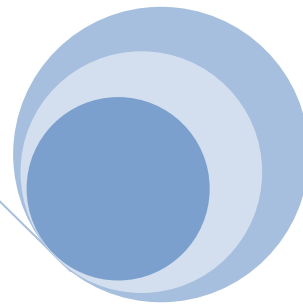
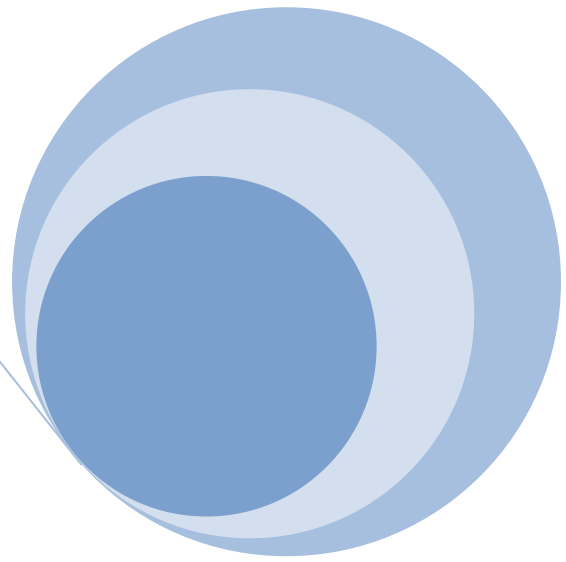




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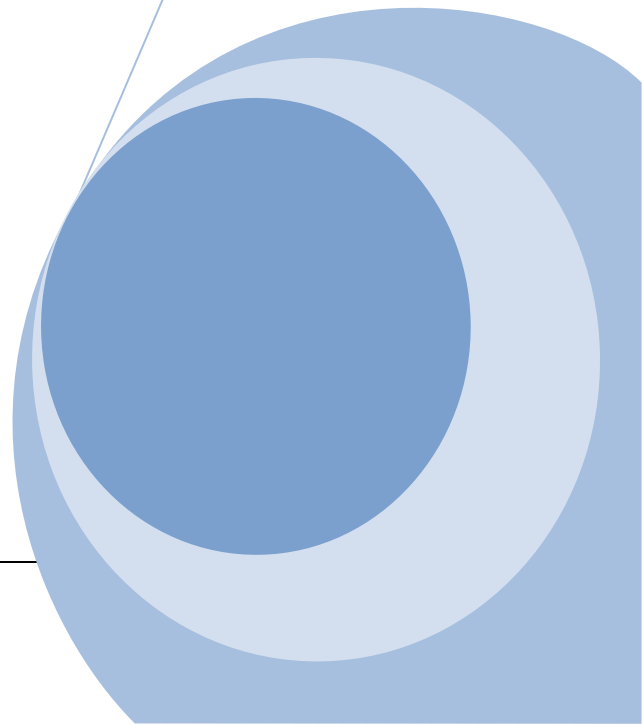


# Peak Oil

The Implications for Planning Policy

## Summary Document

A Discussion Paper published by the RTPI Development  
Planning Network and RTPI-TPS Transport Planning Network





## ACKNOWLEDGMENTS

The Royal Town Planning Institute (RTPI) Networks are all committed to representing and supporting those who work in planning. This paper has been published by the Development Planning Network and the Transport Planning Network. The Transport Planning Network is a partnership between the RTPI and the Transport Planning Society (TPS).

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Much of the technical analysis reported in this paper (particularly Chapters 2, 3 and 4, and the appendix) is based on original work that was undertaken by transport consultants Steer Davies Gleave. The RTPI and TPS thank them for their kind permission to use this material.

## DISCLAIMER

Any views reported in this document are based on the personal opinions of the individuals that have contributed to the report. They in no way represent the positions of their respective employers, the Royal Town Planning Institute or the Transport Planning Society.

## PURPOSE OF THIS DISCUSSION DOCUMENT

This discussion paper sets out the findings of a study undertaken into the issue of Peak Oil and the implications for spatial planning. It aims to promote discussion, raise awareness among transport and spatial planners of the issues around peak oil and suggest an agenda for action by professionals. It is intended as an introduction and primer to the issue; further work will be necessary to develop a greater understanding of any of the facets of Peak Oil covered in this paper, and to develop the responses that UK planning professionals should be making to ensure that the concept is properly taken into account in future planning.

This paper refers to planning processes and procedures under the English system. However, the issues raised here are relevant across UK nations. Reference only to English examples should not be taken to mean that the implications for other nations have been ignored.

While the issue of Peak Oil impacts on all aspect of spatial planning, this document has a strong focus on transport, however we welcome discussion and comments on other areas of planning that it impacts upon.

All comments should be forwarded by e-mail to [transport@rtpi.org.uk](mailto:transport@rtpi.org.uk).

## PEAK OIL: THE IMPLICATIONS FOR PLANNING POLICY SUMMARY DOCUMENT

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Peak Oil theory dates from the 1940's. Typical profiles of oil discovery and production follow a bell-shaped curve. Peak Oil is when production reaches its maximum before it declines irreversibly. This point undoubtedly has already been reached for some oilfields, and some observers say it has already been reached globally. Others suggest it will be another 20 years away. However, there are reservations around the level of quoted reserves on which such estimates are based.

The key effect of Peak Oil will be not just that oil simply ceases to be available, but also that availability declines year on year. The demand/supply gap quickly widens even with static production. Increases in price and price volatility are the inevitable result. There are also likely to be impacts on wider economic activity, such as high inflation and lower economic growth.

A global oil crisis seems inevitable sometime within this century. Increased oil demands from emerging economies will more than offset decline in consumption in developed countries. This means it is unlikely that production will be increased quickly enough to make up for shortfalls in supply.

UK economic growth is linked to global oil supply. We have been importing oil since 2005, and are used to relatively easy, reliable and cheap supplies. Oil provides one third of the UK energy consumption and 95% of transport energy used. Changes to the supply and price of oil due to Peak oil will affect all travel and transport of goods. It will also affect the supply of electricity, and could lead to rising prices for goods and services in general.

In terms of energy policy, oil prices are projected at around \$70/barrel through to 2025, with a range around this down to \$45 and up to \$150. However, there is no apparent or explicit acknowledgement of the effects of Peak Oil, other than to acknowledge maintaining energy supplies after North Sea oil and gas production has peaked is a key challenge going forward. The conventional wisdom appears to be that global oil and gas reserves are sufficient to sustain economic growth for the foreseeable future.

Spatial policy concerns that may arise from Peak Oil will include food production, housing, waste management and recycling, economic development and the whole basis of Spatial Planning. However, Peak Oil is not recognized in spatial planning typically. Changes to the planning system provide a new strategic context for local policy development that is localist in its approach. It remains to be seen if and how this will deal with issues relating to the implications of Peak Oil. At the time of writing, the present Government is preparing a new National Planning Policy Framework. Although there are some references to the need for planning policies to encourage development of more renewable energy sources, there again is no explicit mention of Peak Oil, and the implications of this for spatial policy.

Transport policy also has recently been reviewed at the national level, but remains resolutely silent on the issue of Peak Oil. Technical approaches to transport policy development and the planning of major schemes reflect the optimistic oil price forecasts mentioned above. Other recent reviews, such as the Stern Review on the Economics of Climate Change and The Eddington Transport Study maintained similarly optimistic views.

There are a few examples of Peak Oil being explicitly considered in policy development, including research by the Welsh Government and the Local Government Association (LGA). At a local level Bristol City Council has carried out good work in this area, and there is some limited experience from overseas.

The impact of higher oil prices due to Peak Oil will be most likely broadly to reduce travel demand on all modes, except for rail travel, which will show a slight increase. If oil prices hit \$200/barrel, car travel will return to 2008 levels and fall to nearly 10% below 2008 levels at \$300/barrel. Even at the higher price, air demand remains above 2008 levels, albeit marginally.

Such changes in the patterns of demand for travel could have important implications for transport investment. One clear implication of this is that investment priorities made on this basis would differ from

those based on current assumptions. In particular, the returns on investment in measures to promote active travel (i.e. walking and cycling) and smarter choices (such as home-working, tele-commuting, greater use of public transport, lift-sharing, and car clubs etc.) may also be more attractive in economic and environmental policy terms. This is wholly consistent with the policy positions set out in the most recent Transport White Paper.

However, the different outcomes that might result from pursuing the same policy goals based on alternative economic assumptions and analyses of this type need to be recognized in land use and transport policy-making more explicitly.

Peak Oil will affect everyone unless appropriate steps are taken soon. Possible responses by the planning profession could include an emergency energy supply plan; co-ordinated policies on Peak Oil and climate change, and raising public energy awareness. Adoption of the Oil Depletion Protocol, joint Peak Oil task forces, and partnerships with community-led initiatives are among the options open to organizations.

There are examples of existing initiatives, often not necessarily focused on the Peak Oil issue, that nevertheless provide pointers as to the way forward for planners. These include approaches developed by the Design Commission Cobe (formerly CABA), the Independent Commission on Transport, the Low Carbon Communities Network, the Low Emissions Strategies Partnership, the Centre for Alternative Technology and the Transition Towns Network among others.

Specifically in relation to transport policies, there are also a range of current responses that could be better co-ordinated and harnessed to address issues relating to the implications of Peak Oil, such as energy efficiency, use of alternative fuels, pro-active management of fuel prices, smarter car use, encouraging modal shift and other changes in travel behavior, and speed management.

There is already available a wealth of advice on urban design and sustainable travel, which is providing more clarity in statistical terms and the right focus for meeting desired goals in terms of Peak Oil and climate change. Key themes include settlement size and the strategic location of development, the strategic transport network, development density and so on. Similarly, the Government's advice on 'placemaking' and advice by the Design Commission Cobe is helpful.

None of this is new, and is not exclusive to cities, as often is held. Work by the Government Office for the South East or the Joseph Rowntree Foundation, for example, indicate this. Most measures to secure low carbon living patterns of development are entirely compatible with preparing for Peak Oil. However, there does need to be a greater imperative for their successful implementation.

Initiatives by the present Government focus on encouraging walking and cycling for shorter local journeys to support its wider goals of promoting economic growth and reducing carbon. However, the importance of travel by car and rail for longer-distance journeys is highlighted.

More explicit consideration of Peak Oil will have mixed impacts on policy goals for transport. The concept of Peak Oil must be better integrated into policy making, as climate change currently is becoming, and the synergies between them recognised. One means of achieving this is to better integrate Peak Oil considerations into existing appraisal techniques for spatial planning and transport policies.

Acceptance of the concept of Peak Oil means not only recognizing that oil supplies eventually will become exhausted, but that after passing the point of maximum oil production, stocks will dwindle and prices rise significantly. There may be interruptions of supplies and more volatility in prices. In the UK, Government policies on transport, energy policy and land use have consistently ignored or played down the Peak Oil phenomenon. Nevertheless, the potential impact of Peak Oil is profound. Frequency and patterns of travel will change, and current patterns and trends in land use will become ever less sustainable than at present.

Policy and technological responses that focus on maximising fuel efficiency, encouraging the use of more efficient modes and minimising the need and desire to travel are required. The price effects of Peak Oil will encourage such responses, and these can be supported by appropriate policy measures to guide this transition to a lower carbon transport system and land use policies that maintain lifestyle choices with less need to travel.

Within the planning process, Peak Oil will have serious implications for the demand forecasting and decisions on investment priorities. Alternative scenarios need to be explicitly considered. Also, existing modelling tools and techniques will require fundamental re-evaluation given the potential for Peak Oil to radically change choice behaviour, exogenous demand drivers, land use and trip patterns.

Spatial planning also needs to more explicitly take on board the implications of Peak Oil, both in terms of how changing travel patterns affect the feasibility of traditional land use patterns, but also what proactive measures are needed to maintain economic activities and lifestyle choices in a post-oil economy.

For more detail, research and background access the full discussion document at [http://www.rtpi.org.uk/transport\\_planning\\_network/](http://www.rtpi.org.uk/transport_planning_network/)

### **Recommendations**

The implications of Peak Oil must be recognized in the development of national policies on energy economic development, spatial planning, transport and investment in infrastructure. While it is recognized that there is a great deal of uncertainty and debate about these implications, the adoption of scenario-based approaches to evaluation may help decision-makers to understand the alternative outcomes of “business as usual” policies in a post-Peak Oil world.

In order to facilitate this, spatial planners, transport planners and other built-environment professionals need to develop an understanding and shape appropriate responses to the following:

- Energy-efficient spatial patterns, and how development may be planned to reduce energy consumption by reducing the need to travel, and providing critical mass for the promotion of mass public transport, local energy generation and distribution networks and combined heat and power networks.
- Better understanding of the policy responses necessary to ensure that existing and new buildings, both commercial and residential, are energy-efficient and/or may be used on a low-energy basis. This should include, among other things, aspects of design, density and specification of materials and services.
- The good work done over the past 20 years on reducing the need to travel be revisited and consolidated to provide clear and acceptable policies that lead people to travel less. Changes in technology have made home-working, tele-commuting and video-conference much more realistic and workable alternatives to traditional commuting patterns, but their full potential is far from realized. The revolution in delivering more accurate, up-to-date and accessible travel information to drivers and for users of public transport needs to be capitalized upon.
- Changes in travel behaviour should be actively sought to reduce travel by unsustainable modes. The increasing use of motivational methods and techniques developed in market research, advertising and the treatment of various addictions to encourage changes in travel behavior needs to be much better understood and consistently applied.
- Ensuring that the most energy-efficient means of travel are encouraged, and where each mode of travel is best in this respect. This would include, depending on the circumstances, car clubs, lift-

sharing schemes, priorities for high-occupancy vehicles and vehicles using alternative fuels as well as high-occupancy public transport.

- Understanding the energy needs of essential travel that cannot be met in other ways. In this way, energy budgets that prioritise essential travel can be developed as a basis for policy discussions.
- The policies required to support the generation, supply and distribution of alternative energy sources and fuels, particularly in respect of renewable energy sources, need to be put in place. However, this must be balanced with other appropriate environmental concerns such as protecting the quality of the landscape in remote areas and balancing requirements for food and biomass production.
- Incorporating Peak Oil-related concerns into policy and project evaluations through amendment of requirements and guidance such as the Strategic and project Environmental Impact Assessment regulations, and the Government's Transport Analysis Guidance.



