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Patron HRH The Prince of Wales KG KT PC GCB

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To: H M Treasury by email
Attention: Mr Paul Doyle

11 August 2006

Dear Mr Doyle,

ROYAL TOWN PLANNING INSTITUTE RESPONSE:
CROSS-CUTTING REVIEW OF SUSTAINABLE INFRASTRUCTURE FOR HOUSING

The Treasury is undertaking a cross-cutting review of sustainable infrastructure for housing, in response to recommendations arising from Kate Barker's independent review of housing (the Barker 1 report). Stakeholders were invited to respond to key questions to inform this review.

I enclose a written submission made by the Royal Town Planning Institute (RTPI) as a contribution to this process. If you have any questions about the enclosed submission, please contact me on 020 7929 9478 to discuss it further.

Yours sincerely

DIGITALLY SIGNED BY RYND SMITH
not for unauthorised use

Rynd Smith
Head of Policy & Practice

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SUPPORTING HOUSING GROWTH:
A CROSS-CUTTING REVIEW BY THE TREASURY
RESPONSE BY THE ROYAL TOWN PLANNING INSTITUTE

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PART 1: SUMMARY

1. The Royal Town Planning Institute (RTPI) considers that the United Kingdom currently has a 'sustainable infrastructure gap', in that a combination of market failure and lack of strategic direction form substantial barriers to the large scale infrastructure development necessary to secure housing growth.

2. The RTPI considers that one key means of addressing this market failure will be for the Government to put in place a national spatial planning framework, that will enable (amongst other functions) proposed housing locations to be cross-referred to existing and proposed infrastructure capacities and the underlying resource base (whether natural, human or financial) necessary to sustain and develop these capacities. RTPI research (the Uniting Britain project) has demonstrated the range of issues that can be cost effectively managed in a spatial frame of reference.

3. Such a national spatial framework should be underpinned by strategic infrastructure plans that provide the market with the confidence to invest in the locations and at the scales necessary to provide new housing with sustainable infrastructure.

PART 2: RESPONSES TO THE REVIEW QUESTIONS

2.1 INTRODUCTION

4. The following material is offered to the Treasury as a response by the Royal Town Planning Institute (RTPI) to the questions posed in its cross-cutting review of infrastructure in support of housing growth.

5. The RTPI has a long involvement in considering optimum ways of planning for infrastructure investment and delivery, including work at the European level. Against this background, the RTPI has answered the review questions at the level of principle, with a strong focus on the implications of the questions for the practice of planning. However, not being an infrastructure developer or provider or having direct interests in infrastructure development in any particular locality, it has not provided detailed responses in terms of development costs.

6. The RTPI has however identified what it perceives as being high level sustainable infrastructure needs to support new housing. It has then proceeded to identify what it refers to as a 'sustainable infrastructure gap'. This gap consists of market, policy and system barriers to effective infrastructure investment to support new housing. These are barriers that need to be overcome, to increase the rate of infrastructure delivery, to ensure that the location and scale of proposed infrastructure development relates to that of new housing development and to ensure that new infrastructure is sustainable.

7. Having identified this gap, the RTPI has then related it and the Treasury's questions to developments in the practice of planning. This response refers to the RTPI's 'New Vision for Planning', and uses this as a springboard to identify how new planning practices can provide a framework for sustainable infrastructure development.

8. This response highlights techniques arising from RTPI research that the RTPI considers will be of value to the assessment and development of sustainable infrastructure. Most particularly, the response develops the proposal that Government should initiate a process leading to a 'spatial investment framework' for the UK and more particularly for England, and that this process might underpin the development of more detailed sustainable infrastructure plans at regional and sub-regional levels.

9. Finally, this response relates these issues directly to the review questions posed by the Treasury.

2.2 THE SUSTAINABLE INFRASTRUCTURE GAP

10. The RTPI identifies that the UK suffers from what it terms a 'sustainable infrastructure gap'. To understand the nature of this gap and how it has emerged, it is necessary to consider the history of approaches to infrastructure development and delivery in the period from 1979 to date.

11. Before 1979, the great majority of infrastructure relevant to new housing development was publicly owned and provided. Direct and consultative relationships between infrastructure providers and planning authorities ensured that infrastructure at then relevant standards of construction and provision was available for anticipated housing development.

12. In 1979, the incoming administration was committed to privatisation of a broad range of State assets. Public infrastructure necessary to support housing growth were in part subject to privatisation, largely water, telecommunications and data, power and gas supplies and public transport. Other largely social infrastructures including highways, education, health and social service functions remained in public ownership and delivery – albeit subject to much more rigorous internal market control.

13. At the point of privatisation, the privatised infrastructures inherited forward investment strategies and growth directions that had been closely related to the housing land availability forecasts and land allocations made by local planning authorities through the development plan system. They also inherited a substantial reserve of unutilised or underutilised service capacity.

14. In the intervening years, new housing has tended to be served by the balance of forward service investment that had been programmed before privatisation and/or by way of incremental allocation of the service capacity reserve and smaller scale system augmentations, easily capable of private delivery as part of individual development approval processes, with planning system funding by way of contributions under section 106 of the Town and Country Planning Act 1990 often being used to assist delivery.

15. In general terms it is fair to observe that the ability to grow infrastructure access through the utilisation of pre-privatisation programmed growth and greater use of service capacity reserve is now becoming limited. This programmed growth and service capacity reserve is a finite resource and it is now close to exhaustion in a number of locations.

16. To deliver the levels of housing growth that are clearly needed to respond to the Barker review of Housing Supply, it will be necessary to develop substantial new service capacity across a broad range of privatised infrastructures. However, it is also fair to observe that, over the last quarter century, there has been relatively limited investment in large scale new infrastructure.

17. This lack of investment generates a number of effects that lead to:
    - a lack of capacity to deliver in scale: we simply do not have the institutional and investment capabilities and culture to deliver very large scale new infrastructure projects;
    - a lack of capacity to deliver in space: we are not clear where the new infrastructure demand generated by housing can be met, having regard to resource availabilities and constraints and hence lack the certainty to prompt either infrastructure or housing investment at the speed that we desire;

- ageing infrastructure, where the average age of the infrastructure stock continues to rise and where key infrastructures such as power stations approach their design life without programmed replacement;
- depreciated infrastructure, whereby returns from capital invested in new infrastructure have to compete against returns from substantially discounted and depreciated capital assets and whereby service/supply costs from new infrastructure are unduly high in comparison with service/supply costs from discounted infrastructure.
- inefficient infrastructure, where opportunities to deliver considerable sustainability and cost improvements in energy and water supply and public transport are not invested in, or where investment is limited, due to a conflation of issues around investment scale, the lack of certainty around the location of demand and undue competition from discounted infrastructures.

18. This situation severely limits our capacity to deliver infrastructure to service the needs of planned housing growth of the scale currently anticipated to be necessary. It particularly severely limits our capacity for significant levels of advanced servicing, to ensure that new housing obtains reasonable access to infrastructure from the point of first occupation.

2.3 THE COSTS OF POOR SPATIAL INVESTMENT PLANNING

19. It is possible to undertake new housing investment without advance infrastructure delivery. However, the RTPI argues strongly that to follow such a road is to be broadly unsustainable. It increases the capital costs and delivery lead time for a broad range of necessary infrastructures. It also places the residents of new localities in a position where they face structural barriers to access to sustainable infrastructure, which in turn form or prolong unsustainable patterns of behaviour.

20. To provide simplified examples, if new housing is developed in a growth corridor location in advance of effective education, health care and public transport provision, new householders are likely to make more private vehicle trips and or to have higher rates of car ownership than otherwise similar householders in established residential locations. Per capita carbon emissions are likely to be higher than in equivalent, well served settlements. Once patterns of journey to work and service use are established in new households, these can be much harder to change than at the point when a household forms in or relocates to a growth corridor. Similarly, if adequate water resources are not provided, either households will experience increasing service reductions or interruptions during drought years, or rivers will be driven below their sustainable base flows, or both. Some unsustainable practices become structural and a further economic barrier to the introduction of more sustainable infrastructure is created.

21. The sustainability costs of not planning effectively for the spatial delivery of new infrastructure are potentially severe. In summary terms, these costs could amount to:
    - patterns of natural resource use (energy and water) that are unsustainable in the medium to long term, by way of utilising non-renewable resources, increasing greenhouse gas emissions and/or harming the ecological characteristics and carrying capacities of lands, water catchments and seas;

- lack of availability of sufficient water and energy supplies to meet demand over the medium to long term, particularly in times of excess demand or restricted supply and/or the adoption of pricing to further ration demand;
- higher costs and economic inefficiency in delivering lower quality and later infrastructure offers to meet demand than could have been planned for prior to development;
- continued under-investment in particularly energy infrastructure that would enable better responses to the need to further reduce greenhouse emissions;
- lack of education, health and social service facilities and longer trip times, greater energy consumption and higher carbon emissions associated with accessing these services;
- lack of local green infrastructure and longer trip times, greater energy consumption and higher carbon emissions associated with accessing leisure and recreational pursuits
- lack of public transport capacity and relative under-utilisation of public transport; and
- greater utilisation of private transport, more and longer trips, greater road congestion, higher accident rates and higher carbon emissions than could otherwise have been delivered.

22. These are the challenges that must be responded to by any proposals to deliver sustainable infrastructure to facilitate housing growth. It is proposed that they should be responded to by new tools and techniques in planning, both to articulate clear policy guidance and investment priorities and to provide part of the necessary funds.

23. The planning system itself has been posed as in part providing a reason for under-investment in infrastructure, a proposition that is currently the subject of test in the ongoing review of land use planning by Kate Barker (the 'Barker 2 review'). The RTPI acknowledges that there have been some spectacular instances of individual infrastructure planning processes causing significant and unforeseen delay to development processes[1]. However, it argues strongly that these individual cases are largely just that: individual, high profile cases, determined by way of public inquiry processes, which fail to reflect the underlying body of effective practice and timely decision making by local planning authorities. Furthermore, these often cited cases do not involve the infrastructures more directly relevant to housing supply and development. For this reason, any reform of systems of infrastructure investment planning and approval should not be based on a narrow view of a limited number of high profile process failures.

24. Planning is seen by some as being a regulatory activity that should be reduced in scale or scope by 'better regulation'. It has been suggested, for example in the interim paper for the Barker 2 review, that planning policies and processes can represent a barrier to market action and hence can warrant de-regulatory action.

[1] For example, the Sizewell B inquiry, Dibden Bay port inquiry and Heathrow Terminal 5 inquiry processes, cited in the DTI Energy Review consultation paper.

25. In the RTPI's opinion, this view is not supported by an examination of the evidence. On the contrary, in our view as set out in our response to the initial consultation paper[2] in Barker 2 review, it is a necessary part of better regulation that the planning system should articulate a nationally competitive and sustainable vision for the UK. In circumstances where such a vision was attenuated or removed as a consequence of domestic policy changes, the UK and its constituent parts could be left at a substantial investment and competitive disadvantage to those other countries that do retain a clear spatial vision for investment, growth and jobs.

26. It is the RTPI's equally strongly held view that a primary driver in the shortfall of housing-relevant infrastructure has been that, during a time at which infrastructure development requires substantial private investment, there has been insufficient direction as to type, scale and location of infrastructure requirements as against the availability of resources to enable the market to deliver sound investment. In short, the problem is one of partial market failure, exacerbated by a failure to plan effectively for housing and the necessary infrastructure growth.

27. In the view of the RTPI, this situation in respect of privatised infrastructures cannot be allowed to continue. Its existence and potential severity are in part acknowledged by government policy review processes such as the recent DTI Energy Review. However, there has yet to be a review process that has identified this as a systemic problem and proposed systematic means of addressing it.

28. Turning to the social infrastructures that remain largely public, the situation is not as severe. Here, there has been ongoing investment, particularly from 1997 to date. However, it is fair to observe that processes of predicting and providing for service need in spatial terms have not been as good as they could possibly be. Liaison between for example, National Health Service Trusts, local education authorities and local planning authorities are not leading as clearly and efficiently as they could to the advance identification of the locations and land necessary to service the demand arising from new housing.

29. The current situation in both the privatised and non-privatised sectors calls for a clearer articulation of national policy and its spatial differentiation and impact and a greater integration of physical, sectoral and investment strategies. Both these aims are best achieved through the new planning system and approaches to planning practice in the UK – termed 'spatial planning'.

30. RTPI's 2001 *New Vision for Planning* stated that: *Our focus is on the location and quality of social, economic and environmental changes. In developing a New Vision for Planning we therefore use the term 'spatial planning'. We do so to emphasise that planning is as much concerned with the spatial requirements for, and impacts of, policies - even where these do not require a 'land-use' plan - as it is with land use zonings. The interrelationships, for example, of governmental policy can only be properly demonstrated by consideration of their aggregate impacts for specific places. 'Spatial planning' operates*

[2] See http://www.rtpi.org.uk/resources/policy-statements/2006/mar/pol20060319.pdf

at all the different possible scales of activity, from large scale national or regional strategies to the more localised design and organisation of towns, villages and neighbourhoods.[3]

31. It is a key part of this vision that it is not necessary for an effective spatial planning system to direct the detail of infrastructure (or indeed other) development by way of ownership or management control. The new vision is for a planning practice that gives expression to public (effectively shared) strategies that are influenced and implemented by public and private sector interests alike.

32. The RTPI considers that spatial planning for the delivery of sustainable housing and infrastructure is an activity that is closely linked to national competitiveness. Spatial plans provide the framework within which nations, regions and localities articulate their physical, social, economic and environmental visions. These visions in turn facilitate proposals for infrastructure and housing investment and development that provide enjoyable, liveable places.

33. The RTPI considers that the effectiveness of a country in terms of national competitiveness and in terms of its capacity to provide new sustainable housing growth and infrastructure, will depend on the clarity and efficiency with which its national, regional and local spatial visions are expressed and implemented. It will also depend upon the relationship between spatial planning systems for housing and infrastructure at the national or lower tier in the UK and its constituent countries, as against other countries that are also competing for investment. For example, if one country clearly expresses a policy vision and implementation tools to support the sustainable infrastructures that underpin housing growth, it is arguable that place will be a more effective 'place competitor' for footloose investment capital than a country whose planning framework is less clear.

2.4 FROM A NATIONAL SPATIAL FRAMEWORK TO NEW INFRASTRUCTURE PLANNING AND DEVELOPMENT TECHNIQUES

34. Following from this position, the RTPI takes the view that:
- well developed plans are a sound means to provide the certainty needed to underpin investment in the development of sustainable infrastructure; and
- it is necessary for the UK and particularly England to have close regard to the investment certainty provided by other countries if we seek to prioritise and promote investment in a new infrastructure programme to support housing growth.

35. Infrastructure development typically requires the delivery of major projects. For these to proceed in an efficient and timely manner, it is necessary to provide the certainty whereby investors can identify and control risks due to public policy and environmental contingencies in the development of major projects and target investment to relevant locations. Without this certainty, private capital can lack the capacity to deliver the infrastructure that makes places sustainable and competitive, and that underpins housing

[3] From the RTPI 'New Vision for Planning': http://www.rtpi.org.uk/about-the-rtpi/vision.pdf

growth. The RTPI is strongly of the view that well developed plans are a key mechanism of providing this certainty.

36. In this regard, the RTPI notes that a substantial number of Member States within the EU have national spatial planning frameworks, documents and systems which outline, amongst other things, the national sustainable development priorities for that Member State. Within the framework of the UK, Scotland, Wales and Northern Ireland also have national spatial strategies. The UK and, within it, England, are conspicuous in not articulating a national spatial vision. Similarly, the UK, whilst it has developed a system of drawing development funding to bear on the infrastructure needs generated by new development[4], it is only in relatively recent times that the attention of Government has turned towards the development of consistent good practice in this field, such that significant funding streams can be developed. Again, this position places us at a relative competitive disadvantage with some overseas countries.

37. It is therefore not substantially surprising that, in comparison with other European nations, the UK and England are not perceived as being effective developers of the major infrastructures that are necessary to support housing development.

38. The first proposal that the RTPI makes by way of response to the sustainable infrastructure gap identified above, in the context of improved planning processes, is to develop a national spatial investment framework for the UK and more particularly for England. Such a framework would provide a clear basis on which to consider the following issues in their spatial contexts:
- current, trend and preferred locations of economic growth and reinforcement and employment change;
- current, trend and preferred locations of population growth;
- housing adequacy and need by region
- patterns of transport demand and systems;
- energy resources and distribution systems;
- water resources and distribution systems;
- social infrastructures in respect of spatial indicators of need for educational, health and welfare services.

39. By examining questions of this nature on a national spatial scale, the Government will be placed in a position where the following will become considerably more apparent than they currently are:
- likely locations of housing need;
- that can efficiently be served with existing and/or new infrastructure.

40. In its 'Uniting Britain' project, the RTPI has recently undertaken research to examine the scope for a UK spatial planning framework[5]. This work, undertaken by Professor Cecilia Wong of the Centre for Urban Studies at the University of Manchester and Andreas

[4] Section 106 of the Town and Country Planning Act 1990

[5] A full copy of the RTPI 'Uniting Britain' report can be viewed and downloaded from http://www.rtpi.org.uk/resources/publications/spatial2.pdf .

Schulze Bäing and Alasdair Rae of the Department of Civic Design at the University of Liverpool, was completed in June 2006. It illustrates that a small team can use existing social, economic and environmental spatial data on a UK scale to illuminate issues and trends that are highly relevant to the competitiveness of the UK and of places within it and to the formulation, for example, of a national infrastructure investment programme. It illustrates that this analysis can be undertaken with expedition and economy. The results provide a powerful means to illuminate sustainable development decision making at all levels of government. In short, a national spatial framework is not the discredited national economic plan of the 1960s. It is simply a window through which Government can view the current condition and likely future needs of the UK and a tool by which greatly needed certainty can be delivered to support new investment in sustainable infrastructure.

41. Emerging from a national spatial framework, the RTPI considers that there will be a need for a clear and targeted national infrastructure programme, in which questions of infrastructure need, mode, broad sustainability and indicative location are addressed in a high level strategy, leaving detailed development approval to consider much more closely the issues of immediate site impact and mitigation. Such a programme would be the place in which (for example) the balance between water resource demand to meet demand for housing proposed for the South East, existing water resources and our obligations to catchment management under the European Water Framework Directive could be broadly scoped. From such a programme, it would be possible to step towards both detailed feasibility appraisals for substantial housing growth locations, whilst also providing the clear certainty as to market demand and scale necessary to underpin the necessary private investment.

42. Similarly, there is a need for approvals processes that take place at the most appropriate level of government to facilitate the efficient implementation of a national infrastructure programme.

43. Such an approvals process should be reasonably expeditious in comparison with the public inquiries currently typical for major infrastructure approvals, because they would take place within the framework of strategic decisions that had already been taken by national or regional government and hence were not open to detailed re-argument at the project stage.

2.5 THE REVIEW QUESTIONS

44. The review questions raised in the Treasury's terms of reference are as follows:
- What infrastructure is necessary to support sustainable housing growth?
- What are the key variables affecting the need for and cost of infrastructure to support sustainable housing growth, including demand management?
- How can we improve the way Government Departments currently plan for and deliver the infrastructure necessary to support sustainable housing growth?
- What are the most effective and timely mechanisms to deliver housing related infrastructure on the ground?

Summary responses are provided below, which refer to the principles articulated above, but these can be amplified in further discussion with the RTPI should this be required.

What infrastructure is necessary to support sustainable housing growth?

45. The RTPI has considered as a matter of principle the infrastructure that is necessary to be delivered to support housing growth. It has also considered what in broad terms might be measures of sustainability in the provision and operation of that infrastructure.

46. The infrastructure necessary to support housing growth includes:
- Energy infrastructures, relating to:
  - electricity generation (base load, peak and distributed generation)[6];
  - electricity distribution; and
  - gas distribution.
- Water infrastructures[7], relating to:
  - sourcing, storage and treatment;
  - water distribution;
  - waste water capture and management; and
  - drainage.
- Other physical household infrastructures including:
  - telecommunications and information infrastructure; and
  - solid waste collection and management.
- Access infrastructure including;
  - footpaths;
  - cycleways;
  - roads; and
  - public transport.
- Social infrastructure including:
  - education services;
  - health services; and
  - welfare, commuity and social services.
- Economic infrastructure including access to:
  - proximate employment opportunities;
  - proximate retail opportunities; and
  - proximate commercial recreational opportunities.
- Recreational and green infrastructure, including access to:
  - playing fields;
  - parks;
  - natural areas;

[6] where models should include the use of demand management, energy efficiency, micro and distributed technologies and renewable technologies. There are opportunities for the grid to change from a largely centralised feed to distribution to a more localised equalisation system receiving from and sending to many millions of producers and consumers.

[7] where models should include demand management, water efficiency, local water capture and storage (eg roofwater and grey-water recycling). There are also opportunities for Sustainable Urban Drainage Systems (SUDS) to feed back into water supply systems for eg parkland irrigation and for recreational and nature conservation water features (green infrastructure).

- amenity areas; and
- areas for quiet recreation and
- access to opportunities for entertainment.

47. In considering sustainability, the RTPI has viewed the following measures are relevant:
- minimisation of greenhouse gas emissions and maintenance of air quality;
- minimisation of structural demands for private transport;
- maximisation of opportunities to use renewable energy resources;
- maximisation of opportunities to use walking, cycling and public transport;
- efficient use of input resources;
- maximisation of opportunities for re-use and recycling of waste streams;
- maintenance or enhancement of the ecological characteristics of the receiving environment;
- maintenance of minimum ecological flows in catchments and adherence to the Water Framework Directive;
- provision of affordable housing;
- reasonable local access[8] to shops;
- reasonable local access to some employment;
- reasonable local access to social infrastructure facilities;
- reasonable local access to open space for recreation and appreciation of the natural environment; and
- provision of 'livable' places offering high standards of amenity and design.

What are the key variables affecting the need for infrastructure?

48. Need – in the context of this cross-cutting review - is driven by household formation/construction and broader population characteristics (forming demand), as offset by deliverable measures to manage demand in response to resource limitations and the sustainability measures set out in paragraph 12 above.

How can we improve the way Government Departments currently plan for and deliver the infrastructure?

49. Action will be necessary to overcome the sustainable infrastructure gap identified in section 2.3 above. Amongst other mechanisms, delivery must be improved through improved spatial planning and policy direction at the national level. The preparation of a national spatial planning framework as described in section 2.5 above would offer significant benefits at limited cost.

What are the most effective and timely mechanisms to deliver housing related infrastructure on the ground?

50. The most effective and timely delivery mechanisms will be by way of a national infrastructure programme as described in paragraph 47 above, together with refined

[8] This implies pedestrian, cycle or public transport accessibility for most of the population.

development approvals process described in paragpah 48, which takes clear account of the need, mode and locational policy direction provided in the infrastructure programme.

2.6 RECOMMENDATIONS

In carrying forward this review the Treasury should:

(1) recognise the core role of the planning system in articulating sustainable national, regional and local visions that encourage the delivery of housing;

(2) support the use of a national spatial investment framework as a foundation stone for better identification of sustainable infrastructure needs;

(3) support the development of a national infrastructure programme, based on the national spatial framework; and

(4) support the delivery of the outputs from these exercises into policy that strongly informs the decision making processes for major infrastructure projects