – EU promotion of changes to national laws and implementation of sustainable urban design strategies including frameworks for sustainable land-use and transport planning and sustainable development plans for cities; their regions at the local level and public procurement policies	High	Low	EC, MS, LG
Promoting knowledge exchange and good practice guidance at all level			
3 – Guidance 'manuals' on good practice in urban and regional governance, planning procedures at the national. regional and local level, and measures to improve public participation	Medium	Medium	EC, MS
4 – Improved mechanisms for sharing good practice	Medium	Medium	EC, MS
5 – Promotion of environmental and integrated planning and urban design tools and methods	High	Medium	EC, MS, LG
6 – Promotion of indicators for specific actions and measures, in relation to existing EU indicator programmes	High	High	EC, MS, LG
7 – Promotion of local urban information centres and sustainability observatories	High	High	EC, MS, LG
Raising the profile and monitoring sustainable urban design in the existing EU policy agenda			
8 – Developing mechanisms for evaluating the implementation of current EU policy and assessing the effectiveness of future policy:	High	Medium	EC, MS
9 – In national sustainable development plans the role of cities should be specified and 'design for urban sustainability should be acknowledged as an instrument	High	High	MS
10 – Implementation of the European Spatial Development Perspective a priority as the European policy perspective for addressing the development of polycentric cities; and the development of a framework for planning functional urban regions	High	Low/ Medium	EC, MS
Promoting urban design for sustainability through incentives, subsidies, taxes and funding programmes			
11 – Developing urban design for sustainability guidelines to inform existing subsidy systems, including subsidies for urban regeneration and those for environmental, transport and cultural heritage programmes:	High	Medium	EC, MS

12 – Applying the guidelines to EU transport subsidies to support integrated transport land-use planning at the local level	High	Medium	EC
13 – Applying the guidelines to agricultural subsidy/rural development programmes to promote positive urban-rural relations	High	Medium	EC
14 – Increasing the proportion of Structural Funds going to urban development, acknowledging functional urban regions as eligible recipients	High	High	EC
15 – Extending and focusing the URBAN programme on sustainable urban development	High	High	EC
16 – Offering EU assistance for new pilot projects in sustainable urban design.	Medium	Medium	EC
17 – Developing an EU label for excellence in design for urban sustainability and city-wide environmental management systems.	Medium	Medium	EC
18 – Promoting public-private partnerships and innovative funding support for integrated projects at the local level	Medium	Medium	EC, MS, LG
Raising awareness and promoting education, information and research in urban design for sustainability and sustainable urban development			
19 – raising public awareness of urban design for sustainable development	High	Medium	EC, MS, LG
20 – appropriate training and education, particularly professional training and re-training at the post-graduate level	High	Medium	EC, MS
21 – promoting research in sustainable urban design at the European level using existing and new programmes	High	Medium /High	EC

1.   Introduction

1.1   Objectives

1.1.1   This report identifies models and strategies of good practice in urban design to support sustainable urban development in EU and EU-accession countries, and presents a review of best practice to inform the Thematic Strategy on the Urban Environment of the European Commission and its recommendations for action at Europe-wide, national, sub-national and local levels.

1,1,2   It is the product of the Working Group on Urban Design for Sustainability (Annex E: List of participants), which brings together experts in urban design for sustainability with a research, practice or policy background. The group met four times (Brussels, 18 December 2002, Madrid, 8-9 April 2003, Vienna 9-11 July 2003 and Helsinki 4-5 September 2003 – see Annex F).

1.1.3   The outputs of the Working Group, together with the outputs of other Working Groups on Sustainable Urban Management, Sustainable Urban Transport and Sustainable Construction, will feed recommendations into the Thematic Strategy on the Urban Environment for Summer 2005. The Strategy aims to adopt a new way of looking at complex problems allowing that several different initiatives may be needed to achieve a sustainable urban environment.

1.1.4   The recommendations of the Working Group will provide the basis of the future work programme of the Commission in this respect and, with the agreement of the Council and Parliament for legal measures such as directives on improving land use planning and the other measures such as guidelines, launching a publicity campaign or altering the objectives of a funding programme.

1.1.5   The study explores the following three themes:

1.   Re-designing and retro-fitting existing urban areas to support sustainable development

2.   Sustainable design for greenfield sites

3.   Knitting the urban fabric together to achieve an integrated city wide vision, including viewing urban areas in relation to their hinterlands

1.1.6   The key components of the work are as follows:

- Consolidation of latest concepts regarding 'state of the art' thinking in design of the urban fabric in order to create sustainable settlements, including

- Physical form of cities and smaller urban settlements (and 'urban systems') to support sustainable development

- Reconciling theory and practice – how to develop a pragmatic vision

- Appropriate strategies and measures at the different scales - relating these to local planning and development contexts

- Mechanisms for implementing the visions and ensuring the full participation of all stakeholders in the process of change

1.1.7   In relation to themes 1 and 3: the regeneration of brownfield sites and retro-fitting of the existing urban fabric, bringing together urban form, the study addresses the particular factors concerning:

- The balance between preserving existing built form and infrastructure and replacing them with more sustainable forms of development

- Knitting together disparate parts of the urban fabric to create more integrated urban forms (regeneration is generally site or area based rather than city wide)

- Incentive systems for all relevant stakeholders to move towards achieving the urban design vision: getting all stakeholders, including government, the private sector, communities and citizens to buy into and contribute to a city wide vision and to encourage it to develop on brownfield sites

1.1.8 In relation to themes 2 and 3: Identifying good practice and key elements of sustainable design for new development on greenfield sites and integrating urban form, the study addresses the particular factors concerning:

- Additional opportunities afforded by being able to design for previously undeveloped sites

- Contributing to the improvement of the wider city by linking new developments to the existing and avoiding distinct 'islands of sustainability'

- Designing a more sensitive and integrated relationship between urban areas and their hinterlands

1.2 Methodology

1.2.1 The work of the group was an autonomous, self-directed knowledge-based activity. Its outputs will be interpreted, selected and used by DG-Environment. This selection process will be bottom-up, transparent and participatory, with stakeholder involvement.

1.2.2 The Working Group drew on the experience of its members with a variety of professional backgrounds and from a wide range of European countries. Participants of the Working Group included staff members of the EC-Directorates: 'Environment', 'Regio', 'Science' and 'Development'; representatives of national, regional and local governments; and planners and scientists specialised in the different fields of urban design. The experts have guided the inputs and reviewed the outputs of consultants as well as providing their own specific inputs into the reporting process. These are as follows:

a) Advice on the 'state-of-the-art' in good or best practice generally in urban design for sustainability in their country, or from their particular organisational or professional perspective, together with an assessment of obstacles to achieving good practice and recommendations for overcoming these.

b) Provision of examples of national good practice in urban design for sustainability for the database and for selection and use in the final report of the Working Group.

c) Advice to the main consultant on conceptual and terminological issues relating to the reporting framework and Working Group reports in the different national contexts.

d) Generation and selection of the specific recommendations for action for the EU.

The following methodological approach was agreed in the initial meetings of the Working Group:

1.2.3 Contributions of individual experts: following extensive discussions in the meetings, experts have provided short written statements addressing the following questions that will help identify the kind of actions that can be proposed at the European level.

- What is the 'state of the art' or 'best practice' in reducing the environmental impact and increasing the environmental efficiency of urban areas through urban design? What are the key elements and how easy will it be to apply these best practice approaches across

the European Union? How do they relate to a realistic vision for urban areas for the near future and what could be reasonably achieved in the medium-term?

- What are the 'barriers' that could been found or might be likely?: What is preventing more urban areas from using and implementing these best practice approaches?

- What can be done to overcome these problems? What are the specific measures and actions that can deal with these difficulties?

- How can they be implemented at the European level and at other levels (the Member States, regions, municipalities, city authorities)? How can these recommendations be quantified and evaluated? What could be the targets and indicators for specific actions and measures proposed?

1.2.4 **The international consultant** had the responsibility for preparing the operational framework for the work, including the Reporting Framework and initial conceptual framework, synthesizing the expert and consultant contributions and working with the members of the group in developing the content and recommendations of this report.

1.2.5 **Contributions of national consultants and national good practice**: The Working Group included, in addition, consultants with responsibilities for specific inputs into and outputs from the activity of the Group. National consultants provided initial comments on the Reporting Framework. They took an active role in the discussions of the Working Group and supplied the draft national reports appended to this report. These national good practice case studies (Annexes C1-4 and D1-3) are in-depth studies identifying good practice models and key elements required to achieve sustainable design of settlements and their interdependence to the hinterlands and the surrounding landscapes. The national contributions are elaborated on basis of the National Reporting Framework developed by the international expert (see above). (This also provides a basic reference point, along with the Terms of Reference and Inception Report, for this Interim Report)[2].

1.2.5 The following national reports (each including up to 3 or 4 local good practice case studies each) are appended to this report:

- Spain (Marta Garcia Nart, Government Spain, José Miguel Fernández Güell and José Fariña, consultants to the Spanish Government)

- Finland (Matti Vatilo, Irma Uuskallio, Ministry of the Environment, Anu Mansikka, consultant to the Finnish Government, Staffan Lodenius and Kaisa Hyyti, Technical University of Tampere, Anu Mansikka and City of Helsinki)

- Austria (Uwe Schubert and Gabriele Langschwert, consultants to the Austrian Government)

- Slovakia (Milsolava Paskova, Ministry of Environment)

1.2.6 Additional national case study material drawn on for this report includes:

- Germany: Hannover Kronsberg (Reinhard Martinsen, City of Hannover)

---

[2] Elements of the original Reporting Framework have been incorporated in this Main Interim Report and the remainder presented in Annex A.

- Sweden: City of Stockholm (Mats Pemer, City of Stockholm)

- Hungary: Ferencváros, 9th district of Budapest. (Gabor Locsmandi, Budapest University of Technology and Economics)

- The Netherlands: The National Package for Sustainable Urban Design (Jitske Pultrum, Ministry of the Environment)

- France: National approach to Local Agenda 21 (Nedialka Sougareva, Ministry of Ecology and Sustainable Development)

1.2.7 Other points of reference include:

- PLUGs (Peripheral Low-Density Urban Generators) in Sweden

- The plan for the regeneration of the Fonebu Airport site in Greater Oslo, Norway

- The European Council of Town Planners' Guide to Sustainable Development at the Local Level: 'Try It this Way'

- Projects from relevant clusters of The European Commission DG RTD 'City of Tomorrow and Cultural Heritage' Key Action within the 5th Framework Programme for RTD supports research projects.

Sustainable transport in Calvia, Spain
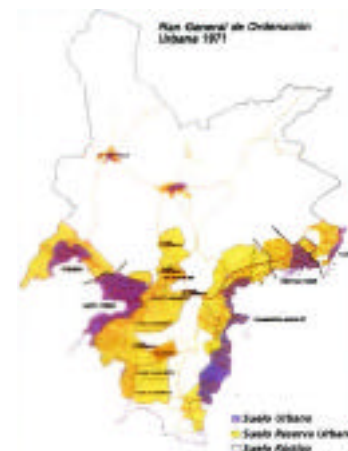
Map of urban area in Calvia, Balearic Islands, Spain

2. The issues

2.1 Strategic policy issues: conceptualising sustainable urban development and design

2.1.1 This section discusses the conceptual scope of the work undertaken by the Group. It includes the concepts of urban design for sustainability, and of sustainable development, used in the Report and outlines some of the strategic policy issues arising out of the discussions of the group.

2.1.2 In this study, urban design is defined as, first, the physical design and planning of the built environment (physical infrastructure, building complexes, spaces and urban areas) in relation to the natural environment in and around built-up areas and, second, the production of concepts and models that serve the purpose of guiding the sustainable development of settlements.

2.1.3 Within existing urban areas, urban design concepts can serve the purpose of knitting the urban fabric together to achieve an integrated city-wide vision. In order to address sustainable

development in an integrated manner, however, it has proved necessary in the study to look at the design of urban areas in relation to the impact on their hinterlands and surrounding rural areas, and in relation to their neighbours (i.e. as city networks or urban systems), as well as understanding how the structure of existing urban areas functions both as an urban ecological system and as a social system. Larger scale spatial development frameworks serve the purpose of linking new developments to existing ones and providing a basis for planning larger territorial units to ensure effective resource conservation, the development of the 'green structure' of a city and its region, and efficient material and energy flows on a cyclic basis. The relationship and impacts of transport infrastructure to settlement form is a critical aspect of this

2.1.4   Sustainable development has to consider social and economic factors as well the environment in an integrated and a holistic way, in line with international thinking on this matter. Sustainable development is essentially a concept of resource conservation and development. The important resources affected most by urban design and development are land, particularly green areas, ecological systems and bio-diversity, air, water, physical infrastructure, the built environment, human health and well-being, social relations ('social capital') and cultural heritage. The recognised international starting point for the definition of sustainable development is that of the Brundtland Report (1987): 'development that meets the needs of this generation without jeopardising the ability of future generation to meet their own needs'

2.1.5   From this starting point there have been two main trends in the interpretation of the definition of sustainable development. In the first, 'sustainability' is mainly concerned with environmental issues and the long term husbandry of natural resources, while 'development' has focused on balancing longer term economic growth with achieving social equity in 'meeting needs' through the equitable distribution of economic and social goods and, in particular, in overcoming poverty.

2.1.6   This view was predominant at the Earth Summit or UN conference on Environment and Development in Rio de Janeiro in 1992. One of the main outcomes of Rio was Agenda 21, intended to provide a basis for achieving sustainable development in the 21st century. Chapters 7 (concerned with human settlements) and 28 (concerned with the role of local authorities and communities in achieving sustainable development through the establishment of Local Agenda 21) provide one of the two UN frameworks for sustainable urban development.

2.1.7   Subsequently, the tendency has been to view 'sustainable development' as a unitary concept that incorporates environmental, social and economic components. Under this concept, it is possible to talk about social and economic, as well as environmental sustainability. This allows for a more in-depth and analytical consideration of the longer-term aspects of economic and social development alongside environmental considerations and underlies the approach taken in this reporting framework.

2.1.8   In other contexts, other 'dimensions' of sustainability have been introduced, such as 'institutional', 'cultural' or 'physical'. These factors are important. For example, in cultural terms, European civic tradition combines a mix of functions in cities: residential, working, leisure, civic and religious, in a well-understood hierarchy, which promotes cultural continuity. The European city has had a strong and at the same time flexible structure, which can only be appreciated in its cultural and historic context.

2.1.9   For the sake of conceptual ease, and in line with the established conventions, however, we retain the three dimensions of social, economic and environmental – with governance (including

empowerment and citizen participation issues) and cultural concerns being included under social sustainability, and physical-built environment under environmental and/or economic concerns.

2.1.10 The 'three-pole' concept of sustainable development is the one that underlies the Habitat Agenda – the outcome of the Habitat II Conference or 'Cities Summit' in Istanbul in 1996. This provides the second UN framework for sustainable urban development, one that largely overlaps with and complements Local Agenda 21, but one that more specifically addresses issues of sustainable urban form and design and related matters of conservation and rehabilitation of cultural heritage. This report is focused on environmental recommendations, as required by DG Environment in preparing the Thematic Strategy on the Urban Environment, within the broader concept of sustainable development outlined above.

2.1.11 The group broadly agreed that urban design for sustainable development should address the following objectives

- The protection of the natural environment and conservation of natural resources at the local and regional scale;

- The reduction of the impact on the natural environment at the global scale and in the longer term: reducing ecological footprints and achieving balanced production and consumption systems;

- Promoting balanced and appropriate economic development whilst reducing social inequalities and improving social integration and cohesion; it is particularly critical to address directly the social issues and rapid changes arising out of mass immigration from low income countries.

- Advancing the quality of life in relation to the above

- Promoting the long term health of the citizens, including addressing the relationship between social and psychological well-being and the possibility of experiencing elements of nature locally (particularly important for children).

2.2 Contradictions and win-win situations in sustainable development

2.2.1 The Working Group discussed possible contradictions between the different aspects of sustainability and the problems of trying to reconcile sustainability with an advanced quality of life for all the world's population. It was emphasized that we should be looking for overlaps and 'win-win' situations between environment and social and economic aspects.

2.2.2 An example of a win-win situation might be, for example, reducing general reliance on private car use and raising demand for and stimulating the development of an efficient public transport system. This, in turn, reduces local air pollution and raises the quality of life for affected residents, as well as improving the accessibility of disadvantaged groups to employment opportunities and services. Reduced private car use implies an overall reduction in CO_2 production, reduction in the use of non-renewable fossil fuels, reduced land-take for roads and motor-related activities and/or quicker access for essential, road-based transportation of goods and services. This, and other complementary or win-win approaches, are addressed by the various models and strategies for sustainable urban design that have been developed in theory and practice in the past few decades and which are outlined below (Section 3.1).

2.2.3 It was noted, in the Working Group's presentations and discussions, that potential conflicts of interest could arise in the design approach to natural areas at the local and regional scale

between addressing the need to protect ecosystems, and addressing public health and amenity requirements and the need to raise the quality of life for local inhabitants. In some situations, providing for local amenity use has undermined the ecosystem where insufficient attention as been applied in the design approach to meeting the various demands. Other case studies raised questions about the possibilities of an excessive focus on the quantity of green space being provided for both amenity use, and as a means of protecting the natural environment without sufficient concern as to its use and management, and longer-term financial and social sustainability.

2.2.4   Conflicts between economic development and environmental protection are, of course, fundamental, and some of the planning systems in the European countries studied by the Working Group (e.g. Spain, Hungary, Slovakia) are still largely geared to economic development demands or have been weakened in order to free up market forces. In Spain, due to the inability to generate sufficient new urban fabric on vacant or brown-field land, real estate speculation is one of the major urban problems. Additionally, urban plans do not always require environmental impact assessments.

2.2.5   In June 2001 the Directive on Strategic Environmental Assessment was enacted, requiring member states to carry out environmental assessment of plans and programmes being prepared and adopted by authorities at national, regional and local level. At present this is fairly open-ended, leaving the detailed procedures to member states. While this is likely to have a positive impact on achieving sustainable urban development, it is not explicitly linked with any specific requirement for the production of land use plans and development frameworks at the local level that will ensure the environmental sustainability of major non-governmental development projects.

2.3   Market forces and demographic factors driving unsustainable development

2.3.1   Development pressures reflect the impact of globalisation, which includes the increasing spatial division of labour and economies of scale in the international economy, overriding any increase in transportation costs (which often, in any case, are highly subsidised). Large scale, single use developments outside the main urban areas are contributing to urban sprawl. The transport of goods and mobility of people continues to grow steadily every year adding to the pollution of the global environment, the depletion of fossil fuels and pollution and congestion at the local level. The development of transport infrastructure, and particularly roads, responds to the economic pressures and in turn increases mobility and accessibility, opening up rural areas to new urban development, with the demand for easing the long distance and international flow of goods over-riding local sustainability needs

2.3.2   Edge-of-town development is generally primarily car-accessed and characterised by extensive, characterless, 'shed' type developments – along arterial and orbital roads and in retail parks and industrial estates, business and technology parks – leisure parks, huge supermarkets and inward-looking mall-based shopping centres. It encompasses large institutional development and extensive suburban residential areas that are often social 'monocultures' as well as single use.

2.3.3   It has to be recognised this type of development is market-led and, some would say, a response to market demand. Although demand is also affected by what the market offers (particularly when choice is limited), many of the new car-accessed urban 'types', for example shopping centres and supermarkets, are now an integral part of the contemporary urban life-style in European cities. Urban design has to look at how these types can become more sustainable and address the

difficult task of how to substitute the convenience of car access, with other approaches. The introduction of traditional mixes of land uses into mono-use areas may be one approach (as mixed use improves accessibility for everyone and achieves a more balanced use of services and infrastructure including public transport facilities), greater use of home delivery of goods (groceries, household goods) another. Each, however, and there are many others, requires a careful study of patterns of activity and demand.

2.3.4　These alternative approaches fit within the overall concept of sustainable development, which addresses the longer-term resource needs and social costs that the short-term operation of markets might fail to address and, in this aspect there is an overlap between the social, economic and environmental viewpoints that can provide the focus of an actual and perceived 'win-win' situation.

2.3.5　Sustainable development focuses on the qualitative aspects of economic development, for example, in organising production and consumption processes in a more cyclic, balanced way, and choosing forms of production that minimise the use of resources and environmental pollution. Similarly, urban design for sustainability is not against economic development, but supports the concept of combining economic development with environmental progress.

2.3.6　Growing prosperity and wealth and increasing demands for an improved quality of life are reflected in the increasing consumption of land and space, demand for privacy and better living conditions and access to green space. Demographic trends, including an ageing population and the growth of smaller and single person households, are adding to the demands for new housing and to the pressures for suburbanisation in rural areas (as well as for improvements to the quality of the environment and everyday life in inner city areas). Valuable agricultural land, amenity space and natural reserves of biodiversity are being lost. At the same, increasing land values and property prices in cities make housing in locations that are accessible to livelihood opportunities and services increasingly unaffordable for many sections of the population. The relationship between the housing market and public land and housing policies and urban design is critical. Urban design can provide the framework for achieving a good quality of life when the attempt to meet these challenges may require higher densities and better mixes of development.

2.3.7　The issue of residential segregation through large-scale suburban development is a key one for urban design for sustainable development to address. The trend in the United States and elsewhere (including some parts of Europe) towards a middle class exodus from central cities leaving behind low-income ghettos has created a fiscal and economic crisis in many cities. In many parts of Europe, large-scale low-income residential developments have occurred in suburban locations, leaving the residents isolated from urban services, cultural and livelihood opportunities. Similar issues also arise in relation the peripheral location of other urban land uses and the centre-periphery theme is clearly a central one in considering models of sustainable urban design.

2.4　Regional imbalances in achieving sustainable development

2.4.1　Achieving sustainable development through urban design may cost more in the short term but permit effective longer-term management of basic resources and protect natural ecosystems and the biodiversity that are fundamental to both long term survival and short term quality of life needs.

2.4.2 Where, in the better off European countries, the concept of sustainable development has informed government policy and been incorporated it into legislation, good practice in urban design for sustainability is not necessarily seen as implying higher costs. However, additional costs are a major constraint in those parts of the world with low levels of production and income and where the main priority is to catch up on the standards of living enjoyed elsewhere. This is the point raised in the Madrid meeting with regard to the relationship between high and low income countries, with low income countries arguing that the developed world should pay the additional costs associated with environmental protection, since it is currently using most of the resources that it wishes to conserve (although, of course, not all developed country government are equally committed to sustainable development). It is fair to say that the development co-operation policies of the developed world are now more focused on the mitigation of the effects of global economic imbalances and social inequalities through poverty reduction, than on ensuring that developing countries have rapid economic growth within a framework of environmental sustainability.

2.4.3 In Europe there are also obviously strong regional imbalances and inequalities in wealth and income, as well as differences between urban and rural areas, between cities and between areas within cities. Many cities and regions in Europe are burdened with an industrial landscape that is largely defunct, and/or are under political pressures to find short-cuts to attract the investment necessary to compete in the global economy which may prove unsustainable. Many rural areas are cut-off from the benefits of globalisation and/or have out-dated agricultural production systems.[3]

2.4.4 Structural economic changes are another consequence of globalisation, bringing the decline of industrial activity in many European cities and the need to invest heavily in the regeneration of brown field sites and declining inner city neighbourhoods to overcome the high levels of unemployment and social deprivation and exclusion resulting from the changes. The concentration of social problems in inner city neighbourhoods, and in isolated or over-sized public housing estates, increases problems of crime and personal security leading to further spatial segregation and the 'flight of middle classes' to protected suburban enclaves. Impacts are also being felt in many rural areas and there is a need to review rural development policies to encourage development that is more sustainable as well as more closely linked with sustainable urban development.

2.4.5 Regional economic imbalances add to the pressures for mass migration, along with the increasing cross boundary movement of people associated with increasing international flows of goods, information and finance. Many of the migrants to cities in the EU come from poorer countries beyond its borders, as well as poorer regions within the Union. Although there are many examples of successful mixed ethnic neighbourhoods in European cities, tensions between newcomers and existing residents remain. This can be exacerbated by cultural and ethnic differences, especially in neighbourhoods characterised by poverty and social exclusion. Urban design can help provide the physical framework for overcoming differences and segregating processes, as well accommodating the need for a variety of expressions of cultural and ethnic identity.

---

[3] Where agricultural production is being updated this is likely to be on modern industrial lines but this represents an important opportunity to explore production based on ecological principles and to develop production based on local capacity to serve local needs.

2.4.6 Regional differences are being addressed, to a large degree, by EU structural funds and the various different Commission-led funding programmes and subsidies. However, it is doubtless the case that these subsidies could be better informed and directed by an urban design perspective that is based on improved knowledge of the way that cities and their regions, and larger networks of cities and urban systems work, and areas within cities and individual settlements relate to one another in physical terms.

2.5   The role of urban design in addressing the key issues

2.5.1 The physical design of infrastructure and the built environment, and the way the land is used and developed, noting that the value of land as agriculture area is generally much less than if it is planned for development, is clearly of key importance to balancing production and consumption patterns and achieving sustainability. In this respect the concept of the 'ecological footprint' is helpful. There has been a tendency to use this concept in relation to individual cities, in the negative sense that cities have been viewed as more unsustainable than rural areas, but also in the positive sense that self-governing cities can be strong management units that can take positive steps at the local level, particularly through Local Agenda 21s, to improve their contribution to sustainable development.

2.5.2 With urbanisation, it becomes meaningless to talk of cities being more unsustainable than the countryside as the urban lifestyle and high standards of living come to be shared by most of the population, no matter where they live (and, in fact, those living in rural areas may have a greater environmental impact). It is also necessary to view larger cities and smaller settlements and associated rural areas as part of larger, integrated settlement systems that often encompass many separate administrative areas and are consequently difficult to plan for. This is one of the key themes of this report.

2.5.3 The 1990 Commission Green Paper on the Urban Environment focused on car-based suburban sprawl, congestion, pollution and segregated land uses as the key problems that sustainable urban design should address. These remain key issues and the concept of the Compact City clearly remains valid as a central component of a strategic urban design approach to sustainability. The pressures favouring urban sprawl remain intense. While urbanisation as a process is not fully complete in Europe, many towns and cities are not showing any significant increase in population and others are in decline. This is partly as a result of the 'counter-urbanisation' process where people migrate from the central city areas to smaller settlements and rural areas in the outer parts of urban regions, with improved transport connections allowing long-distance commuting. Nevertheless, cities continue to grow in extent, with increasing residential unit demand from growing numbers of one-person and small households and increasing space demand associated with growing wealth.

2.5.4 However, alongside excessive land take, traffic levels and car use, congestion and pollution and the loss of vitality associate with, and general unsustainability of, segregated land uses, other key issues were identified by the Working Group. These included social and ethnic segregation, lack of participation and social alienation, social exclusion, growing crime and insecurity, particularly in poorer inner city areas and on isolated public housing estates, unemployment and lack of housing, educational and cultural facilities and preservation of cultural heritage. Many of these factors are associated with globalisation (including economic and political integration within Europe) and its impacts. These include increased migration (especially mass immigration) and cultural exchange, increasing economic competition with associated decline and structural

economic changes in many places, and the growing importance of the urban regeneration agenda. It was suggested that urban design should provide a flexible framework for addressing these issues, with an emphasis on changing life styles and sustainable production and consumption patterns. Clearly, urban design cannot solve all these problems on its own and needs to be seen as part of a larger strategic approach involving transport and land use planning, urban governance and management and sustainable construction.

2.6   New urban settlement patterns

2.6.1   The growth of mobility, of the transport infrastructure and other infrastructures, especially in the area of information and communication technology (ICT) is also resulting in the emergence of new, more polycentric patterns of urban development, with a greater specialisation of functions between centres (as well as increased competition) and the growing importance of networks of cities. The challenge for urban design is to respond to these emerging patterns in a proactive way that overcomes negative effects such as excessive car-based mobility and urban sprawl.

2.6.2   Several experts noted that there had been major changes in the nature of the larger urban settlement form in Europe and most of our concepts and planning practices had failed to keep up with these changes. These changes were associated with changing patterns of new settlement and use of existing adopted urban form, movement and the changing relationship between core and periphery. Older cities have gone from horse drawn vehicles to cars and, in many centres, back to pedestrian movement. While there are cultural and geographical differences, there is a common process of urban development in both large and small urban centres with a change in the functions of city centres and the growing importance of urban periphery, with the development of polycentric urban systems. In this respect there is a continuity between the objectives of urban design for sustainability and the broader regional spatial development aims set out in the European Spatial Development Perspective. It is important that measures to implement the ESDP continue at it provides a Europe-wide framework for addressing the issues of polycentric urban regions (which often cross European national boundaries) at the local level.

2.6.3   The emerging urban patterns are not simply an issue of urban sprawl, though this is clearly an aspect of the process. Rather a new system of networked urban centres is emerging within identifiable urban regions. Our policies, administrative and planning systems, and practices need to take account of this reality. These city networks and polycentric urban regions are developing on the basis of better transport links and improved information technology and communication. However, physical movement is primarily by private car and this needs to be challenged. The group discussed the adoption of a strategy of 'decentralized concentration' (within the particular context of the ongoing development of polycentric urban regions and accepting the need to maintain the compact form of existing cities) through the creation of dense settlements and centres away from the principle centre and conurbation (models based on this approach are explored below), and as a realistic compromise between compaction and dispersal. The development of a sustainable urban pattern needs to be based on an understanding of the landscape to achieve urbanisation that is balanced and integral with the development of agriculture and forestry, and with the green structure of natural and recreational space as an equal partner to other elements of infrastructure.

2.6.4   Many functions are being lost from the existing principal centres (central business districts) to the periphery (or to new growing centres in the periphery or to nearby towns and cities, within a polycentric urban region), often a response to growing congestion and other costs. The

increasing land values of central business districts do not suggest an essential weakening of their economic function but rather increasing specialization as a preserve of very high value uses (e.g. HQs of commercial companies, especially multinationals, higher functions of government, leisure and entertainment and specialized services drawing on very large catchment populations). All these benefit from the remaining high accessibility and high quality service provision associated with city centres.

Residential and school buildings illustration in the Solar City of Pichling in Linz Austria

3.   Developing the Vision

3.1   Models and Strategies for Sustainable Urban Design

3.1.1   Compared with cities in the Asian, African and South American continents European cities have reached a greater level of maturity, without the explosive urban growth seen in those regions in recent decades. In the period following the Second World War, with its devastating impacts across Europe and need for major reconstruction, many parts of Europe saw an emphasis on a strong planning system with a focus on preserving agricultural land around cities in 'green belts' and preventing ribbon development and urban sprawl along main roads. However, the planning legislation developed in the post-war period also promoted suburban and mono-functional types of development, while the pressure for the development of land around cities has continued to grow inexorably. As a result, the attention of European cities is increasingly focused on issues of energy consumption, traffic management, noise and emission reduction and ongoing urban sprawl, combined with improving the whole quality of life within this development context. The ongoing participation of those who are already existing citizens has also been an important factor in contributing towards greater sustainability.

3.1.2   Historically, the emphasis in the development of models of sustainable urban form has been on environmental sustainability, while the development of urban design strategies that address the other aspects of sustainable development is only now being addressed. A number of models of

environmentally sustainable urban form have been developed that are broadly variations and hybrids of two basic strategies[4]:

- the Compact City strategy
- the Short Cycles strategy

3.1.3 The Compact City strategy focuses on the form of the city and the efficiency of the distribution of human activities within it, making optimal use of the infrastructure of the city, particularly transport infrastructure, through compact, mixed-use and dense settlement structures enabling effective use of public transport and non car-based movement systems and minimising vehicular movements. The argument of this report is that the Compact City approach remains a key element of urban design for sustainability but that urban design and landscape design must be closely linked. The contemporary European city should be compact and green at the same time.

3.1.4 The Short Cycles strategy is associated with the environmental thrust of Local Agenda 21 and an emphasis on achieving local environmental sustainability through more efficient local use of natural resources and recycling, greater local economic autonomy and a smaller 'ecological footprint'.[5] One model of its realisation is in a spread out, low density city (with space for horticultural production and recycling associated with large, single family housing plots) but, within the European context, it is more commonly envisaged as an urban system consisting of a series of small, compact town-size settlements with easy access to natural areas and space for natural processes in their immediate surroundings. This type of model is particularly appropriate for new settlements and greenfield site developments and knits well with an ecological approach to decentralised concentration (see below).

3.1.5 The following short review sketches out the main features of these two approaches, which are often seen as competing but both of which are drawn upon and synthesised in the 'model' advocated in this report. Section 3.2 reviews models of integrated transport and land use planning which can be seen as more specific design strategies for implementing the broader model of sustainable urban design. Section 3.3. explores the recently developed spatial development strategy of 'decentralised concentration', sometimes put forward as an alternative to the Compact Cities approach. However, it is the argument of this report that decentralised concentration can form part of a broader Sustainable City Region strategy, emphasising the integrated nature of urban and rural areas within the European landscape, and drawing strongly both on the Compact Cities and Short Cycles approaches, and on integrated transport and land use planning models, in particular the networked city idea.

3.1.6 The Compact City is associated with existing traditional European urban forms and the European Commission, in its 1990 Green Paper on the Urban Environment, stressed the cultural and quality of life as well as environmental benefits of the traditional, mixed-use (and mixed income) high density, high accessibility European city over car-based suburban sprawl and segregated land uses. The Compact City strategy implies a concentrated urban form within the boundaries of

---

[4] See Petter Naess, Norwegian Institute for Urban And Regional Research, in his contribution to the conference on *Urban Utopias: New tools for the Renaissance of the City in Europe,* DGXII European Commission, Berlin, 1995.

[5] See, for example, Barton, Hugh, Davis, G and Guise, R (1995) *Sustainable Settlements: A Guide for Planners, Designers and Developers,* University of West of England and The local Government Management Board, for a practical approach to achieving greater local autonomy through urban design.

existing urban settlements (or through limited urban extensions) and possible increases in gross densities through development of infill and brownfield sites, or redevelopment at higher densities – 'urban intensification'.

3.1.7   Most commonly, the Compact City is visualised as an adaptation of the traditional 19th century (and pre-19th century) European city, also seen in the North American gridiron cities of the early twentieth century. This is the model, with its fine urban grain, traditional street spaces, mixture of uses, and high densities supporting urban vitality, a range of services and public transport systems that the American economist, Jane Jacobs argued for in her classic polemic against the modernist, planned functionally-segregated 20th century city, *The Death and Life of Great American Cities*[6]

3.1.8   However, the Compact City strategy is not tied to this particular vision and it is possible to envisage compact urban forms that are modernist in their conception, for example the sustainable high-rise city model adapted by the architect, Richard Rogers, for his entry to the Shanghai Pudong District planning competition.[7] This proposed mixed-use towers linked to pedestrian and public transport-orientated movement systems, appropriate for high value central areas of larger cities. This approach to urban form and its associated life-style is seen in practice in Asian cities like Hong Kong.

3.1.9   While the emphasis has been on the environmental benefits of the Compact City form in terms of efficiency in use of resources and global and local environmental impacts, this form is also sustainable in terms of its social impacts allowing easier, affordable access by low-income residents to urban services and employment opportunities.

3.1.10   The Compact City strategy has an application in each of the three basic themes of this Working Group project. In redesigning or retrofitting the city, the areas concerned are often disused or under-used 'brownfield' areas and redevelopment focuses on mixed-use, medium and high density development that fits within the broader Compact City strategy.

3.1.11   In terms of integrating the city, it is often the case that existing compact and integrated urban settlements have been transected by large scale transport infrastructure, railways and highways, and urban design interventions are required to knit together the districts that have been segregated from one another. (Large-scale, single use developments often have the same impact and require similar interventions).

3.1.12   While new greenfield site settlements tend to be at a sub-city scale, above a certain size the same Compact City principles can be applied in their design. This is important because most new greenfield site developments still tend to be single use and, in the case of residential development, socially-divisive in creating 'life-style' enclaves for the better and worse off. One example of a strategy that takes a compact, mixed-use approach to the design of small settlements in the Urban Villages model.[8] The urban village is usually seen as an autonomous or semi-autonomous area-based unit. One of the main sources of this idea is the work of the

---

[6] Jacobs, Jane (1994) *The Death and Life of Great American Cities,* Harmondsworth, Penguin Books, (first published 1961)

[7] See Rogers, Richard (1997) *Cities for a Small Planet,* London: Faber and Faber

[8] See Aldous, Tony (1992) *Urban Villages: a Concept for Creating Mixed-Used Urban Developments on a Sustainable Scale,* London, Urban Villages Group

Luxemburg architect, Leon Krier, which began with the vision of the autonomous urban quarter - work, leisure and shopping facilities - all within walking distance in a mixed use ideal.

3.1.13　The Compact City vs. Short Cycles strategies suggests a basic polarity of centralised vs. decentralised urban forms, but the dimension of concentrated and deconcentrated urban form also need to be considered. Here, the concept of gross densities and net densities is helpful. While the Short Cycles model implies lower overall or gross densities than the Compact City approach, the population may still be concentrated in smaller, high density settlements, as previously noted.

3.1.14　The Compact City, by contrast, implies both centralised and concentrated urban development, with the population concentrated in existing large as well as medium-sized and smaller cities. This corresponds to the reality in most countries and hence its adoption as the favoured strategy in many European countries.

3.1.15　However, there are many elements of the short cycle or ecological approach that can also be applied in existing urban settlements, including large ones. Many cities, including several examples in the studies carried out by the national consultants, have consciously adopted planning and urban design policies that increase the quantity, quality and accessibility of green spaces in cities, enlarging and integrating the green structure, for example through green networks and the landscaping of the public realm, giving additional possibilities for recreation and leisure as well having an intentional ecological impact on the microclimate of the city and reducing the impacts of pollution. Many European towns and cities show that the best solution lies in compact-green city fusions. There are many other aspects of an ecological approach, including the use of appropriate building technologies and layouts and recycling techniques that can have a local application in existing urban areas.

3.1.16　This approach is also often associated with policies to improve the quality of life of the population of existing towns and cities. In some regions, particularly in the countries of Southern Europe but, more generally, in local pockets of cities throughout Europe, existing residential densities may be regarded as too high, with over-development, overcrowding within dwellings and too much pressure on limited public spaces and infrastructure. In such instances, the city may be regarded as over-compact and moves to reduce densities and introduce new public and green space will be critical.

3.1.17　However, while in the past comprehensive redevelopment and 'slum' renewal would have been the normal planning strategy, it is now more common to make more selective urban design interventions that retain the existing urban fabric, which often has a high historical and cultural value, and minimise the disruption to existing communities and their social capital, whilst improving the conditions and quality of life for the existing population.

3.2　Integrated transport-land use planning urban design approaches:

3.2.1　Whilst the more ecologically-orientated approach of the Short Cycles City tends to focus on local autonomy, a recognition of the economic and social necessity of inter-relatedness and some degree of spatial specialisation tends to shift the stress from de-centred autonomy back towards accessibility and transport energy efficiency. This is apparent in a number of models that relate concentrated, higher density settlement forms, whether dispersed or centralised to public transport systems. These have been developed both in the European context and in other

developed and developing world contexts and the basic principles are, by and large, universally applicable.

3.2.2 Transit-Oriented Development (TOD), sometimes called 'Pedestrian Pockets' is a concept of the Californian 'New Urbanist' Peter Calthorpe[9], which it is a mixed-use community within a 600m walking distance of a core commercial area and rapid transit stop. The main difference with the Urban Villages idea is the emphasis on the link with the rail-based transport system and the notion that different TODs on the network can serve more specialised urban functions. This concept has its origins in the 'Garden City' ideas of the British reformer, Ebenezer Howard, towards the end of the 19th century, and its later manifestation in the garden suburbs and new towns constructed around London.

3.2.3 The Dutch ABC Strategy focused on non-residential rather than residential uses. It set out a series of accessibility requirements and specific criteria relating to parking and public transport for urban and business centres according to their level of trip generation.

3.2.4 The city of Curitiba in southern Brazil combines both integrated spatial planning and green strategies in a linear (axial or corridor) public transport-based (express bus in reserved routes) development strategy that has been taken up by a number of other cities.[10] It can be seen as a recent realisation of the ideas of the Spanish planner Arturo Soria y Mata first set out in 1892.

3.2.5 The Networked City is an increasingly popular concept, looking at the idea of using telematics to link smaller cities to make them competitive with larger cities in an increasingly globalised economy. Hilderbrand Frey (1999)[11] promotes the idea of a networked city at the local scale where a series of smaller centres combine to create a networked city region.

3.3 Decentralised concentration, the European Landscape Convention and the Sustainable City Region

3.3.1 'Decentralised concentration' is usually taken as an alternative spatial development strategy to Compact Cities in that development pressures are directed to new centres away from the existing major centres (as in the traditional New Towns approach based on Ebenezer Howard's concept of the Garden City applied in the regional context). However, it can also be used in the sense that new peripheral development, which is happening in response to irreversible development pressures, should take a concentrated form, and focus on new, high density centres, well-located within a regional or metropolitan public transportation system that is energy efficient and minimising in its environmental impact.

3.3.2 Thus, decentralised concentration can be seen as an extension of the compact city idea to the metropolitan regional context, rather than as an alternative vision of urban form. If we recognise the growing functional specialisation of both existing and new centres, then compaction of both types of centres can be promoted as a legitimate policy. The aim is to increase densities to reduce the pressure on land and resources as well as to make public transport links more effective and feasible and increase the overall integration of the urban region. We need to identify

---

[9] See Calthorpe, Peter (1993) *The Next American Metropolis,* New York: Princeton Architecture Press

[10] See Lloyd-Jones, Tony (1996), Lloyd-Jones, Tony (1996) 'Curitiba – Sustainability by Design', *Urban Design Quarterly,* no 57 and Rabinovitch Jonas and Lietman, Josef (1996) 'Urban Planning in Curitiba', *Scientific American,* vol 274, no.3, March

[11] Frey, Hildebrand (1999) *Designing the City: Towards a More Sustainable Urban Form,* E & F N SPON, London: Routledge.

possible urban design methodologies for achieving integrated metropolitan strategies of this kind.[12]

3.3.3 An important aspect of this strategy is to ensure that the various settlements within the urban system on a regional scale are fully networked through physical infrastructure (transportation and information/telecommunications) and integrated within a developed green structure, as part of a 'Sustainable City Region' strategy that recognises the pattern of urban and rural areas that forms the European landscape, with its cultural as well as environmental implications. It is important to recognise the complexity of the European landscape and understand the physical and social interplay between the built up areas and the rural environment surrounding the cities to enable urban design to contribute to sustainable development.

3.3.4 The European Landscape Convention (ELC)[13] has an important role in this respect. It is a document that aims to raise awareness of the European landscape as a complete environment for the people of Europe. It promotes landscape protection, management and planning, and is the basis for European co-operation on landscape issues, including protection, management and planning. Through the Convention, the European Council provides a new instrument devoted exclusively to the protection, management and planning of all landscapes in Europe. Subject to the provisions contained in Article 15, the Convention applies to the entire territory of the signatories and covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes.

3.3.5 Among other measures the ELC recommends

- establishing procedures for the participation of the general public, local and regional authorities, and other parties in the decision-making process,

- integrating landscape issues into regional and town planning policies and cultural, environmental, agricultural, social and economic policies.

The convention is developed to form a mutual understanding and a common platform for the future of the landscapes of Europe. The Convention specifically mentions both the urban and rural landscape, supporting its use as a tool for developing a sustainable urban design at the same time as securing the versatility of the European landscapes. By implementing the objectives of the Landscape Convention as a part of the background policies and programs when working on the development of sustainable urban areas in Europe, it will be easier to achieve the coherence of the urban–rural dimension in the European landscapes and apply a Sustainable City Region approach.

---

[12] See the discussion in the paper submitted by Hans Bjur (Annex B). An example of such a strategy is set out in a chapter by Tony Lloyd-Jones, et al in 'The Integrated Metropolis a Strategy for the Networked, Multi-Centred City', Ali Madanipour, Patsy Healey and Angela Hull (eds.) *The Governance of Place: Space and Planning Processes,* Aldershot: Ashgate (2001) which also focuses on the identity, design character and cultural aspects of the strategy and, like Bjur, emphasizes the importance of the design of networks of movement and communication. See also Stephen Graham and Simon Marvin's description of the networked city in *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition,* London: Routledge 2001.

[13] The European Landscape Convention was adopted by and opened for signature by the member States of the Council of Europe, in Florence, on 20 October 2000.It will be binding for the member states of the European Council when at least 10 member nations have ratified it. The present situation is that out of the 46 member nations 20 have signed it, Seven countries have ratified the convention.

3.3.6   The Sustainable City Region strategy and decentralised concentration may have a particular application in regions where there are large numbers of smaller towns and cities and where governments wish to support the development of such settlements as an instrument of sustainable development. This is in addition to its application, already noted, in 'retrofitting' the sprawl that is already occurring around major urban centres to a more sustainable form.

3.3.7   The key issue is how to balance the development trends and strategies that build on these conceptual structures with more local issues of improving the quality of urban space, the design of places and nodes of mobility so as to promote economically, socially and economically sustainable urban development The increasing specialisation associated with current trends in urban development may not be sustainable in this sense at the local level and this needs to be addressed in any urban design strategy that addresses this trend. It will need to also accommodate the following factors:

- Accepting the reality of growing significance of periphery (which a Compact City approach focused only on existing major urban centres might fail to do);

- Increasing the density, concentration and compactness of peripheral development and improving public transport links between new settlements and between those settlements and the centre;

- Improving the knowledge of the design and management of transport nodes and systems (as well as other elements of physical infrastructure including ICT) within the network of the functional urban region;

- Improving the knowledge of the design and management of the green structures and green nodes as elements creating linkages between old and new forms of urbanisation;

- Recognising that the changing patterns of urban development will change the nature of centrality within the region and offer opportunities for new centres that can provide vitality in the life of the suburbs;

- Recognising increasing functional specialisation across the urban region and the significance of networks of centres – polycentrism;

- Recognising that the existing major centres will retain considerable accessibility and service advantages, providing action is taken to overcome congestion and the need for car-based commuting, and may continue to attract the highest value activities on a more specialised basis;

- Recognising that the more disadvantaged sections of the population may be by-passed by the new developments and that local social and economic sustainability needs to be consciously addressed in any regional strategy of this kind. One key question is what are the impacts of new development on the lives and livelihoods on disadvantaged groups (as well as on the environment)?

- Addressing functional integration across urban regions and between networks of urban centres with an urban design strategy that reinforces the identity of the region as well as clearly expressing both the links between centres and the particular character of the individual centres.

3.4   Implementing the ideal

3.4.1   The emphasis in these models and strategies for urban design for sustainability is on the physical characteristics of urban form but urban design is also a process in which decisions affecting thousands of people are taken. To be socially sustainable, and for them to feel ownership for this process, there needs to be participation by these stakeholders in the decision-making process. Since the agreement of Agenda 21 at the Earth Summit in Rio in 1992, and the Habitat Agenda at Istanbul in 1996, participation has been a central element of sustainable development. Effective urban design for sustainability needs to draw on the practices of community planning that are emphasized in Local Agenda 21, or have been developed on a more autonomous basis in many places.

3.4.2   It is clear that traditional practices of public consultation in the design and planning of urban development combined with top-down, sectoral management practices do not fit within a concept of sustainable development. At the same time, there is a lack of clarity and considerable variation in interpretation in what participation means in practice. Representative local democracy is universal in Europe, normally with alternating administrations from competing political parties and with local party politics more often than not reflecting those at the national scale. In many, if not most places, local authorities continue to execute policies in traditional, top-down, bureaucratic ways.

3.4.3   However, increasingly, development projects of any size are designed, implemented and managed as partnerships between the key stakeholders involved. Often such partnerships are unequal, with those partners that control the finance, and those that exercise legal powers, having a greater say than other stakeholders who are usually those most directly affected physically and environmentally by the development concerned. Nevertheless, communities can also exercise considerable influence through political means and there are many examples of effective partnerships between local authorities, communities and the business sector achieving more sustainable forms of development at the local level. Local Agenda 21 has proved an effective tool in achieving this type of participation through partnership and the Working Group saw a number of examples of how effective this approach could be in practice.

3.4.4   However, there are also many difficulties with this type of approach. The decision-making process can be slow and the transaction costs high. The private sector, with more targeted objectives (albeit those often exclusively concerned with profit) and dedicated management processes, is faster and more competitive in its approach. While partnerships can help resolve the conflicts of interest that arise and ensure win-win outcomes, it may be no faster than the traditional, formal planning procedures. Since in most cases these have to be navigated in any case, it may even add to the length of time involved. There are sometimes issues of transparency about how partnerships work and how effectively the interests of stakeholder groups are being represented. Many of the issues can be overcome through greater clarity about procedures and rules of operation. However, it is also clear that many of those representing stakeholder interests at the local level are unfamiliar with the type of collaborative practice that requires exercising skills in influencing events rather than controlling them. The Working Group identified an important need for capacity-building in this area.

3.4.5   Of course, in all sustainable design-processes it is of great importance that participants of different kinds are involved. However, during the development process the kind of participants and the subject matter of involvement will change. Transparency in the choices made at the

different phases of the development and reporting to the participants in the next phase is vital for not losing the achieved sustainability and for further optimising of the project in the next phase of the sustainable development.

3.4.6   Alongside the partnership or collaborative stakeholder approach to particular urban development projects, local authorities in some places are adopting a more participatory approach to how they operate in general. Again, Local Agenda 21 has provided the framework for this process in many places, with representatives of local stakeholder interests (including the different sector interests who seldom normally talk to one another) being involved in production and implementation of LA21 plans at the district and city-wide level. The area-based approach can ensure that there is a framework for approaching development projects in an integrated manner and with regard to long term community objectives, essential for achieving sustainable development. This can result from independent initiatives at the municipal or local levels, though a recent survey of LA21s in Europe shows that, where there is a national strategy for implementing Local Agenda 21, the use of this approach is far more widespread. In the United Kingdom, there has long been a national strategy for implementing Local Agenda 21 and nearly 90% of local authorities have LA21 plans. More recently, the government has legislated for community planning in the form of 'Local Strategic Partnerships' further institutionalising the process, though perhaps with some weakening of the long-term sustainability objectives.

3.4.7   Again, there are issues about how effective and transparent this process is in practice and our experience of the approach is in the early days. It is clear that there are tensions between participatory local democracy and representative local democracy, with many local politicians anxious about the influence of new stakeholder consultative bodies and confusion about how the process of democratic decision-making is working. Sector interests within local authorities and other agencies remain strong and it is often difficult to overcome the associated narrow perspectives. Along with the barriers to horizontal policy integration, problems of co-ordination between local, city-wide, regional, provincial and national levels of government and operation remain. The danger of presenting only the positive features of 'best practice' is that the lessons learned about the difficulties and hurdles involved may be missed. This is a factor that must be addressed in any knowledge-sharing set-up at the European level.

3.4.8   In terms of governance processes, mention should be made of the more formal, contract-based approach, adopted particularly in France but also at the European level, whereby stakeholders, especially governments at the various levels, enter in a formal relationship for planning the common approach to sustainable development. At the same time, one of the impacts of change in information and communication technology has been the growing importance of informal networking and more effective city-to-city co-operation. It seems that there is a spectrum of associational processes from the informal to the most formal, and with varying degrees of openness and flexibility within which new approaches to local governance can be explored. Given the confusion about the nature of the new processes of local governance, guidance at the European level about the spectrum of methods of local governance and urban development decision-making, their characteristics, pros and cons and areas of application could be helpful. In this respect, some of the recommendations of the group overlap and augment the recommendations of the Working Group on Sustainable Urban Management

3.4.9   In relation to governance, the importance of Identity in sustainable urban planning and design should be more emphasised. Identity is one of the most important things to preserve and develop

in European cities and towns. National and local cultures are different in different countries and this should be understood and supported. There is a clear link between governance and identity in urban systems. Governance must be understood as a means to preserve and further develop each town's specific identity. Cities are always places of change, this change will be positive if the inhabitants of the city participate in the process of change and share an optimistic vision of the future of their community. The goal of governance must be to get all the stakeholders together, find compromises between different interests and new chances for those who are in difficulties. Preserving identity doesn't mean rebuilding cities as medieval historical centres. It means building a contemporary town following the needs and aesthetic principles of the present inhabitants, preserving the memories of the past but looking to the future. The cities with human scale squares and lively streets will naturally be a consequence of it.

3.5 State of the Art in Urban Design for Sustainability

3.5.1 Examples of good practice in urban design for sustainability were presented in the reports of national consultants and in papers presented by the experts. This report provides a brief summary and analysis of the case study material, which was presented in a variety of formats and is included in full in the appendices to the report. Most of the case studies were either presented at the meeting or distributed to participants as written papers, and in this way fed into the discussion by the Working Group on what constituted best practice and how it can be achieved. The examples covered a broad range of different types of practice:

3.5.2 **National policies:** Three examples of a national policy were presented – the Government strategy for implementation of Local Agenda 21 in France, which clearly had a strong implications for local urban planning and design although this aspect was not highlighted, and the guidance for sustainable urban design produced by the Government of the Netherlands. The Government of Slovakia presented a nation-wide spatial framework for urbanisation and city development.

3.5.3 The examples illustrated, in different ways, the importance of having national policies in place to help guide local practice. A recent global survey of LA21s showed that countries that had national LA21 policies, had a far higher take up by local authorities. The successful national Local Agenda 21 initiatives of other countries were also noted by the group, including the National Local Agenda 21 Report in Sweden and the national policy in Italy. The Netherlands has developed a national strategy for urban design for sustainability, and in Finland the National Architectural Policy has stimulated some of the bigger cities in Finland to produce their own architectural policies. The same effect may result from national strategies for sustainable urban design being put in place. Urban design for sustainability might also be addressed within wider sustainable development policies, such as National Sustainable Development Strategies or as a focus of related policies, such as the public procurement policies, which should address quality and sustainability issues and set a good example for builders and developers.

3.5.4 The national spatial framework for urbanisation and city development of Slovakia is a response to economic stagnation and an attempt to link the development of the settlement structure of the country more closely with that of its EU neighbours. In this respect, it has closed affinities with the European Spatial Development Perspective. Within the EU, Ireland has produced a national spatial development framework that implements the ESDP within the national context. There are clearly more opportunities in this respect and one of the recommendations of the Working Group is that the ESDP (and the ongoing work of ESPON in relation to this) are prioritised as providing

the European policy perspective for addressing the development of polycentric cities; and the development of a framework for planning functional urban regions.

3.5.5 **Urban regional/metropolitan plans:** In practice, effective urban regional planning is extremely difficult to achieve because of the political and administrative fragmentation of planning regions. As noted in the previous paragraph, there are opportunities within existing EU policy, for guidance to be developed and offered on institutions, forms of local co-operation and stakeholder participation and partnerships for spatial planning at the city regional scale. While it tends to remain an unrealised ideal, one example, Stockholm, of physical planning at the metropolitan/urban regional scale in practice was presented to the Working Group.

3.5.6 The example of Stockholm was presented as a planned sustainable compact city in a networked urban region. In the post-war period the city was planned with new suburbs with high density cores planned along metro lines. With citizen and other local stakeholder participation, the new City Plan 99 is reorientated towards the Green Compact City strategy advocated in this report. New developments are focused in an area around and within the inner city, connected by a new peripheral fast tram system to existing radial metro lines. The city's green structure is integrated into the planning process through its 'Green Map' which defines green spaces for ecological and amenity purposes. Meanwhile, the network of fast regional and commuter trains is being developed that could enable the emergence of a wider network of larger and smaller towns and cities in the four county Stockholm urban region.

3.5.7 **City-wide plans:** City-wide plans and LA21-based physical development plans for three small and medium-sized cities in Spain, and a smaller town and village in Austria (which also involved economic regeneration) were presented. The plans at the city-wide scale enable good practice principles in urban design for sustainability to be implemented effectively and in an integrated manner, at the local level, and for the local authorities to reinforce what, in most of the cases presented, were existing Compact City features. They also allowed the local authorities in the Spanish examples to address the issues relating to the city edge and periphery and the transition between the city and its immediate rural surroundings.

3.5.8 The example of the application of LA21 plans to a number of districts in the city of Vienna is an example of a bottom-up approach to environmental planning at the city-wide scale was also presented. Starting from a pilot project in one district involving good citizen participation, and operationalisation in 3 other districts, the decision now is to cover the whole city. Effective co-ordination and networking between the many interest groups involved is critical to this type of approach.

LA21 plan for the greenbelt in Vitoria, Spain

3.5.9 **Neighbourhood developments:** A number of ecologically-friendly new housing neighbourhoods and mixed-use suburbs were presented from Finland, Austria, Germany and the Netherlands. These included examples that focused on an 'Urban Villages' or Compact City approach at the local level, such as Pikku-Huopalahti in Helsinki, involving higher densities, mixed uses, traditional street patterns and a downgrading of vehicular mobility in favour of pedestrians and cyclists.

Other examples took a 'Short Cycles' approach, emphasising ecologically-efficient building layouts and technologies, integrated with the design of green spaces for ecological and amenity purposes. They include the Viikki neighbourhood in the eastern suburbs of Helsinki, comprising the Helsinki Science Park and ecological housing. In Austria, Solar City Pichling in Linz falls into this category, using low energy construction methods and innovative methods of sewage treatment and water supply, while social planning is addressed in a mixed social and demographic structure.

Solar City of of Pichling in Linz, Austria

Hammarby Sjöstad, Stockholm, Sweden

3.5.10 **Integrated housing, governance and planning strategies:** The City of Helsinki presented its city-wide housing strategy to improve social integration and cohesion. The city owns a large proportion of the land in its borders and can therefore exercise strong control over the objectives and standards of development, including the social and tenure mix of housing, which is 50% owner-occupied and 50% for rent. The City works in partnership with reliable commercial developers who construct and manage the development on a long-term lease contract basis. The detailed planning aspects are controlled through the submission of development plans (Master Plans) and detail plans according to the new Building and Planning Act, which also requires all stakeholders to be able to participate in the planning process.

3.5.11 **Inner city, small town and brownfield regeneration:** A number of inner city neighbourhood and brownfield site regeneration schemes were submitted from Finland, Sweden, Hungary and Norway. The Aurajoen Länsiranta area in the port of Turku, Finland, involves the regeneration of the old port area, with the expansion of housing, and business and city-centre related activities and a strong focus on the cultural role of the riverside area, and the use of existing building heritage for new uses. A similar regeneration of a run-down port and industrial district is occurring in Stockholm's Hammarby Sjöstad ('Sea City'), where it is being transformed into a modern, ecologically sustainable part of the city employing recycling technology, with a living and working population of 30,000.

3.5.12 Austria presented some interesting examples of smaller settlement regeneration using a Local Agenda 21 framework, including The Local Agenda 21 Eco Plan of Weiz, a town of about 10,000 people and the Local Agenda 21 strategy of Steinbach an der Steyr, an industrial village of 2,000 people. A Hungarian example of a successful public-private partnership-based approach to urban renewal is Ferencváros, 9th district of Budapest. Early plans for a radical modernist housing development were abandoned in favour of a plan that maintained traditional street patterns and housing design.

3.5.13 **Polycentric developments:** Out-of-town centres and high density, mixed-use development around transport nodes were seen in the Swedish and Slovakian context. In Sweden, decentralised concentration is being implemented through 'Peripheral Low-density Urban Generators' – out-of-town nodes in the transports system. This idea is being tried near Göteborg at the intersection of the north-bound highway and a new ring road and in Jönköping where a new railway station was located on a peripheral highway over the originally preferred central city location. Slovakia presented the City Centrum Bratislava Nové Mesto, a sub-city town centre being developed along compact, mixed-use city lines - an example of active city development policy.

3.5.14 **Sector-based approaches** One example of a more sector focused approach was the Energy Plan of a middle sized municipality in Austria,. The Municipal Energy Plan of the City of Graz was designed both to improve the environment and stimulate the local economy. The Energy Plan is part of a larger City Development Programme and environmental programme 'eco-city 2000'.

3.6   National Good Practices

3.6.1 **Spain**: In Spain, most of the legislative powers, both as regards the environment and in relation urban and regional planning lie at the intermediate regional level. With regard to education, competencies are shared between the national, regional and local levels. There has been a widespread take up of sustainable development initiatives at the local level with authorities at the

municipal, municipal association, provincial and regional levels representing 43% of the population having signed the Aalborg Charter.[14] 68% of these have undertaken some kind of sustainability initiative, the majority in relation to Local Agenda 21 but scattered across a range of approaches and constrained by the existing development-orientated planning system.

3.6.2   The Spanish examples represent three different regional and typological contexts. They include the Local Agenda 21 of Vitoria, capital of the Basque Country, which is a well-defined compact city with a green ring. Vitoria has made a significant effort to rehabilitate its historic district, to improve its public transport system and to provide an accessible green space system and municipal network of social services across the city.

3.6.3   A further example is the Agenda 21 plan of Calviá in the Balearic islands, subject to very rapid tourism-related expansion in recent years. The plan focuses on containing and directing the development and on meeting the needs of the local population, using compact city policies, new road infrastructure and rehabilitating facilities and urban spaces. The programme takes a holistic view, using a matrix of indicators to analyse the inter-relationships between the different factors in the local system.

3.6.4   The third example is the historical city of Segovia in Castilla y Léon, which is a compact city with defined limits and a green belt. This case shows the conflicts between the development of green spaces for recreation and the ability to preserve the original ecosystem, as a general sustainability principle. In terms of access, there is insufficient attention to accessibility by disabled persons. As with the other examples, much of the financing came from European Union, in this instance in the form of funding for the rehabilitation of flood defences.

3.6.5   **Finland:** The reports for Finland emphasized the cultural strengths of the traditional Finnish town. Sustainable urban planning principles are enshrined in the Land Use and Building Act of 1999, and the core role of the municipalities in the land use planning and urban design at the provincial, municipal and local levels. The cities, towns and other communes have the monopoly of master and town planning. Bigger cities have their own planning departments, which produce master plan and town plans. Even if most plans in smaller towns and communities are drawn up by consultants, they are complied by the local authorities. Architectural competitions are extensively used for strategic development sites.

3.6.6   The good practice examples include the strategic planning and public-private partnership-based housing policy of the City of Helsinki. Helsinki seeks to attain a heterogeneous social structure in housing policy through varying the type of funding, with about half of housing production in new residential areas being rental subsidized or privately-financed apartments under the City Housing Programme. The city has a large land holding and plans its development, including housing development.. The plots are handed over for construction and management to reliable commercial developers who lease the plots with long-term contracts on completion.

3.6.7   Other examples include the Viikki development comprising the Helsinki Science Park and ecological housing. The southern part of Viikki, according to the masterplan, is reserved for the teaching and research farm of the University of Helsinki and a large natural protection area.

---

[14] The First European Conference on Sustainable Cities and Towns was held in Aalborg, Denmark in 1994. It launched the European Sustainable Cities and Towns Campaign and agreed the charter which concerned the implementation of Local Agenda 21. Nearly 2,000 local authorities in Europe have now signed the Charter.

When finished, the neighbourhood will accommodate 13,000 inhabitants and offer work places for 6,000 employees as well as 6,000 university students. The masterplan and district plans of the area were drawn up by the City Planning Department and the emphasis is on nature protection and good public transport links. Viikki is fast becoming a district combining high-tech research and training, urban habitation and excellent opportunities for outdoor recreation.

3.6.8   Another Helsinki-based good practice is Pikku-Huopalahti – an 'Urban Village by the Bay' in the inner-city suburbs, where primary use of the streets is given to pedestrians aiming, thereby, to restrict the use of cars. The idea behind this development is to demonstrate the strength of the traditional urbanism of European towns with ordinary streets and squares, and small shops and restaurants, on the ground floor of the buildings. There are no large shopping centres. Strategically the area is subdivided into four mini `villages´, each with their own special characteristics to provide a sense of identity and community spirit. The environmental plan allowed for some 40 per cent of the neighbourhood to be structured as green areas, either for recreational and sports activities or simply parkland and woods. There are good public transport connections to the city centre with two tram lines. People who have moved to the area participated in the planning and organisation of their new living environment.

Pikku-Huopalahti Neighbourhood development, Helsinki, Finland

Regeneration of Aurajoen Länsiranta Port area in Turku, Finland

3.6.9   The Aurajoen Länsiranta area in the port of Turku is an example of 'brownfield site' regeneration, in this case part of the old port area. The focus for renewing its use has been the expansion of housing, and business and city-centre related activities (for instance, museums and two art academies) towards the port area as a result of the growth of the city, and the growing importance of the riverbank area for leisure activities. The redevelopment is based on idea competitions which included concepts for the new use of buildings of the area noted to be valuable in terms of townscape, cultural history and architectural considerations.

3.6.10   **Austria:** Austria has particular features in the international context as a European country. It is a frontier country with 85% of its population in border areas. With the opening of the EU to the east, there are huge implications and uncertainties for Austria's economic development. Half of the population live in the Alpine region, which is highly vulnerable from an ecological point of view. Finally, Austria is a landlocked country and a cross roads in terms of transit traffic between the major European economic centres, with conflicts of interest between the needs of economic development and road users and those of the local population. At the same time while more than a quarter of the Austrian territory has some degree of protection, its unique natural (and man-made) heritage is at risk from urban sprawl. Improved transport infrastructure has lengthened commuting distances and increased the demand for detached housing in the outskirts of cities. A further particular feature of Austria is the high proportion of the population that still resides in rural areas and more than 50% of the Austrian population live in smaller settlements of less than 20,000 people. A strong policy focus on revitalisation of rural settlements has helped in maintaining a balanced urban-rural relationship.

3.6.11   Austria has similarities with Germany and other northern European countries, in that responsibility for land use zoning, master plans and building codes lie largely with its 2,539 self-governing municipalities. But as with Germany, there are difficult hurdles to negotiate at the higher levels off administration. Laws at the provincial, national and EU levels must not be violated, with private consultants playing an important role in interpreting this tangle of regulations in local plans. The Austrian Strategy for Sustainable Development, 'Designing Austria's future sustainably' has a focus on ecological requirements for sustainable development. The 'Austrian Spatial Development Concept OREK 2001' works within the framework of the ESDP and specifies a model of decentralized concentration, with more compact settlement patterns at all levels. Both have legislative force.

3.6.12   Good practice examples include Solar City Pichling in Linz, which is a new housing development of 1,400 apartments, using low energy construction methods and innovative methods of sewage treatment and water supply. Social planning is incorporated in a mixed social and demographic structure and the scheme, as conceived by international experts and drawing on EU subsidies, is intended to be a model of sustainable development.

3.6.13   A further example is the Municipal Energy Plan of the City of Graz aiming at a 50% reduction in CO_2 emissions by 2010, designed both to improve the environment and stimulate the local economy. The focus in on working out detailed instruments to realise the potential for saving energy working through five teams of local stakeholders. On the supply side there has been a move from coal and oil to district heating and gas powered energy plants but there is equal stress on managing the demand side. The Energy Plan is part of a larger City Development Programme and environmental programme 'eco-city 2000'.

3.6.14　The Local Agenda 21 Eco Plan of Weiz, a town of about 10,000 people in Easter Styria had renewed the spatial development plan with a focus on citizen participation and on incorporating ecological concerns through environmental planning. The municipality has been working in co-operation with 18 other municipalities in the region focused around the 'Energy Valley'. Although there has been some brownfield redevelopment in the town, the space for new companies in vesting in the area is limited so that successful revitalisation has been shared between Weiz and other municipalities in the regional development association.

Steinbach, Austria

3.6.15　The revitalisation of Steinbach an der Steyr, an industrial village of 2,000 people is another model of an effective Local Agenda 21 approach. Following a collapse in the local economy in the 1970s and disastrous floods, the village became dilapidated and depressed. This was turned around by a new 'culture of politics' when a group of local politicians took the initiative to revitalise community life and economic activity in the early 90s. A regional bank made a loan available to fund a number of linked development projects that focus making the best use of local skills and resources, linking local production and consumption, and conserving the environment. Projects include the construction biomass-fuelled energy plants, renovating dilapidated houses in the village to prevent sprawl and brining the town square to life again, as well as a number of projects that have increased local employment and income.

3.6.16　The Local Agenda 21 of Vienna is the largest LA21 project in Austria. With a pilot project in 9th district involving good citizen participation, and operationalisation in 3 other districts the decision now is to cover the whole city. It has involved a bottom-up approach and getting better communication with administrators/politicians of the districts, which have decision-making and spending powers, co-ordinated with local authority. Co-ordination and networking are very important. The plan involves many different local activities. Expert groups study areas what and where things need to be done, there is a management board of councillors/administrators from municipality and districts, political parties and citizens and every district has an LA21 office in an NGO or private planning office, which designs and gives a face to the project.

3.6.17　**Sweden:** various examples of good practice were described in the Swedish context. Mention was made of attempts to implement decentralised concentration through PLUGs – 'Peripheral Low-density Urban Generators'. These are out-of-centre nodes in the transport system developed as generators of sustainable urban form. This idea is being tried near Göteborg at the intersection of the north-bound highway and a new ring road and in Jönköping where a new railway station was located on a peripheral highway over the originally preferred central city location.

3.6.18   The example of Stockholm was presented as a planned sustainable compact city in a networked urban region. From the early 1950s the city has been developed on the basis of a comprehensive plan with new suburbs with high density cores planned along metro lines exactly as the model of Transport–Orientated Development being promulgated by the American New Urbanists. Following discussions with citizens and other local stakeholders, the new City Plan 99 aims to "build the city inwards", reusing existing land for new developments. Most of the new developments are focused in an area around and within the inner city, connected by a new peripheral fast tram system to existing radial metro lines.

3.6.19   The first of these new developments is in Hammarby Sjöstad ("Sea City"), where is a run-down port and industrial district is being transformed into a modern, ecologically sustainable part of the city employing recycling technology, with a living and working population of 30,000. Another important type of development is taking place in Kista Science City, an important new technology concentration, where physical inks including roads, tram lines and a landscaped park are planned to link the area socially with nearby poorer suburbs.

3.6.20   While Stockholm has a good modal split with 70% of commuters to the centre using public transport, the planners are still aiming to develop the public transport system to discourage urban sprawl. The network of fast regional and commuter trains is being developed that could enable the emergence of a wider polycentric urban region incorporating the larger and smaller towns and cities of the Mälär Valley, part of the four country Stockholm urban region. A further element in the planning strategy for sustainable development is the 'Green Map' that aims to integrate the green areas of suburbs and inner city, dividing them into areas of ecological value and areas of socio-cultural value as places for "human activities and experience".

Kista Science City, Stockholm, Sweden

3.6.21   **Germany:** In Germany today more, than 1,000 cities have started activities and programmes responding to the Agenda 21 vision of sustainable development but, as in Spain, the urban planning sector has received only minor inputs on the sustainable development approach. The idea of sustainability is enshrined in planning law, (with self-governing cities and towns being the competent planning authorities within the framework of federal and state law) but no more than 10 municipalities, among them Freiburg, Heidelberg, Bremen and Hannover, have incorporated a sustainable development approach in their planning work.

3.6.22 Even so, there are already some examples of good practice in Germany that demonstrate the implementation of sustainable and integrated urban planning: Freiburg's Vauban quarter and Hannover's Kronsberg housing area. Each project was founded on a decision by the respective city council, demanding a strong commitment by all stakeholders. In preparation for the political decisions, experts in all planning sectors identified the specific sustainability issues and interpreted them as quantifiable standards to be incorporated in the council decision. To ensure application of these standards from the very earliest stages through to the construction and maintenance phase, standard planning procedures were expanded and the separate phases connected through a continuous information and participation process involving all relevant stakeholders

3.6.23 **The Netherlands**: The government of the Netherlands has adopted two main approaches to sustainable urban development:

a) The National Strategy for Sustainable Development

b) The National Package for Sustainable Urban Design

The National Strategy for Sustainable Development sets out the most important policy goals for the coming years in the Netherlands as follows:

1. Ensuring economic growth despite a greying population;

2. Maintaining the social cohesion against a background of a multi-cultural society, individualisation and an ageing population;

3. Reducing the pressure on nature and the environment and making an honest contribution towards maintaining the world's ecosystems.

3.6.24 Basic guidelines to translate these three goals into concrete governmental policy have been worked out around five main themes: population, knowledge, climate, water and biodiversity. For the 'Urban Strategy' to achieve a sustainable environment the most important actions at the governmental level are:

a) To facilitate the accumulation and transference of knowledge (as in the National Package for Sustainable Urban Design)

b) The further improvement of co-operation between local government, the business community and private citizens on sustainable development.

c) Reduction in the emission of greenhouse gasses: by making the polluter pay. This includes decreasing energy-consumption (for example by introducing heavy taxes on the use of fossil fuels); expressing the negative effects of excessive mobility through prices; and achieving targeted, safe and sustainable transport systems through innovative, economically and socially-acceptable technology.

d) Reducing the negative effects that flooding can cause, for example by developing construction-techniques for building houses on low-lying areas near rivers.

3.6.25 The National Package for Sustainable Urban Design has been developed by various institutions from the world of housing, building, architecture, local government, transport, water etc. The package gives a overview of all the different aspects of sustainability in urban design.

To promote this national package the Dutch government co-finances and supports some Dutch projects on sustainable urban design. One example of good practice in urban design for sustainability quoted is the new development at Lanxmeer, near Culemborg. This is a 40 ha., mixed-use development on a former water protection area, planned to be well integrated into the city landscape and for recourse management, with local rainwater and wastewater treatment and 100 % energy self-sufficiency. This project is a good example of the four elements of sustainability in urban design regarded as key by The Netherlands' Government

 a) the choice of the location of the development

 b) the development of the construction area

 c) the sustainable construction of the buildings

 d) the management and use by the future inhabitants

3.6.26 **France:** France has gone further than many countries at the national level in integrating Local Agenda 21s into the planning and spatial development system and linking it to urban management through a number of recent acts and policies, and through contracts between local authorities, regions and the national government supporting sustainable development based on Agenda 21 at the local level.

3.6.27 The Ministry of Ecology and Sustainable Development is also providing financial incentives in the form of grants for projects on tools and steps for implementing Local Agenda 21. Three types of projects are receiving support: sectoral projects with a sustainable development demonstration value, methodological tools and Agenda 21 projects for specific areas. In 1997 and 2000, 45 projects out of those submitted by 155 communities received grants. Projects are evaluated on the basis of 4 general criteria:

1. How does the project integrate protection and enhancement of the environment and quality of life?

2. Does the project include economic development that is likely to modify production and consumption modes?

3. How does the project integrate the improvement of social cohesion and the fight against inequalities?

4. How is the project organised in terms of governance? This includes analysis of stakeholder relationships, their participation in the decision-making process, a diagnosis of the diverse ways of life and creation of a collective vision, a multi-dimensional analysis, transverse organisation to link the various sectors and the creation of relations between the various scales, from local to world-wide.

3.6.28 **Hungary:** In Hungary, sustainable urban design is limited by the number of procedural constraints. The system of territorial administration is unwieldy with no administration at intermediate levels. For example, there are no tiers of government between even the smallest village and the 19 counties.

3.6.29 In the urban planning law and national planning code adopted in 1997, developers are constrained by only a few simple zoning regulations and it is difficult to influence the design process. Numerous environmental agencies control zoning plans and local planning/building codes but their activity is less effective /only re-active/ in the design phase.

3.6.30   There is little in the way of policies, economic incentives and subsidies and there is no land value tax that could help finance land development - both regeneration of brown-field areas and inner city renewal and also a more compact development of urban regions. In most Hungarian cities, the formerly state-owned agencies and companies were dissolved, leaving little expertise on the public side, with no public companies or public-private partnerships to address social housing needs. Sustainable development policies could be incorporated in the land sale contracts with private developers but there are only a few examples of this 'best practice'.

3.6.31   One example of a successful public-private urban renewal operation is Ferencváros, 9th district of Budapest. This was based on the adoption of market-based housing policies since the early 1980s, but mass privatisation was abandoned in favour of maintaining public responsibilities. Early plans for a radical modernist housing development were abandoned in favour of a plan that maintained traditional street patterns and housing design. The project was characterised by excellent co-operation between public and private stakeholders, and received financial subsidies from both the city and the District.

3.6.32   **Slovakia:** Planning in Slovakia has been the responsibility of the self-governing municipalities since 1990, and since 2002 there are also self-governing bodies at the regional level. The planning system is weak in that new development can be approved without a local or city plan as a reference point. Also, approved plans can be subject to frequent changes that weaken their effectiveness in terms of sustainable development. As with Germany and the northern European countries, the national government maintains a largely supervisory role.

3.6.33   The process of urbanisation in Slovakia has come to a halt, with large scale economic stagnation in both urban and rural areas. As a result, the country is looking outwards and viewing its settlement structure in broad strategic terms. The relevant legislation is based on two assumptions or broad goals:

   •   Establishing interconnections with the European settlement network

   •   Creation of optimum conditions for sustainable development of all activities.

3.6.34   The more detailed objectives are to create economic competitiveness, promote balanced settlement development, including the countryside, provide equal access to infrastructure, protect the environment – natural and cultural heritage, and promote social integration and cohesion.

3.6.35   There regulations relating to the arrangement and hierarchy of settlement structure, relating to international and national spatial connections ('networks') and urbanisation axes within the country, and to co-ordination principles for creating balanced economic development. The strategic planners are anticipating a process of suburbanisation with deconcentration of activities from the major urban centres to their peripheries and towns in their regions and are intending to manage this process of growing polycentrism.

3.6.36   The good practices presented included the City Centrum Bratislava Nové Mesto, which is the new development and redevelopment of a sub-city town centre along compact, mixed-use city lines - an example of active city development policy. Another example of active city development policy with public participation is the redevelopment of Zvolen City centre around the greening of the central square and new pedestrian zone.

Regeneration of Aurajoen Länsiranta Port area in Turku, Finland

3.7 A European Vision of Urban Design for Sustainability

3.7.1 Based on a first draft of principles produced by the Commission the following summary draws on points raised in most of the expert contributions on the best practice and 'state of the art' in their respective countries:

3.7.2 Sustainable urban design is a process whereby all the actors involved (national, regional and local authorities, citizens, civil society and community-based organisations, research, academic and professional institutions and the private sector) work together through partnerships and effective participatory processes to integrate functional, environmental, and quality considerations to design, plan and manage a built environment that:

1. Creates beautiful, distinctive, secure, healthy and high quality places for people to live and work in that foster a strong sense of community pride, social equity, cohesion, integration and identity at the local and wider scale.

2. Supports a vibrant, balanced, inclusive and equitable economy and promotes effective urban regeneration.

3. Treats land as a precious resource that must be used in the most efficient way possible, reusing land and empty property within the urban area in preference to seeking new land outside and avoiding urban sprawl: compactness of the city at a human scale as a local development requirement; concentrated decentralisation as a regional development pattern.

4. Looks at cities and smaller settlements in relationship to their hinterland and to one another, considers the functional existence of city regions, networks and urban corridors and systems and their development trajectory, and treats the urban and rural landscape of the city region as an integrated whole.

5. Ensures the strategic location of new developments and local area development in relation to the natural environment (addressing resource conservation, biodiversity and public

health and recreational needs) and public transportation systems, and to ensure maximum efficiency in the use of vehicular movement systems.

6. Promotes mixed land use to make best use of the benefits of proximity (easy and equitable access to services, amenities, green areas and workplaces), ensure the maximum efficiency in the use of public infrastructure and services, a balanced community and population structure, vitality and security in the use of public space and adaptability in the long-term development of built space (with the concept of adaptability applied to existing and new buildings alike).

7. Has sufficient density and intensity of activity and use so that services such as public transport are viable and efficient whilst achieving a high quality living environment (including appropriate standards of privacy, personal space and minimising adverse effects such as noise and pollution).

8. Has a green structure to optimize the ecological quality of the urban areas including microclimate and air pollution, and give access to a biodiversity for those who lives in the urban areas to explore, experience, learn about nature elements.

9. Has high quality and well-planned public infrastructure including public transport services, pedestrian and cycle networks and networks of streets and public spaces to promote accessibility particularly for disadvantage communities and to support a high level of social, cultural and economic activity.

10. Makes use of the state of the art of resource saving technology including low energy housing and other buildings, environmental technology, fuel efficient, non-polluting transportations systems, recycling systems, district heating and bio-mass fuelled and other alternative forms of power production.

11. Respects and builds upon the existing cultural heritage and social capital and networks of existing communities whilst avoiding conservation for its own sake.

Viikki Experimental Ecological Housing Area, Helsinki, Finland

4. Obstacles

4.1 Against this common vision of best practice in urban design for sustainable development the barriers for achieving this more widely vary considerably from place to place but cover common themes such as lack of political will and awareness; difficulties with planning and administrative systems, legislation and procedures; the need for appropriate training and education; lack of appropriate knowledge sharing systems; the persistence of the traditional, sector-based approach to urban planning and design; the complexity of the holistic vision of sustainable development and planners reluctance to accept it. Beyond the environmental field there are a lack of agencies to promote the holistic vision of sustainable development. Within the European Commission, for example, different sectoral directorates promote different aspects of sustainable development. There is no institution at the European, national and local level that deals with all aspects sustainability in an integrated manner.

4.2 Existing planning legislation, systems and practice were seen as a major barrier to the achievement of good practice in several countries, with existing land use classification systems and planning processes insensitive to environmental considerations and geared towards aiding the commercial development process. The way that the planning system operates in practice and the general slowness of urban planning and design compared to rapid change in the development environment was identified as one of the main barriers to achieving sustainable development. However, it has to be recognised that the operation of the planning system in the contemporary context is complex, the quality of the output which will last for decades is critical, and the development of complicated public and private partnerships and local participation are inevitably time consuming processes. This obstacle is addressed by recommendations 2 and 3 in the next section.

4.3 Most of the participants of the Working Group identified the culture of traditional, sector-based architectural and urban design, planning and management as a major obstacle to effective urban design for sustainability. Aspects of this culture include:

- The sector-based approach to planning

- Traditional, non-holistic management of urban design and architectural issues

- Planning culture and concepts of urban reality: reluctance to accept the new Sustainable Development paradigm: lack of information at the political and practical level and incomplete interpretation of the sustainable development vision at the level of practical planning processes

This is much to do with the training of professionals involved and is addressed in recommendation 20 of the Working Group.

4.4 Some experts identified the lack of effective private-public partnerships as a major obstacle to the implementation of good practice (see recommendation 18). This is a much broader issue that affects all areas of resource planning and management in the contemporary world. Partnership remains a problematic concept particularly in large urban centres and regions where many partners and many stakeholder interests are involved that are often not recognized as formal partners in the process. The relationship of large-scale partnership-based projects to the larger institutional and political processes also needs to be clarified.

4.5 Lack of general awareness and understanding of the concept of sustainable development was seen as an obstacle by several members of the Working Group and one of the reasons for the lack of political will to implement sustainable development policies and practices. This is addressed by recommendation 19 of the Working Group. Some of this was attributed to the complexity of the new vision, especially in its global dimension. This point is one that tends to apply all integrated approaches, common in the urban planning context.

4.6 Perhaps the more important point is not the complexity of the vision, but rather that trying to balance environmental, economic and social goals in a single approach is often very difficult to achieve. The process of design, including urban design is, by its nature, one of trying to reconcile conflicting objectives but greater explicit recognition of local priorities that are likely to vary from place to place might help in this respect.

4.7 A number of contributors focused on the importance of effective 'territorial' planning across functional urban regions. While some countries had administrative areas that allowed for this type of planning, most are characterised by political and administrative fragmentation across functional urban regions (functional urban areas in the terminology of the Working Group on Sustainable Urban Management) and lack of coherent regional planning bodies, making integrated physical planning almost impossible to achieve. This is addressed in the Working Group recommendations 2, 3 and 10.

4.8 A number of key urban design themes arose to a greater and lesser degree in all the national case studies (see boxes at the end of Section 5). These themes provide the framework for those Working Group recommendation that relate to evaluation or monitoring of existing programmes, projects, laws and regulations (recommendations 2, 6, 8, 11, 12, 13, 15, 16 & 17), to new 'soft laws' at the EU level (recommendation 1), to the dissemination and exchange of good practice (recommendation 3, 4, 5 & 7) and to areas for new research (recommendation 21).
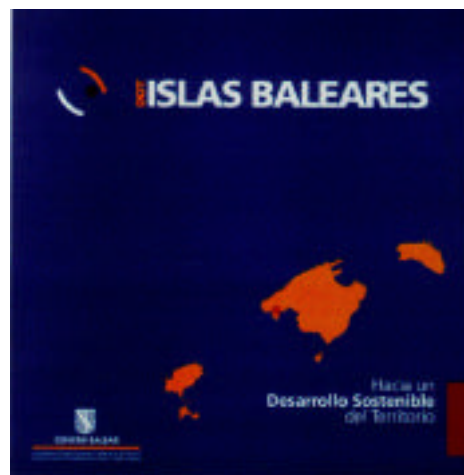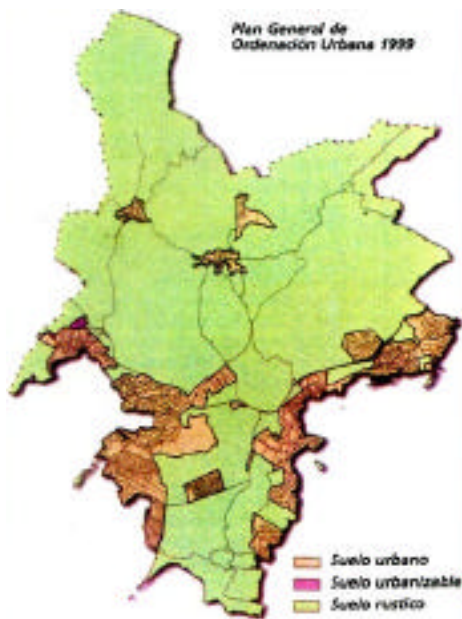
LA21 Plan of Calvia, Balearic Islands, Spain

5. Recommendations

5.1 The final section of this Final Report sets out a series of 21 recommendations, focusing on action that can be taken at the EU level, either directly or, in most cases, to facilitate and support the actions of actors at the national, sub-national and local levels to achieve urban design-led sustainable local development. These recommendations are intended to address the obstacles set out in Section 4 and have been grouped, with no particular order of priority, under five headings:

1. Promoting urban design for sustainable development: in legislation at the EU and national levels

2. Promoting knowledge exchange and good practice guidance at all levels

3. Raising the profile and monitoring urban design for sustainable development: in the existing EU policy agenda

4. Promoting urban design for sustainable development: through incentives, subsidies, taxes and funding programmes

5. Raising awareness and promoting education, information and research in urban design for sustainability and sustainable urban development

5.2 The Working Group agreed that urban design for sustainability is very dependent on the national and local context. It depends on the national policy, the local situation, the available finance, the political situation, and varies widely with national cultures and identities. Therefore legislation at the national (and local) level is more useful than legislation at the European level where the promotion of knowledge sharing is the main task. Recommendations for good practice can be useful, in particular, for promoting and incorporating urban design as an integrated approach to sustainable development into planning policies, systems and practice.

5.3 Promoting urban design for sustainable development: in legislation at the EU and national levels

5.3.1 The Working Group on Sustainable Land Use, however, suggested a number of areas where the EU might intervene to influence national policy on sustainable urban development, and it was agreed that EU recommendations could carry considerable weight at the local level even when they were not mandatory. The following recommendations cover the suggested new policy and guidance measures:

5.3.2 **Recommendation 1 – EU 'soft laws' (European Council decision), targets and guidance on specific urban design for sustainability issues:** There should be technical guidance on the implementation of directives as set out in the earlier EU expert group report on Sustainable Urban Land Use, and support for specific targets for policy objectives that relate to sustainable urban design and development: for example, European Council decisions and recommendations on targets for key urban design themes (see box 1 and 2 at the end of this section).

5.3.3 **Recommendation 2 – EU guidance on national laws, sustainable urban design, land use planning and public procurement policies:** There could be EU guidance on national legislation that can encourage incentives for sustainable urban development, and research into laws and polices that present barriers (e.g. planning laws preventing the development of mixed use areas).

This could include, for example, guidance on land use classification to give sufficient priority to environmentally sensitive areas.

5.3.4   Cities should adopt sustainable land use plans integrating transport issues and links development plans for cities with the planning policies of their surrounding regions, as in the example of Stockholm (see 3.6.18). This requires a suitable enabling framework for sustainable city and regional planning to be in place in national legislation and government policy. Some member states have such a framework in place but by no means all. Similarly, our research and good practice examples have shown that the case of Local Agenda 21 as an instrument for sustainable urban planning at the local benefits greatly from a supportive framework at the national level (see 3.5.2 & 3.5.3).

5.3.5   The European Union could recommend national law overviews and regulations drawing on the Architects Council of Europe Urban Task Force contribution to the preparation of The European Union Strategy for Sustainable Development (30.4.2001) as follows:

"As a specific area of communication and research, there is a need for action in the field of rules and legislation, working methods, norms and definitions etc in the field of urban development and architecture. Present…..legislation is well fitted to help actors (builders, planners, architects, public officials) to create the type of suburban and mono-functional….[but] not fitted to help or guide actors to create living, humane, varied and synergy-producing environments such as mixed use-areas of the European type. Legislation on environmental matters (noise, traffic etc) must be reviewed and the question asked: "Will this legislation help us to create truly European cities, towns and villages, with low travel and energy use patterns? If the answer is "no" (as often is the case) there could be a need for a 'superior instance' or a 'general clause' (in the different countries or regions) stating that: If the use of legislation, rules or norms constitutes an hindrance to the creation of truly European cities etc, this legislation could be over-ruled, changed or not followed (in the specific case) - granted that this is the opinion of local stake-holders. Such a study could be done as a co-operation project between a number of organisations and countries.

5.3.6   A useful tool here could be proposing National Strategies for Sustainable Urban Design (possibly within the context of National Sustainable Development Strategies) including targets and measures for good and sustainable built environment. All member state governments should follow the good practice example of the Netherlands in this respect (see 3.5.2). The themes to be addressed in such a strategy and those set out in the box at the end of the section, although the interpretation of these themes, and the way in which they are prioritised, is likely to vary according to the national context.

5.3.7   One important target here is the Public Procurement Policy of the State, which should be a good example for other builders and developers. The Netherlands has developed an urban design for sustainability strategy mentioned in this report. The work of similar kind in Finland, for example, has influenced some of bigger cities in Finland to produce their own policies with recommendations for the local level. Such programmes can thus rise the awareness about sustainable urban design and building and help the knowledge sharing between cities and towns.

5.4   Promoting knowledge exchange and good practice guidance at all levels

5.4.1   **Recommendation 3 – guidance 'manuals' on good practice in planning procedures at the national and local levels:** Some of these recommendations could take the form of inputs to guidance 'manuals' on good practice in planning procedures at the national and local levels, with

a particular emphasis on improving the speed and efficiency of planning processes, as well as better targeting toward sustainable development, more openness to public participation and synchronising private and public planning and development cycles.

5.4.2 **Recommendation 4 – improved mechanisms for sharing good practice:** research should lead to improved mechanisms for the sharing of good practice, including well-defined city and local typologies and ways of clarifying the national and cultural contexts, good practice classification and databases and a common terminology and a European dictionary/glossary across the languages of the EU. There are more opportunities for city-to-city knowledge sharing, through the exchange of urban planners, designers and other experts, and better use of networking and the internet.

5.4.3 **Recommendation 5 – promotion of environmental and integrated planning and urban design tools and methods, as a 'toolbox for urban design for sustainability':** Environmental Impact Assessment and Local Agenda 21s should be promoted as environmental planning tools. Environmental Impact Assessment methodologies should be developed to include a greater emphasis on accessibility issues, for example location of new shopping centres close to higher density concentrations of population, or accessibility of facilities to disadvantaged groups). Other urban design and spatial planning methods should be promoted and disseminated. Urban design and spatial development frameworks at the local level can be targeted on particular issues such as maintaining the integrity of the public space and street structure or developing green structures, or providing a typological framework for different use mixes, densities and built form character. Similarly, the use of design frameworks can be used to provide an integrated or holistic vision of city development. GIS and other computer-based techniques can be used to build up integrated data models of cities and urban regions and there is already ongoing work in this sphere at the European level. Other tools include urban design and development briefs, design statements and urban design guides and codes for particular areas or characteristics. The European Union could provide general guidance on the use and application of such methods, as a 'toolbox for urban design for sustainability'.

5.4.4 **Recommendation 6 – promoting indicators for specific actions and measures, in relation to existing EU indicator programmes:** Indicators for specific actions and measures proposed and for evaluating good practice (with associated benchmarks or a framework for setting local targets) should be developed. There was some difference of opinion within the group about the value of local indicators, with some experts preferring urban design 'models' of good practice. However, it was noted that indicators also have an important role in facilitating the participation of stakeholders in local governance. There is an emphasis on the importance of building on existing European indicator programmes, in the European Common Indicators Programme and the work that has been done on urban indicators in the Urban Audit.[15]

5.4.5 **Recommendation 7 – promoting local urban information centres and sustainability observatories:** One area where the EU could help in building effective institutions for collecting

---

[15] Urban Audit stems from the Commission Communication `Towards an urban agenda in the European Union' (1997), the subsequent discussions, and the publication of the `Sustainable Urban Development : an EU framework for action' (1998), which have identified the need for more information about towns and cities in the EU. The Urban Audit is also part of the process of improving Urban Statistics in the EU.
Responsibility for the conception and management of the Urban Audit rests with the Directorate General for Regional Policy in collaboration with EUROSTAT.

data at the local level, informing the public and communities and providing models of effective practice and participation that could feed directly into local planning processes. This could be envisaged as an extension of the ESPON (European Spatial Planning Observatory) approach currently operating at the regional planning scale under the Interreg III Programme to help implement the European Spatial Development Perspective. The work on UN-Habitat with its Global Urban Observatory and network of local urban observatories (mainly in developing countries) could also provide a model of how this might work in practice.[16]

5.5 **Raising the profile and monitoring urban design for sustainabilty in the existing EU policy agenda**

5.5.1 **Recommendation 8 – Developing mechanisms for evaluating the implementation of current EU policy and assessing the effectiveness of future policy:** Sustainable urban development and design is already widely addressed within policy and programmes at the EU level. It is included within the Amsterdam Treaty of Sustainable Development. From a broader European landscape perspective, the European Landscape Convention addresses the importance of regarding urban areas as an integral part of the landscapes of Europe. Proper interpretation and implementation of these policies, both by national governments and by the different directorates within the European Commission is extremely important. Methodologies have been introduced to assess the impact of different sectoral policies and the Commission undertake 'extended impact assessments' on proposals with major economies, social or environmental effects at the national and European level,. However, the sectoral interpretation of sustainable development is still significant (with economic interests usually being predominant) and no institution or mechanisms for assessing sustainability aspects in terms of spatial development that cuts across the sectors.

5.5.2 Equally, there is a problem of co-ordination (in most countries except the most centralised and top down) between different levels of sphere of government, national or federal, regional or provincial and municipal. Policy integration, both horizontal and vertical, has long been identified as a key hurdle to sustainable urban development and was highlighted in the European Sustainable Cities Report and the 1998 Communication 'Sustainable Urban Development in the European Union: A Framework for Action'. Ensuring effective co-ordination and implementation of the existing sustainable urban development mechanisms within existing and future EU policy requires a much greater emphasis on monitoring and evaluation.

5.5.3 **Recommendation 9 – in national sustainable development plans the role of cities should be specified and urban design for sustainability should be acknowledged as an instrument:** Further ministerial co-ordination is to be recommended among European ministers representing the social, economic, environment, transport, housing, urban and rural development and local government sectors to discuss the implementation of national plans for sustainable development with a particular focus on the urban environment. There should be extended use of the current system of reporting at the EU level on national progress in achieving national sustainable development strategies to promote a focus on the role of cities.

---

[16] The Vienna Hub is currently operating as an Urban Observatory at the regional scale, integrating the collection and dissemination of best practices in Easter and Central Europe, with monitoring and data collection activities.

5.5.4 **Recommendation 10 – implementation of the European Spatial Development Perspective a priority as the European policy perspective for addressing the development of polycentric cities; and the development of a framework for planning functional urban regions:** An emphasis was placed on effective and integrated 'territorial planning' at the urban regional scale, on recommendations for achieving this, and on co-ordination between the different scales and levels of planning. The continuing implementation of the European Spatial Development Perspective remains a priority as this provides a European policy perspective for addressing the development of polycentric cities. This and other mechanisms should be used to provide a general framework and guidance on the definition, governance and effective planning of functional urban regions across Europe.

5.6 Promoting urban design for sustainability through incentives, subsidies, taxes and funding programmes

5.6.1 **Recommendation 11 – developing urban design for sustainability guidelines to inform existing subsidy systems, including subsidies for urban regeneration and those for environmental, transport and cultural heritage programmes:** There are possibilities for improving the system of subsidies (including tax relief) at both the EU and national levels. These include developing urban design guidelines (covering the themes referred to under recommendation and listed in box 1) to inform existing subsidy systems, including subsidies for urban regeneration and those for environmental, transport and cultural heritage programmes, and broader funding and taxation regimes (especially VAT and property taxes). These seldom address the physical planning aspects, or do so in a limited way.

5.6.2 The issue of clarification of the EU position on state aids and urban regeneration as a step towards the adoption of a more flexible approach (i.e. not solely concerned with competition issues) was raised by both the Sustainable Land Use Working Group and in the recent Stakeholder Consultation Meeting in Brussels, with a call for the Commission to provide a statement of its position.

5.6.3 It is evident everywhere that there are additional costs associated with the redevelopment and regeneration of brownfield sites and areas On its own, this encourages the unsustainable practice of developing greenfield sites in preference to existing sites within cities. The cost of reclamation of brownfield sites needs to be compared with the total social costs of extending urban areas (including increased transport costs), or the reduction of the green areas within existing urban areas. Therefore, systems of subsidy to support urban regeneration are critical to the achievement of urban design for sustainability.

5.6.4 Another approach to the private financing of public goods that has a strong potential application in the area of urban design for sustainability is taxing development through 'betterment' taxes and trading development rights through the planning system through 'planning gain'. The EU could fund research and offer guidance on such approaches.

5.6.5 **Recommendation 12 – applying the guidelines to EU transport subsidies to support integrated transport land-use planning at the local level:** European transport subsidies are currently directly at improving the international movement of goods and people with little regard to the impact at the local level. As we have seen in this report and in the Interim Report on Sustainable Urban Transport, there are critical issues for urban management and design arising out of the lack of attention to integrating land use and transport planning at the local urban and

regional scale, and there should be guidelines and requirements for local urban design impacts studies. While strategic environmental assessments on all major infrastructure projects funded by the EU (for example, the TENs programme) or member state governments are now required under the Strategic Environmental Impact Assessment Directive the working of this directive could be greatly strengthened with more guidance on its application at the local level (see 2.2.5).

5.6.6 **Recommendation 13 – applying the guidelines to agricultural subsidies to promote positive urban-rural relations:** This issue applies equally to rural development and to the need to promote positive urban-rural relations. In this respect the re-focusing of the European Common Agricultural Policy on broader rural development (in recent years some 10% of CAP spending has been earmarked for rural development rather than agricultural support) should be augmented with a specific emphasis on promoting positive urban-rural linkages and sustainable city regions.

5.6.7 **Recommendation 14 – increasing the proportion of Structural Funds going to sustainable urban development:** the current proportion of Structural Funds going to sustainable urban development is very small (currently around 10%) and should be increased, given the importance of regeneration in achieving social cohesion and geographically balanced economic development across the European regions, as well as being an important potential tool for sustainable urban development, with appropriate attention to urban design, planning, management and governance.

5.6.8 **Recommendation 15 – extending and focusing the URBAN programme:** At the EU level, the existing URBAN II initiative should be augmented with an URBAN III follow-on. (The Sustainable Land Use report also recommended increasing staff resources to Objective 2, URBAN II and INTERREG III). URBAN is the most important programme under the European Regional Development Fund (ERDF), from the social and economic regeneration point of view, financing up to 75% of the total cost of a programme if the urban area is a region whose development is lagging behind (Objective 1), and up to 50% elsewhere.

5.6.9 **Recommendation 16 – offering EU assistance for new pilot projects in urban design for sustainability:** Other possibilities include developing new European Union subsidies specifically targeted at promoting good practice in urban design for sustainability, as the French government has done with Local Agenda 21. Such subsidies should target both new, greenfield site developments, as well as brownfield site redevelopment and inner city regeneration.

5.6.10 **Recommendation 17 – developing an EU label for excellence in urban design for sustainability and city-wide environment management systems:** creation of an EU label for excellence in urban design for sustainability: and its practical application at the local level, as well as the development of a concomitant audit scheme ('city EMAS'). A city-wide environmental management system in on of the main recommendations of the Sustainable Urban Management Working Group. Financial assistance could be provided for cities striving for the label by hiring 'European Consultants for Design For Urban Sustainability'.

5.6.11 **Recommendation 18 – promoting public-private partnerships and innovative funding support for integrated projects at the local level:** Rather than public subsidies, another possibility is to follow a credit-based or public-private partnership route involving local communities as 'clients', to promote sustainable urban development (not just economic development) and to use public finance as revolving funds, to 'pump-prime' to leverage private financing, or through providing loan guarantees for private finance**.** Organisations like the World Bank and the United Nations have been moving in this direction in funding infrastructure and urban development in developing countries and there is increasing experience of this approach in infrastructure project funding across Europe. It is also evident that there are market gaps in the supply of private finance for the kind of innovative, integrated projects necessary to achieve sustainable development at the local level, and a system of publicly-funded loan guarantees or other loan mechanisms could plug this gap.

5.7 Raising awareness and promoting education, information and research in urban design for sustainability and sustainable urban development

5.7.1 **Recommendation 19 – raising public awareness of urban design for sustainable development:** At the widest level, the 'public' is often afraid of change in its own environment. Even 'well-educated' and informed people often have the ability to obstruct balanced and well-planned urban development because of this fear. There needs to be a much greater emphasis on raising public awareness of urban design for sustainable development. This could include targeting a variety of stakeholders and the public in general through the use of the mass media, including educational television programmes, and through 'open university' teaching programmes. Such an approach should be supplemented by campaigns and more targeted 'capacity-building' of those citizens and representatives of different stakeholder interests involved in the decision making process. Many of those representing stakeholder interests at the local level are unfamiliar with new type of collaborative practice that are operating in decision-making at the local level. There is also a need to address urban environment issues including planning, urban design and public participation in various types of education programme, including at the primary and higher school levels (One of the Austrian examples of good practice visited by members of the Working Group, the Local Agenda 21 of Steinbach an der Steyr, demonstrated the practical effectiveness and importance to maintaining the long term vision of sustainable development of including children in the work of the community).

5.7.2 **Recommendation 20 – appropriate training and education, particularly professional training and re-training at the post-graduate level:** The problems of the planning 'culture' and lack of political will on the part of politicians and other key decision-makers is at least in part due to a lack of knowledge and awareness of appropriate urban design and other practices for sustainable development. Possible ideas to overcome this include new trans-disciplinary teaching programmes, including the creation of appropriate linked European programme of sustainable urban and regional planning and design or an international masters course through a 'virtual university' linking universities in countries with strong research and teaching activities in the field; 'accreditation' of designers and planners providing sustainable urban design services**;** and the revision of the curricula of existing programmes for architects, landscape designers, planners, civil engineers and transport planners.

5.7.3   **Recommendation 21 – promoting research in urban design for sustainability at the European level using existing and new programmes:** Research, including drawing on and pulling together all existing research information and available knowledge about urban design for sustainability in a coherent and readily available format must be given a high priority. Research is necessary to cover the core areas of urban design for sustainability for sustainability where new guidelines are being recommended at the end of the section.

5.7.4   Other important potential research topics already mentioned in this report include: effective urban partnerships and participation (and how these might be combined with effective multi-level, strategic and integrated planning; broad guidance at the European level about the spectrum of methods of local governance and urban development decision-making, their characteristics, pros and cons and areas of application could be helpful including the pulling together and dissemination of existing knowledge of the different structures, policies, tools, actors for urban regeneration; and impacts of the new settlement forms, urban types and lifestyles (living, working, shopping).

5.7.5   At the Vienna meeting of the Working Group, it was suggested that use be made of 20% slice of Framework funding for Sustainable Cities set aside for uses other than city networking be utilised for ongoing advice on sustainable urban design.

Box 1 - Key urban design themes as the focus of policy objectives, legislation, targets, guidance and research

Key urban design themes

- **the re-use and regeneration of urban land:** stressing the priority of brownfield redevelopment over new greenfield site development, fixing the proportion of new development to be accommodated on existing urban land;

- **density of new development:** achieving appropriate densities, depending on local context and urban typology (see below);

- **location of new development** in relation to public transport provision or other accessibility factors, and in relation to the natural environment (see below);

- **design of green structures and city landscape:** emphasising particular features of good practice in development in relation to the natural environment and ensuring cities are integrated into their natural environment; designing the transition between built areas and green areas, and designing green structures to be sustainable in meeting both ecological and amenity needs; securing land for agricultural production and urban farming as an integrated part of the green structure on a long term basis;

- **streets and movement structure:** including the pedestrian and cycle environment, public spaces: quality, centrality and equitable distribution of public open spaces and amenities; ensuring the integrated, multifunctional role of the traditional urban street network; an integral relationship to the green structure; ensuring continuity in the fabric of the urban structure, in particular in relation to the enclosed space of the street network and knitting new and old developments together (see below); ensuring that public transport systems including stations, stops and interchanges are safe and attractive.

- **promoting mixed uses:** ensuring a good balance of jobs, housing and services to make the best use of public infrastructure and promoting integrated land use and transport planning within this framework; adopting a system of compulsory variety of use indexes for new developments (including a proportion of residential in city centres) and relating these to existing mixes of uses; using zoning policies to support small and medium enterprises which are often priced out of city centres but are critical to urban vitality and to the development of new technologies and services (this should seen as part of a wider mixed use strategy for revitalising existing town centres and for 'converting newer shopping malls to become mixed use centres);

- **designing for affordable housing:** fixing a compulsory proportion of social housing within well-designed wider mixed use, income and tenure developments as way to foster diversity and social cohesion as well as ensuring access to accessible, affordable housing for low and middle-income groups;

- **accessible public amenities and services:** emphasising the provision of public and collective recreational facilities such as a public green structure over private and individual provision and ensuring good physical access to public amenities and services for all social groups;

- **appropriate conservation, renovation and use/re-use of cultural heritage:** maintaining the national, cultural and local diversity of European cities; generating local models for sustainable urban planning such as design guidelines and density and other standards; developing new types of building relating to the local context and finding new ways to use existing buildings; avoiding piecemeal renewal; keeping historic central area active through retaining residential uses and existing working/living communities; good urban management and planning, including financial planning for the maintenance of buildings (including new buildings), public space and parks, including in suburban areas;

Continued next page:

Box 1 continued:

- **sustainable, high quality architecture and building technologies:** appropriate use of resource conservation-orientated building and recycling process technologies, within the context of the Green Compact City and Sustainable City Region strategies outlined in Section 3, high quality in the design of public buildings, as in public spaces, restoring their role as landmarks in the urban structure (recently lost to private buildings) (see below);

- **maximum and minimum standards**: looking at the possibility of implementing 'maximum standards' to guarantee urban sustainability in the different national contexts, whilst ensuring that minimum standards are met in all areas (in many areas they have been largely fulfilled or surpassed);

These themes need to be considered in the light of the three thematic objectives that this report addresses:

- Re-designing and retro-fitting existing urban areas to support sustainable development

- Sustainable design for greenfield sites

- Knitting the urban fabric together to achieve an integrated city wide vision, including viewing urban areas in relation to their hinterlands

and at the appropriate urban scale:

- City core and high density central core

- City-wide and urban periphery

- Functional city region

Note: The themes are not set out in order of priority. The interpretation of these themes, and the way in which they are prioritised, is likely to vary according to the national context.

Box 2. Some examples of Working Group recommendations on key themes:

Appropriate density of development

Density is an urban indicator, which measures the number of inhabitants per surface unit (number of inhabitants/km^2 or number of housing units/ha.) It must be understood that density is related to urban uses and typologies; therefore, when we try to determine the suitable density for a place, we should take into consideration local characteristics, such as socio-economic, physical, climatic, and cultural.

Objectives: An appropriate urban density must allow for:

- Efficient public transport systems.

- Affordable urban infrastructures and services (water, sewage, garbage, etc.).

- Easy access to collective facilities.

- Creating community identity.

Specific actions: In order to achieve the former objectives, the following actions should be taken:

- Increase density in urban sprawl areas so as to avoid excessive land consumption.

- Consider the use of 'maximum standards' to discourage low-density developments.

- Adjust density in central areas to maintain acceptable quality of life levels.

- Preserve green areas among existing and new urban areas.

- Develop decentralised nodes in large urban areas.

- Use available technologies to adjust densities to quality of life.

Continued next page:

Box 2 continued:

Tools: The optimum level of urban density can be estimated by applying the 'U Curve'. This is a mathematical function widely used by Economists, where we correlate two basic criteria: (1) urban density or number of inhabitants; (2) associated costs to urban development (economic, environmental, social, etc.).

Streets as an element of urban structure

Streets should form a common element in the urban structure in existing built-up areas and new developments. The public space, walking and social functions of the streets should be treated as of equal importance as traffic systems (recommendation).

Streets are defined as multi-functional public access spaces within urban areas, enclosed by continuous or semi-continuous frontages, depending on context, use and typology.

Streets are one of the few common elements of all European cities and towns. Streets are areas of mixed uses and concentrations of activities. They are elements critical for the life, social cohesion and security of the towns. However, the building of streets with continuity of frontages has become more difficult in many European countries because of regulations, health standards and contemporary development practices.

Location of new developments in relation to accessibility

All major new developments should be located on or close to public transport infrastructure and plans for new developments should include a public transport plan, to be implemented when the development in being built.

Sustainable, high quality architecture and building technologies

Public building should set a good examples in good urban design for sustainability and public procurement should ensure appropriate standards of quality, rather than looking for just the cheapest options

Good architecture makes life better. The environmental, building and renovation projects should be sustainable and of high quality in their design and execution. Public buildings used to be the most important landmarks of towns and cities. Because of the economic pressure of building public buildings as cheaply as possible, they have lost their importance in the city structure and most of the new landmarks are private buildings - headquarters of different companies, banks etc. It is important to restore the significance of European public buildings and important public spaces and squares and give them the importance they deserve. Saving money in a short-sighted way leads to unsustainable solutions. If the price of building is compared with the achieved quality, more sustainable-designed buildings can often prove cheaper in the long run than those are designed in an unsustainable way. (See Report of the Working Group on Sustainable Construction: this report also emphasizes that sustainable community depends on sustainable urban design and shapes the importance of interpreting both visions to promote both improved quality of life and diversity in solutions. This is a view shared by the Working Group on Sustainable Urban Design).