

***Governance and  
Administration of  
National and Local  
Roads in Great Britain:***  
  
***Main Report***

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## 1.0 Introduction

As citizens, we depend upon a range of basic utility services – water, electricity, gas and telecoms – to support everyday life. These services are generally provided through infrastructure networks operated by a range of privatised utility companies.

The current model for ownership and delivery of network utilities arose out of the privatisations of the 1980s and early 1990s. These privatisations had a number of drivers. These included:

- The introduction of competition and market liberalisation (telecoms, energy);
- Facilitating major programmes of investment through access to private capital - and, ultimately, customer charges (water);
- Disengagement from Government involvement in running businesses (railways),

The basic frameworks used for these privatisations shared a number of characteristics. These included the establishment of independent economic regulators setting price limits under an **RPI-X system of regulation**. Under this system, regulators undertake regular 5 yearly reviews of investment requirements, efficiency and outputs and set price limits which provide incentives for companies to outperform over the next 5 years. Regulators operate under a financing duty to ensure that companies are able to properly finance their functions, having regard to the relevant cost of capital and market conditions. In turn, companies operate under a licence which defines a range of obligations and conduct requirements<sup>1</sup>.

In the case of transport, we also rely upon infrastructure networks and a range of service providers although – as this paper demonstrates – the provision model used for roads differs significantly from that used for other utilities, and also railways.

We can observe at the outset a number of key differences between roads and utility services.

**First**, responsibility for roads is much more diffuse than is the case with utility networks. Within England, responsibility is split between 82 local authorities (counties and unitary authorities) and the DfT which uses the Highways Agency to maintain and operate 4,350 miles (7,100 kms) of motorway and major A roads, around 2.5% of the total network in England. By comparison, there are 21 water suppliers in England & Wales. National Grid – a single company - owns and maintains both the high voltage electricity transmission system in England & Wales and, since 1999, the national gas transmission system across GB.

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<sup>1</sup> The Conditions of Appointments – or licences - for water companies cover issues such as charging schemes, asset management, codes of practice for customers and ring-fencing requirements.

**Second**, whereas for utility services there is a direct billing relationship between customers and service providers, in the case of roads - outside central London and excluding toll bridges, tunnels and the M6 Expressway - there are no direct user charges.

**Third**, while for utility services there are defined performance standards and levels of service, in the case of roads, the concept of (customer) performance standards is relatively under-developed. Performance experienced by a road user on any specific journey will depend on a range of factors such as time of travel, choice of route and random factors such as accidents, weather conditions, road works and the behaviour of other road users. Indeed, with the large number of responsible authorities, there is little appreciation by road users of who is responsible for particular roads.

Against this background, this paper examines the extent to which features of the current frameworks for utilities could usefully be applied to governance and administration of the roads network to improve efficiency, performance standards and investment planning. It does this with particular reference to experience in the water and rail sectors.

It takes place against the background of trends we observe concerning the road network. These include the continued growth of traffic which, set against the decline in rates of road construction since the mid 1990s, has produced more stress and congestion on the system; the lack of a long term framework for planning new capacity on the system and concerns highlighted by the Nichols Report in 2007 on governance arrangements for the major roads programme and the capabilities of the Highways Agency.

It is worth also recalling that utility services were themselves at one stage provided, at least in part, by municipal authorities. But whereas utilities have progressed from municipal ownership through nationalised industries and public authorities to privatised companies, the structure of ownership and management of roads has in large measure remained largely unchanged – the exception being the establishment in 1994 of the Highways Agency.

## **2.0 The framework for regulated utilities**

In each of the utility sectors, we have specialist economic regulators operating at arm's length from Government. They include Ofgem (energy), Ofwat (water), ORR (rail), CAA (airports), Postcomm (postal services) and Ofcom (telecoms).

The original view of regulation by one of its architects – Stephen Littlechild – was that regulation was there to '*hold the fort until competition arrived*' and in both telecoms and energy we have seen the development of market liberalisation, spurred in the case of telecoms by developments in technology. In other sectors, such as water, which are characterised by elements of natural monopoly, the original framework of regulation remains – despite attempts to introduce competition.

A further element of the framework for privatised utilities was the establishment of systems of sector specific **customer representation** with bodies such as Energywatch and what has now become the **Consumer Council for Water (CCW)**. Their role was to be customer advocates for these industries and to protect the interests of vulnerable consumers. Recently, three of these bodies (Energywatch, Postwatch and the National Consumer Council) have been brought together in a new cross sector organisation, **Customer Focus**. Water and railways continue to have sector-specific customer representation through the CCW and through **Passenger Focus** (the operating name of the Rail Passengers Council).

In general, these frameworks have delivered significant improvements in efficiency, product quality, customer service standards and increased investment. For example, Ofwat, the water regulator, claims that water bills in England & Wales are now 30% lower than they would otherwise have been while, since 1994/95, leakage – a key indicator - has been reduced by 35%. Since privatisation, the industry has invested around £80bn in improved drinking water and environmental quality standards, the latter reflected in cleaner rivers and beaches.

Although appointed by Ministers, independent regulators operate within a set of statutory duties and are answerable to the courts rather than to Ministers. They are subject to direction or guidance by Government only to the extent that this is provided for by the relevant legislation. The regulators are diligent in making decisions in the public interest and in accordance with the duties and powers set out in the legislation—since failure to do so would put them at risk of Judicial Review. Regulatory decisions on price determinations or licence/code modifications are also subject to appeal by companies to the Competition Commission.

Over the years, regulators have sought to improve the transparency of the regulatory process through adopting '*better regulation*' principles<sup>2</sup> and governance has been strengthened by adoption of regulatory boards – with chairmen and chief executives - to replace individual regulators ('director generals'). The framework of independent regulation has been designed to achieve the long-term policy objectives, such as consumer protection, promotion of competition and maintain the confidence of private investors.

However, Government continues to have an important – and indeed, growing - role in relation to the utility sector. This is because a number of Government policies directly impact on the sector. They include climate change and renewable energy, policy on airport expansion, digital switchover, and implementation of EU directives (eg Water Framework Directive). In addition, Government social policies also impact on these sectors. These include policies on affordability for low income households, water and energy efficiency as part of a wider sustainability agenda.

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<sup>2</sup> These are the 5 principles of good regulation introduced by the Better Regulation Task Force in 1997/98. They comprise, transparency, proportionality, targeting, consistency and accountability.

Under the respective legislation governing the duties of the regulators, Government has powers to issue guidance. For example, there is provision under the **Gas and Electricity Acts** for the Secretary of State to issue guidance to the energy regulator (Ofgem) on the contribution it should make to the attainment of the Government's social and environmental policies. This has been since updated to require Ofgem to support long term energy strategies set out in the 2003 Energy White Paper. Similarly, the **1993 Railways Act** enabled the Secretary of State to issue general guidance to the rail regulator (ORR). This was last updated in 2007 to reflect legislative provisions of the **2005 Railways Act** (*see below*).

In the case of water, Defra also has powers to issue guidance on social and environmental matters. The department issues guidance to Ofwat in relation to periodic reviews for the water sector. Duties can also be extended through new legislation. For example, the **2003 Water Act** placed an additional statutory duty upon Ofwat to contribute to the achievement of sustainable development.

The relationship between Government and Regulators can sometimes be a difficult one. During 2008, energy prices have become a political issue with calls for Government action against companies and criticism of the role of Ofgem as regulator. Such developments can create tensions between the regulator and the relevant Government department. In the context of privatised plcs dependent upon raising finance in the capital markets, political intervention and pressures upon regulators raise perceptions of political risk which will increase the cost of capital, with adverse effects upon investment and customer charges.

One area where Government has a more direct involvement in the regulatory process is in the case of railways because of the role of subsidy in supporting the costs of the rail network. The system for railways is described in more detail below.

## **2.1 Recent Developments**

In recent years, the basic regulatory framework for privatised utilities has been extended to a number of publicly-owned utilities. These include **Royal Mail**, **Scottish Water** and **Northern Ireland Water**. The application of a successful incentive-based framework to organisations without conventional equity raises some particular challenges. This is also an issue in the case of **Network Rail**, the 'not-for-dividend' successor to Railtrack plc as national rail infrastructure provider.

At the same time, the privatised utilities have seen major changes in patterns of ownership and financing. The early 1990s, saw acquisitions by French and US utility companies. In more recent years, acquisitions by overseas pension and infrastructure funds have reduced the numbers of listed utility companies; and the availability of debt finance, with financial innovation, led to highly geared financial structures – with associated concerns by regulators concerning risk accommodation and investment incentives.

More recently, deteriorating credit market conditions have raised rather different concerns over the availability of debt funding for major investment programmes by utilities and also the sustainability of highly geared structures.

Other recent developments include the focus on developing **longer term frameworks for investment planning** – necessary in the case of responses to challenges such as climate change and flooding risk (water) and, more generally, appropriate to industries with long lived assets. Indeed, a recurrent criticism of the medium term framework with 5 yearly reviews is that it provides insufficient incentives for developing longer term investment strategy.

There are also ongoing debates about the **role of customers** – partly spurred by the increases in energy bills and concern over disadvantaged customers; and also by customer service failures by some companies (e.g. Thames Water). Passenger Focus criticised projected increases in regulated rail fares from early 2009, and called for a fairer link between fares, investment and train performance.

In monopoly sectors such as water, companies consult with customers over investment plans and prospective bill increases, and their affordability, as part of the periodic review process. In liberalised markets such as energy, the focus has been more on empowering customers to switch supplier as a way of improving service standards.

Currently, there is some debate about the effectiveness of market liberalisation as a spur to service improvement in energy while in water, a review has been underway by Professor Martin Cave<sup>3</sup> to examine the feasibility and means of introducing competition and greater innovation to the water sector. The aim is to stimulate innovation and further improvements in customer service.

### **3.0 Key elements in the framework for regulated utilities – A summary**

Although each sector has its distinctive characteristics, a number of key principles can be identified across the utilities. These can be summarised as the following:

- *Independent regulation* – based upon principles of transparency and consistency. Regulators operate under duties to ensure that companies can finance the proper carrying out of their functions – as well as to protect the interests of customers. The financing duties and regulatory principles are necessary conditions for investor confidence. In those parts of the business that survive as monopolies—such as the natural monopolies characteristic of distribution networks—the regulator prevents abuse of dominant position through excessive pricing, limitation of access to the network or provision of inadequate quality of service.

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<sup>3</sup> Independent Review of Competition and Innovation in Water Markets –Final Report; Defra; April 2009



- *Government role in setting the wider policy context* - within which these industries operate and, in the case of water and rail, setting the overall strategy for the sector. In aviation, Government has also set out plans for the development of airport capacity over the next 30 years<sup>4</sup>.
- The use of *medium term financial frameworks* with decisions on price limits, investment and outputs made every 5 years through regulatory review processes.
- The use of *cost reflective charging regimes* with a clear link between levels of investment and user charges.
- RPI – X incentive regulation as the starting point for regulation of these sectors under which companies are incentivised to outperform the regulatory assumptions made at price reviews, through retention of additional profits for a specified period.
- *A common methodology* for price-setting - based upon setting an allowed return (weighted average cost of capital or WACC) on a regulatory asset base (RAB) with the value of new investment being added to the RAB.
- In liberalised markets, the extension of customer choice as a spur to service improvement and innovation. In monopoly sectors, accountability of companies to their customers and Regulators is provided through regular performance monitoring and publication of comparative performance data.
- *Customer protection* provided through a system of customer representation bodies and, in the case of monopoly sectors, guaranteed standards and compensation arrangements for service failures.

Against this background, we first review how these arrangements work in the case of the water and rail sectors before reviewing the present arrangements for roads.

## **4.0 Case studies in governance and administration**

### **4.1 Case Study 1: The Water Industry**

The water industry in England & Wales was privatised in 1989. It comprises 10 regional water and sewerage undertakers (WASCs) and 11 smaller water-only companies. Prior to privatisation, the industry had been consolidated in the 1970s through the creation of regional authorities based upon river catchments.

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<sup>4</sup> The Future of Air Transport; White Paper – DfT, December 2003

Companies currently operate under a set of statutory duties, such as supplying wholesome water, and conditions of appointment ('the licence') which places a range of obligations on them concerning the way they conduct their business.

In addition to Ofwat as economic regulator for the industry in England & Wales, there are environmental regulators (notably the **Environment Agency**), a **Drinking Water Inspectorate** as well as customer representation in the form of the **Consumer Council for Water**. The Department for Environment, Food and Rural Affairs (Defra) is the relevant sponsor department.

Since privatisation, the industry has made big gains in efficiency, and by the end of the current control period in 2010, will have invested around £80bn to bring about improvements in drinking water and environmental standards, and levels of customer service. The industry remains essentially a monopoly with regulation based upon comparative competition under which the regulator compares performance and efficiency of different companies. Less well-performing companies are provided with 'carrots and sticks' to catch up with the performance of the best performing companies.

Currently, the industry is undergoing a periodic review process (PR09) involving a review of investment requirements and outputs for the 5 years 2010-14. Key elements of this process include:

- Publication by DEFRA of a strategy for the industry (*'Future Water'*<sup>5</sup>) which covers the issues of water demand and supply; water quality; drainage and flooding; greenhouse gas emissions and water charging.
- Publication of *Strategic Direction Statements* by companies, setting out strategies for the next 25 years and how they plan to deliver both for customers and the environment.
- Preparation of *draft business plans* by companies setting out proposed investment plans for the next 5 years and the implications for customer bills.
- Consultation with customers by both companies and a joint stakeholder group covering their views on current service levels, priorities for improvement and willingness to pay.
- Cost benefit analysis by companies of proposed environmental schemes contained in investment programmes.
- Consultation with investors and rating agencies concerning financing prospects for the sector.

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<sup>5</sup> Future Water: the Government's water strategy for England – Defra, (February 2008)

PR09 is the fourth such periodic review exercise since privatisation in 1989 and the procedures are now well developed, involving both stakeholders and customers. However, the industry faces significant new challenges from climate change and population growth, including the need to strengthen asset resilience – to combat the increased risk to treatment works from flooding – together with some major projects such as the Thames Tideway and new reservoirs.

For PR09, companies' first draft business plans (August 2008) involved proposed capital investment of £27bn over the 5 year review control period – the largest ever and over 40% more than in the current period. The plans contained a significant increase in capital maintenance expenditure and investment in water resources to meet population growth. Proposed increases in capital maintenance expenditure were associated with major programmes to replace Victorian underground infrastructure in cities such as London, which have contributed to high leakage rates. Some £3bn related to major projects, principally the Thames Tideway – an interceptor sewer to deal with the problem of intermittent discharges into the Thames. Ofwat's initial view was that – excluding the Thames Tideway – companies should be able to deliver the required outputs with investment of £19bn rather than the £24bn proposed<sup>6</sup>. However, under current market conditions, financing this scale of investment represents a significant challenge for the industry and its regulator.

The periodic review process for England and Wales continues until November 2009 when Ofwat make their final determinations. On the basis of feedback from Ofwat on their draft business plans, companies submitted final business plans in April 2009, which Ofwat will use as the basis for making 'draft determinations' in August. These will then be subject to consultation and company representations prior to final price limits being set in November. From Ofwat's initial consultation on its approach to the review to final determinations takes 2 years and places heavy demands upon those involved. However, it is a transparent process with effective stakeholder and customer input.

Similar review processes are underway in both Scotland and Northern Ireland for the state-owned water companies, following broadly comparable approaches and methodology.

Before leaving water, it is perhaps worth highlighting two issues of wider significance - security of supply and water efficiency and charging policy. On the first of these, water companies have a duty to maintain adequate supplies of water and as part of this are required to produce 25 year **water resource plans** setting out how they intend to provide sufficient water to meet their customers' needs and to reconcile future demands with supply constraints, particularly in regions of population growth.

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<sup>6</sup> Source: Ofwat presentation at Water UK Annual City Conference, February 2009

In relation to charging, customers have traditionally paid for their water and sewerage services in England & Wales on the basis of **rateable values** (that is, in proportion to domestic property values used as a basis for local taxation in the 1970s and 1980s.) rather than metered supply as for other utility services. Growing concerns about water scarcity in parts of the country have led to support for the extension of water metering as a component of demand management, with survey evidence suggesting that metering reduces average household consumption by 10-15%.

Other elements of water resource strategy include improved leakage control and promotion of efficient use of water among customers. From 2010, companies which operate in area of serious 'water stress' will be able to compulsorily meter customers where this is shown to be the most cost effective means of balancing supply and demand. In recent years, sentiment on water metering has shifted and it now has support from politicians and a range of key stakeholders, including environmentalists.

#### **4.2 Case Study 2: The Rail Industry**

The railway industry was privatised between 1993-96 using a more radical model. In place of a national integrated state owned railway (British Rail), the industry was broken up into a national infrastructure provider (Railtrack), franchise passenger operators, open access freight operators and rolling stock leasing companies (ROSCOs). Competition was an integral component to the new model with train operators competing for franchises (*competition for the market*); and competition *in the market* through non-franchise open access train operators. In the event on-rail competition has only really been significant for the freight sector although some significant competition is beginning, for instance on the East Coast Main Line, as the Office of Rail Regulation relaxes the policy of "moderation of competition".

Unlike water and energy, railways historically relied upon Government subsidy and a prime objective of privatisation was to reduce the industry's dependence upon state support through the introduction of competition and bringing in private sector skills. The then Government wanted to achieve disengagement from a sector, which it saw as being in long term decline.

Key elements of the architecture of the new privatised railway were an independent economic regulator (**the Office of the Rail Regulator**) whose role was to approve access agreements and regulate Railtrack as the monopoly infrastructure provider; and a Government agency, the **Office of Rail Franchising** (OPRAF), which awarded and managed passenger rail franchises. The latter was subsequently subsumed into the short-lived **Strategic Rail Authority** (SRA) – and these responsibilities have now passed into the heart of DfT as the sponsor department. This has had the effect of putting railways under direct Ministerial control. Customer representation is now provided by **Passenger Focus**, the successor to Rail User Consultative Committees.

In the first few years following privatisation the subsidy level began to fall largely as a result of competitive bids put in by franchise bidders which involved declining subsidy profiles, built mainly on assumptions of traffic growth. In this, the privatised railway was successful with growth of passenger and freight volumes – a trend which has continued to this day but which may suffer some temporary reversal due to the economic downturn. In the 10 years to 2006, passenger kms on the GB network grew by 47%, and freight tonne kms by 60% - both representing the fastest growth seen in Europe. In 2007, the network carried 1,213 million passenger journeys generating 30bn passenger miles, an historic record.

However, by the late 1990s problems had begun to emerge with the rail infrastructure. In particular:

- Traffic growth put additional strain on the infrastructure and produced failures such as increased numbers of broken rails. This in turn highlighted historic levels of under-investment in the system. It also identified the fact that responsibility for the wheel/rail interface was poorly defined in the new structure.
- A series of rail accidents (Southall, Ladbroke Grove, Hatfield, Potters Bar) raised concerns about the safety of the privatised railway and served to undermine the legitimacy of Railtrack as infrastructure provider.
- The position of Railtrack was further undermined by the escalating costs of upgrading the West Coast mainline, the first major upgrade undertaken by the privatised railway.

The Hatfield accident (November 2000), the result of a broken rail, led to widespread speed restrictions being placed upon the network as further examples of 'gauge corner cracking' were identified. The consequent reviews of engineering practice and safety had important implications for funding requirements for the network. The disruption to services in the months following Hatfield was also a factor in a number of franchises running into financial difficulty.

Railtrack went into administration late in 2001 and its '*not for dividend*' successor, **Network Rail**, took over the network 12 months later in October 2002. Faced with the escalation of costs arising from Hatfield, it applied to ORR for an interim determination of access charges.<sup>7</sup> This was carried out in 2003 and resulted in a large increase in funding for the infrastructure provider - £22bn for the operation, maintenance and renewal of the network over 5 years.

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<sup>7</sup> Under the original privatisation model, subsidy was paid only to passenger franchise operators who then paid access charges to Railtrack. Direct subsidy to the infrastructure provider – in the form of revenue grants - was introduced in 2001 as a consequence of ORR periodic review. Currently, subsidy is paid both to a (diminishing number of) passenger franchise operators and to Network Rail.

The increase in funding required a substantial uplift in subsidy for the network and brought into sharp relief the principle of independent regulation for the rail industry – a principle strongly espoused by its then regulator, Tom Winsor. The public policy concern was the duty under the legislation of the Regulator to determine a funding settlement, a substantial part of which would fall to be met by Government – an issue not faced by other regulators. This was one of the factors, which led in January 2004 to the Government announcing a fundamental review of the rail industry.

The subsequent White Paper (*The Future of Rail*) introduced a series of structural changes for the industry. They included the following:

- Abolition of the SRA with the Government taking responsibility for setting the strategy for the railways. With this, the Department for Transport would take over responsibility for letting passenger franchises.
- More devolved responsibilities to the Scottish Executive, Welsh Assembly and the London Mayor.
- ORR becoming a combined economic and safety regulator (**the Office of Rail Regulation**) with responsibility for safety, performance and cost. This was to be facilitated by the transfer of the railways safety inspectorate (HMRI) from the Health and Safety Executive to ORR.

The new structure was given effect through the Railways Act 2005.

#### 4.2.1 The New Funding Framework

Under the new regime, every 5 years, prior to the start of a periodic review process for Network Rail, Government would publish two documents – a **High Level Output Statement (HLOS)** setting the outputs it wished to see delivered in the next control period; and a **Statement of Funds Available (SoFA)** setting an effective budget constraint for the review.

Accordingly, in July 2007, Government published a new white paper *‘Delivering a Sustainable Railway’* setting out:

- A High Level Output statement (HLOS) for improvements in safety, reliability and capacity the Government wished to buy in the period up to 2014;
- Specific programmes of investment to be undertaken in the period up to 2014 which will deliver benefits beyond 2014; and
- The funding available for these improvements.

The White Paper envisaged some £10bn of investment in enhancing network capacity between 2009 and 2014 with total Government support for the rail industry of more than £15bn.

The aim was to accommodate a 22.5% increase in passenger demand by 2014, with reductions of average load factors and overcrowding. Major infrastructure projects included Thameslink, and schemes to tackle bottlenecks at Reading and Birmingham.

It was against this background, that ORR conducted their periodic review of Network Rail outputs and funding, the outcome of which was announced in October 2008. Key elements of the determination comprised:

- £26.7bn funding for the infrastructure provider for the 5 years from April 2009 to maintain, renew and enhance the network - £2.4bn less than the company had asked for;
- a 21% required improvement in efficiency over the 5 years;
- required improvements to train reliability and performance; and in rail safety; and
- delivery of a range of specified improvements in capacity across the network to accommodate 20% more passengers and an expected 30% increase in freight services.

In line with other utilities, Network Rail is able, under its licence, to appeal regulatory determinations to the Competition Commission.

It is probably too soon to assess how the new arrangements under the 2005 Act have worked. However, it is worth contrasting the approach used in rail to that of water. There appear to be a number of significant differences:

- **Affordability Constraints:** in rail, these are set by Government through the SoFA process rather than in terms of bill increases to final customers. However, a consequence of reduced subsidy in rail is that fares will rise more rapidly to fund the improvements. In water, plans are informed by extensive research by companies and consumer bodies into willingness to pay for service and environmental improvements.
- **Strategy:** in rail this is set by Government both in terms of high level outputs and detailed specification. In water, responsibility for developing strategies to meet growth, environmental and other challenges is for companies within a wider policy context set by Government.
- **Role of Customers:** In rail, by contrast with water, there is little evidence of direct customer input to the periodic review process. The structure of the industry means that train operators are the primary customers of the infrastructure provider, Network Rail, and rail passengers the customers of train operators.

Although **Passenger Focus** carries out regular passenger surveys covering levels of satisfaction with service attributes and fares<sup>8</sup>, it is not evident how customer views about service levels, priorities for improvement and fares are reflected in the periodic review (although it is claimed that this research feeds into specifications for train franchise bids). Rather, the HLOS process appears largely top down, with the Department setting the outputs and determining the allocation of investment across the network.

However, in one respect rail and water face similar challenges – how to respond to growth in demand. In water, **demand management** is seen as one necessary component of a strategy of maintaining adequate supply, which includes the extension of water metering for domestic customers. In rail, there has been a long history – going back to BR days - of using fares to manage demand. The 2007 White Paper envisages an increase in the proportion of industry costs borne by users as a consequence of planned reductions in subsidy, with the consequence that the next few years will see fares rising in real terms. Thus demand management features in both sectors.

In addition, there are important questions concerning how additional capacity is provided to meet continued growth in demand for rail travel – with a projected doubling of passenger traffic over the next 30 years - in what is increasingly a capacity- constrained network. Although the HLOS contained a number of schemes to tackle capacity bottlenecks (e.g. Reading, Birmingham), major increases in capacity either through electrification of existing mainlines or the construction of new high speed lines cannot be satisfactorily dealt with in the context of a 5 year funding framework.

Thus while the new funding framework for rail can be seen as an improvement on what went before, it remains insufficient to deal with long term strategic investment – with the Government hitherto having been cautious on commitments to major investment in new capacity. Recent months have seen indications that this may be changing with the new Ministerial team at DfT.

Against the background of completion of both the Channel Tunnel Rail Link and the 10 year upgrade of the West Coast mainline, with the recognition that the additional capacity provided on the latter is expected to again become overloaded by 2025, DfT announced early in 2009, development work on examining the case for a new high speed line (*High Speed 2*)<sup>9</sup>.

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<sup>8</sup> Passenger Focus published in February 2009 the results of a survey comparing rail fares in the UK with those in other European countries. It showed that average fares in the UK were 50% higher than those in Europe and that annual season tickets were almost double those in France, the next most expensive country.

<sup>9</sup> Britain's Transport Infrastructure: High Speed Two – Department for Transport January 2009.



A new company has been established, with a non-executive chairman and small team, to examine the case for new high speed services between London and Scotland and, as a first stage, to develop the case for a new line between London and the West Midlands. However, in the current climate, such proposals are likely to face severe funding challenges.

## 5.0 The framework for roads

There are currently 394,879 kms (246,800 miles) of road in Great Britain spread across a number of different classes of road. This compares with 15,795 kms of national railway used for passenger travel. The breakdown for roads is shown in the following table:

**Table 1: Road Length by Type of Road – 2007 (Kilometres)**

Type of Road	England	GB
<b>Motorways</b>	3,011	3,559
<b>Dual Carriageway</b>		
- Trunk	2,630	3,487
- Principal	3,974	4,449
<b>Single Carriageway</b>		
- Trunk	1,686	5,196
- Principal	23,985	33,611
<b>B Roads</b>	19,963	30,265
<b>C Roads</b>	64,207	84,423
<b>Unclassified Roads</b>	181,983	229,889
<b>Total</b>	<b>301,440</b>	<b>394,879</b>

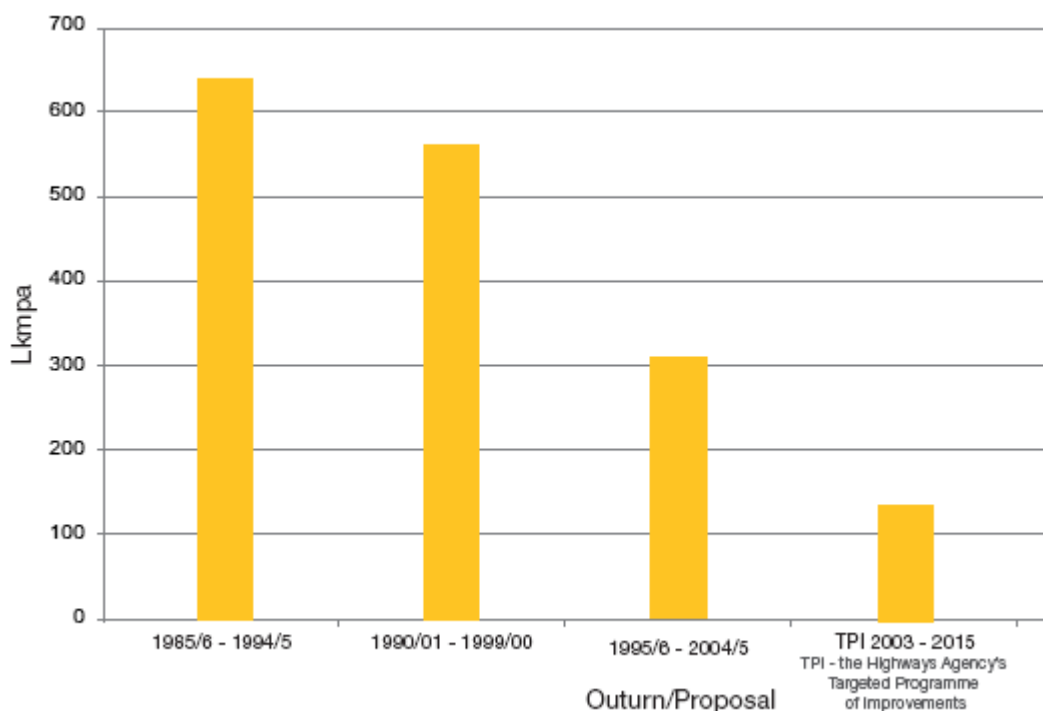
*Source: Transport Statistics, GB, 2008*

Unlike utilities, responsibility for roads is highly fragmented with the majority of the network the responsibility of local authorities. There are no regulators or consumer bodies. Nor is there a clear relationship between demand and the provision of new capacity. Unlike water or electricity, there is no duty on the part of road providers to maintain adequate supplies of road space. Instead, the provision of new capacity on the road network has to be put in the context of overall transport policy and local planning and funding frameworks.

## 5.1 Recent History

Despite road traffic growing broadly in line with GDP, actual rates of road construction have fallen markedly since the mid-1990s – as shown in Figure 1.

**Figure 1: Actual and Proposed Rates of Road Construction**



Source: RAC Foundation (2007) *Roads and Reality*, Figure 2, p. 12

This declining trend in construction for the strategic road network can be explained in terms of the recent history of transport policy. The incoming Labour Government in 1997 placed a moratorium on new road building and instituted a programme of 21 **multi modal studies** to examine integrated solutions to problems on key parts of the strategic road network. The individual studies had steering groups comprising key stakeholders (the Highways Agency, Strategic Rail Authority (SRA), local authorities, regional development agencies (RDAs), and other bodies). However, the multi modal studies, while admirable in principle, do not seem to have been effective in delivering solutions capable of implementation.

In 2000, Government published '*Transport 2010 – the 10 Year Plan for Transport*' – an ambitious attempt to development a long term integrated transport strategy. It envisaged large-scale upgrading and expansion of the rail network to allow 50% passenger growth and 80% growth in rail freight. Congestion on the roads network was expected to reduce from 2000 levels by the end of the decade with easing of bottlenecks and targeted road widening of 360 miles of the strategic road network.

Many of the assumptions on which this was based have since been invalidated by two factors. First, by the escalating costs of operating the existing rail network in the wake of the Hatfield accident and Railtrack administration, which led to the deferral of most of the proposed rail capacity enhancements. A second factor was the growth in car use arising from the lower real cost of motoring and rising GDP.

Just as rail traffic has grown, so has road use with the total number of vehicle kms on the GB road network increasing from 441 billion in 1996 to 506 bn in 2006 – a 15% increase<sup>10</sup>.

Plans for the strategic road network under the **Targeted Programme of Improvements (TPI)** have suffered from difficulties experienced by the Highways Agency in delivering road schemes. Following a series of cost increases for individual road schemes, the DfT commissioned a review by Mike Nichols (*the Nichols Review*)<sup>11</sup> who made a series of recommendations concerning management and planning of the roads programme, and governance arrangements involving the allocation of roles and responsibilities between the department and the agency. His review also contained recommendations for improving project management capability within the agency.

How then, does the approach to planning and implementing road improvements and performance measurement for roads differ from what we observe for utilities and railways? We first consider the roles of the key players; the approach to planning and funding improvements to the roads system, and then examine the role of performance measurement.

## 5.2 Funding and governance frameworks

Within Great Britain, responsibility for the trunk road network is devolved. **Transport Scotland** has responsibility for Scotland's trunk road network of 3,500 kms, which comprises just over 6% of the total road network and carries 37% of all traffic. **Transport Wales** is responsible for 1720 kms of motorway and trunk road, with annual expenditure of around £210m. Within London, **Transport for London** under the Mayor has responsibility for the strategic road network including motorways. However, in what follows, we focus on the major road network in England (excluding London).

There are a large number of players involved in planning and development of the major road network in England. They comprise the following:

- The **Department for Transport (DfT)** which has overall responsibility for strategic development, policy and funding.
- The **Highways Agency** which has delivery and management responsibilities for the strategic road network.
- **Regional Development Agencies (RDAs)** who - with Regional Assemblies – develop regional transport plans.

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<sup>10</sup> Source: Highways Agency Business Plan, 2008-09 – Dept. for Transport.

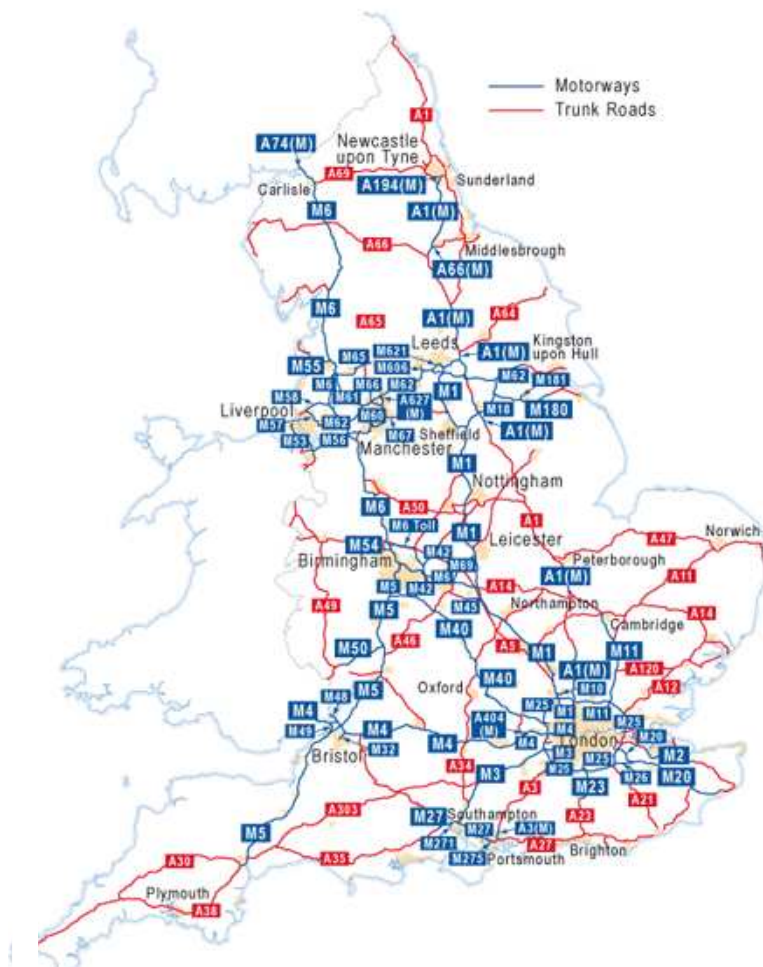
<sup>11</sup> Review of Highways Agency's Major Roads Programme –Report to the Secretary of State by Mike Nichols (March 2007).

- **Regional Assemblies** which are partnerships made up of elected representatives from local authorities in each of 8 English Regions and who scrutinise the work of regional development corporations and advise Government on regional planning, housing and transport issues.
- **Local authorities** – county councils and unitary authorities who are responsible for local transport policy in their areas and maintenance of local road networks.

Although it is easy to regard the **Highways Agency** as the equivalent to Network Rail as infrastructure provider, its scope is much more limited. First, it is responsible for only a small part of the total road network and, unlike Network Rail, its responsibilities are confined to England. The route mileage for which it is responsible is well under half that of Network Rail and comprises less than 2.5% of the total road network in England – some 7100kms (4350 miles). However, this network carries one third of all road traffic in England and two thirds of heavy freight traffic.

Figure 2 shows the network of motorways and major A roads for which the Highways Agency is responsible.

**Figure 2: Map of the Highways Agency Road Map**



Source: Highways Agency Website (<http://www.highways.gov.uk/aboutus/139.aspx>)

This network is attributed a value of £85bn<sup>12</sup>. **Transport Scotland** gives a value of £12.5bn for the 3500kms trunk road network in Scotland. Together, this gives a combined value of £97.5bn for the trunk road network in England & Scotland. The basis for these estimates is unclear. However, they compare with an estimated value of the regulatory asset base (RAB) for **Network Rail** of £28.6bn (England and Wales) and £3.3bn (Scotland) in April 2009, giving a total GB figure for the rail network of £31.8bn.

Second, as an executive agency of DfT, the Agency currently has no strategic role. The DfT retains overall responsibility for strategy towards the strategic network while the Agency is seen as a delivery body both for DfT in relation to the national network and for the regions in respect of the regional network. Moreover, its current focus is on managing the network through the provision of information, monitoring performance and the provision of traffic officers to deal with the aftermath of around 850 incidents that occur on the network every day.

Unlike Network Rail, the Agency is totally dependent upon Government funding, with budgets set annually. It has neither independent powers to borrow on the financial markets nor a revenue stream from users. Unlike regulated utilities or Network Rail, it has no security over medium term funding. It is against this background, that the Agency's 2008/09 business plan was for one year only. Finally, accountability of the Agency is to the Department – rather than members or shareholders, and customers.

The 2008/09 business plan<sup>13</sup> set out how the Agency intended to '*help customers on their journeys on the strategic network in the coming year*' and describes as its key aims '*to tackle unreliability, improve safety and provide better information to help road users make better decisions as they plan their journeys*'. This is against the background of continuing increases in the demand for journeys. It is hard to see a utility company putting this forward as its response to demand growth and supply constraints. Elsewhere, in the plan, the Agency describes the key challenge for the next three years as being to find '*the right balance between measures to make better use of the existing network and providing targeted increases in capacity where they are really needed*.'

On increasing capacity, the plan sets out limited programmes of national and regional major roads projects built around a three-phase project control framework covering *options, development and construction*. In relation to national major roads programme, the schemes are managed on behalf of the Department who also fund the schemes. In relation to regional roads, funding comes through the **Regional Funding Allocation** process (*described below*).

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<sup>12</sup> Source: The Highways Agency: Annual Report & Accounts 2007-2008.

<sup>13</sup> Helping you with your journey: Highways Agency Business Plan 2008/09: Department for Transport.

In July 2008, Government published a command paper<sup>14</sup> on roads with the purpose of promoting and informing the debate about '*how we might best deliver the road capacity that will support the trips that people and businesses need to make in the most sustainable, reliable way.*' It noted that road transport accounted for nearly three quarters of all trips and that there were now 28 million cars registered. Nearly one third of households have access to 2 or more cars. In survey results quoted in the report, 87% of respondents felt that congestion was a '*serious*' or '*very serious*' problem for the country and three quarters believed it important for Government to tackle congestion in relation to its other responsibilities. It showed predicted congestion patterns on the GB road network in 2025 derived from the 2006 **Eddington Report**.<sup>15</sup> – shown in Figure 3.

The Eddington report had predicted that, without action, by 2025, congestion on the GB road system would grow by about 30% - broadly in line with the projected increase in road traffic -, with increases most marked in urban areas, key inter-urban corridors and around ports and airports. Eddington had estimated the cost of this increased congestion in England at £10bn for business with a further £12bn for time wasted in congested traffic conditions for households.

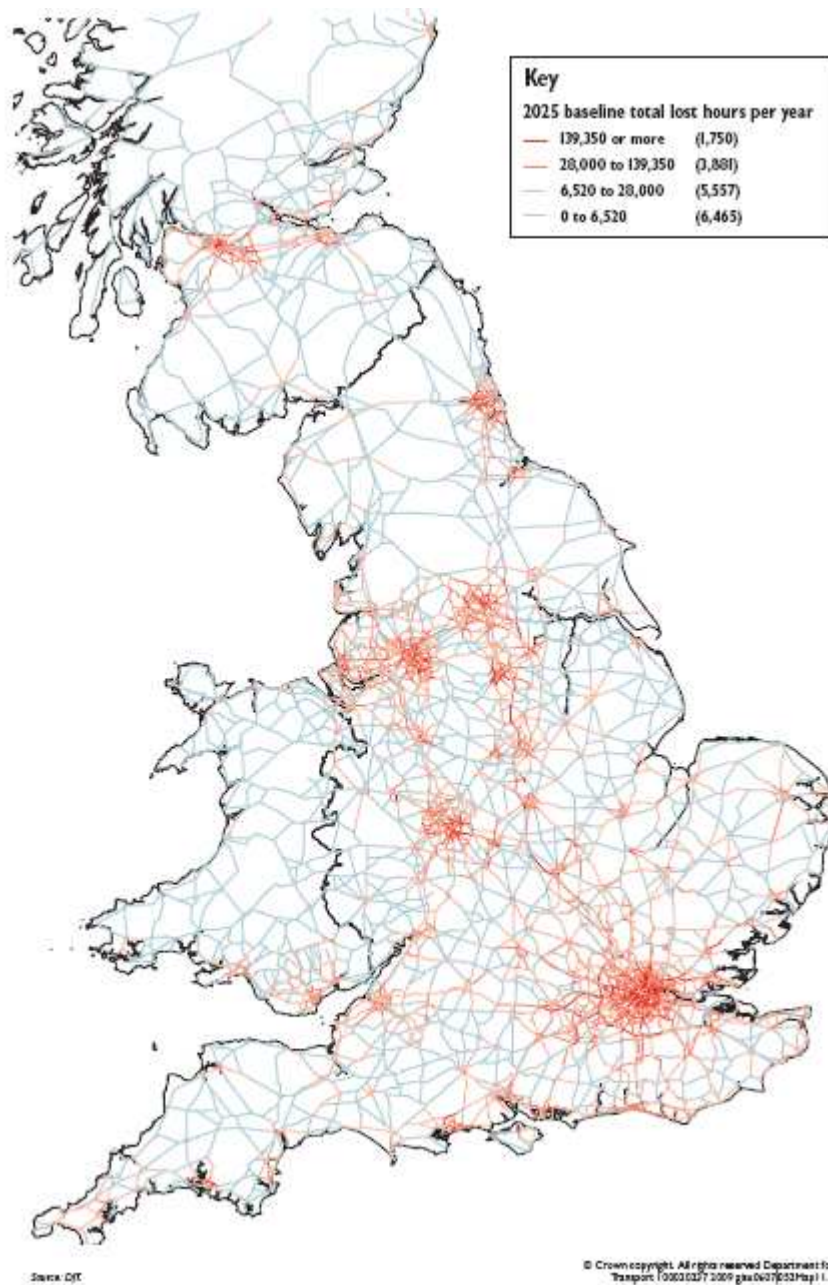
Against this background, plans were set out in *Roads-Delivering Choice and Reliability* to invest up to £6bn in the period to 2014, on major improvements to the strategic roads network in a programme designed to support economic growth, improve inter-urban journey time reliability, support housing growth and improve road safety. Over the three years up to 2010/11, the plans were expected to deliver an extra 80 lane miles of extra capacity to the strategic road network. In addition, further investment in strategic regional routes would take place through the Regional Funding Allocation process, described below.

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<sup>14</sup> Roads – Delivering Choice and Reliability: Department for Transport, July 2008.

<sup>15</sup> The Eddington Transport Study: The Case for Action – HM Treasury; DfT – 2006.

Figure 3: Congestion Patterns on the GB road network in 2025, with no road pricing



Source: DfT (2006) *The Eddington Transport Study: The Case For Action*, Figure 13, p.42.

A reappraisal of schemes in the roads programme was completed in early 2009, following feasibility studies undertaken by the Highways Agency on hard shoulder running on the M42 and new traffic management technology. In a paper published in January<sup>16</sup> 2009, DfT described the conclusions of this work and how it planned to apply the concept of '*managed motorways*' progressively across key parts of the network. The work carried out suggested that hard shoulder running (HSR) would provide a feasible alternative to motorway widening, saving, on average, around 40% of capital costs.

The January paper goes on to list a revised set of schemes due to be completed in 2008/09 and 2009/10 along with schemes on which work is expected to commence during these two years. It also sets out a provisional list of schemes on most of which work is expected to start over the following two years (2010/11 and 2011/12) along with a list of other, mostly HSR, schemes, on which construction would begin by 2015. When fully completed, the planned schemes would deliver over 520 additional lane miles to the national strategic road network, of which 340 lane miles would be through HSR. The funding for this programme is through the £6bn announced in July 2008 in '*Roads-Delivering Choice and Reliability*.'

Individual schemes in the programme remain subject to the outcome of detailed studies including value for money and completion of statutory planning procedures. It was announced that planned enabling work on HSR would be brought forward as part of a fiscal stimulus package.

Despite these developments, the 5-year programme for the strategic road network lacks the degree of output commitment that we see on railways through the HLOS approach. Cost overruns on parts of the programme will be at the expense of other schemes and the budget for the Highways Agency, unlike that for Network Rail, remains vulnerable to cuts. Moreover, at a time when consideration is being given to the case for new high speed rail capacity, through construction of a new line, the focus in relation to roads remains one of getting better use out of the existing network through a combination of opening up hard shoulders and other demand management measures (such as high occupancy lanes), rather than examining the case for new motorways.

### **5.2.1 Regional Funding Allocations**

Within the English regions, the **Regional Assemblies** currently have responsibility - with **Regional Development Agencies (RDAs)** - for developing regional spatial strategies and regional economic strategies. The spatial strategy covers a 15-20 year horizon for a region and identifies, so far as transport is concerned, priority schemes.

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<sup>16</sup> Britain's Transport Infrastructure: Motorways and Major Trunk Roads: DfT, January 2009.



The context for these strategies is a new system of regional funding allocations which Government introduced in 2004. Its purpose was to integrate the regional economic strategies developed by the RDAs with regional transport and spatial development strategies, all within a framework of indicative long term funding guidelines for each region.

The aim was to achieve better coordination of plans for housing, economic development and transport, and to provide funding allocations at regional level for three years, together with longer term planning assumptions. The transport allocation for the first three years 2005/06 to 2007/08 was set to increase from £708m to £738m. 10 year 'indicative' budgets were also set. For London, there is a separate funding settlement.

With the first round of allocations having been made in 2006, the regions had to submit updated advice to Government in February 2009 – and, as a consequence of this 'refresh' exercise, further three year allocations would be made with indicative budgets extended a further 7 years until 2018/19.

Financing of large schemes (over £5m) on regional major roads comes through these Regional Funding Allocations (RFAs). In drawing up their advice, RDA's consult with the Highways Agency who will have the responsibility for delivering these schemes, 90% of the funding of which is met by Government with the remainder met locally. Local authorities carry the risk of any overspend.

Some £3bn of funding for strategic regional roads in the period to 2015/16 has been provided through the Regional Funding Allocation process.<sup>17</sup> Schemes to be completed over the three years from 2008/09 are expected to add 50 lane miles to the regional road network.

As part of the regional planning process, RDAs may commission studies to demonstrate the economic benefits of new schemes. Thus in the Eastern Region, the EEDA have commissioned a study to demonstrate the economic benefits of a new dual carriageway between Braintree and the A12.

### **5.2.2 Local transport planning and funding**

The final piece in the jigsaw concerns the arrangements for funding road maintenance and local transport schemes. All revenue funding is provided through **Revenue Support Grant (RSG)** to local authorities. For capital, there is currently an annual £1.2bn block grant, half for road maintenance and the rest for integrated transport – including bus park and ride and road safety initiatives.

Capital allowances assume that local authorities finance investment in schemes through borrowing plus developer contributions.

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<sup>17</sup> Source: Britain's Transport Infrastructure – Motorways and Major Trunk Roads' (January 2009)

There are also **Local Transport Plans** (LTPs) produced by local authorities providing an integrated approach to transport over a 5 year planning horizon. The second round of these plans covers the period 2006-11.

An annual Local Authority Road Maintenance (ALARM) survey is carried out by the Asphalt industry Alliance on local authority controlled roads in England & Wales. It involves collation of data collected from local authorities. The 2009 survey<sup>18</sup> points to the deteriorating condition of the local authority road network and estimates a £8.5bn maintenance backlog needed to bring the network up to steady state. This compares with a £2.7bn budget allocation for road maintenance in 2008/09. There are similarities with the position on water and rail infrastructure, pre-privatisation – although only in the case of water was provision made for addressing this backlog at the time of privatisation.

### 5.3 Performance Measurement

As observed earlier, measuring the performance of the road system is more challenging than for utility services or railways. In particular, because trains operate to timetables, it is more straightforward to measure performance in terms of reliability and train delays.

For the 2007 Comprehensive Spending Review (CSR07), the DfT was given a **Public Service Agreement (PSA)** to deliver reliable and efficient transport networks that support economic growth.

One of the four indicators used to measure success was reliability using a measure of average vehicle delay on the slowest 10% of journeys on the Strategic Road Network (SRN). The baseline set is the year ending March 2008 and the measure is to be monitored annually up to the year ending March 2011. Final figures for the year ending August 2008 show an average vehicle delay of 3.68 minutes on the slowest 10% of journeys on the SRN - a 6.9% improvement from the CSR07 baseline year.

The Highways Agency has developed the database for measuring the journey time reliability measure. It is based on average journey time and traffic flow for every 15 minute period of the day for each of the 2,500 junction-to-junction links on the network. Delay is measured against a reference journey time calculated on the basis of free-flowing traffic.

Under the Department's PSA, local authorities for the ten largest urban areas are also required to set congestion targets for 2010/11 to improve person journey times on city transport networks.

However, the scope of these targets remains limited as does their visibility. For example, figures for train reliability are regularly posted on stations and the relative performance of train operators is analysed, as is the case for water companies.

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<sup>18</sup> ALARM 2009 – Annual Local Authority Road Maintenance Survey: Asphalt Industry Alliance

Indeed, customers experiencing performance failures by utilities can expect compensation - such as through the Guaranteed Standards scheme for water customers, or compensation arrangements for rail passengers experiencing major delays. In contrast, for road users, there are no guaranteed standards and no compensation arrangements for delays incurred.

Moreover, with the frequency of serious incidents on the network, relative to the rail network, road users experience a greater risk of extreme delays – up to several hours in some cases - which makes journey planning more difficult. Unlike railways, there appears to be no systematic attempt to measure the cost of delay or attribute a value to it. The existing performance standards are largely internal to Government, its agencies and local authorities. Nor is there a consumer body, as with railways, carrying out surveys of user satisfaction and following up complaints.

#### **5.4 Conclusions on Roads**

Taking the national road network in England, it is evident that the approach to planning investment to meet future demand has been very different from that adopted in both utilities and railways. The Highways Agency is accountable to the DfT but currently lacks strategic responsibility for planning future development of the network in the way that Network Rail has. While the Agency's responsibilities include delivering a programme of widening schemes on strategic roads over the next 3 years, its primary focus is on better traffic management and control of the motorway network to improve journey reliability. Moreover, compared to rail, the commitment to deliver the programme of schemes for completion by 2014 is weaker.

Schemes are more susceptible to delay for planning reasons, cost overruns on particular schemes are likely to delay start dates for other schemes in the programme; and, as we have seen, developments in the 'managed motorway' concept may lead to further changes in the programme.

There is no independent regulator for determining funding requirements, efficiency improvements and outputs for the Highways Agency and no 'regulatory contract' of outputs to be delivered, as is the case in water and rail. The Highways Agency accountability is to the DfT – rather than to an independent regulator and its customers or users.

There is another important difference from rail. Whereas environmental factors are likely to constrain the provision of additional capacity to the road network, rail is seen as a relatively energy efficient means of transport, and is seen to have a key role in shaping the UK's future transport emissions.

Finally, fragmentation of ownership and management of the road network remains an issue. The Highways Agency remains responsible for only 2.5% of the total road network for England for which there is a multiplicity of local authority providers. Although approaches have been developed to planning improvements to regional road networks through the Regional Funding Allocation process, these processes lack the necessary transparency.

They involve Regional Development Agencies and Regional Assemblies neither of whom have direct democratic accountability. Indeed, we understand that Regional Assemblies may be wound up. Against this background, it is not at all clear how the views of road users feed into determining priorities for improvement.

## **6.0 How the present arrangements for governance and administration of roads might be improved**

Any reform programme for roads, drawing upon the utility model, faces two main obstacles:

- The absence of a customer billing relationship between the service provider and the road user, of the kind we observe for utilities and around which customer service standards can be set. In relation to the strategic road network, there is a very incomplete contract between road users and the Highways Agency, which makes it difficult to establish the type of utility/customer interface we find across the utility sector.
- The lack of a revenue stream on the basis of which the Highways Agency could be granted corporate status and which could be used as the basis for borrowing to finance investment programmes.

On the face of it, the prospects for introducing road user charging – and hence a direct revenue stream - for the inter-urban strategic highway network might seem poor in the short to medium term, particularly following the result of the Manchester referendum on the proposed congestion charge for the city.

However, in *'Roads - Delivering Reliability and Choice,'* there was discussion of tolled lanes, based upon US experience, which offer motorists the choice of a more reliable journey in return for payment of a toll. DfT were understood to be considering the practicability of applying the concept to the motorway network, including how traffic in the tolled lane could be effectively segregated. Subsequently, however, the Government confirmed that it had no plans to seek powers necessary to implement single lane tolling<sup>19</sup>.

Nevertheless, in the new climate of deteriorating public finances and fiscal constraints demonstrated in the 2009 Budget, Government may need to look afresh at road user charging as a future source of revenue possibly linked to a green agenda<sup>20</sup>. In this context, it is worth noting that one of the revenue-raising measures contained in the Budget was the re-introduction of the fuel duty escalator previously abandoned after protests in 2000.

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<sup>19</sup> British Transport Infrastructure: Motorways and Major Trunk Roads – DfT, January 2009 – page 19

<sup>20</sup> Answers needed about the role of the state – article by Nicholas Timmins; Financial Times article in Budget 2009 Review, April 23, 2009

The case for road-user charging has not been made effectively at the political level in recent years and, with growing congestion on the network, the case for re-consideration of the role that user charging could play in demand management becomes ever stronger. It is also worth noting that sentiment can change as we have seen in the case of water-metering which is now seen as a necessary tool of demand management, linked to sustainable development.

Notwithstanding the obstacles, both political and practical, to any general system of road user charging, there remains considerable scope for reforming the existing governance arrangements by drawing upon elements of the established framework for utilities – and railways. Such a reform package should include the following:

1. **Formalising the duties of the Highways Agency** - in relation to maintaining, renewing and enhancing the strategic highway network, and meeting the reasonable demands of road users.
2. **Providing the Highways Agency with corporate status, either within the public or private sector** – involving a shift from its current position as an Executive Agency. A number of alternative models for this are reviewed below. All would involve a strengthening of governance arrangements and establishing a more arm's length relationship with Government.
3. **Providing an independent funding stream for the Agency** –at least until such time as a general system of road user charges can be introduced.
4. **Formalising the role of Government in setting strategy for the national roads network.** Putting the strategic road network on a comparable basis to the railway network under which Government would determine strategic priorities and publish a High Level Output Statement and Statement of Funding Availability for each 5 year 'control period' – to inform the regulator in carrying out his periodic review of funding and outputs for the Agency.
5. **Establishing a roads (transport?) regulator** - who would set for the Highways Agency a medium term (5 year) financial framework, approve its investment programme and outputs, set efficiency targets and monitor performance – within the overall strategic framework set by Government.
6. **Strengthening performance measurement and accountability to customers** - through regular publication of a range of service standards and development of a full performance regime to measure delays.
7. Giving road users a voice on a comparable basis to users of utilities and railways – through establishing a **Consumer Council for Roads**.

8. Extending the size of the road network in England & Wales for which the Highways Agency is responsible.

In relation to the last of these, it is right that any reform package should include a review of the scale of operations of the Agency and the national network for which it is responsible. Recent years have seen a process of de-trunking and transferring responsibility for a number of regional trunk routes to local authorities. With the right governance and funding frameworks for the Agency, its responsibilities could be expanded to include more of the regional road network, for which it already undertakes major projects. This appears to be in line with recent Government thinking which we discuss further at the end of this section.

We now consider each of the above elements in turn.

## 6.1 Formalising the Duties of the Agency

Under legislation to set up a new Highways infrastructure provider, based upon the Highways Agency, the new body should be given statutory duties to maintain and develop the road network. In addition, a conventional licence framework would provide a means of formalising the duties and obligations of the Agency to its users. An example is provided by Condition 7 of the licence for Network Rail which requires it to secure:

- (a) the operation and maintenance of the network;*
- (b) the renewal and replacement of the network; and*
- (c) the improvement, enhancement and development of the network*

*In each case in accordance with best practice, and in a timely, efficient and economical manner so as to meet the reasonable requirements of persons providing services to railways (i.e. train operators) and funders in respect of:*

- (i) the quality and capability of the network; and*
- (ii) the facilitation of railway service performance ....on the network.*

Network Rail is accountable to its regulator for meeting the terms of its licence and, in particular, these obligations to users and funders of the network. Similar '*conditions of appointment*', should be drawn up for the new service provider.

Licences also place duties upon regulated utilities in relation to asset management. Water companies, for example, are required to maintain asset management plans and publish measures of network serviceability. Network Rail has comparable duties, under its stewardship duties for the network, to maintain an asset register recording the condition and capability of its assets. Any national highways infrastructure provider should have similar duties for stewardship of the network.

## 6.2 Corporate Status, Governance and Accountability for the Highways Agency

Within the utility sector, there are now a number of models of corporate and financial structure that can be observed. These are summarised in Table 2 below.

**Table 2: Alternative Corporate Models in UK Regulated Utilities**

Model	Examples	Accountability	Financing
<b>1. Public listed company</b>	Centrica National Grid Severn Trent United Utilities	Shareholders	Conventional debt and equity
<b>2. Privately-owned</b>	AWG (Anglian Water) Thames Water	Pension and infrastructure fund owners	Debt and (private) equity
<b>3. Mutual (company limited by guarantee)</b>	Welsh Water (Glas Cymru) Network Rail*	Members	Debt and bond finance plus retained earnings
<b>4. Statutory Corporation or Government-owned company</b>	Scottish Water Northern Ireland Water* Royal Mail	Government as shareholder and policy-maker	Public borrowing
<b>5. Privately-owned businesses with Government stake<sup>21</sup></b>	NATS (air traffic control)	Public and private shareholders	Equity (both Government & corporate) and debt <sup>22</sup>

*Note: Network Rail also receives network grants from DfT and NI Water, subsidies from the Dept. of Regional Development.*

Although privatisation of water and energy in the late 1980s resulted in public listed companies, acquisitions of UK listed utilities in recent years by overseas pension and infrastructure funds, and some private equity, have significantly reduced the number of utilities listed on the stock market. There has also been a trend for companies to become much more highly geared, reflecting (until recently) both favourable debt market conditions and financial innovation with structured finance.

**Glas Cymru** (Welsh Water), purchased from Western Power Distribution following the failure of Hyder in 2001, adopted an innovative corporate and financial structure without shareholders. As a low-risk, single purpose company it was able to tap into low cost bond finance and thereby reduce its financing costs. Financial reserves are built up through regulatory outperformance, which are then returned in the form of customer dividends.

<sup>21</sup> NATS Holdings Ltd - – the holding company for provider of air traffic control services – is part owned by a consortium of airlines (the Airline Group) who own 41.9% of the shares; the Secretary of State for Transport owns 48.9%; BAA plc 4.2% with the remainder owned by an employee trust.

<sup>22</sup> The financial re-structuring of NATS in 2003 – brought about by the downturn in business following 9/11 - involved additional equity investment of £65m each from BAA plc and the Government.

Both operational activities and the capital programme are out-sourced to specialist contract partners.

Recent years have also seen the adoption of conventional regulatory frameworks to publicly owned utilities, notable **Scottish Water**, **Northern Ireland Water** and **Royal Mail**. To varying extents, these apply similar financial and economic disciplines to those of conventional privatised utilities, although they remain reliant upon public borrowing (and subsidy in the case of NI Water). In the case of NI Water, Government's role as Shareholder is also formalised through payment of a dividend<sup>23</sup>.

A further model not currently represented in the utility sector is that of **the public trust**.<sup>24</sup> This concept has a long pedigree in the UK going back to eighteenth century turnpike trusts. More recent examples include trust ports, the Port of London Authority (PLA) and the London Passenger Transport Board between 1933 and 1948. Such trusts are established by act of parliament and are able to issue bonds, secured by revenue streams from their activities, to finance capital investment. They are typically directed by independent boards of trustees. Trusts have many of the characteristics of utilities, with their stable income streams and ability to raise bond finance. There are also similarities with modern infrastructure funds particularly when these are tied to the operation of specific infrastructure such as airports or toll roads.

The author believes there would be advantage in legislation to put the Agency on a proper corporate basis – using one of the models described above.

In general, of the current utility models, only privatised utilities and 'not for dividend' mutual companies are able to raise debt through the capital markets to finance new investment rather than being dependent upon Government borrowing. Network Rail, which receives its income from train operators – in the form of track access charges – also receives grant income from Government now covering around 60% of its revenue requirements. Uniquely, it is able to raise debt from the capital markets, with most of this debt still subject to government guarantees.

### 6.2.1 Accountabilities and Governance

The different corporate models outlined above have different accountabilities and governance structures. The accountability to shareholders under the plc model is well understood. Under the **Glas model**, in the absence of shareholders, the company is able to claim that it operates solely for the benefit of its customers. However, accountability is to independent members who are appointed on a personal basis and not to represent particular stakeholder or interest groups.

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<sup>23</sup> The Shareholder Executive manages a portfolio of Government – owned businesses and seeks to ensure improvements in the way Government shareholdings are managed. In the transport sector, they manage the 49% shareholding in NATS, the air traffic control company.

<sup>24</sup> Described in more detail in 'Getting Partnerships Going- PPPs in transport' by Stephen Glaister, Rosemary Scanlon and Tony Travers – IPPR, 2000.



This '*not for dividend*' structure became the model adopted by **Network Rail**, although, in contrast, the members of Network Rail are drawn both from the rail industry (passenger and freight train operators, train manufacturers and contractors) as well as from members of the general public. The Department for Transport is also represented. Their role is to review the performance of the company and hold the Board to account. However, following criticism of the effectiveness of the present governance arrangements for Network Rail, a review is underway.

Specific accountabilities will vary under the different public and private sector models between conventional shareholders, private sector owners, Government shareholders and members. Under the **public corporation model**, the principal accountability of the Highways Agency would continue to be to Government (DfT) but on the basis of a more defined shareholder role, where Government would be directly concerned with the financial performance of the business.

A more detailed evaluation of the various utility models – and that of the public trust – is required as a next step. With the anticipated severe pressures on the public finances over the coming years, Government may see the financial case for selling a stake in the Highways Agency as attractive – particularly set against an imputed value of £85bn.

Much would depend upon the appetite of infrastructure funds for investments of this kind – something that is likely to be tested with the prospective sale, on competition grounds, of Gatwick and Stansted airports. In the case of the public road network, a further prerequisite for any sale would be the provision of a funding stream, independent of Government – a concept examined further below.

Any move to establish the Highways Agency as a corporate entity might, in practice, involve a staged process starting with a public corporation model but with the prospect of partial or full sale of the business at a later stage. (The mutual '*not for dividend*' model might be seen a middle way although the governance arrangements would require careful consideration). Any decision on future corporate structure and status would need to reflect financial considerations and the perceived future advantages of allowing the Highways Agency access to debt and bond markets to finance investment.

Whatever structure is adopted, the Highways Agency would require a Board with relevant commercial skills and financial expertise, as well specialist engineering and highways knowledge.

Currently, the **Shareholder Executive** has broad responsibility for developing a portfolio of some 29 commercial businesses, which are fully or partially owned by Government, and works with sponsor departments in developing the Government's shareholder role.

Among businesses included in the portfolio – in addition to the publicly-owned utilities - are BNFL, the Royal Mint, Channel 4, the Met. Office, UK Atomic Energy Authority and NATS Holdings, the air traffic control body for which DfT is the sponsor department.

### 6.3 Funding the Agency

The principal obstacle to adoption of a one of these models for the Highways Agency is the absence of a revenue stream from users.

However, in the absence of road user charging, there remain a number of options for putting the Agency on a more independent financial footing. The front-runners are the allocation of an element of road tax or fuel duty to provide a revenue stream. There are precedents for this and, as **Ian Heggie**<sup>25</sup> has described, in the last 20 years, the principle of **earmarked road funds** has been adopted by a number of countries, including New Zealand, Japan and the USA.

Under these funds, the basic expenditures on the highways network are funded by charges related to road use. This might comprise a fuel levy collected directly from fuel companies and paid into a road fund account; and also by a direct element of road user charging. In general, the fund is then managed by an independent board which would include representatives of road users.

Although Heggie points to some success stories worldwide in the use of road funds established in recent years, none has so far followed the model used for UK utilities with independent regulators determining revenue requirements, setting efficiency targets, and holding road authorities to account for performance and the delivery of outputs.

Among the practical issues involved are the following:

- How far would a roads fund involve a re-assignment of revenues already raised from road users and fuel companies to a roads authority – or new revenue raising?
- Would the fund be allocated to *all* road authorities or just to the body responsible for the strategic roads network – currently the Highways Agency in England?
- What are the relative merits of Vehicle Excise Duty or a component of fuel duty being used as a proxy payment for use of the network?
- Who would determine the level of assigned revenue (or size of the road fund)?
- How to ensure the stability of the revenue stream over time.

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<sup>25</sup> Ian Heggie: 'Commercializing the Management and Financing of Roads': chapter of 'Street Smart: Competition, Entrepreneurship and the Future of Roads', edited by Gabriel Roth

In 2007, it is estimated that £5.2bn<sup>26</sup> was collected in **Vehicle Excise Duty (VED)** from all UK road users and measures in the 2008 budget were expected to add a further £735m (12.5%) by 2010/11<sup>27</sup>. The current yield compares with a 2008/09 budget for the Highways Agency of £6.9bn – although the VED figure is for the UK. Any increase in the size of the network for which the Agency is responsible would, of course, require larger budget provision.

VED has a long history and was originally introduced in the 1909 budget by Lloyd George to fund building and maintenance of the road system. Therefore, making it an assigned revenue once again - and a de facto charge for use of the road network - takes us back to the original purpose of VED.

Finally, it is quite possible to have a combination of independent revenue and Government support as demonstrated by the case of Network Rail – which from April 2009 will receive network grants from Government covering some 60% of its revenue requirement, the remainder coming from track access charges paid by train operators and property income.

#### **6.4 Government's Strategic Role**

Under any of the models described above, Government would set the strategy for the road network and determine major investment priorities. This follows established precedent in the water sector, energy, aviation and railways. Strategic direction can be provided through white papers, and policy documents. Moreover, as we have described, in the context of regulated utilities, Government can place statutory duties upon regulators to have regard to policy objectives and issue guidance in the context of regulatory reviews.

The Department for Transport is now recognising the need for a more integrated approach to planning road and rail infrastructure. In October, it set up the **National Networks Strategy Group**, chaired by the then Minister of State, Lord Adonis, to direct work on rail electrification and on priorities for investment in the motorway network. In January 2009, it published a series of documents detailing a package of transport investments covering road and rail infrastructure and additional airport capacity at Heathrow. In one of these, plans were set out for motorways and major trunk roads.<sup>28</sup>

The DfT also embarked on a consultation in late 2008 on planning for 2014 and beyond.<sup>29</sup> In this document, Government proposes taking the lead in generating options for those route corridors that link key centres of population to each other and to the busiest international gateways.

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<sup>26</sup> Source: Source: Road Users' Alliance annual report 2008/9

<sup>27</sup> Source: Budget 2008, HMT, Table 1.2.

<sup>28</sup> Britain's Transport Infrastructure: Motorways and Major Trunk Roads: DfT January 2009.

<sup>29</sup> Delivering a Sustainable Transport System: Consultation on Planning for 2014 and beyond DfT, November 2008.

It identifies **14 strategic national corridors** and states the priority of improving the predictability of end-to-end journey times on these routes. The focus on these routes is cross-modal and work will be carried out with both the Highways Agency and Network Rail and co-ordinating activity for the next High Level Output Statement for rail, covering the period 2014-19 - which the DfT is due to issue in 2012. It is also intended to improve the basis for planning on city and regional road systems by providing, for each 5 year period, a '*clear indication of the level of funding available for regional and local transport investment and delivery*', together with 10 year indicative funding allocations.

A key driver for these developments is the **Planning Act 2008** establishing the **Infrastructure Planning Commission** as a new authority responsible for giving planning consent to nationally important infrastructure projects. The Act provides for relevant Government departments to produce **national policy statements** (NPS's). Thus the NPS for transport, produced by DfT, would need to include major proposals such as motorways, high speed rail links and airport runways.

Against this background, a logical next step would be to formally extend the approach adopted for rail under the **2005 Railways Act** – with statements of high level outputs (HLOS) and funds available (SoFA) - to strategic road investment. These statements would set the context for reviews of funding and outputs for both the Highways Agency and Network Rail.

A key question concerns the process for determining these high level output statements (HLOS) for roads and railways. One would like to see a more transparent process by which the Highways Agency, Network Rail and other stakeholders such as local authorities, Customer (or Passenger) Focus and user groups, provide input into these HLOS statements. The regional planning process through the RDA's could also be opened up and made more transparent. A further question concerns the extent to which priorities would be informed by cost benefit appraisal (a technique first applied to transport projects in the 1970s but now used more widely, including investment schemes in the water sector as part of the current PR09 process).

Finally, to the extent that part of the Highway Agency's role is to deliver projects of regional significance for local authorities, it will be important to strengthen the relationship between the Agency and local authorities for whom they act as the contractor for 'major schemes.' This would probably come about as part of a wider review of the regional planning system.

## **6.5 An Independent Regulator**

The job of an independent RDA regulator would be to:

- ensure that the road infrastructure provider was able to finance its functions for maintaining and enhancing the capacity, capability and safety of the strategic highway network;

- to monitor its performance in relation to stewardship and service delivery; and
- to hold it accountable.

The roles of the **Office of Rail Regulation (ORR)** and **Civil Aviation Authority (CAA)** provide models for the regulation of transport infrastructure operations and both combine economic and safety regulation.

One possibility would be to have a combined road and rail regulator (*the Office of Transport Regulation*) which would potentially allow an integrated approach to planning and funding strategic transport investment. As with both airports and rail, there is a strong case for combining economic and safety regulation for roads although it should be noted that the current safety regimes for road and rail are very different. (In contrast to the position on rail, under Health and Safety legislation, there are no 'duty holders' on the roads network).

Through the process of a periodic review for the Highways Agency, informed by Government statements on high level outputs and funding (*'affordability'*), the Regulator would determine a 5 year settlement with an approved investment programme, and agreed outputs in relation to capacity, capability, safety and performance of the network, for which the Agency would be held accountable. The Regulator should also require the Highways 'company' to undertake longer term investment planning and to set out sustainable approaches for meeting future demands on the network, in the same way as Ofwat currently does for water companies.

## **6.6 Performance and Service Standards**

The present approach to measuring performance of the strategic road network should be developed further – perhaps leading to a variant of the performance regimes for measuring train delays on the national rail network or the London Underground. Under such regimes, performance can be measured on different parts of the network (routes or lines) and delays attributed to a range of causal factors. What would be more difficult in the context of a highway network with a multiplicity of individual users would be to apply the incentive properties of such regimes through systems of liquidated damages.

What should be possible is to incentivise the infrastructure provider to improve management of the system and, to hold it accountable for delays due to maintenance and engineering work overruns – as we have seen in the case of Network Rail. At the same time, road users would gain some of the evidence they need to hold road providers to account for the service quality they receive.

A further benefit of performance regimes is that, in identifying the major causes of delay on particular routes, infrastructure providers gain a valuable source of information. However, unlike train operators, it would be more problematic to hold individual road users responsible for the delays caused by breakdowns or traffic accidents in which they are involved.

The publication of route-based performance information could also bring wider benefits. Thus, on a seriously congested stretch of trunk road (such as the A14 in Cambridgeshire), published information on traffic speeds, frequency of delays and accidents would help users and stakeholders – including local authorities - hold the Highways Agency to account and intensify pressure for earlier action to address problems of severe congestion and safety risk.

## **6.7 A Consumer Council for Roads?**

There has been a long history of consumer bodies representing the interests of customers for utility services. We have previously referred to the three consumer organisations being brought together in a single organisation, Customer Focus – which sees itself as ‘*campaigning for a better deal for consumers in England, Wales & Scotland*’. The new body has legislative powers including the rights to investigate any customer complaint which may be of wider significance; the power to conduct research and, if necessary, make a super-complaint about failing services.

However, both water and railways continue to have their own consumer bodies. **The Consumer Council for Water** was set up in 2005 with offices across England & Wales. As well as dealing with complaints, it plays an important role in price reviews both conducting customer research and commenting on the business plan submissions of companies. The current price review in water has seen coordinated research activity – between companies, the CCW, Government (Defra and Welsh Assembly) and environmental regulators - into customer priorities and willingness to pay for service improvements. Conducting research into consumer preferences is seen as particularly important in a monopoly industry where customers are unable to choose between different suppliers or service levels.

**Passenger Focus** is the independent national rail consumer watchdog. It conducts national surveys of passenger satisfaction; campaigns for improvements and resolves complaints. Recently, it published findings on European comparisons of rail fares, showing the fare differentials experienced by UK rail passengers. There is no comparable body conducting surveys of road users and satisfaction levels.

As part of any reform package, there is a strong case for introducing a **Consumer Council for Roads** – or **Road Users’ Forum** – to provide an effective voice for road users and to hold providers of highway services to account. Neither the RAC nor the AA as motoring organisations have the legislative powers available to consumer representation bodies.

While there is currently no direct customer relationship to road infrastructure providers through charging, there remains an important indirect relationship through road and fuel taxation – and making VED an assigned revenue would strengthen this relationship. Against this background, a new consumer body for roads would also serve to strengthen the accountability of local authorities to road users. As an alternative to establishing a new consumer body, the existing responsibilities of **Passenger Focus** could be extended to cover road users.

A body of this kind could also play an important role in helping to determine regional investment priorities and opening up the rather opaque process under which RDAs draw up **regional transport strategies**. One issue for consideration is whether it could reasonably represent the interests of both car users and commercial road users, including HGVs. In the utility sector (and railways), consumer bodies represent the interests of domestic customers (and passengers). There are separate trade bodies for commercial organisations such as the **Major Energy Users Group**.

As noted earlier, concerns have been expressed over whether the framework for rail – and more generally for utilities – goes far enough in enabling a long term view to be taken of strategic investment requirements, recognising the long lead times for high speed rail lines or major projects such as water reservoirs. However, adoption of conventional medium term financing framework, along with the other changes described above, should be seen as an important first step in the approach to investment planning.

As we have seen, within the context of a 5 year review cycle, water companies now have a statutory obligation to produce 25 year plans for water resources indicating how they plan to meet future demands. In the case of transport, as we have observed, there now appears to be a greater willingness by DfT to consider longer term strategic requirements for the rail and road networks.

## **6.8 Defining the Strategic Network – and the Scope of the Highways Agency’s Responsibilities.**

We have commented previously on the limited size of network for which the Agency currently has direct responsibility. The consultation exercise on *Planning for 2014 and Beyond*<sup>30</sup> with its development of the concept of Strategic National Corridors, contains proposals for re-categorising a number of routes currently categorised as roads of regional importance as *roads of national importance*. From 2014, it is proposed to re-define the Highways Agency national network to match the 14 strategic national corridors. This involves re-categorising some 13.5% of the total HA network – and these will be roads for which Government will assume direct strategic planning and funding responsibility.

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<sup>30</sup> Delivering a Sustainable Transport System: Consultation on Planning for 2014 and Beyond – DfT (January 2009)

The case for re-defining the national network along these lines would seem compelling. The question is why such changes cannot be brought about sooner.

The growing backlog of maintenance expenditure and deteriorating asset condition on the local authority road network is a further factor which would merit a review of the allocation of responsibilities for the road system between the Agency and local authorities - particularly in the context of the type of reform package proposed in this paper.

## **7.0 Conclusions and recommendations**

The present system of governance and administration of the GB road network is, in important respects, not fit for purpose. There remains a multiplicity of infrastructure providers; there is a very incomplete contract between road users and providers; and the accountability of the Highways Agency with its responsibility for the strategic network in England is to Government, and not road users, a situation exacerbated by the lack of a charging relationship. Until recently, there has been an absence of strategic investment planning and it remains unclear how future growth in demand is to be accommodated on the system without significant deterioration in service levels.

These criticisms are strongest in the case of England. In Scotland and Wales (and also London), devolution has brought decision-making closer to end-users – although there continues to be an absence of any defined contract between road users and infrastructure providers. The principles outlined in this paper have general applicability, although the case for reform is greatest in the case of England which accounts for three quarters of the total GB road network and 70% of the strategic, trunk and principal network. For this reason, we have focussed our recommendations on England where we already have in the Highways Agency, a national infrastructure provider.

Against this background, we believe that the present arrangements could be significantly improved by drawing upon elements of the framework for regulated utilities. Our principal recommendations are as follows:

**(i). The role of the Highways Agency should be extended** – to take primary responsibility in England for managing and developing the strategic national network, and more of the regional network. Government policy, based upon the definition of Strategic National Corridors (SNCs) now appears to be moving in this direction.

**(ii). The Agency should be given corporate status** – and a review should be carried out of the various options ranging from public corporation (or ‘Go-Co’) to partial or full privatisation. One possibility would be a staged approach setting up the Highways Agency initially as a regulated public corporation with the prospect of a full or partial sale at a later stage. From the outset, the new organisation would have statutory duties, licence obligations, independent directors and a revenue stream independent of Government.



It would operate within a strategic policy framework set by its sponsor department (DfT) and, as a public corporation, would be accountable to the Shareholder Executive for its financial performance.

**(iii). There should be an independent regulator for roads and road safety;** this would draw upon elements of the current system for rail regulation and civil aviation. It would provide a clearer framework of accountability for output delivery – in terms of stewardship and performance standards on the network; delivery of agreed network enhancements and efficiency improvement.

**(iv). A conventional medium term funding framework should be adopted for the Agency for maintaining and enhancing the network;** this would be informed by a Government statement of funding availability (SoFA) and national strategic and regional priorities (high level outputs). The latter would be informed by input from road users, local authorities and regional bodies as well as planning undertaken by the Highways Agency itself.

Recent developments within Government, including establishing a **National Networks Strategy Group** and the 14 strategic national corridors covering both road and rail, appear to envisage parallel – and integrated approaches – to planning improvements to these trunk network. But the formal framework remains to be put in place for roads.

**(v). There should be a customer representation body** for road users – analogous to those for water and rail. It is for consideration whether this should represent the interests merely of private domestic users or should also include commercial road users.

While the principle elements of the architecture for this new framework are clear, and follow precedent from the utility sector and railways, we recommend that more detailed studies are conducted of the following:

**(a) Financing of the Highways Agency:** this would involve examination of the practicability of providing a revenue stream independent of DfT, probably by attribution of vehicle excise duty (VED) and, in this way, establishing an indirect charging relationship with road users. While in the absence of direct user charging, the Agency would also continue to be dependent upon an element of direct support from Government, there are precedents for this in the regulated sector, notably with Network Rail and also NI Water.

**(b) Corporate Status and Governance:** while public corporations like Scottish Water can perform well in terms of performance standards and efficiency within a conventional incentive-based regulatory framework, their prime accountability is to Government as shareholder. A potential advantage of the **Network Rail/Glas mutual model** is that accountability is to members drawn from stakeholders - the rail industry (ie users), members of the public and Government (the DfT).

Moreover, as a private company, a CLG would have access to private credit and bond markets – and therefore not be dependent upon Government borrowing. While the effectiveness of the current governance arrangements for Network Rail has been subject to criticism, the principle of having the principal roads infrastructure provider accountable to a widely drawn group of users and stakeholders has some attraction for a network which is used by a majority of the population.

**(c) Regional Planning input:** it will be necessary to review how the system of regional transport planning and funding allocations would need to be modified under the new regime. Regional planning would continue through RDA's but the Highways Agency would have direct responsibility for much more of the regional road network and would probably be funded centrally for development schemes. The regional planning system would also need to be opened up and made more transparent.

The other area where more work is needed is in developing a wider range of **performance and output measures** for the road network and associated reporting systems, but this would come about as part of the development of the regulatory regime.

To date, the road network has largely been insulated from the reforms affecting other providers of network infrastructure over the past 20 years. The result is a pattern of under-investment and poor service of the kind that characterised much of the utility sector prior to privatisation. The absence of a charging relationship also means that road users lack the status of consumers of other utility services.

While the prospect of changing this in the short term may be limited, there are important gains in terms of service performance, investment planning and delivery. Efficiency could be secured through giving the Highways Agency corporate status and improving governance arrangements, within a conventional framework of economic regulation. Even in the absence of direct user charging, the case for developing the relationship between road users and the Highways Agency and for enhancing the accountability of the national roads infrastructure provider to its customers is a strong one. In making these recommendations, the paper draws on elements of the architecture used for other utility sectors - including railways. While there would be much to do in further developing these proposals up to an implementation stage, this paper represents a first step in this direction.