



NAO Report – Maintaining Strategic Infrastructure: Roads

To: All English contacts

For information: All contacts in Scotland, Northern Ireland and Wales

Key issues

NAO report highlights the scale of changes to financial resources available to maintain the highways network
Details some of the examples that local highways authorities have used to make savings and efficiencies
Highlights some of difficulties resulting from the current funding arrangements

1. Introduction

This NAO study examines the planned reductions to road maintenance budgets and the consequences for the network; and the systems and processes needed to achieve value for money on road maintenance.

2. Summary

The Summary highlights the importance of the network in England. It notes that “the strategic and local road networks are our most highly valued infrastructure asset, at around £344 billion. The two networks comprise over 187,000 miles of roads. They include more than 61,000 bridges, numerous other features, such as embankments and retaining walls, and drainage systems. This infrastructure supports 90 per cent of passenger traffic and 68 per cent of freight movements. Maintaining it so that it is safe, serviceable and reliable is vital for the economy and the social well-being of communities.”

It goes on to mention that in 2011 NAO reported on planned reductions to road maintenance budgets (in *Reducing costs in the Department for Transport* after the Spending Review 2010). The Department proposed to cut budgets by £1.2 billion with a planned reduction in grants to local authorities of 28 per cent in real terms over a four-year period. The report concluded that these reductions risked deterioration in road quality and higher long-term costs, and might not be sustainable. The Committee of Public Accounts was also concerned that the Department did not fully understand the likely impact of reducing road maintenance budgets; and expected local highway authorities to find savings of £223 million but was not clear how they would do this.

This report examines whether highways authorities have: reduced road maintenance budgets as planned, how they have done so, and the consequences for the networks; and the right structures and information to achieve long-term value for money on road maintenance.

3. Key findings

3.1 Balance of funding

- Injections of capital funding offset the reductions in revenue budgets. The overall budgets for road maintenance have not decreased as much as planned because of the government’s announcements of supplementary funding, often in the last quarter of the financial year, to address traffic bottlenecks and repair winter damage. The actual reduction in the Agency’s budget will now be 7 per cent, rather than the 19 per cent

announced in the Spending Review 2010, despite a cut in the revenue budget of 27 per cent. Capital funding for local highway authorities has increased by 3 per cent instead of the planned reduction of 15 per cent. However, revenue funding, which is for all local authority services, has fallen by more than planned – around 33 per cent rather than 28 per cent

- The change in the mix of funding and lack of predictability had practical implications and may cost more in the longer term. The Agency's capital spending exceeded its revenue spending in 2012-13. Local highway authorities still spend more revenue on maintenance, but they told us that they were carrying out less routine activities, such as clearing gullies and inspection, which is essential to prevent water seeping into the road substructure. Highways authorities said that reducing the proportion of revenue to capital budgets further would make it difficult to maintain the condition of the networks.
- The condition of the strategic road network has improved but there is insufficient data to conclude on the local road network. The most recent data showed that the surface condition of the strategic network improved between 2003 and 2013. However deterioration may not yet be visible because the network is made of many materials and complex structures, some of which are hidden. The Department collects less data on the local road network. Public dissatisfaction about the surface and appearance of the networks has increased however.
- The pattern of funding announcements and the planning cycle for maintenance, combined with having to spend money within the financial year, means that work peaks between September and March. Highways authorities plan their work programmes on indicative budgets, provided annually in December by central government. Actual funding is agreed in the spring and highways authorities revise their plans to fit budgets and do detailed design for the schemes. This means that most maintenance is done in the autumn and winter, which is less efficient because materials can be more difficult to handle in cold and wet conditions and daylight hours are shorter. As a result of the additional funding for emergency repairs, which is made available at the end of the financial year, almost all highways authorities need extra capacity from the market at the same time, which makes it less likely that they will get value for money

3.2 Optimising effort

- Funding pressures have encouraged the Agency and local highway authorities to increase efficiency and innovation, but some measures may create long-term problems. The Agency's contractors are using incident support units to carry out small maintenance tasks rather than keeping them on standby and using depots and equipment across multiple contracts for the public sector. In local authorities, there was a mixed picture, with examples given of savings from changing methods for repairing potholes and refreshing road markings more regularly so that motorists can see clearly when street lights were dimmed. However, some services were being stopped, for example structural maintenance on drainage assets, and there were reductions in skilled maintenance staff.
- Changes to budgets in-year do not promote value for money. Infrastructure UK has reported that certainty of funding is associated with cost savings of 10 to 20 per cent for routine maintenance. 'Stop/start' funding makes long-term planning more difficult for highways authorities and contractors cited unpredictable income as a disincentive to invest in improving efficiency.
- The Agency has a robust inventory and data about the condition of road surfaces which it used to target its maintenance efforts, but there are gaps in the information or quality issues which mean it was not used well to make decisions. For example, the Agency has introduced a national maintenance programme so it can make decisions based on the entire network. However, its data and deterioration modelling on some assets, such as drainage systems, still requires improvement. The Agency has increased staff's commercial and asset management skills. There is further work to do and the Agency has begun to develop a detailed picture of what affects the costs of maintenance.
- The extent to which local highway authorities use information to optimise road maintenance varied.

The most effective authorities use information about their road network and the condition of their assets to help councillors make well-informed maintenance decisions. This helps counteract local pressure to do 'worst first' maintenance. However, at least 45 local highway authorities had not yet completed an asset management plan when surveyed in early 2014.

- There are good examples of highway authorities working together locally to reduce costs and make improvements. Over half of local highway authorities are now members of maintenance alliances. These help them to share best practice and make savings on procurement. The London Highways Alliance Contract, developed as a joint initiative between Transport for London and London's boroughs, extends collaboration by encouraging the four area-based contractors and 34 highway authorities to work together across boundaries, provide joint support, share best practice and success factors in performance and encourage innovation across and through the supply chain.

4 The Department's response to these challenges

- The Department is seeking to tackle the problems that are hindering cost-effective road maintenance. In June 2013, the government set out plans to change the Agency's status to a limited company wholly publicly owned by the government, with six-year funding certainty for capital projects and maintenance, which has the potential to secure better value for money. The Department is also looking at how it allocates the annual grant of £976 million (April 2015 to March 2021) for maintenance to local highway authorities. It is, however, unable to guarantee that further ad hoc funding announcements will not be made throughout that period.
- The Department has promoted best practice in local highways maintenance through the Highways Maintenance Efficiency Programme. This has also improved collaboration, but how far local highways authorities are involved varies widely. The Department has identified that it needs to target the Programme at those local highway authorities that need most help and give a more compelling, quantitative case for preventative maintenance.

5 Conclusion on value for money

- There are positive signs of innovation by highways authorities in response to funding pressures on road maintenance. We believe that the Department understands the threat to value for money from uncertainty of funding. It is setting up a government company to address the problems in maintaining the strategic road network. However, this measure in itself will not be enough. Unless funding for both road networks is made more predictable and the allocation between capital and revenue balanced better, public value will be lost.

6. NAO Recommendations

The Department should build on the steps that it has already taken to improve value for money by:

- working with HM Treasury and the Department for Communities and Local Government to address the barriers to long-term planning for road maintenance, such as the lack of predictability of funding for local highway authorities and the split between revenue and capital funding;
- improving its understanding of the current condition and future needs of the local road network, including structures; and
- identifying criteria to target the Highways Maintenance Efficiency Programme at those local highway authorities that need the most help, and develop evidence for local highway authorities to justify planned preventative maintenance.

The Agency should:

- have in place better data and modelling of deterioration for all its assets for the new government company.

In this report we evaluate the Department's and the Agency's performance. We have, however, seen that there is scope for some local authorities to become more efficient by:

- using information to build clearer cases for programmes of preventative maintenance; and

- increasing collaboration with other authorities and industry to make best use of constrained capacity and capability.

7. How reductions were achieved

The report notes that it found that expenditure was reduced by a mix of: innovations that improved efficiency or eliminated wasteful activities; reclassifying work, to fund it out of capital budgets; and stopping some services. It goes on to specify a number of issues and how they contributed to savings.

It mentions HMEP and how it was set up in response to the challenging efficiency savings required by the 2010 spending review. The Department set aside £6 million to support the Programme until March 2013 and has since extended the end date for the funding to March 2015. The team researched and developed a range of resources to help local highway authorities.

It notes that there are no government-wide data on efficiency or savings in local highway authorities but in 2013-14, local government estimated it had saved £37 million by using the products from HMEP. These included toolkits for asset management, shared services and deterioration modelling, and a standard specification and contract for highways maintenance.

It details some examples of local authority measures to reduce maintenance spend and their effect on the network and road users. These include the introduction of new contracts to encourage more preventative maintenance; increased collaboration by integrating Council and contractor teams so that staff sit together; and reduced duplication by using common processes; for repair potholes use of a 'hot box', which allows old tarmac to be recycled and kept at optimal temperature for longer periods; use of multi-purpose vehicle, that planes the road surface to the exact depth required, which gives a sound base for patch repairs and also reduces the health and safety risks to staff from machinery vibrations; increased the time allowed to repair potholes, leading to more permanent and effective repairs first time; refreshed road markings with reflective paint more regularly to allow motorists to see the road clearly enabling street lights to be dimmed or turned off.

Staff cuts

Industry representatives and senior staff from local highway authorities informed the report of cuts in the number of maintenance staff. This was supported by the Local Government Financial Statistics. These show that the cost of the staff working on road maintenance for local highway authorities was cut by 30 per cent from £567 million in 2011-12 to £399 million in 2012-13.

Collaboration

The report provides examples of collaboration in local government. Via a survey of local highway authorities, 26 respondents judged themselves to be good or very good at identifying opportunities to collaborate with other local highway authorities. At least 102 of the 152 local highway authorities were part of a highways alliance. Members share best practice and can make savings on procurement through framework agreements. Collaboration could be extended, as under the London Highways Alliance Contract, in which participating highways authorities will be able to benchmark the four area-based contractors' prices and performance against each other (Figure 9).

Local highway authorities rated themselves much less favourably at collaborating with the Highways Agency than with each other. However, there was evidence of cooperation in relation to schemes to remove 'pinch points' on the networks. This collaboration could be developed further particularly as the Agency's new 'route-based strategies' will require it to work with local authorities and Local Enterprise Partnerships, when identifying maintenance schemes across the strategic network and planning for longer-term investment, to take account of local priorities for growth.

London Highways Alliance Contract is a joint initiative between TfL and London's boroughs. The objectives for the 8-year contract are to: understand the true costs and drivers and make the link between service levels, cost and risk clearer; improve service on highways maintenance and reduce the cost; stop the constant state of retendering across the 34 highways authorities in London, estimated to cost £9 million per annum; provide more consistent customer experience by minimising congestion and delays through joint forward planning, rapid

construction techniques and improved collaboration; use resources and skills better through common specifications and sharing technical expertise and specialist equipment; and create up to 250 new apprenticeship opportunities.

Local network condition

In contrast to the strategic network, the local road network developed over centuries from tracks or turnpike roads. It is therefore more difficult for local highway authorities to develop a good understanding of the network's construction and condition. Collecting data is an expensive process but some local highway authorities made it a priority to improve their knowledge of their assets. In our survey 34 respondents rated themselves as having a good or very good inventory and information about the condition of their roads. However, less than half of these local highway authorities felt this was true for their footways, bridges, tunnels, drainage systems, lighting and signage.

APSE comment

The general themes of this report will serve as evidence to support the thoughts of many in the highways sector - that the asset is fundamental to economic success and social well-being, that there are a lack of funds to keep it in a reasonable condition and that planning is made difficult due to the funding regime.

The report highlights some important factors. It mentions that "Infrastructure UK has reported that certainty of funding is associated with cost savings of 10 to 20 per cent for routine maintenance". Needless to say this is a significant saving and cannot be ignored. However, 'Stop/start' funding continues to play a part in the funding regime so making long-term planning more difficult for highways authorities whilst contractors cited unpredictable income as a disincentive to invest in improving efficiency. It goes on to note the spending patterns of local highways authorities, how the funding cycle prompts them to undertake most maintenance in the autumn and winter, which is less efficient because materials can be more difficult to handle in cold and wet conditions and daylight hours are shorter

The additional funding pots for pothole repairs, flooding work or winter maintenance add to the funding difficulties and do not help authorities plan for their own assets. Building these pots into single grants made in reasonable time to enable effective plans would be far more beneficial.

The report notes additional funding made available at the end of the financial year, results in the need for almost all highways authorities requiring extra capacity from the market at the same time, which makes it less likely that they will get value for money. This is a further result of the funding mechanism and it also highlights the benefits of a DLO providing the flexibility of managing internal resources without relying on external suppliers.

The report points to specific services which have been stopped such as structural maintenance on drainage assets in some areas and generic cuts including dramatic reductions in levels of skilled maintenance staff. Once again it is clear that factors such as these will have impacts in the future not the least of which will be extra costs to get back to the present state of asset condition.

The reports notes the costs of recording and keeping asset information up to date and it states that at least 45 local highway authorities had not yet completed an asset management plan when surveyed in early 2014. Clearly this should be a short term objective but financial restrictions will continue to be a factor here and have an impact on value for money further on down the line.

A number of good practice local highway authority examples are detailed and these reflect the innovation which is going on in the sector. But this is not being aided by the restrictions in resources. Although there are arguments made elsewhere justifying the public spending cuts, there is no doubt that they are having a long term impact on what is generally accepted to be the basic infrastructure of the nation.

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