A network for the whole economy

UK roads are thought of as either strategic – motorways and A-roads – or local. **David Quarmby** and **Phil Carey** argue that attention should be focused on a third, hybrid group of economically important roads

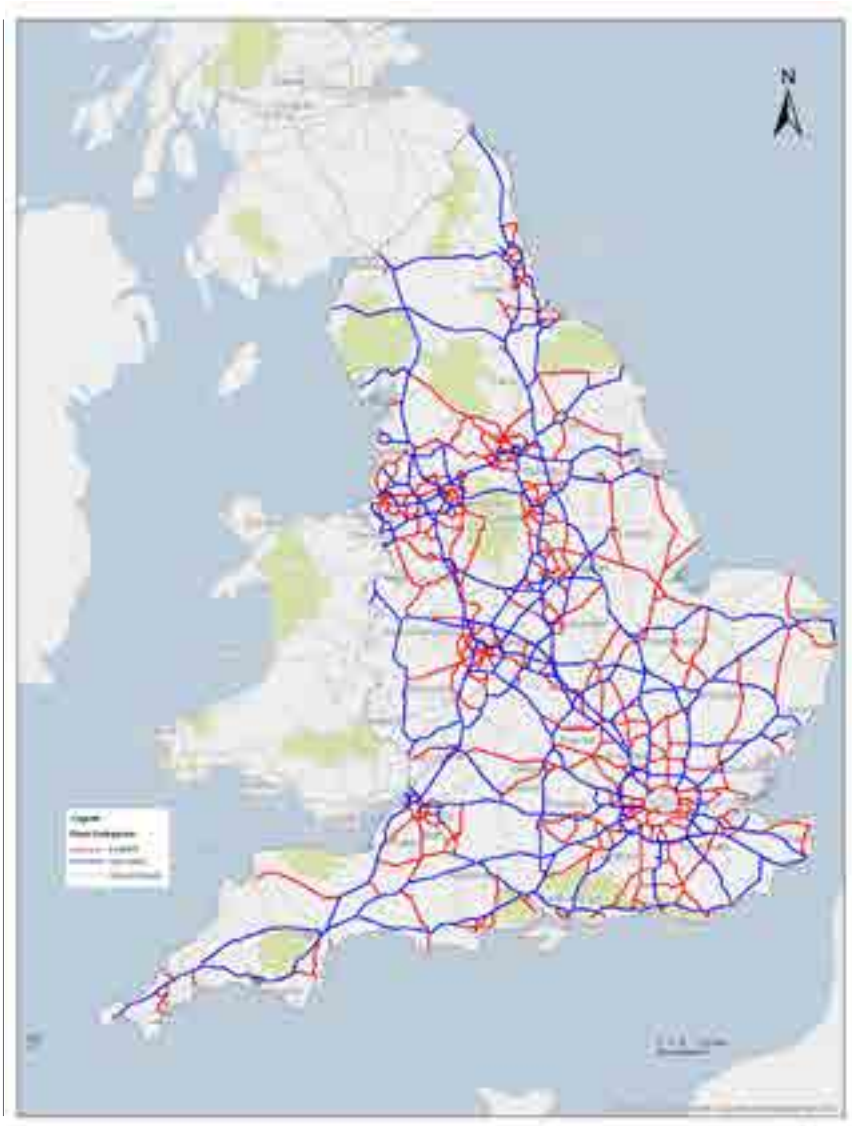
Highways England is a year old and by all accounts has got off to a good start: chief executive Jim O'Sullivan is focusing on putting into practice the first five-year road investment strategy, achieving a much more customer-centric culture, and targeting vital safety improvements for road users and roadworkers alike. Doubling expenditure by 2020 on the strategic road network of motorways and trunk roads – accounting for 2% of England's roads but a third of all traffic – is a cornerstone of the Government's ambitious infrastructure programme, set out by the Treasury three years ago and designed to sustain the national and regional economies and to support key areas of economic regeneration and growth.

But is concentrating on the 4,400 mile strategic network enough? Its coverage varies between different parts of the country and between conurbations; it doesn't always provide sufficient connectivity for users across the regions (such as in East Anglia and Lincolnshire, or south of London) or to meet new patterns of movement (such as the arc running north-east from Oxford towards Cambridge). It's left to a series of major cross-country local authority roads to meet these needs.

Critically important though it is for the nation, the strategic network does not, in our view, comprise all the roads that drive England's economy at the national and regional level. So, in a project commissioned by the Rees Jeffreys Road Fund, we set out to define on an objective basis a fuller set of economically important roads – strategic and local – that make up a coherent network.

Taking account of traffic levels, the proportion of commercial transport (HGVs and light vans), and connectivity for all towns above 50,000 population, we add 3,600 miles of the more "strategic" local authority A-roads alongside the strategic network, creating a Major Road Network of 8,000 miles (see map).

The result is a balanced and integrated network that underpins national and regional economies.



The 8,000 mile Major Road Network is based on motorways and all those A-roads in England that, using 2014 traffic count data, have average annual daily flow greater than 20,000 vehicles, or greater than 10,000 vehicles as long as the proportion of HGV traffic is at least 5%, or of LGV traffic at least 15%. Account is taken of connectivity for towns and cities of more than 50,000 population. The 2014 data have been modified by type of road and region to take account of the varying rates of traffic growth to 2040 predicted in the 2015 National Road Traffic Forecast (scenario 2)

It provides a framework to plan long-term strategic investment.

But it will only fulfil its potential if there is a consistent regime of governance, planning and funding. This would provide the mechanisms needed to provide the service the country needs from its major roads. It's not only about the infrastructure itself, but about the flexibility to adapt as technology revolutionises how busy networks are managed, and how vehicles use them.

All this is clearly a challenge when more than half this network is the responsibility of Highways England, while the rest belongs to scores of local highway authorities. Highways England now has a clear remit, with five-year planning and funding arrangements; there is a very different regime for local authorities, which are largely subject to annual budget-setting, a complex patchwork of funding sources and no comprehensive performance regime. The gulf is exacerbated by the large and growing funding gap between the two.

But we are not advocating any changes in who is responsible. Instead, there are two changes in the governance regime for roads which are already in train and can ensure the MRN concept is workable and achievable.

First, as part of the Government's devolution agenda, new legislation allows the creation of sub-national transport bodies, formed by voluntary groupings of local authorities and other stakeholders. Each grouping bids to vest its own sub-national body with a range of possible transport powers – either "uploaded" from those authorities or "downloaded" from Whitehall. The Major Road Network is arguably the "natural" network of regional and national roads for a sub-national transport body, provid-

ing wider connectivity to and within its area than the strategic network alone can. The sub-national body would then collaborate with Highways England on the strategic planning and development of this network.

One of the prospective bodies, England's Economic Heartland Strategic Alliance, is in the process of doing just this, adopting the MRN as the strategic network for its area. We understand that alliance would plan to work with Highways England on the strategic development and programming for the MRN in its area. But it would probably also retain the local highway authorities across the south Midlands as the network operators with statutory responsibilities for their bits of the MRN, alongside all the other local roads each one operates. A similar opportunity exists for Transport for the North and Midlands Connect.

Second, the creation of the National Road Fund for strategic roads, fed by hypothecated vehicle excise duty from 2020, provides an opportunity to consider funding the local authority component of the Major Road Network in a similar way to Highways England's strategic network. Based on projections of VED receipts from the Treasury and the Office of Budget Responsibility, and depending on Highways England's future needs, there may well be some capacity in the National Road Fund to contribute to maintenance and development of the local authority roads in the MRN.

Strategic planning of the MRN is not just about addressing network capacity challenges; to fulfil its core purpose in supporting regional economies entails a degree of connection between the spatial, economic and transport planning processes. The variety and complexity of England's local governance arrangements do not make this easy, but the creation of Local Enterprise Partnerships has provided a good opportunity to make this happen, and the MRN is the "natural" road network for this.

In spite of a chaotic start – and continuing overlaps in LEP geography – the LEPs have been using the leverage of local growth funds to "join the dots" with local planning and local transport authorities, and to achieve collective ownership of the resulting plans and priorities for investment and policy action.

Inevitably LEPs' capabilities and degrees of integration with partner local authorities vary. But we believe the concept is sound, and as the LEP movement matures it should grow in effectiveness.

All this needs the MRN to be comprehensively fit for purpose – fit to meet the needs of the wider range of user types, and to maximise the net benefit to local communities. The components of this embrace many aspects familiar to highway authorities through guidance documents and codes issued for the UK Roads Liaison Group, such as *Well Maintained Highways*, but the concept of fitness must be more holistic, embracing safety and environmental impacts as well as users' needs and expectations, and the effective utilisation of capacity.

Highways England is a special case, in that its licence and the targets set and monitored by ORR define much of the mechanism for ensuring the strategic road network is fit for purpose. This new regime provides a strong starting point for ensuring fitness for purpose consistently across the MRN as a whole.

In broad terms, this fitness for purpose to meet the needs of the user and communities should embrace:

- Setting and meeting reasonable service expectations
- Providing the connectivity to sustain local economies and support growth
- Reducing the impacts on communities and the environment
- Meeting or managing current and prospective demand
- Providing effective regimes for safety management and efficient network operation
- Applying an effective asset management regime
- The ability to respond to and exploit innovation and change in technology, in vehicles and in infrastructure management and operation.

These requirements will be differentiated by the road's context, with a distinct form of fitness applying to the MRN in large urban areas. We have identified four separate tiers within the network, each performing a distinct function:

- Tier 1 – motorways and purpose-built limited-access roads (mostly dual carriageway). This accounts for 46% of MRN mileage;
- Tier 1A – an 11% subset of this mileage in conurbations, where frequent junctions and very heavy traffic flow mean they will be particularly subject to the wider transport policy framework and traffic management strategies set by the city or regional authority;
- Tier 2 – mainly all-purpose rural A-roads that also sometimes serve the "place" needs of communities they run through, representing 42% of MRN mileage;
- Tier 3 – major roads in urban areas, often with the greatest mix of user types, and where significant "place" functions will need to be met as well as "movement". They may be associated with air quality problems. As with Tier 1A, these urban roads will be particularly subject to locally determined cross-modal transport policies, and prioritisation of some user types; they account for 12% of MRN mileage.

Handling the potential conflict between the movement and place functions of many urban roads and streets was recently addressed comprehensively in the DfT's *Manual for Streets* series. The London Mayor's Roads Task Force was the first attempt to deal with the conflict on a network basis, establishing a 3 x 3 matrix of street types within which all road sections in London – major and minor – have now been classified according to the relative significance of movement and place. This guides consistent and tailored interventions on roads and streets in the network, and would apply to our Tier 3 major roads. It is a methodology well worth applying in other significant urban areas.

As combined authorities become established in the city-regions, they are beginning to designate key route networks, their interpretation of the significant roads for the conurbation to function effectively. This reflects the idea of the Transport for London Route Network and the first key route network, in Greater Manchester. Understandably, these are more granular than our Major Road Network, which remains the right strategic network for the super-region as a whole – whether this is Transport for the North, Midlands Connect, England's Economic Heartland or other bodies yet to emerge. The key route networks can fit well alongside the less dense, and more integrated, MRN.

At a time when economic sustainability and growth is the government's strategic priority, and an unprecedented programme of road and rail infrastructure spending is under way, this is the moment to ensure that expenditure on the nation's roads reflects the underlying need, not distorted by the current institutional arrangements. We believe the Major Road Network concept is tailor-made for that. It meets the need now, not requiring any disruptive reorganisation, and also provides an enduring framework for the longer term.

"The Major Road Network is the natural network for a sub-national transport body"

The Rees Jeffreys Road Fund

The Rees Jeffreys Road Fund is a charity which supports education and research in transport. In autumn 2014, the fund commissioned a two-year study to develop a long-term vision for England's major road network, for its users, the communities it passes through and for the role it plays both nationally and in the regions. The report will be published in October 2016.

For further information, visit www.futureroadsengland.org

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