

House of Commons Transport Committee: state of local roads inquiry ~ submission from Campaign for Better Transport

September 2018

Campaign for Better Transport is a leading charity and environmental campaign group that promotes sustainable transport policies. Our vision is a country where communities have affordable transport that improves quality of life and protects the environment.

We welcome the opportunity to contribute to the Committee's inquiry into the state of local roads.

Summary

In summary, we argue that there is an urgent need for significant investment in road maintenance; that this should be part of a comprehensive programme of environmental, safety and integration improvements; and that this approach would be a better investment than building new roads.

We share concerns about the adverse impacts of poor road maintenance on all road users, particularly on road safety, and note that this is exacerbated by the growth in heavy goods traffic. Road users report that the quality of existing roads is their primary concern, and would prioritise those enhancements that support better use, or reduced environmental impact, of the existing network.

Meeting the estimated £9 billion backlog in local roads maintenance should come before adding new road capacity: making the existing network bigger without first addressing maintenance costs will place even more demands on already overstretched local authorities, and lead to an overall worsening of the road network.

We argue for a more sustainable approach to maintenance, investing not only in repair but in environmental enhancement of existing roads, and that this should be a higher priority than expanding network capacity.

We identify opportunities for funding such a programme by reallocating resources from road building, and by adopting new mechanisms for future road funding, linked to usage, that will encourage a more sustainable future for the road network.

1. The impact of poor local road maintenance

There is a well-documented crisis in the state of road maintenance across many parts of the UK road network, as reported in the Asphalt Industry Alliance's annual ALARM survey of local authorities across England and Wales.

The 2018 survey reports an estimated £8.24 billion catch-up cost for England's roads, where 18 per cent of the network is reported as being in a poor state of repair, and each road is resurfaced on average once every 92 years.¹

In England, an average local authority budget share of 6.3 per cent goes on road maintenance: about one in three reports a budget increase, with a total increase in spend to £26.2 million from £21.8 million. There is an average shortfall of £3.4 million per council of the budget needed to maintain acceptable standards of repair.

¹ Asphalt Industry Alliance: Annual Local Authority Road Maintenance Survey 2018

Potholes also come at a cost to road users in terms of safety and expense. The 2018 RAC annual survey found that motorists were increasingly concerned about road maintenance, with 42 per cent of drivers giving the condition and maintenance of roads as their top concern, a rise from 33 per cent in 2017.² Research by Transport Focus³ confirms that road user priorities are safety, reliable journey times (supported by better information), and road surface maintenance.

Poor maintenance is a costly problem for road users and a false economy for the public purse. The AA reports that the number of pothole claims received during the first 4 months of 2018 is more than for the whole of 2017 and, UK-wide, reflects a cost to motorists of £1 million a month.⁴

Research from Cycling UK found that 156 highways authorities have spent a total of £43 million on pothole compensation claims between 2013 and 2017, with an average spend of approximately £277,700 per authority. Based on this average, Cycling UK estimates that highways authorities across the UK incurred direct costs of around £72 million.⁵

It also affects road users' safety, with the state of the road surface cited as the main factor in nearly 600 road traffic accidents in 2016, 12 of them fatalities, and a contributory factor in many more.⁶ Cycling UK reports that 390 cyclists were killed or seriously injured in the ten years from 2007 due to potholes.⁷

The state of the roads is exacerbated by the growth in heavy goods traffic. The damage to local roads caused by high volumes of HGVs must be properly assessed. While motorways are built to a higher specification to cater for heavy goods vehicles, the majority of local road infrastructure is not. Lorries cause far more damage to the foundations and structures of roads than cars.

The damaging power rises exponentially as weight increases (the generalised fourth power law): for example, the standard 44 tonne HGV, which is the industry workhorse, causes 136,000 times more damage to road infrastructure than a Ford Focus. Research based on DfT figures shows that in the current fiscal regime, HGVs only cover 11 per cent of their road infrastructure cost.⁸

We are particularly concerned that this problem will only get worse with the proposed roll out of longer semi-trailers on local authority controlled roads. The DfT has not to date engaged with local authorities properly even though there are serious safety implications as well as extra costs for local authorities from damage to street furniture and buildings, and the need to re-design junctions to cater for the extra length. We are calling for proper involvement of local authorities and their representative bodies with a full impact assessment being carried out on local roads, as 38 per cent of longer semi-trailer journeys are estimated to be off the motorway network.

2. A more sustainable approach to road maintenance

The ALARM survey reports that just over half (56 per cent) of English local authority highways maintenance budgets go on carriageway repairs and a further 18 per cent on reactive surface maintenance. This leaves only a quarter of the budget available for proactive road maintenance and wider enhancement.

At the same time, major sums are committed for building new roads or providing further capacity increases, either directly by local authorities or through Highways England or Local Enterprise Partnership programmes, all of which will generate additional traffic on local roads and add to the future maintenance bill. This risks creating a negative cycle of declining road quality and places an unsustainable burden on local highway authorities.

A better approach would be to refocus roads investment and consolidate the network, prioritising maintenance, safety, environmental enhancements and resilience instead of expanding capacity.

A more comprehensive maintenance programme could usefully go beyond traditional repair and resurfacing, to deliver a 'green retrofit', that is a programme of environmental enhancements that would make the road network better integrated, more attractive for the full range of road users and more resilient for the future.

² RAC: Annual report on motoring 2018

³ Transport Focus: Road users' priorities for the Road Investment Strategy, 2020-25 (2017)

⁴ The AA: Road pothole epidemic a national disgrace (May 2018)

⁵ Cycling UK: The cost of not filling that hole (March 2018)

⁶ DfT: RAS50001 Contributory factors in reported accidents by severity, Great Britain, 2016

⁷ Cycling UK: 390 cyclists killed or seriously injured since 2007 due to potholes (March 2018)

⁸ MTRU: Heavy Goods Vehicles - do they pay for the damage they cause? (2014, 2nd edition 2018)

Working with other NGOs, we have developed an approach to road investment based on four elements:

- Fix it first: improve the current network, including green retrofit, with new road capacity a last resort
- Integrated approach: corridor planning, join up with other modes and other networks
- Environmental leadership: a system-wide focus on low carbon future, air quality, biodiversity
- Committing the necessary resources to deliver greener roads.⁹

Our most recent report – ‘Roads and the Environment’ - draws on international best practice to explore the potential of greener road management to enhance the road user experience, deliver a more resilient network and reduce the adverse environmental impact of major roads.¹⁰

Case study: using recycled materials in road resurfacing (I)

Street works contractors Kier and Clancy Docwra have piloted use of the Roadmender onsite asphalt mixing machine. The use of this new technology enables hot mixing of asphalt on site, removing the need to travel to offsite plant, with reduced environmental impact and cost savings. The same machine can also recycle the old road surface, mixing it with rubber and bitumen to serve as the underlay for the resurfaced road.

Case study: using recycled materials in road resurfacing (II)

In the Netherlands, the standard road surfacing is open-graded asphalt friction course (OGFC), which is porous and water permeable but requires higher volumes of bitumen to bind the aggregate. A new project in Friesland, developed in partnership with the University of Utrecht, is retrieving cellulose from waste paper in the drainage system. The material is sterilised, bleached and dried, and then used in combination with bitumen to provide a cost effective OGFC product.

Case study: sustainable road verge management

Lincolnshire Wildlife Trust has been working with Highways England and partners on sustainable road verges these support biodiversity by providing connected habitats with new planting and natural drainage ditches. As part of the project, Peakhill Associates has investigated the potential to undertake biomass harvesting from the motorway verges to supply local anaerobic digestion facilities for electricity generation. Using the products of good verge and roadside woodland maintenance to sell on as feedstock for biomass is a positive example of the circular economy.

Case study: sustainable drainage, Lancaster, Pennsylvania

The city of Lancaster in Pennsylvania adopted a green infrastructure approach, using sustainable drainage, to manage greywater and storm water. This delivers energy and carbon emissions savings from reduced volumes entering the sewer system. The project is estimated to have reduced infrastructure capital costs by \$120 million and to reduce water pumping and treatment costs by \$661,000 per year. These benefits exceeded the costs of implementing green infrastructure, which were estimated at around \$51.6 million if integrated into planned improvement projects or up to \$94.5 million if implemented as standalone projects.¹¹

Based on these positive examples, we recommend looking to all road maintenance projects to deliver environmental enhancements, making more use of green infrastructure, and reviewing contracts and specifications to embed a greener approach in business as usual. These approaches can be underpinned by using methods such as Natural Capital Accounting, payments for ecosystems services or resource rental, in cost-benefit analysis; and by including environmental quality in state of the network reports, scheme prioritisation and performance metrics.

Green infrastructure brings not only environmental benefits, but also long term cost savings and resilience benefits. Traditional maintenance regimes, for example of verges, may be highly damaging to the roadside environment without in practice being more cost effective in the long term. Features such as sustainable drainage and tree barriers require less maintenance than man-made structures, and make a positive contribution to key Government targets on air quality, CO2 reduction, and biodiversity.

Climate change is a threat to us all: it is already affecting the operation and maintenance of the road network with increased instances of extreme weather and flood damage. The continuing growth in transport CO2 emissions increases the future risks of major disruption. Large cuts in transport emissions of carbon dioxide are essential if the UK is to meet its climate change targets and this would also help address the challenges of congestion, air quality and road maintenance. Investing in low carbon approaches to maintenance and retrofitting existing roads to be flood resilient should be greater priorities than new road building.

⁹ Campaign for Better Transport: Rising to the Challenge (2017)

¹⁰ Campaign for Better Transport: Roads and the Environment (2018)

¹¹ EPA: The Economic Benefits of Green Infrastructure: A Case Study of Lancaster, PA (2014)

3. A better approach to roads funding

Maintenance is too often the poor relation when it comes to road spending. Improving existing roads should be a greater priority than building new road capacity. Reallocating resources from new road building to existing road maintenance would be a prudent investment.

A very large proportion of transport spending is still being allocated to building new roads. The supposed benefits of new roads are often over-stated, while the adverse environmental impacts are significant. New roads add more traffic to the network, which will put more pressure on roads which are already congested or close to capacity. Not only does major road building take resources from current road maintenance and enhancement, it also adds to the asset that will need future maintenance.

A recent analysis of over 80 road schemes found they have not cut congestion: instead, traffic showed increases of up to 47% over 20 years. The environmental impacts included loss of ancient woodland, destruction of wildlife habitats and damage to the landscape. Nor had the promised economic benefits from new roads been delivered: of twenty-five road schemes that had been justified on the basis that they would benefit the local economy, only five had any direct evidence of economic effects, and even then there was no evidence the road was responsible for anything more than moving economic activity from elsewhere.¹²

It is a similar picture globally. An evidence review of around 2,300 evaluations of the local economic impact of transport projects from the UK and other OECD countries found only 17 robust studies of the effect of road schemes on the local economy. The main finding was that a majority of evaluations showed no (or at best mixed) effects on employment.¹³

We await the Government's response to the consultation on its proposals for a Major Roads Network (MRN) supported by additional funding for local highways authorities. The Rees Jeffreys report calling for the creation of the MRN played an important role in highlighting the funding gap between the Strategic Road Network and local authority roads. It is right that some of the billions of pounds of public funds currently spent on the Strategic Road Network should also be made available for the local road network which carries most journeys.

However, we believe the proposed MRN funding criteria should be changed to allow for a focus on road maintenance and safety as well as provision for public transport, walking and cycling, and that the minimum project size should be reduced to allow for high quality smaller schemes to qualify for funding. While we welcome broadening the Government's proposed Roads Fund to include local authority roads, we are concerned that limiting it to projects like big new bypasses and road widening will neglect the most important priorities and could make transport conditions worse.

Public policy and trends in travel demand further strengthen the case for reallocating funds from new road building towards improvement of existing roads. Transport is now the largest-emitting sector of the UK economy accounting for 28 per cent of UK greenhouse gas (GHG) emissions in 2017. The Committee on Climate Change reports that "opportunities to reduce demand for travel must be exploited. Demand reduction is generally highly cost-effective and has many co-benefits."¹⁴

The Commission for Travel Demand has reported on a consistent long-term decline in time spent and distance covered in travel: while there has been a growth in employment, there is a decline in commuting trips.¹⁵ There is also a decline among young adults in take-up and use of driving licences. The number of young people with a driving licence peaked in 1992-94 at 48 per cent of 17 to 20-year-olds: by 2014 only 29 per cent of that age group had a licence. Among people aged 21 to 29, the number of licence holders dropped from 75 per cent to 63 per cent over the same period. There has also been a 10 per cent fall in the number of 17 to 29-year-olds driving a car in a typical week, from 46 per cent 1995-99 to 37 per cent 2010-2014.¹⁶

¹² Sloman L, Hopkinson L and Taylor I: The Impact of Road Projects in England, TfQL report for CPRE (2017)

¹³ What Works Centre for Local Economic Growth: Evidence Review 7 Transport (July 2015)

¹⁴ UK CCC: Reducing UK emissions – 2018 Progress Report to Parliament (2018)

¹⁵ Prof. Greg Marsden et al, University of Leeds "All Change? The future of travel demand and the implications for policy and planning" (May 2018)

¹⁶ Kiron Chatterjee et al, UWE/University of Oxford "Young People's Travel – What's Changed and Why? Review and Analysis" (Feb 2018)

The growth in electric vehicles (EVs) will also have an impact, with the planned phasing out of new conventional diesel and petrol sales by 2040. EVs are low noise and zero emission at tailpipe, removing many of the arguments for bypasses to address pollution. However EVs require a comprehensive accessible and robust charging network, which will also require reallocation of investment for the local road network to be fit to deliver the Government's 'Road to Zero' vision.

The World Health Organisation has highlighted the need for a cross-government approach to tackling the global health crisis caused by growing physical inactivity.¹⁷ Road improvements can play an important role. Investing in dedicated active travel (walking and cycling) routes across the network where these are lacking would help reduce future road maintenance costs by enabling the shift to lower impact modes.

A comprehensive approach to maintenance would improve safety and provision for all road users. Dedicated bus lanes can reduce bus travel times by 7 to 9 minutes along a 10km high traffic route, and also improve their reliability. Buses play a vital role in reducing congestion: every three buses replace approximately 200 cars on the road: therefore investing in bus provision where appropriate as part of network maintenance will benefit all road users by cutting traffic and reducing future wear and tear.

We believe the priorities for roads funding should be maintenance, including safety measures; integration, with a truly multi-modal approach; and environmental leadership, including a serious commitment to CO2 reduction and demand management, with new road capacity a last resort.

4. Alternative funding streams

We note the proposal that from 2020, Vehicle Excise Duty (VED) is due to be hypothecated into a roads fund which will be made available to local councils and Highways England. We believe the priority for any such National Roads Fund should be to fix the backlog of repairs that are needed on local roads. Under present proposals, the Government risks creating an increasing gulf between local and the bigger roads. London is also completely excluded from the Roads Fund and other cities will see limited benefit from it. We recommend making funding available from the new National Roads Fund to local roads, and also to cities through an urban transport grant.

Investment should give priority to management and maintenance of existing roads and to improving local transport. We propose a new Road Repair and Renewals Fund to tackle the road and pavement maintenance backlog.

There is a fundamental problem with fuel duty and VED; revenue from both these taxes is falling. The spread of electric vehicles will accelerate this decline and in the medium term different ways of taxing road vehicles will be needed.

The current lack of a 'pay as you go' model for most road transport means that motor vehicles do not pay the cost of their impact in terms of carbon emissions, air pollution or road maintenance. For the longer term, we support the principle of usage-based road pricing. The UK already has some examples of specific road charging, such as the M6 Toll, the Dartford Crossing and other river crossings and also London's congestion charge.

General road pricing could replace fuel duty and VED, and be a more equitable way to raise funds. Oregon's OReGO12 scheme was introduced in 2015 and has proved that wide scale road user charging is possible. Funds raised from drivers pay for road maintenance and improvements that benefit everyone. Last year's Wolfson Prize winner set out ways in which road pricing might work in the UK.

This would create a sustainable income stream to fund road maintenance, directly related to the use made of the asset, and would reflect the principle that those who contribute to congestion and environmental problems should help pay for the costs to society this causes. Such schemes can bring wider benefits by helping to make best use of road space, cut congestion, reduce illegal levels of air pollution and free up space for public transport and active travel.

HGVs already make some contribution through the time-based HGV levy but still contribute only one third of the external costs they impose and only 11 per cent of their costs in terms of road maintenance. The current daily charge bears no direct relationship to the amount of use of the network, so there is no incentive to make more efficient use of the road network or to reduce lorry miles.

¹⁷ WHO: More active people for a healthier world The global action plan on physical activity 2018 – 2030 (2018)

The single most effective change would be to replace the existing time-based lorry charging system with a distance-based system which could relate charges paid to the real impacts HGVs have on other road users and the road network. This would also contribute to meeting the Government's stated objectives of improving freight efficiency, reducing exposure to collisions, and reducing air and CO2 pollution.¹⁸

There is also potential for innovative approaches at local level. Nottingham City Council has demonstrated that the Workplace Parking Levy can be implemented to generate a substantial revenue stream without undermining the local economy. Such an approach in other cities could help fund current road maintenance as well as supporting investment in modern public transport to cut traffic and reduce future road maintenance costs.

A fresh approach to how local transport is funded would not only see safer, better maintained local roads, but would also address the problems underlying the UK's transport system: congestion, pollution and social exclusion from over-dependence on road and air transport.

September 2018
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Campaign for Better Transport

Campaign for Better Transport's vision is a country where communities have affordable transport that improves quality of life and protects the environment. Achieving our vision requires substantial changes to UK transport policy which we aim to achieve by providing well-researched, practical solutions that gain support from both decision-makers and the public.

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¹⁸ Freight on Rail: Department for Transport call for evidence: reforming the HGV road user levy (January 2018)