

THE ROYAL TOWN PLANNING INSTITUTE

The Urban Environment Study

A response to the Royal Commission on Environmental Pollution

August 2005

2005/31

Introduction

1. The Royal Commission on Environmental Pollution has invited the RTPI to submit evidence to its study on the urban environment. The study aims to examine how towns and cities could develop to become more environmentally sustainable and contribute to a better quality of life. It will result in a series of recommendations on how to reduce the environmental impact of urban areas and increase their contribution to human health and well-being.
2. The RTPI has developed this response in consultation with its Branches and Environmental Planning and Protection Network. In addition it commissioned a scoping paper to advise on the implications of an ecosystems approach for planning practice and outcomes, with particular reference to the pressing need to address the “carbon footprint” of the built environment. The paper is attached as Annex 1 to this submission. Its author, Roger Levett, has considerable experience in sustainable development policy and appraisal, including assessment of progress against the national sustainable development indicators for the Sustainable Development Commission and the strategic environmental assessment and sustainability appraisal of the East of England Regional Spatial Strategy.

The submission is set out according to the format set by the specific questions posed by the Commission in its invitation to give evidence.

General

3. The RTPI strongly welcomes this study at a time when fundamental and urgent questions about the sustainability of the urban environments that we are modifying and creating, need to be addressed. Development demand in the UK is being driven by major demographic change, particularly changes in household size, the age structure of the population and migration. The latter is closely linked to spatial variation in the nature and strength of local and regional economies. The growth in household numbers has been forecast by the ODPM to range from an increase of 8% in the north east between 1996 and 2021 to an increase of 25% in the south east and east of England¹. This represents very significant pressures for urban extension and the use and re-development of existing urban areas. It is vital that change should be environmentally sustainable and contribute to increased quality of life for all communities.
4. The UK Sustainable Development Strategy (2005) represents a valuable, defining

¹ http://www.odpm.gov.uk/stellent/groups/odpm_housing/documents/page/odpm_house_604206.hcsp

framework for meeting these aims. It has not, however, yet been adequately integrated with other national-level frameworks for the development of the built environment. The Commission's Study should highlight this gap. The RTPI is especially concerned that the role of spatial planning frameworks in coordinating sustainability objectives should be more explicitly recognised and demonstrated.

5. The UKSDS states a firm commitment to integration, environmental limits to change and finding real, multi-functional solutions to meet social and economic needs. The definition of "sustainable communities", refining the recommendations of the Egan Review, informs the strategy throughout. The implementation of the Government's "Sustainable Communities Plan" will be an acid test for the strategy. In particular, the relationship between urban and rural development and environmental management raises fundamental issues for Government policy.
6. The RTPI is committed to promoting research and information on sustainable scenarios for living and working environments and supporting all those involved in planning to deliver, using the tools of spatial planning, supplementary guidance, negotiation and development management (Annex 2). It agrees that climate change is the gravest and most urgent challenge facing urban areas (and indeed rural ones). Making deep cuts in greenhouse gas emissions within a decade must be the top priority for urban environmental policy. Action so far has been inadequate. There are huge opportunities to reduce the environmental impacts of urban areas by managing energy and other resources in circular flows, like natural ecosystems, using known and proven technologies. The main challenge is to remove the barriers to applying these technologies.
7. It is vital to consider the urban areas of the UK in their global and European context. UN-Habitat and UNEP run a joint Sustainable Cities Programme, recognising that urban environmental problems are a serious threat to socio-economic development. Many of the tools that are being developed are likely to benefit from comparative analysis and learning between nations. There is certainly a shared and growing recognition that adequate planning and implementation capacity at regional, local and neighbourhood levels is critical to the success of management and intervention. The European Commission's Sustainable Cities Campaign has similarly demonstrated common challenges and themes and is contributing to innovative responses.

Responses to specific questions posed by the Commission

Geographical scope of the study.

8. The Government's Review of Urban and Rural Area Definitions² highlighted the complexity of ongoing attempts to define what is meant by the description of "urban":

"Modern urban areas are simply too varied for such regularities to hold true, not least because some new towns such as Telford have large populations who live at low densities. The result is that now the categories urban and rural can only be said to each have a 'family resemblance' across a variety of characteristics. Thus all rural areas will share most of the characteristics which make up the contrast with urban areas but, taking any one characteristic separately, a few rural areas will be more like a typical urban area – and a minority of urban areas more like a typical rural area – in that particular respect."

² http://www.statistics.gov.uk/geography/downloads/Project%20Report_22%20AugONS.pdf

9. There is, however, a distinctive rhetoric about the ideal experience of an “urban” lifestyle just as there is about the “rural” lifestyle. These include concepts of cultural vitality (including both levels of activity and innovation and access to education), tolerance, mobility (both physical and social), high levels of access to services, and high levels of market choice, whether in housing or more perishable commodities. In contrast, the ideal “rural” lifestyle incorporates concepts of tranquillity, privacy, contact with nature, clean air and water and fresh, uncontaminated food. In fact, urban communities can be isolated, under-serviced, socially and economically polarised to name but a few of the challenges facing certain areas. Rural communities can find themselves surrounded by far less biodiversity than can be found in a London park, barred from access to surrounding land, socially fragmented and suffering from fundamental problems in dealing with wastes.
10. Indicators of urban living include the link between home and workplace, connection to and availability of services and cultural activities and events. These have all been driven by the rapid evolution of transport, television and information technology networks. As the above review points out, there are often far greater economic and social similarities between communities of similar incomes in rural and urban areas than there are between rural communities or urban communities differentiated by income levels.
11. The key indicator used for defining urban areas is, in fact, the extent of built-up land. Thus the Study is urged to consider the overall nature and character of the built environment that we are managing and creating. Its form and function and its relationship to the form and function of natural and managed landscapes should be investigated as integrated systems, demonstrating greater or lesser degrees of capacity for supporting sustainable societies. This approach recognises that society depends on a range of services from both the built and unbuilt environment.
12. There is concern that some of the current administrative divisions, and associated territories, of counties and districts can at times hinder sustainable development by preventing integrated management. However, this need not be the case: as the ODPM review pointed out, the potential to respond to complexity with new and sophisticated tools of analysis and understanding of inter-relationships is growing:

“Just as the challenge of urban/rural definitions has become more complex, so the potential for more complex forms of analysis has greatly increased.....It is no longer reasonable to continue following the earlier approach of relying almost exclusively on population density, as if no other indicators were availableNow that the available information is so much greater, the new challenge is to select from options which range from satellite imagery to lifestyle datasets.”

Q2. Which environmental issues are most pressing in urban areas, and how are they being addressed? What is the overall environmental profile of urban areas? Are new environmental issues emerging that have been neglected or are little understood? How are they being addressed?

Greenhouse gas emissions

13. The most pressing environmental aspect of the built environment’s profile is its unsustainable use of fossil fuels. The costs are enormous. Of these the most pressing potentially is the impact on the global climate and the effects these are likely to have on highly interdependent economies. The best available research indicates that the risk of unstoppable catastrophic climate change, of kinds which will threaten the security and

indeed the lives of urban and rural dwellers alike, will greatly increase if carbon dioxide concentrations in the atmosphere exceed 400 parts per million. On current trends this point will be passed within a decade. Achieving major cuts in greenhouse gas emissions within this timescale should therefore be the overriding priority of any responsible environmental policy. In fact, the Government's own figures show that after the 'windfall' of the 'dash for gas', and despite continuing shrinking of manufacturing, greenhouse gas emissions are again rising.

Managing Risk

14. Perceptions and treatment of natural hazard are changing in the context of climatic uncertainty and its potential impacts on a range of environmental factors. In particular the concept of risk management has become the framework within which the environmental protection agencies prioritise investment and planning response to hazard. The concept of risk as a function of probability (of a pollution or hazard event) times the significance (generally health and economics-based) of the consequences raises very complex issues that are seriously challenging to the relationship between governance structures and environmental regulation. These are only likely to be satisfactorily resolved if the information base and concomitant levels of community involvement in decision-making are afforded a much greater significance in public life that has hitherto been the case in the UK. These needs reflect the commitments of the Aarhus Convention, which the UK ratified in February this year. This covers access to information, public participation in decision-making and access to justice in environmental matters. The concept of environmental democracy underpinned by the Convention is critical to the future of the regulation of the built environment.

Waste generation

15. Overall waste generation continues to rise. This is a critical indicator of failure in environmental management overall. A new national planning policy statement, PPS 10: *Planning for Sustainable Waste Management* has recently been launched. This highlights the important contribution that planning for the built environment can make in addressing the resource consumption of new building and the delivery of waste management facilities. However, the overall delivery of waste management strategies requires a national level review to address the problems of integration of waste reduction mechanisms and the adoption of innovative and effective fiscal and investment frameworks.

"Urban" green space

16. There is an urgent need to develop a multifunctional understanding and policy framework for "green" or "open" space. The relationship of green space to urban areas is increasingly recognised as essential to quality of life and environmental functioning. The Environment Agency is promoting the concept of "green infrastructure" in the Growth Areas, describing it as "a planned network of multifunctional greenspaces and interconnecting links which is designed, developed and managed to meet the environmental, social and economic needs of communities"³. This concept needs to be developed within the wider context of the need to review the use and management of the so-called "urban fringe"⁴

Water use

17. Stresses on the water environment have been highlighted by the assessment of the status

³ Environment Agency (2005) *Planning Sustainable Communities: A Green Infrastructure Guide for Milton Keynes and the South Midlands*.

⁴ Countryside Agency (2005) *The Countryside In and Around Towns: A vision for connecting towns and country in the pursuit of sustainable development*.

of UK surface waters which shows that a large percentage of these will fail to meet the European Water Framework Directive's definition of "good ecological status". The combined pressures of population growth, increasing per capita water demand and climate change have raised serious issues of water supply and habitat loss. At the same time the costs of flood defence and urban drainage continue to escalate. The Directive requires a new assessment to be made of the relationship between the built environment and river and coastal catchments. This raises important opportunities for improved integration of environmental and land use management within spatially informed frameworks.

The role of planning

18. In the context of these critical environmental issues, the role and significance of spatial planning has still to be fully recognised by all stakeholders. Regional and local spatial plans across the UK have a major role to play. Key tools include environmental and health impact assessments. PPS 1⁵, published this year, highlights the scope of the planning process. It requires planning, amongst other things, to deliver policies which:

- reduce energy use,
- reduce emissions (for example, by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight),
- promote the development of renewable energy resources,
- protect groundwater from contamination;
- address noise and light pollution;
- minimise resource consumption.
- promote sustainable use of water resources; and the use of sustainable drainage systems in the management of run-off.

It requires plan policies and planning decisions to be based on:

- i. up-to-date and adequately detailed information on the environmental characteristics of an area;
- ii. the potential impacts, positive as well as negative, on the environment of development proposals (whether direct, indirect, cumulative, long-term or short-term); and
- iii. recognition of the limits of the environment to accept further development without irreversible damage.

19. The welcome emphasis on assessment of environmental impacts and the design of mitigating and compensatory measures (where appropriate) requires a stronger evidence and research base to support it and we would ask the Commission to consider how this might be best delivered. In particular, there should be greater scope for planning authorities to collaborate closely with the UK's environment agencies in the development of spatial strategies and their integration with environmental objectives for an area.

Q3. In a modern industrial society, do urban lifestyles put more or less pressure on the environment than lifestyles of similar affluence and aspiration lived in the countryside?

20. The arguments put forward in this submission aim to move the Commission's attention away from any simplistic distinction between the urban and the rural: in a post-agricultural, indeed a post-industrial country, differences in lifestyles are often minimal. The question should surely be what forms of the built environment and built environment management

⁵ ODPM (2005) *PPS1: Delivering Sustainable Development*

(including the regulation of human activity) put greater or less pressure on critical aspects of natural environmental support systems e.g. the maintenance of biodiversity, the regulation of natural cycles (atmospheric, water and soil-based).

21. In this context, we need to develop indicators and monitoring systems not only to illustrate the state of the environment but also to allow us to compare and contrast trends and future directions of pressures and responses. This is an area of work that we recommend that the Royal Commission on Environmental Pollution could review in detail. For instance, while we welcome the UK Sustainable Development Strategy's commitment to a strengthened role for the Sustainable Development Commission in reporting on the Government's progress on sustainable development, a coordinated research and monitoring base to underpin this reporting role does not appear to be developed. In addition, such a knowledge base will not contribute adequately to improvement in the management and governance of the built environment unless it is linked to a well-resourced public communications strategy.

Q4. Which aspects of urban environmental pollution are most important in terms of their negative effect on human health and well-being?

22. Pollution effects which are long-term and irreversible e.g. greenhouse gas emissions, serious erosion of critical habitat and persistent contamination of groundwater are obviously of key concern. At the same time, the capacity of communities to respond to environmental stresses should also inform management priorities. Many social factors which determine the capacity of local residents and businesses to influence management and development decisions are likely to be key factors in the relationship between the environmental quality of an area and indicators of health and well-being.

Q5. How could the urban environment be improved to benefit physical and mental health, well-being and quality of life?

23. Enabling multiple benefits to be realised from development and regeneration processes is a priority. Planning has a central role to play in delivering this approach. The potential for integration of health and environmental impact assessments illustrates the capacity of integrated planning for improving overall quality of life for the residents of a locality.

Q6. Is there evidence that deprived urban areas are exposed to greater levels of environmental pollution and/or a poorer local environment?

24. Low income/deprived communities do tend to live in the poorer environments, reflecting land and property values which themselves reflect relative environmental attributes. The Environment Agency concludes that the difference between affluent and poor areas is marked, with deprived parts of London, Manchester, Sheffield, Nottingham and Liverpool suffering higher levels of pollutants such as nitrogen dioxide, which can affect health⁶. Sustainable development indicators should also be designed to identify particularly vulnerable groups, such as the elderly and the very young.

Q7. What major policy developments are on the horizon over the next 5 to 10 years that might affect the urban environment?

25. The role of spatial strategies at national, regional, sub-regional and local levels will assume increasing importance over the next 5 – 10 years, as a result of devolution and recent planning reforms. Devolution also raises interesting comparisons in the nature of environmental planning. For example there are clear divergences between Scotland and the rest of Great Britain in the application of Strategic Environmental Assessment legislation.

⁶ Environment Agency (2005) *State of the Environment 2005*

26. Energy and climate change policy are developing rapidly. There is an urgent need to consolidate a clear UK strategy that integrates energy generation and efficiency of use. This will have implications for transport infrastructure and urban form. Close collaboration is required between development planners and environmental regulators in assessing these implications and delivering the necessary changes.
27. The implementation of the EU Water Framework Directive is acknowledged as having major significance for development.

Q8. What information exists on the other trends that will shape our urban areas over the next 10, 20 and 50 years?

28. Recent information on trends is being generated by the ongoing 'State of the Cities' research programme for the ODPM⁷. However the environmental indicators used are restricted to measures of derelict land, green space and recycling of household waste.

Q9. What measures should be taken to make cities more environmentally sustainable 10, 20 or 50 years into the future? What would these urban areas be like and what would be the social and environmental consequences?

29. More environmentally sustainable built environments need to deliver the following:
- support for "low carbon" lifestyles
 - cycling of water and wastes to reduce impacts of materials use
 - high, consistent standards of access to open and recreational space
 - high levels of access to environmental information
 - integration of health and environmental objectives.

Research and monitoring programmes should be developed and strengthened to support these themes and to elucidate their social consequences and governance requirements.

Q10. How will urban areas be affected by climate change?

30. There has been considerable research on the potential impact of climate change on urban areas in the UK^{8,9,10,11}. Of particular interest is whether the response will be strategic and forward-looking or piecemeal and reactive. The latter will tend to further displace the burden of environmental uncertainty to those communities least able to invest in defensive responses, such as building modifications or relocation.

Q 11. To what extent will conventional or near-market technologies be sufficient to meet environmental goals and make cities of the future environmentally sustainable?

31. This very much depends on governance and decision-making capacities. In the accompanying paper by Roger Levett, it is argued that the changes required for a low carbon economy could be achieved entirely with existing, proven technologies. Certainly, good practice can and should be rolled out and supported on a much wider scale. Examples include the use of micro-renewables in urban areas [see London Borough of Merton planning policies] and increasingly sophisticated pricing systems for urban services, such as congestion charging.

⁷ Parkinson, M. et al (2005) *State of the Cities: A Progress Report to the Delivering Sustainable Communities Summit*, ODPM

⁸ London Climate Change Partnership (2002) *A Climate Change Impacts in London Evaluation Study*.

⁹ Three Regions Climate Change Group (2005) *Adapting to Climate Change: A Checklist for Development*.

¹⁰ ODPM (2004) *The Planning Response to Climate Change on Better Practice*.

¹¹ UK Climate Impacts Programme: www.ukcip.org.uk

Q 12, 13, 14, 15, 24, 26. Can high-density developments offer a more environmentally sustainable future that is also desirable for householders? Can design codes play a significant role in improving the environmental sustainability of urban areas? How can construction be made more efficient in terms of natural resource use and waste minimisation? How can the environmental impact of buildings in the domestic and commercial sectors be reduced? What part could a) economic instruments and b) good practice guidance or other improved management approaches play in improving standards? Is the implementation and enforcement of current legislation and standards effective? To what extent are better regulation and enforcement required to improve the environmental sustainability of urban areas?

32. There is considerable evidence that significantly higher than average density levels can provide successful housing for a wide range of needs. However density needs to be appropriate to the nature of a particular area and used in conjunction with other relevant considerations. Optimal density levels for specific locations will aim to support and strengthen local services. Design and construction standards are critical to the liveability of medium to high-density residential development.
33. Design codes are one of a number of development management tools that are currently being assessed. The institutional and strategic planning frameworks within which they may be expected to operate must be given comparable attention. Design codes, for instance, must be developed in the context of the Local Development Framework for an area. There is some concern that the current focus of codes¹² is predominantly on aesthetic considerations, rather than on environmental sustainability and “liveability”.
34. Design codes or similar tools should be carefully integrated with other forms of built environment regulation. For instance, useful standards and techniques to guide more sustainable practice include the BRE Eco-Homes standard. These include the design of environmentally sustainable transport systems, water use efficiency, sustainable urban drainage systems and urban biodiversity action plans.
35. Key areas that must be addressed are the pricing of services, the funding of appropriate and supportive infrastructure, and associated matters of social equity. The roles and responsibilities of local government in particular, should be reviewed in this context. These include their coordinating policy roles, the potential roles of planning tariffs and obligations in relation to environmental management, and direct management responsibilities. The latter is particularly starkly illustrated in relation to the hiatus facing the widespread implementation of sustainable urban drainage systems in England and Wales due to lack of clarity about their long-term adoption and maintenance.

Q21 and 22. Could an ecosystems approach provide practical benefits for urban areas? To what extent do the technologies and systems exist to underpin such an approach? Are there examples of closed loop systems already in existence in the UK?

36. The concept of the ecosystems approach represents another example of the tools that are being tested and considered to meet the challenge of sustainable built environments. See Annex 2 for a discussion document commissioned from Roger Levett by the RTPi for this response.

¹² CABE (2005) Design Coding: Testing its use in England

Q23. What is the role of the various bodies involved in urban policy?

37. This is a hugely complex arena, further complicated by the diversity of structures in the devolved nations. Common themes, however, are the roles of the local authorities and local partnerships in planning and delivery and how these relate to the regulatory and data coordination and monitoring roles of the environmental agencies. Better integration is needed. The Sustainable Institutions Group in Oxfordshire is a valuable example of a partnership approach. Set up to share good environmental practices, it brings together Oxford City Council, Oxfordshire County Council, Oxford Brookes University, Oxford University and the major Oxford Hospital Trusts.
38. In the context of the integration of environmental policy, there is particular concern about a seeming lack of commitment at the level of the UK Government to develop robust institutional structures to deliver the Water Framework Directive. River catchments should be an important focus for the monitoring and development of policies and delivery mechanisms for ensuring the sustainability of built environments.

Q25. Why have the changes that would be needed to make urban areas more environmentally sustainable not been effectively implemented before now, given that some of the proposed solutions have been around for several decades?

39. The changes that are needed to make the built environment more environmentally sustainable require political leadership and commitment, together with resourced, responsive and integrated delivery mechanisms. It also requires robust and shared understanding of the drivers of environmental change and quality.

Q27. Is the UK's science and knowledge base sufficient to support current urban policies and guide development in a more environmentally sustainable direction? If not, what are the most important gaps?

40. This is a key question for the future of the built environment. An overview of research and information resources is needed to characterise gaps with confidence. However the work of, for instance, Professors Judith Petts and Susan Owens for the ESRC Transdisciplinary Seminar Series *Knowledge and Power: Exploring the Science/Society Interface in the Urban Environment Context*¹³ provides important insights into the failure to date for relevant scientific and technical research to substantially influence urban policy and management. They quote a figure of over £30 million being spent on relevant research by the Research Councils in the last decade¹⁴ and examine the tendency for large volumes of research on the urban environment to “gather dust in cabinets”. This is a serious issue that must be addressed. The Commission’s study should evaluate the role of, for instance, the ESRC *Sustainable Urban Environments* initiative in building up and disseminating the evidence base that is actually required to deliver quality built environments.
41. Among the valuable points raised by the seminar series the following could be particularly relevant for the work of the Commission:
- i. Research findings will only be used if there are institutional structures that can listen and respond. Our current structures need to be evaluated for their capacity to do so.

¹³ www.cert.bham.ac.uk/urbanenvironment/index.htm

¹⁴ Evans, R and Marvin, S. (2004) “Disciplining the sustainable city: moving beyond science, technology or society?” www.lse.ac.uk/collections/resurgentCity/Papers/marvinevans.pdf

- ii. The link between priority research and demonstration projects could be an effective way to expand the scale of knowledge transfer required, although these are likely to be highly resource intensive and require innovative partnership approaches.

42. The European perspective is particularly valuable in this context. We recommend reference to projects that are being undertaken under the INTERREG IIIB¹⁵ and EU LIFE programmes, e.g. the PURE project on planning for urban-rural river environments and the SMURF project on sustainable urban river management.

Q28. Are there any other major questions associated with the environmental sustainability of urban areas that the Commission should examine?

43. We recommend that key questions for the environmental sustainability of the built environment that the Commission could examine are:

- The role of spatial planning in delivering environmental quality and how this can be supported through improved legislation, regulation and investment.
- The respective and complementary roles of the environmental protection agencies and local authorities.
- The challenge of increasing community engagement in environmental decision-making and management, particularly in the context of commitments under the Aarhus Convention.
- The information and data requirements for delivering higher quality built environments, with particular reference to the development of integrated planning and management tools.
- The development and management of an improved environmental monitoring system, coordinated at the UK level, but also delivering data requirements at devolved, regional and local levels.
- Models of the interaction between the built and natural environments, particularly in the context of river basin catchment planning.
- Analysis of the skills and training needs required to deliver environmental quality.
- The need for sustainability appraisal of national development policy.

44. We particularly recommend that these subjects should be considered within the context of:

- The UK Sustainable Development Strategy, and its emphasis on the urgent need to confront greenhouse gas emissions,
- The ongoing development of national, regional and local spatial strategies and, in particular, the integrating role of sustainability appraisal and strategic environmental assessment.

¹⁵ www.interregiii.org.uk ; <http://www.smurf-project.info/background.html>