



**RTPI**

mediation of space · making of place

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To whom it may concern,

**RESPONSE TO THE CONSULTATION INTO THE PROCESS AND METHODOLOGY OF  
THE NATIONAL INFRASTRUCTURE ASSESSMENT**

The RTPI welcomes the opportunity to provide evidence to the Commission's consultation on the methodology for the National Infrastructure Assessment.

Please see our submission to the consultation below.

Yours faithfully,

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**Policy and Networks Manager**

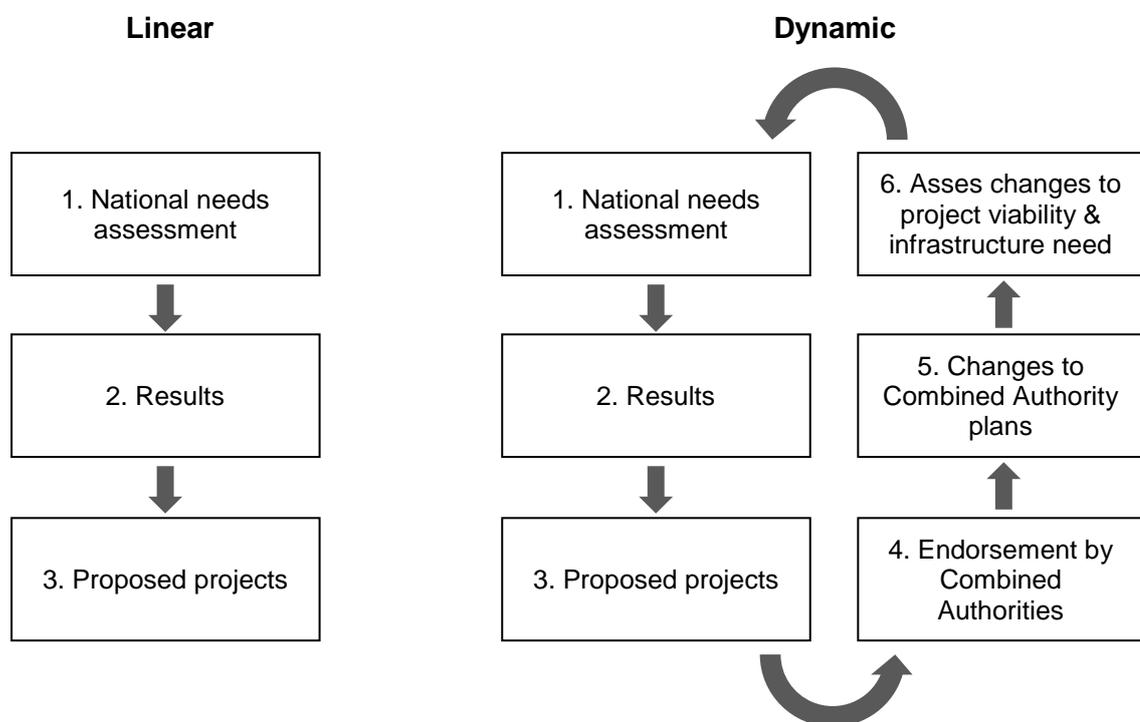
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## RTPI response to consultation on national infrastructure assessment methodology

### Overarching issues

1. The RTPI welcomes this opportunity to respond to the consultation from the National Infrastructure Commission. The UK approach to national infrastructure planning has for too long been characterised by uncertainty, delays and a lack of joined-up thinking. This assessment offers a valuable opportunity to overcome these challenges and develop a visionary, long-term and strategic infrastructure plan for the UK.
2. The Commission has been given a remit from Government to “...analyse the UK’s long-term economic infrastructure needs, outline a strategic vision over a 30-year time horizon and set out recommendations for how identified needs should begin to be met.” The RTPI believes that the assessment should take a proactive approach in setting out a number of scenarios which explore the transformative potential of infrastructure to benefit the environment, drive economic productivity, and improve quality of life. In doing so, the Commission will need to develop a methodology capable of taking a dynamic approach to the identification of ‘infrastructure need’.
3. We therefore agree with the proposal from the Commission to take “...a whole system approach, understanding and studying interdependencies and feedbacks” by incorporating a range of cross-cutting issues and infrastructure drivers. We note that the Commission is fully cognisant of the need to take account of feedback loops in its approach (see box on 24) which is particularly important in considering the links between infrastructure and housing. We suggest that these would need to be addressed through a **dynamic methodology** for understanding infrastructure need in relation to land use planning, which accounts for the role of infrastructure in unlocking and enabling sustainable growth. The alternative would be a linear approach to assessing infrastructure need based on current patterns of demand, a process which would tend to reinforce prevailing patterns of growth and would limit the ability of the Commission to consider the transformative potential of infrastructure investment. The difference between the two methodologies is illustrated below.

**Figure 1: Linear versus dynamic methodology**



4. As shown in Figure 1, a linear methodology would assess infrastructure need based on existing patterns of growth and demand, and propose a range of infrastructure to meet that need. However this would not account for the impact that the provision of this infrastructure would then have on land use planning and the shape of the built environment, which would in turn impact upon the use, viability, efficiency and resilience of the infrastructure. A linear approach would also risk simply reinforcing the provision of infrastructure in the south east of England, where current demand is greatest, but at the expense of areas where infrastructure investment could make a greater difference to sustainable growth and the quality of life of its inhabitants.
5. A dynamic methodology would similarly propose a range of projects based on the initial assessment of need, but would then provide a mechanism for planning stakeholders (such as combined authorities) to endorse the proposals by offering plans for associated housing growth and regeneration. These plans would in turn affect the viability and demand profile of the initial infrastructure proposal, for example through an uplift in the value of land, increased private sector contributions, increased capacity requirements etc. These changes can then be fed back into the initial assessment to produce new results and adjust proposals before making recommendations to Parliament.
6. This process would be complex, as decisions over the prioritisation of major infrastructure will almost inevitably favour some people, places and sectors of the economy over others. It would also require the Commission to be firmly spatial in its approach to assessing need and proposing projects, in order to enable engagement from stakeholders at the regional/sub-regional level.
7. By taking a proactive approach and considering these feedback loops, the Commission's visioning, assessment and recommendation process can act as a vehicle for addressing a series of long-standing and often politicised topics which otherwise risk being deferred to successive governments. The cross-cutting themes and infrastructure drivers identified in the consultation document suggest that the Commission could play a much-needed impartial role in these discussions, looking at the role of infrastructure in addressing the housing crisis, bridging the divide between the South-East of England and the rest of the UK, changing patterns of travel and energy consumption, and shaping our response to climate change. These are explored in more detail throughout our response.
8. In order to fulfil this role, the Commission will need to adopt a transparent approach to scenario modelling which recognises and makes explicit the trade-offs, risks and uncertainties inherent in the planning and delivery of infrastructure.

**Q1. The Government has given the National Infrastructure Commission objectives to:**

- **foster long-term and sustainable economic growth across all regions of the UK**
- **improve the UK's international competitiveness**
- **improve the quality of life for those living in the UK**

**What issues do you think are particularly important to consider as the Commission works to this objective?**

9. In our introductory section we set out how the objective of long-term sustainable economic growth requires that the Commission's methodology is able to generate the confidence required to enable growth, and can factor in the impacts of land use planning changes in response to endorsement from other public and private stakeholders. In particular we commend a **dynamic methodology** which incorporates feedback loops.
10. The objectives should also relate to all regions *and nations* of the UK, and should aim to reduce the disparities in economic performance between them. There is a need to map the spatial incidence of expenditure proposals. The RTPI recommended this in its [Map for England proposal](#).
11. The RTPI has had sight of the consultation response from the National Infrastructure Planning Association (NIPA), and agree that climate change will be a key issue for the Commission to consider in relation to these objectives, particularly the emission reduction targets for 2032 and 2050. These are covered in more detail in our response to Q3, Q4 and Q10

**Q2. Do you agree that, in undertaking the NIA, the Commission should be:**

- **Open, transparent and consultative**
- **Independent, objective and rigorous**
- **Forward looking, challenging established thinking**
- **Comprehensive, taking a whole system approach, understanding and studying interdependencies and feedbacks?**

**Are there any principles that should inform the way that the Commission produces the NIA that are missing?**

12. The RTPI broadly agrees with these principles. Under the proposal for the Commission to be comprehensive and take a whole systems approach, we point to the need to develop a methodology that can account for the feedback loops between the assessment of infrastructure need and the impact that proposed and actual infrastructure projects have on that need, including project viability. These are set out in paragraphs 2 - 7 above.
13. We understand that the NIC is not in a position to reopen closed agreements on price control settlements for regulated utility industries. However, such agreements are medium term only. After they expire there would seem to be ample opportunity to get regulators to place much greater emphasis on the support of housing supply growth. The current approach heavily limits the ability of utility companies to make infrastructure investments ahead of demand. Regulators exhibit undue risk-averse behaviour requiring high levels of commitment at the start of control period (e.g. full planning applications) which is simply not a realistic proposition.
14. The Commission should include clear spatial principles in its approach. Few of the existing National Policy Statements (NPSs) are spatially specific, and this assessment presents a valuable opportunity to examine how different policies relate to each other spatially. Furthermore, the four infrastructure drivers identified by the Commission have a clear spatial dimension which needs to be addressed.

15. The assessment is likely to deal much more comprehensively with infrastructure in England than it does with Wales or Scotland, and is assumed to have no remit in Northern Ireland. In being consultative, the Commission will therefore need to ensure the interests of the regions and nations of the UK are represented, especially cross-boundary infrastructure issues. For Wales, the Commission will need to clarify how the assessment will relate to the existing Nationally Significant Infrastructure Projects (NSIPs) and the National Development Framework, Developments of National Significance and emerging Strategic Development Plans. In Scotland, the same clarity will be needed in relation to the revised National Planning Framework. In England, the existing infrastructure plans of combined authorities, other local government, Local Enterprise Partnerships (LEPs) and private companies will need to be connected to the assessment. To manage this process there is a strong case for the appointment of commissioners with explicit responsibilities for the interests of each of the regions and nations.

**Q3. Do you agree that the NIA should cover these sectors in the way in which they are each described?**

**Q4. Are there particular aspects of infrastructure provision in these sectors which you think the NIA should focus on?**

**Q5. The NIA will seek to pull together infrastructure needs across sectors, recognising interdependencies. Are there are particular areas where you think such interdependencies are likely to be important?**

16. The RTPi generally agrees with the choice of sectors as described in the consultation document, but suggests a greater consideration of the relationship between each sector and the built environment.

#### The built environment

17. In setting out the remit of the interim Commission, the consultation document states on page 18 that it should not include housing supply directly, but rather “consider the potential interactions between its infrastructure recommendation and housing supply”. The Commission proposes to coordinate the timing and delivery of infrastructure and housing by using information about the potential locations of strategically important housing allocations as part of its evidence base.

18. In our policy papers on [Strategic Planning](#) and [Delivering Large-Scale Housing](#), the RTPi argued that social well-being, employment growth and economic competitiveness were being put at risk by a failure to fully integrate the provision of housing and infrastructure across local authority boundaries. This integration needs to occur at a range of scales, and the devolution of powers and responsibilities to combined authorities is a positive step forward. However there is also a need for decision-making on national infrastructure to actively enable and shape sustainable housing growth, rather than simply respond to existing demand.

19. In not directly addressing housing supply, the Commission risks missing an important opportunity to transform the relationship between policies, planning and expenditure for

national infrastructure with policies and planning for housing. We therefore recommend that the Commission is able to take a more proactive approach to using infrastructure to unlock potential housing sites, and that this is reflected in the methodology as suggested in paragraphs 2-9 of our response. This would reflect the explicit connections between housing and infrastructure which have already been made by the Commission in the *Transport for a World City* report, and in the studies for the Milton Keynes – Cambridge Growth Corridor.

20. As we indicated in Figure 1, this would provide an opportunity for stakeholders (such as combined authorities) to respond to infrastructure projects proposed by the Commission with integrated plans for sustainable housing growth. The impacts of this growth, for example, on land values or commuting patterns, would then need to be fed back into the needs assessment with adjusted calculations for viability, capacity etc.
21. As a further point, the conflation of ‘the built environment’ with ‘housing supply’ on page 18 does not capture the wider and more complex relationship between infrastructure and the built environment. These are usefully set out in [Urban form and infrastructure: a morphological review](#) from Foresight/Government Office for Science. This report examines the characteristics of the following urban typologies against a range of economic, social and environmental criteria:
- Compact contained towns and cities
  - Edge of town retail and commercial developments
  - Peripheral housing estates and urban extensions
  - New settlements
  - Dispersed developments
22. Choices around national infrastructure are in part determined by our existing urban form, and the infrastructure projects envisaged by the Commission will in turn shape the sustainability of how our settlements grow and expand, for example by encouraging higher density developments, decentralised energy networks, or public transport systems. These relationships are included in our comments on the transport and energy sectors below. Describing infrastructure as “enabling people to get work” (para 39 of the consultation) runs the risk of supposing that commuting demand is a dependent variable and is not in itself the consequence of policy decisions around transport and land use.

### Transport

23. The latest carbon budget report from the Committee on Climate Change (CCC) states that the government does not have sufficient policies in place to reduce emissions from the transport sector. An overreliance on vehicle electrification and fuel efficiency to reduce transport emissions may also place additional pressures on the energy sector – a critical interdependency which we welcome the Commission’s focus on.
24. The RTPI would also recommend that the Commission examine the relationship between the built environment and transport behaviour, especially given the proposal under the cross-cutting themes to determine infrastructure needs based on “...where people live and how they will travel”. Land use planning can play a significant role in promoting sustainable modal shift and reducing the substantial negative externalities

associated with road traffic by influencing both the location of new development in relation to infrastructure, jobs and services, and patterns of churn within the existing housing stock. Current problems associated with road traffic, including congestion and air pollution, are impacting on economic productivity and health, and we would wish to see land use planning recognised as part of the solution.

### Energy

25. As with transport, there are several interdependencies between the energy sector and the built environment, which should be examined by the Commission. The first is the relationship between the energy sector and energy efficiency in new and existing buildings. The CCC again state that new policies are needed to boost energy efficiency in order to meet our emission reduction targets in a cost-effective manner. Improving energy efficiency also has important quality of life benefits by reducing fuel poverty and tackling health conditions associated with poorly insulated housing, especially under conditions of climate change.
26. The Commission's *Smart Power* report also considered the future role of a more distributed approach to energy generation, where a greater proportion of low and zero-carbon electricity is generated closer to areas of demand. In addition to the need for more active network management described in the report, this would also have implications for the built environment and land use planning which should be considered by the Commission. A scenario in which distributed low-carbon energy plays a greater role may also be one which; a) energy infrastructure competes for land with housing, employment and other forms of infrastructure; and b) favours relatively compact settlement patterns which can be connected to decentralised heat networks.

### Digital and communications

27. In relation to the transport sector, the Commission could consider the impact of technological change on remote working and the need to commute by car.

### Water and drainage

28. In relation to this point, the Commission may be interested in the RTPI [Map for England](#) study and [Thinking Spatially](#) paper, which noted that the areas of the country with the highest household growth projections display overlap with areas that already have serious levels of water stress, including Greater London, the South East and the East of England. We support the consideration by the Commission of the relationship between population growth, infrastructure need and environmental capacity at a national level.

### Flood risk management

29. In relation to the cross-cutting theme of governance and decision-making, the Commission may wish to consider a scenario in which flood risk management spending is devolved, with responsibility aligned along catchment boundaries.
30. The RTPI also agrees with the suggestion from NIPA that the Commission consider flood risk over a 80-100 year time period, which aligns more closely to the life-span of major flood defence infrastructure and the impacts of climate change.

31. In addressing flood risk management, options around changes to upland management of land to reduce the speed and volume of run-off need to be able to be evaluated against the building of new flood defences. This issue is of particular significance as a cross-boundary issue between Wales and adjoining regions of England.

#### Green infrastructure / natural resources

32. The role of green (and blue) infrastructure, while not a traditional national infrastructure sector, should also be considered by the Committee. There is a clear economic case for greater investment in green infrastructure as a means to address many of the infrastructure needs identified above, especially in relation to climate change, and provides additional benefits for quality of life, biodiversity and resilience. In carrying out its assessment, we recommend the Commission should be alert to whether the extent to which identified needs could be met by green infrastructure at a different spatial scale.

33. The Commission may also wish to consider whether to conduct a high level assessment of natural resources as a separate sector, adopting an ecosystems approach, and recognising the constraints and opportunities presented by natural resources (including the supply of minerals required to meet infrastructure and growth needs, and the impacts of infrastructure provision on natural capital/landscape quality). In doing so, the Commission could seek to engage with bodies such as the Natural Capital Committee and DEFRA as they prepare their 25-year Plan for Nature.

#### **Q6. Do you agree that the NIA should focus on these cross-cutting issues?**

#### **Q7. Are there any other cross-cutting issues that you think are particularly important?**

34. The RTPI generally agrees with these cross-cutting issues. As we set out in our introduction, the challenge of understanding these issues, particularly in relation to geography and local growth, and issues of cost, funding and financing, will need to be considered through a dynamic form of assessment which can respond and adapt to the initial recommendations made by the Commission.

35. On sustainability, we would recommend that the Commission takes account of the embodied carbon of infrastructure, including decommissioning, in order to fully consider the costs and benefits of proposed projects.

#### **Q8. Do you agree with this methodological approach to determine the needs and priorities?**

36. The RTPI agrees with the principle of a dynamic approach to determining needs and priorities as suggested in Figure 1. This will not produce a single 'right answer' but will rather lead to a range of identified options which can then be widely reviewed and critiqued. The value of the assessment will be to provide pragmatic recommendations to government which have a strong degree of buy-in and where the costs, benefits and risks are transparent. This will help to provide the long-term certainty which is needed to support sustainable growth.

**Q9. Do you have examples of successful models which are particularly good at looking at long-term, complex strategic prioritisation in uncertain environments?**

**Q10. Do you believe the Commission has identified the most important infrastructure drivers (set out below)? Are there further areas the Commission should seek to examine within each of these drivers?**

37. As we state in our introduction, these four infrastructure drivers have a clear spatial dimension and a dynamic relationship to land use planning. We therefore welcome the Commission's proposal to consider the various feedback loops that these drivers entail. Our proposal for a dynamic assessment methodology in Figure 1 will help to capture these complex interdependencies, such as between the provision of infrastructure and the question of where people live and how they travel.

38. One of the most important considerations that the Commission will need to consider the need to meet legally binding emission reduction targets of 57% by 2032, and 80% by 2050. The 2016 Progress Report from the Committee on Climate Change (CCC) notes that most of the UK's emissions reductions have come from decarbonisation in the power sector, with almost no progress in the rest of the economy. As we stated in our response to Q3-5, the Commission should examine the role of infrastructure in the built environment as a means to mitigate and adapt to climate change and try to identify infrastructure solutions which deliver mitigation and adaptation benefits simultaneously.

39. Under the population and demography driver, the Commission may wish to consider the impact of infrastructure proposals on the rural economy and environment.

**Q11. The NIA will aim to set out a portfolio of interventions that best meets the demands of the UK in the future. Do you have a view on the most appropriate methodology to determine that portfolio?**

**Q12. In your view, are there any relevant factors that have not been addressed by the Commission in its methodological approach?**

40. In the response to Q11 and Q12 we propose that the dynamic methodology set out in the introduction and Figure 1 would be appropriate to determining a portfolio of interventions that meets the objectives proposed by the Commission in Q1.

41. In considering the supply of infrastructure services, there is a need to recognise the importance of an adequate pool of individuals with the necessary skills. The supply of spatial planners and of engineers could helpfully be included within the scope of the NIA.

**Q13. How best do you believe the Commission can engage with different parts of society to help build its evidence base and test its conclusions?**

42. In considering stakeholder engagement on the NIA, there is a strong case for consultations to include a cross-professional dimension. Given the differing contexts in devolved nations, it will be important for there to be engagement which focusses on those locations.