



Improving Local Highways:

# The Route to a Better Future



# Acknowledgements

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# Foreword



Everyone depends on the UK's network of local highways, and these arteries of our country need to be invested in to ensure fitness to compete in the global economy.

The footways, cycleways, and carriageways that connect and cross our cities, towns, and countryside are how people get to work, go to school, hospital, and the shops, and connect with other transport links such as the railway as well as where they exercise. They allow people to get on with their lives, whether they are walking, running, cycling, on buses, or in cars. They are how goods are delivered to shops and businesses, how parcels are delivered to homes, and how emergency and care services reach people when they need help, and they support the distribution of the water, energy, and communications services that communities need.

Local highways are places where people have tangible evidence of commitment to their community through the quality of their streets. They are where the public can see transport investment targeted for them right outside their front doors.

Local highways are the arteries of modern living that tie communities together, creating healthy, liveable places where people can feel encouraged to get out and meet one another, creating connections that will attract new business to an area. Most local highways have supported our country for centuries. They are the roots of our future.

This Chartered Institution of Highways & Transportation (CIHT) review of the local highway network (LHN) in England was undertaken in a similar time frame to the July 2019 report of the UK Parliament Transport Select Committee (TSC) into the subject. The report acknowledges that the LHN is receiving insufficient funding. This review has been underpinned by engagement with CIHT members and key sector bodies involved in the LHN.

The LHN sits alongside the strategic road network (SRN) and the major road network (MRN) as a vital piece of England's infrastructure. CIHT has long called for the certainty and clarity of long-term funding for the infrastructure sector and has welcomed the changes made in this regard for the SRN.

CIHT recognise that Local Highway Authorities and their partners have sought to develop innovative approaches to managing the network within a constrained funding environment. The recommendations of this review will help the sector to deliver the network the country needs.



**Ginny Clarke CBE**  
Chair of Learned Society & Technical Strategy Board  
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# Recommendations

CIHT recommends that the government commits to deliver a four-point strategy for the Local Highway Network (LHN) that will create a vision, funding and focus over the next ten years.

## 1. Recommendation 1: Create a new focus for the LHN

- 1.1. Establish an improved system of monitoring that (a) gives clarity on how the LHN is performing and (b) includes comparisons of efficiency, effectiveness, and innovation in delivery
- 1.2. Encourage greater collaboration through providing an appropriate funding regime
- 1.3. Define how local highways meet the economic and social requirements of local areas: roads for places, roads for distribution, roads for access (both rural and suburban), and roads for sustainable and active transport
- 1.4. Show how the highway network will support the delivery of a carbon-neutral system, create sustainable, green, resilient, and accessible places, make transport healthier, and help the economy grow
- 1.5. Define what people can expect from the LHN, underpinned by an outcome-based service specification and guidance for local authorities and other practitioners
- 1.6. Review regulations and legislation relevant to the LHN

## 2. Recommendation 2: Commit to establishing an inflation-linked local highways fund

- Establish a 10-year additional funding settlement (should be additional to the current annual capital and revenue funding that local authorities receive for highway maintenance) of £15 billion TOTEX to address the maintenance backlog
- Agree a 10-year local highways fund - leading to improved efficiencies and effectiveness in the management and maintenance of the LHN, including incentivisation to deliver wider outcomes for people

and society (would allow maintenance to facilitate active travel, supporting the decarbonisation agenda whilst improving peoples' health)

- Allocate an initial £7.5 billion from the fund for the first five years, distributed to local authorities on a yearly increasing basis as a new national asset conditions dataset is introduced
- Allocate a further £7.5 billion from the fund for the second five-year period, with distribution taking account of local authority performance, asset conditions, road function and increasing length.

## 3. Recommendation 3: Create a better understanding of the asset through improved data

- 3.1. Create an up-to-date database of national condition information for all key highway assets
- 3.2. Update techniques for collecting data using the latest technology
- 3.3. Develop a standard measure to calculate the required funding based on common standards of serviceability from a customer perspective

## 4. Recommendation 4: Establish new sources of funding to support the local highways fund

- 4.1. Improve the efficiency of how funding is allocated to local highway authorities by reducing the number of complicated funding mechanisms and bidding processes
- 4.2. Government should identify and develop alternative and additional sources of revenue to finance the future funding of local highways, including moves to where utilities pay the real cost of reinstatement. CIHT sees opportunities for road pricing to address congestion, reduce carbon and provide a potential funding source.

# Setting the context

## A vital community asset

Everyone depends on the UK's network of local highways; they are at the heart of our communities, and these arteries of our country need to be invested in to ensure fitness to compete in the global economy.

The footways, cycleways, and carriageways that connect and cross our cities, towns, and countryside are how people get to work, go to school, hospital, and the shops, and connect with other transport links such as the railway as well as where they exercise. They allow people to get on with their lives, whether they are walking, running, cycling, on buses, or in cars. They are how goods are delivered to shops and businesses, how parcels are delivered to homes, and how emergency and care services reach people when they need help, and they support the distribution of the water, energy, and communications services that communities need.

Local highways are places where people have tangible evidence of commitment to their community through the quality of their streets. They are where the public can see transport investment targeted for them right outside their front doors.

Local highways are the arteries of modern living that tie communities together, creating healthy, liveable places where people can feel encouraged to get out and meet one another, creating connections that will attract new business to an area. Most local highways have supported our country for centuries. They are the roots of our future.

## But they are not fit for purpose

The LHN is not in a healthy state and not up to the job of supporting the country's ambitions for the future. As the future evolves and new 4G and 5G internet networks are installed, local highways may be asked to work even harder, finding space for fibre cables, masts, and cells that will give us high-speed, universal, instant connectivity.

At the same time, while the zero-carbon economy develops, electric and other clean-fuel vehicles, that become more autonomous, will need additional infrastructure and change how road space is used, and our LHN will need to be safe to cater to the increase in walking and cycling that zero carbon demands.

Despite the efforts of central and local government to maintain local highways, the investment does not match our demands and the ageing of the asset. Without a new strategy, the LHN cannot help businesses to increase productivity, realise their economic opportunities and deliver what the nation needs for a sustainable future. The LHN is estimated to have a value of £400 billion<sup>1</sup>, and yet no consistent measure of its condition has been made. Claims from users for injury or damage caused by poor condition cost local authorities, while revenue funding has been falling<sup>2</sup>. Physical evidence of ageing and worn-out roads is there for everyone to see:

- broken carriageways;
- uneven and cracked footways;
- bridges with use restrictions imposed;
- aged light columns,
- blocked gullies that lead to flooding; and
- patchworks of poor reinstatement after countless holes have been dug, undermining the entire structure of some roads.

Much attention has been paid to potholes, which are the symptoms of underlying deficiencies. Extreme weather events exacerbate poor road conditions, and the winter of 2017/18 had a devastating effect on the country's highway network, exposing its fragility. Its physical condition is likely to be exacerbated by climatic issues, as seen with the recent flooding in the winter of 2019/20.

While deterioration is inevitable, good initial construction and an effective asset management regime can reduce urgent and more disruptive unplanned repairs with planned works. However, several factors work against this regime:

<sup>1</sup> Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>

<sup>2</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

- Many local highways were not initially built to modern standards – being converted from tracks or cobbled lanes – and have simply been patched up and resurfaced over time.
- Despite the huge value of the LHN, its benefits are not recognised in achieving wider policy goals, and it does not attract the funding it requires.
- Over 200 bodies, including numerous uncoordinated utility companies, have rights to dig up roads to access water, power, and telecoms infrastructure. The quality of reinstatement is inconsistent, while even good repairs considerably reduce the lifespan of a surface.
- Network users (consumers) have no performance measures for their roads and lack redress via a regulator or other independent channel. (Councillors may represent their electorate, but they also represent the local highway authorities.)
- Despite the general public concern about the state of local highways, currently, no standard approach to measuring their condition and no official, comparable data on the condition of all local highway assets exist.

### What if we do not change our approach?

The following aims will not be properly achieved:

- Delivering connected and automated mobility, which is a key part of the industrial strategy
- Achieving healthier lifestyles if we do not invest to support active travel to encourage walking and cycling
- Adapting to a changing climate and creating and supporting more resilient communities
- Supporting a move to net zero through improved public transport, modal shift, and infrastructure for electric vehicles
- Maintaining good connections among local places that help support local economic activity

### Creating a new focus for the LHN

The LHN needs a new vision. This vision, created with and endorsed by the government, should include how the LHN can help move the country to a carbon-neutral system, create sustainable, green, equitable, and accessible places, support digitalisation and innovation, make people healthier, and help the economy grow.

### National transport strategy

Currently, the transport strategy at a spatial level across the UK lacks coordination. An effective strategy would provide a coordinated programme of infrastructure investment, giving businesses the increased certainty they need. This would enable the sector to support key public policy programmes, including economic growth, reducing inequality, tackling the health agenda, and addressing the impacts of climate change.

As part of this strategy, the links between planning and transport need to be improved. Too often, we build first and then think about transport infrastructure afterwards. To mitigate against this, CIHT, in collaboration with others, published 'Better Planning, Better Transport, Better Places'<sup>3</sup> in 2019, providing practical advice on how to better integrate planning and transport to deliver more integrated and sustainable places.

### Funding

Put simply, not enough money is being spent on the network to maintain its condition. Currently, money that is allocated for maintenance is not ring-fenced and so is often diverted, for example to pressing social needs.

Yet investment in highway maintenance brings a high return. According to a Department for Transport (DfT) report, for every £1 spent in increased maintenance comes a £2.70 return.<sup>4</sup> Money currently allocated to spend on the LHN is circa £3.65 billion a year for capital and maintenance work.

These funds include capital funding<sup>5</sup> from the DfT as well as revenue funding from the councils' own resources, including council tax and business rates, and from the Revenue Support Grant from the Ministry of Housing, Communities & Local Government (MHCLG). The Revenue Support Grant can be used to finance revenue on any service, with no specific grant for highway maintenance services.

<sup>3</sup> Chartered Institution of Highways & Transportation (CIHT) (2019), Better Planning, Better Transport, Better Places <https://www.ciht.org.uk/knowledge-resource-centre/resources/better-planning-better-transport-better-places/>

<sup>4</sup> Department for Transport (2016), Valuing the Benefits of Highways Maintenance, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/487937/highways-maintenance-benefits-summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/487937/highways-maintenance-benefits-summary.pdf)

<sup>5</sup> Text as per document

Increasing pressure on adults' and children's services with statutory care responsibilities has resulted in reduced budget provision for highway maintenance. This has led to cutting back routine activity such as gully emptying and weed spraying, which prevent damage to the assets.

How much money each local authority spends on highway maintenance annually or compared to funding allocated for that purpose is generally unclear. No monitoring is performed to ensure that it is spent in the most cost-efficient way.

In 2018, the number-one concern for motorists was

the condition of local highways, and only 38% of the respondents to the National Highways and Transport Public Satisfaction Survey (NHTPSS) were satisfied with how potholes and damaged roads are dealt with.<sup>6</sup>

Without a change in approach, the condition of the LHN will worsen, with knock-on impacts for government ambitions in areas of transport, health, safety, economic growth, zero carbon, and social welfare.

The TSC clearly stated in its July 2019 report that the LHN needed a change in funding and that innovation was vital to develop better data collection and better highway management.

## LOCAL HIGHWAYS AND THE INDUSTRIAL STRATEGY

### Guaranteed, long-term funding to renew England's LHN would meet all five foundations of productivity set out in the industrial strategy:

#### Ideas

Local highways will be key in the development of electric and autonomous vehicles. They will house and test sensor technology to understand road performance and manage traffic and are the home for new broadband technologies, including 4G and 5G.

#### People

A significant, reliable uplift in investment for years to come will create good jobs for people in their local community and improve earning power close to home whilst supporting people to be healthier and access opportunities.

#### Infrastructure

Local highways provide the basic infrastructure that enables economic activity and feed national infrastructure for cars and freight, but they are also the routes for local public transport, cycling, and walking.

#### Business environment

Businesses need uncongested and well-maintained access and egress for goods and staff, which a renewed LHN can provide.

#### Places

Well-maintained local highways can set the standard for sustainable, prosperous communities across the country, encouraging social connection, street culture, and a sense of pride while improving safety and reducing crime.

<sup>6</sup> National and Highways & Transport Network (NHT) (2019), NHT Survey Annual Report - Public satisfaction survey <https://nhtnetwork.org/wp-content/uploads/2019/11/2019-NHTPS-Executive-Summary.pdf>



# Recommendation 1: Create a new focus

The LHN needs a vision which should be part of an integrated national transport strategy. This vision should include how the LHN can help move to a carbon-neutral system, create sustainable, green, and accessible places, support digitalisation and innovation, make transport healthier, and help the economy grow.

CIHT recommends that the government create a clear system to monitor the performance of the local highways sector over the next five years. In the same period, the government should work with the sector to develop a new focus for the LHN. These will be achieved through the following:

## 1. Recommendation 1: Create a new focus for the LHN

- 1.1. Establish an improved system of monitoring that (a) gives clarity on how the LHN is performing and (b) includes comparisons of efficiency, effectiveness, and innovation in delivery
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- 1.3. Define how local highways meet the economic and social requirements of local areas: roads for places, roads for distribution, roads for access (both rural and suburban), and roads for sustainable and active transport
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- 1.6. Review regulations and legislation relevant to the LHN

### 1.1 Establish an improved system of monitoring that (a) gives clarity on how the LHN is performing and (b) includes comparisons of efficiency, effectiveness, and innovation in delivery

At a local authority level, monitoring has been conducted through national statistics, through incentive funding, and (on a voluntary basis) through surveys such as that of the National Highways and Transport Network<sup>7</sup> (NHT). The issue is that this monitoring is somewhat fragmented, and CIHT believes that over the next few years, a firmer basis of monitoring should be established.

The monitoring arrangements of roads have evolved in recent years, but this review notes a need for greater clarity across all roads in England. The remit of the Office of Rail Regulation [now called the Office of Road and Rail] (ORR) was expanded to include strategic roads as part of establishing Highways England.

CIHT considers a need for a greater clarity for everybody about how local highways are performing; the money invested must be spent wisely. The Infrastructure Act 2015<sup>8</sup> allowed the creation of Highways England, a government-owned company. The act included the establishment of a monitoring function by the ORR to monitor how a strategic highways company exercises its functions.

CIHT calls for the government to explore the most appropriate mechanism by which the outcomes of the LHN in England are effectively monitored. Differentiating between monitoring and regulatory functions is important. The regulatory function is more extensive in terms of having the powers to enforce law and compliance, e.g. setting performance specifications and levying fines for not meeting these. The monitoring function, as noted earlier, undertakes many similar exercises to gather information on performance; however, it does not act on this information.

<sup>7</sup> National and Highways & Transport Network (NHT), <https://nhtnetwork.org/about-us/>

<sup>8</sup> Legislation Infrastructure Act (2015) <http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted>

## 1.2 Encourage greater collaboration through providing an appropriate incentive funding regime

CIHT supports the idea of incentivising certain performance measures but would encourage that measures in the current arrangement be reviewed or new ones be applied to support the delivery of outcomes. As we begin to acquire more data and a better understanding of assets, we can think about what we want from our network beyond ensuring an appropriate condition. A 2019 Rees Jeffery Report<sup>9</sup> states,

**“Advances in data collection mean it’s now practicable to prepare for a step change and treat roads as a public service alongside all the others. If we don’t, we cannot properly make sense of what we’re investing in and why.”**

CIHT would encourage, through incentive funding, greater collaboration. This aligns with one of the comments from the CIHT survey about what good reform would look like: ‘Larger, regional/area highway authorities building on the best practice of the incentive fund recommendations’. The TSC, in their report on local roads funding and governance, welcomed the improvements made by regional highway alliances.

The TSC report<sup>10</sup> rightly highlighted the need to take advantage of technology and innovation, stating that innovation is essential for the efficiency and effectiveness of local road maintenance. Their report noted that although the government stimulates and encourages innovation, the value for money of any investment in innovation is only properly repaid when new technologies, ideas, and ways of working are scaled up and available to all.

The role of a monitor could discharge some of the recommendations from the TSC report<sup>11</sup> on local highways, where it was suggested that sharing good

practices and benchmarking the performance by local highway authorities would be useful. If a connection exists between funding and the reward or incentivisation of authorities to innovate, then the value of this could be integrated and shared across authorities.

The SRN and (soon) the MRN both have a funding arrangement, the Road Investment Strategy, which provides Highways England and local authorities with the means to plan and manage that part of the network in a consistent manner. A step in the right direction was made with the announcement of the MRN.

The next logical step will be to rectify the ‘unsatisfactory arrangements still in place for the 98% [96% excluding the MRN] of roads that are run by over 150 [local highway authorities]’<sup>12</sup> by committing to long-term funding for the LHN. This would be in accordance with the DfT’s ‘Transport Investment Strategy’, stating that they ‘will continue to prioritise predictable funding and a stable long-term pipeline of projects’.<sup>13</sup>

Local highways total almost 175,000 miles, which is 92% of the overall road length in England. The network also contains footways, cycleways, street lighting, structures (including bridges), highways drainage, street furniture, and trees as well as traffic signals, signs, and markings. Local highways are much more than routes for traffic; they create the atmosphere of a place. When planned and maintained properly, they add to feelings of safety, security, and well-being, promoting social cohesion and economic development.

## 1.3 Define how local highways meet the economic and social requirements of local areas

The existing classification of the network<sup>14</sup> (into ‘A’, ‘B’, ‘C’, and ‘U’ – unclassified) is not relevant to how this vision will be delivered or does not help reflect how local highways are used by people daily. CIHT proposes the development of a system that better represents what local highways do to support the economic and social activity in local areas and what is required in

<sup>9</sup> Carey, P. (2019), ‘What Do We Want from Our Roads: Outlining a Service Specification’, Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2019/04/190410-Roads-as-a-Service-final.pdf>

<sup>10</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017–19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

<sup>11</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017–19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

<sup>12</sup> Quarmbly, D and Carey, P (2016), A Major Road Network for England, Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2016/10/A-Major-Road-Network-for-England-David-Quarmbly-and-Phil-Carey-Rees-Jeffreys-Road-Fund-October-2016.pdf>

<sup>13</sup> Department for Transport (2017) Transport Investment Strategy, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/624990/transport-investment-strategy-web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/624990/transport-investment-strategy-web.pdf)

<sup>14</sup> See Appendix A of the report for further details on the classification of roads.

infrastructure terms to deliver that. This will also help develop a clearer definition of what people can expect from local highways.

The classification for navigation will not change; CIHT is not proposing a renumbering of all the motorways and A and B roads in every road atlas. However, CIHT would like to build on the approach underpinned in the UK Roads Liaison Group (UKRLG) code of practice 'Well-managed Highway Infrastructure'<sup>15</sup> and move to a clear expression by practitioners, policymakers, and local politicians of the purpose of the LHN. The stewardship of the roads need to work within a road hierarchy that better represents what local highways do to support people across urban and rural geographies. As a starting point for a discussion on how to categorise local highways, CIHT proposes the following broad categories:

- **Roads for sustainable and active transport**<sup>16</sup> - These are roads and routes that promote active, inclusive, and healthy lives. These will focus on allocating enough road space and infrastructure to support safe walking, cycling, and other sustainable modes. This will create a system whereby these modes are integral to the LHN and maintained accordingly.
- **Roads for places** - These are roads in the centres of cities, towns, and villages with a complex mix of uses. This will require addressing five key areas set out in CIHT's 'Creating better streets: Inclusive and accessible places'<sup>17</sup>: inclusive environments, ease of movement, safety and public health, quality of place, and local economic benefit.
- **Roads for access** - These are roads in both rural and suburban areas that are about movement. They provide access from peoples' homes into town centres, villages, stations, health centres, and community and business locations. They also allow access for goods and services to peoples' homes and businesses. They will have a mix of transport modes that need to be reflected in the way they are managed and maintained. Although vehicular use will likely be dominant, they should safely support sustainable modes of transport by providing public

transport<sup>18</sup> and (where appropriate) footways and cycleways. They will also require good lighting and consistent parking standards.

- **Roads for distribution** - These are the arteries of economic activity where vehicular use is prevalent. Examples include city bypasses as well as roads that link communities to the SRN and between places and key sites for commerce and industry. A focus on these routes will include durable carriageways, resilience, and technology to reduce congestion. The needs of non-vehicular road users will need to be carefully addressed, particularly regarding road safety. The LHN needs a vision which should be part of an integrated national transport strategy.

#### 1.4 Show how the highway network will support the delivery of a carbon-neutral system, create sustainable, green, resilient, and accessible places, make transport healthier, and help the economy grow

Surface transport contributes around one fifth<sup>19</sup> of greenhouse gas emissions, primarily through carbon. Through creating a new focus for the LHN that better supports sustainable modes of transport the LHN can contribute moves towards net zero.

Additionally, the local highway network should support green infrastructure to aid biodiversity and offer further measures to absorb carbon. The LHN should be able to support both a grey and a green infrastructure. Not just the pavements and footpaths (the grey infrastructure) but also the planting, sustainable drainage, trees, and so on (the green infrastructure) to support the local highway environment.

As the value of the local roads is estimated to be £400 billion, ensuring that all the local assets are valued is important – from pavements to footways, from lighting columns to bridges and green infrastructure. Investing in creating greener environments within the fabric of our LHN supports regeneration and helps the economy grow.

<sup>15</sup> UK Roads Liaison Group (2016), Code of Practice 'Well-managed highway infrastructure' <http://www.ukroadsliaisongroup.org/en/codes/>

<sup>16</sup> CIHT (2019), Streets And Transport In the Urban Environment, <https://www.ciht.org.uk/knowledge-resource-centre/resources/streets-and-transport-in-the-urban-environment/> CIHT Manual for Streets and Manual for Streets 2. CIHT is exploring Manual for Streets 3 with the Department for Transport. These are also supported through CIHT's 'Streets and Transport in the Urban Environment'

<sup>17</sup> CIHT's (2018), 'Creating better streets: Inclusive and accessible places' which should be encompassed in 'Roads for places' – see page 9 [https://www.ciht.org.uk/media/4463/ciht\\_shared\\_streets\\_a4\\_v6\\_all\\_combined\\_1.pdf](https://www.ciht.org.uk/media/4463/ciht_shared_streets_a4_v6_all_combined_1.pdf)

<sup>18</sup> Department for Transport (updated 2020), A better deal for bus users, <https://www.gov.uk/government/publications/a-better-deal-for-bus-users/a-better-deal-for-bus-users> For example, in October, 'A Better Deal for Bus Users' noted that all new road investments in England which receive central UK government funding will be required to either support bus priority measures or explain why doing so would not be necessary or appropriate in that instance.

<sup>19</sup> Office for National Statistics (2019), Road transport and air emissions, <https://www.ons.gov.uk/economy/environmentalaccounts/articles/roadtransportandairmissions/2019-09-16>

The London Borough of Islington used the Capital Asset Value for Amenity Trees (CAVAT), which provided a basic structural value of £110 million for street trees in the borough. Using this tool enables authorities to establish an annual maintenance budget – around 1% to 1.5% for their financial budgeting.

### 1.5 Define what people can expect from the LHN, underpinned by an outcome-based service specification and guidance for local authorities and other practitioners

CIHT's response to Action for Roads in 2013 noted the need for consistent and appropriate standards to be applied across the strategic and local networks. The focus of the regulatory oversight could extend beyond that of a performance specification. The Rees Jeffrey Foundation<sup>20</sup> makes a compelling case for reform:

**“We're getting increasing value from the [performance specification] for the SRN, but stopping at that ignores the great majority of road journeys up and down the country; drivers pay up and obey the rules, but they're given little sense of what they should expect in return.”**

CIHT welcomes the work by the Rees Jeffrey Foundation (Carey, 2019)<sup>21</sup> in making the case of moving from a performance specification to a service specification for all roads. Currently, we have a performance specification for Highways England, but at some point, we need to move to a service specification for all roads.

An outcome-based service specification, if constructed correctly, should help the LHN to better observe the wide-ranging benefits it can deliver for the economy and for the environment. What do public transport users want from the LHN? What do pedestrians and cyclists want? They want outcomes showing that the network can support in addressing and even mitigating against the effects of climate change. These are elements for a specification that should focus more on the outcomes delivered from the network.

### 1.6 Review regulations and legislation relevant to the LHN

As CIHT is calling for a new focus for the highway network, this means that the duties required for local highway authorities will need to be considered. This would apply across a range of regulations and legislation, i.e. not just the Highways Act but also the Traffic Management Act, the Automated and Electric Vehicles Act 2018, and the Equalities Act, amongst others.

Taking an example, based on the results from a CIHT survey, 57% of the respondents said the Highways Act was no longer fit for purpose.<sup>22</sup> Part of this was explained by the fact that it is now almost 40 years old, but other factors included the adoption of roads as well as changes in responsibilities and technology since then and expected in the future. One response noted that it has an outdated focus on 'moving traffic'. Engineers invariably interpret that as moving motorised traffic. This means pedestrian and cycle traffic is potentially ignored and side-lined as an afterthought in terms of funding and design.

Another point raised through consultation conducted with the sector involved the need to implement Part 6 of the Traffic Management Act. Part 6 of the act allows councils outside of London to enforce moving traffic offences, for example making banned turns, exceeding weight limits, and stopping in yellow box junctions.

<sup>20</sup> Carey, P. (2019), 'What Do We Want from Our Roads: Outlining a Service Specification', Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2019/04/190410-Roads-as-a-Service-final.pdf>

<sup>21</sup> Carey, P. (2019), 'What Do We Want from Our Roads: Outlining a Service Specification', Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2019/04/190410-Roads-as-a-Service-final.pdf>

<sup>22</sup> See Appendix B: Summary of the CIHT survey.

# Recommendation 2: Commit to establishing a local highways fund

The evidence gathered as part of this review led CIHT to consider that funding is a challenge for local highways. Both capital and revenue funding need to be considered as they are both fundamental to the management of the LHN. As with other infrastructure assets and the SRN, longer-term certainty of funding is vital.

## 2. Recommendation 2: Commit to establishing an inflation linked local highways fund

- Establish a 10-year additional funding settlement (should be additional to the current annual capital and revenue funding that local authorities receive for highway maintenance) of £15 billion TOTEX to address the maintenance backlog
- Agree a 10-year local highways fund - leading to improved efficiencies and effectiveness in the management and maintenance of the LHN, including incentivisation to deliver wider outcomes for people and society (would allow maintenance to facilitate active travel, supporting the decarbonisation agenda whilst improving peoples' health)
- Allocate an initial £7.5 billion from the fund for the first five years, distributed to local authorities on a yearly increasing basis as a new national asset conditions dataset is introduced

- Allocate a further £7.5 billion from the fund for the second five-year period, with distribution taking account of local authority performance, asset conditions, road function and increasing length.

The above recommendations are consistent with the TSC recommendation: 'We recommend that the [department] should propose a front-loaded, long-term funding settlement to the [treasury] as part of the forthcoming [spending review] so that local authorities can address the historic road maintenance backlog and plan confidently for the future'.<sup>23</sup>

### Current spending

Total local road maintenance expenditure in 2017/18 was £3.65bn<sup>24</sup>. The expenditure is a combination of local government own revenues and funding from the Department for Transport and the Ministry of Housing Communities and Local Government. As noted by the Transport Select Committee: "Although central government funding is significant, local authorities typically spend more capital money on highways maintenance than the sum provided to them through the DfT".

### Structural maintenance funding:

Approximately half of the expenditure on structural maintenance is funded by the Department for Transport's Highway Maintenance Block Grant and the other half comes from additional sources.

<sup>23</sup> Department for Transport (2014), Local authority highways maintenance funding: 2015/16 - 2020/21 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/374566/consultation-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/374566/consultation-document.pdf)

<sup>24</sup> The Transport Select Committee (2019) 'Local roads funding and maintenance: filling the gap' see page 15 This data is from the DfT Road Condition Statistics Table RDC0310 'Maintenance expenditure by road class, in England, from 2005/06 to 2017/18 at 2017/18 prices [see: <https://www.gov.uk/government/statistical-data-sets/road-condition-statistics-data-tables-rdc>] CIHT in their analysis rounded this up as the figure was £3.66bn - this included the following components: - Revenue maintenance expenditure mainly covers the routine works required to keep the highway serviceable and reactive measures to rectify defects. The Department for Transport reports expenditure as being apportioned as follows:

- £2.21bn for Structural maintenance
- £1.12bn for Routine and other maintenance
- £0.33bn for Policy, planning & strategy maintenance

The Highway Maintenance Block Grant is ~£1bn. and does not take account of inflation or an increasing network length. The Needs Based formula element (75%) is directly allocated on an historically defined apportioned basis amongst local authorities whilst receipt of all of part of each local authority's Incentive Fund formula element (comprising 18% of the overall Block Grant) is dependent on the extent to which a local authority meets the performance requirements of the annual 'self-assessment questionnaire' process. The Block Grant was top sliced to create a Challenge Fund (7%) element. Funds can only be secured from this fund through a competitive bidding process in three separate tranches at irregular intervals over the last five years.<sup>25</sup>

The additional capital funding comes from ad-hoc funding announcements like the Pothole Action Fund and local authority raised funds such as borrowing, use of capital reserves and monies from parking fines and other fees.

### Routine maintenance funding:

The 'routine and other' expenditure, the majority of which is revenue expenditure, comes from councils' own resources including Council Tax, Business Rates and from the Revenue Support Grant from the Ministry of Housing, Communities and Local Government.

### Policy, planning & strategy maintenance:

This funding includes all aspects of managing the LHN, including works on and general asset management of the LHN.

### What funding level is required?

CIHT has examined three approaches to explore the level of funding required to bring the LHN into a 'steady state' condition. The approaches take on different perspectives of the funding requirements, thereby allowing the selection of the most appropriate option to address the problems the network faces.

- The first approach looked at the existing evidence provided by a range of estimates of the level of additional investment required for the local carriageway network, which ranges from £5 billion to £10 billion (this approach looks at just the carriageway condition).

- The second approach looked at a core investment case that covered all assets based on the evidence from the highway maintenance Private Finance Initiative (PFI) programme, which came to £18 billion.
- The third approach took evidence from local highway authorities and considered both capital and revenue funding. This approach is the most appropriate, and the investment required is £15 billion. For comparison, the government's response to the TSC enquiry highlighted a figure of up to £12 billion.<sup>26</sup>

The three approaches are detailed below.

### Approach 1 - Existing evidence case

The Asphalt Industry Alliance's (AIA) Annual Local Authority Road Maintenance Survey (ALARM) for 2019 concluded that almost £10 billion<sup>27</sup> was required to clear the maintenance backlog. A more conservative estimate is £5 billion from the National Infrastructure Commission (NIC).<sup>28</sup> In its 2018 National Infrastructure Assessment, it wrote that 'the economic case for maintenance is very strong since inadequate upkeep creates a risk that roads may need to be closed for emergency repairs ... The [commission] recommends that [the] government should make £500 million a year of funding available from 2025/26 to 2034/35 for local highway authorities to address the local road maintenance backlog'.

AIA's backlog estimate has merit in that it builds on existing evidence, and both the NIC and the AIA address one of the major elements of the backlog (the carriageway) for local highway authorities. The lower estimate is based on the NIC's recommendation of £0.5 billion in additional funding each year for ten years to bring the network into a steady-state condition (a total of £5 billion). The higher estimate is based on the AIA's recommendation of £1 billion in additional funding each year for ten years to bring the network into a steady-state condition (a total of £10 billion).

### Approach 2 - The core investment case

The second approach is the PFI, as applied to highways (in the principal of a wider-scale approach of investing to save), and look at what level of additional core investment was required for the LHN.

<sup>25</sup> Department for Transport (2014), Local authority highways maintenance funding: 2015/16 - 2020/21 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/374566/consultation-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/374566/consultation-document.pdf)

<sup>26</sup> Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>

<sup>27</sup> Asphalt Industry Alliance (2019), Annual Independent Survey 2019, <https://www.asphaltuk.org/alarm-survey-page/>

<sup>28</sup> National Infrastructure Commission (2018), National Infrastructure Assessment. [https://www.nic.org.uk/wp-content/uploads/CCS001\\_CCS0618917350-001\\_NIC-NIA\\_Accessible.pdf](https://www.nic.org.uk/wp-content/uploads/CCS001_CCS0618917350-001_NIC-NIA_Accessible.pdf)

The logic of applying a comparison with the core investment period of the PFI highways programme is useful as these schemes were based on gathering detailed asset inventories and allocating capital based on robust financial scrutiny and risk apportionment. As such, the model of ‘scaling up’ the core investment period of the highways PFIs is useful as it is based on a detailed assessment of all assets (street lighting, bridges, footways, and carriageways) as opposed to a ‘carriageway only’ approach.

For this, we looked at the five highway maintenance PFIs in England (Hounslow, Isle of Wight, Birmingham, Sheffield, and Portsmouth) and used them to model the core investment required across the English LHN, concluding with a figure of £36 billion over five years.<sup>29</sup> Considering the current level of funding of £3.6 billion and assuming this holds constant over five years,<sup>30</sup> the total would be £18 billion, half of what the PFI core investment suggests is required. An additional £1.8 billion in funding each year for ten years is needed to bring the network into a steady-state condition (a total of £18 billion).

Again, this scenario focuses on a significant capital uplift being allocated to the LHN. However, this option may not be suitable as it is too large a scale of investment in a short period.

### Approach 3 - The local authority perspective

Another way to determine the level of funding required is to hear directly from local authorities based on their own analysis of need. This approach provides a more granular level of analysis and, although approximate, can provide a proxy measure of what is required across the rest of England. We gathered estimates from local highway authorities that accounted for all asset types and included more details on ongoing revenue issues for local highway authorities. CIHT has secured analyses from Lincolnshire, Suffolk, and Staffordshire.

Starting with the capital funding position, analysis from the Suffolk County Council<sup>31</sup> using the Highway Maintenance Efficiency Programme (HMEP) lifecycle toolkit concluded,

“A focus on the AIA [ALARM] Survey road maintenance backlog suggests that doubling the DfT capital investment would clear the [£9.7 billion] backlog in 10 years. An HMEP-based assessment (using Suffolk as a proxy) indicates that a doubling of the current DfT funding would allow a better steady state for [the] ‘red’ condition, virtual clearance of the ‘amber’ condition, and a decent level of investment in other [infrastructures] to keep revenue costs down. With a doubling of capital investment, the maintenance of the road surface is (arguably) combatted, but little else is addressed. Road signs, vegetation management, elements of drainage (e.g. grip cutting), road markings, and bridges remain underfunded areas of revenue-based work, thus requiring additional revenue investment.”

A key point is that reductions in revenue funding can disproportionately impact on active travel. CIHT would like to see maintenance for active travel<sup>32</sup>; this will support the decarbonisation agenda whilst improving peoples’ health. Footways that become overgrown with vegetation could discourage people from walking. A recent study noted that 31% of cyclists are apprehensive to cycle following a pothole-related incident/accident.<sup>33</sup> This means that the funding issue must address both capital and revenue funding, i.e. consider total expenditure (TOTEX) funding.

<sup>29</sup> The five PFIs found that £996 million was allocated through PFI credits. These investments were for only 2% of the road network, so scaled up for the rest of England, the amount would be £45 billion. CIHT took off an assumed 20% premium figure to represent the risk transfer and private financing costs inherent in the PFI model. Data from: UK Government (2014), Private Finance Initiative projects: 2014 summary data <https://www.gov.uk/government/publications/private-finance-initiative-projects-2014-summary-data> and Department for Transport (updated 2020), ‘Road network size and condition’ <https://www.gov.uk/government/collections/road-network-size-and-condition>

<sup>30</sup> CIHT used five years for this approach as this has been the typical period for the core investment period for highway PFIs.

<sup>31</sup> Stevens, M. (2019), ‘Investing revenue and capital funding into maintaining local highway infrastructure.’ Mark is the assistant director of operational highways of the Suffolk County Council and chair of the Engineering Board at the Association of Directors of Environment, Economy, Planning & Transport (ADEPT). Available on [www.ciht.org.uk](http://www.ciht.org.uk)

<sup>32</sup> This term is derived from the Hertfordshire County Council’s work on making the case for active travel through maintenance expenditure (notably from revenue funding)

<sup>33</sup> Cycling UK (2018), news story ‘156 local authorities spend total of £43.3 million on pothole claims’ <https://www.cyclinguk.org/press-release/156-local-authorities-spend-total-ps433-million-pothole-claims>

The evidence provided from Lincolnshire was modelled across carriageways, lighting, signs, and footway assets. It suggests that an additional five-year budget of 85% over the current level of capital funding was required for their authority to improve the network and maintain a 'steady state' of condition. Over five years, at a national level across England, this equates to £9.4 billion.<sup>34</sup>

Analysis by Staffordshire concluded that they needed five times their current capital funding to reach a 'steady state' level of condition; scaled across England, this is £11 billion,<sup>35</sup> an amount perhaps more accurate given the concerns that the AIA figure was too narrow in its perspective. This analysis shows that a figure between £9 billion and £11 billion of capital funding is required to achieve a 'steady state' of condition.

Turning to the revenue side of the equation, support for increased revenue funding was reported in CIHT's survey, where the respondents said that insufficient revenue funding prevents the use of data-driven policies.

At Suffolk, Mark Stevens assessed the required level of revenue funding to maintain the network and concluded that a significant increase was needed (to return funding to pre-austerity levels following reductions since 2010).<sup>36</sup> This view was supported by Lincolnshire. Without this level of investment, the capital investment would not deliver as funding would be insufficient to maintain the condition.

Local government revenue funding has fallen by about 25% since 2010. The allocation within it for local highways is not ring-fenced and is often used by councils to plug gaps in other budgets.<sup>37</sup> Inflation-adjusted spending by councils across England has seen

highways and transportation spending fall by 40% from 2010 to 2017/18.<sup>38</sup>

CIHT takes a 30% increase as a conservative estimate of what is needed to restore revenue funding to pre-austerity levels (i.e. since 2010). Then funding across England would need to increase from £1.12 billion<sup>39</sup> to £1.6 billion, a revenue uplift over 10 years of an additional £4.8 billion.<sup>40</sup> This, combined with a capital uplift of £10 billion, leads to a figure of £15 billion in additional funding over 10 years to bring the network into a steady-state condition.

To sum up, in the first funding approach, the range of additional funding required runs from the lowest for carriageway investment, from the NIC of £5 billion and the £10 billion from the AIA required to clear the network; this approach, however, is too narrow in focus.

The second approach looks at taking a core investment case from the PFI programme, resulting in £18 billion, a more considerable figure and perhaps too ambitious to be both politically and practically deliverable.

This leads to the third approach as the most plausible in terms of coverage and deliverability. It includes capital and revenue and is based on evidence from local highway authorities. This scenario concluded that an additional £15 billion in funding was required – spread over ten years – to bring the network into a steady-state condition.

<sup>34</sup> As £2.2 billion of the £3.6 billion is allocated to capital, an 85% uplift would lead to £4 billion of capital funding required, £1.8 billion more than the current £2.2 billion.

<sup>35</sup> This is five times the £2.2 billion.

<sup>36</sup> According to Suffolk, in-year pressures suggest that current revenue funding is insufficient, so using the 2018/19 funding level (£11.9 million), increasing by a minimum of £4.2 million, lifts this to £16.1 million (i.e. 2011/12 levels). However, the 2010/11 funding level of £17.38 million increasingly seems a more realistic revenue sum. That constitutes a circa 70% increase, but without an 'extra' £16 million per annum spent on preventative carriageway maintenance and lighting energy costs rising at 11% per annum, the revenue spent potentially spirals beyond a sustainable position.

<sup>37</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

<sup>38</sup> BBC News, 5 December 2018, 'How cuts changed council spending, in seven charts', <https://www.bbc.co.uk/news/uk-england-46443700>

<sup>39</sup> The assumption made here is that the maintenance figure across England is £1.12 billion, as indicated in the earlier figures at the start of this section.

<sup>40</sup> The difference of £1.26 billion to £1.6 billion is £0.48 billion, calculated over 10 years.



### How the funding should be delivered

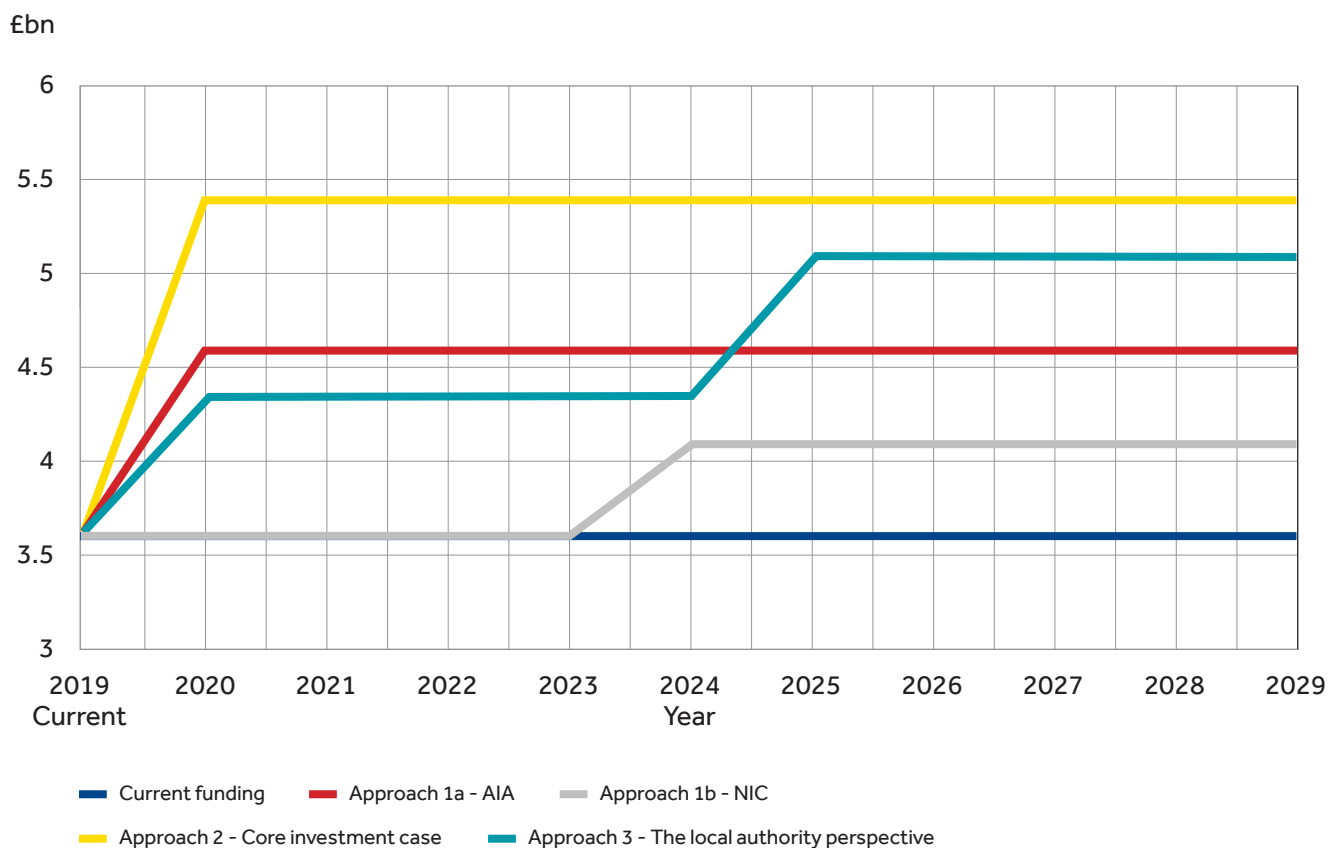
CIHT believes that the sector lacks the capacity and capability to deliver the works from an instant doubling of funding. We propose that the funding gradually increase over a five-year period, with indicative funding for an extra five years, with a review of progress based on the additional information that better data will give [see Figure 1 below].

CIHT expects this additional funding to deliver efficiency savings but is cautious about quantifying how much. In 2011, a review investigated the management of the SRN and suggested that this action could produce efficiency savings of 15%–20%,<sup>41</sup> noting that this would be

achieved through greater efficiencies and effectiveness. Measuring actual efficiencies achieved in the highways sector is an evolving process, and the ORR has been working on this with Highways England.<sup>42</sup>

CIHT would welcome a similar process being carried out for the LHN and see this being part of the monitoring concept outlined in Recommendation 1. CIHT believes that increased levels of efficiencies could be achieved for the LHN if a greater funding allocation (and certainty of funding) was provided. This additional funding will need to be developed in parallel with an increased understanding of asset conditions through improved data collection and performance monitoring.

Figure 1 - How the funding should be delivered: Three approaches to funding



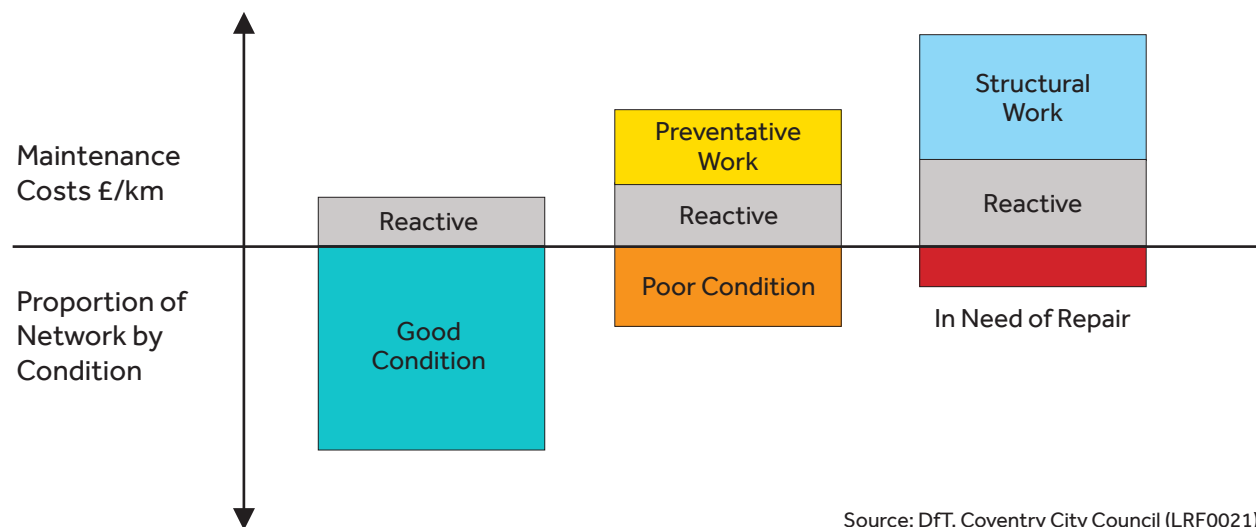
<sup>41</sup> Department for Transport (2013), 'Action for Roads' [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212590/action-for-roads.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/212590/action-for-roads.pdf)

<sup>42</sup> Office of Road and Rail Regulation (2019) 'Annual assessment of Highways England's performance, from April 2018 to March 2019' <https://www.gov.uk/government/publications/annual-assessment-of-highways-englands-performance-april-2018-to-march-2019> noted, 'It is essential that a better, [fully funded] baseline plan is developed for RIS2, built on a clear understanding of scheme costs, timings, and scope.'

### How the additional funding should be provided

Delaying essential works on highways often increases the bill for fixing the problem and increases the exposure to additional costs through public liability claims. The TSC report (2018)<sup>43</sup> includes a good illustration of this.

Figure 2: Road maintenance costs and network condition



Source: DfT, Coventry City Council (LRF0021)

How the funding is delivered must be carefully considered. The outcome should be that the investment in transport facilitates peoples' journeys. *Funding settlements must deliver the best value for money, achieve fairness across authorities, address specific challenges these authorities face, and reward ambition.*

CIHT does not support too many different funding packages as this creates additional pressures on local authorities in competing for limited funding and the resource inefficiencies this incurs. CIHT supports an element of incentivisation and would like to see this developed to deliver wider outcomes for people and society.

**CIHT calls for additional funding for the LHN of £15 billion, spread over ten years, from 2021 to 2030 (over and above the £3.6 billion current funding)**

Additional funding needs to work in parallel with improved asset condition data, including the monitoring of progress. Such changes will require a certain amount of additional investment to achieve the required change in governance and management of the LHN. In summary, it is proposed that we do the following:

- get clarity on available funding to allow the sector to respond effectively;
- increase funding because
  - it gives the sector time to adjust and to improve the capacity and capability to deliver what is required and
  - it allows an understanding of how increased investment leads to better condition by the improved understanding of asset data; and
- create a monitoring function, working towards series of outcome measures that act to incentivise the sector (LAs and providers) to deliver efficiencies in a way that provides clarity of how the additional funding is being spent.

<sup>43</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html> (page 38 of report)

# Recommendation 3: Create a better understanding of the asset through improved data

The code of practice 'Well-managed Highway Infrastructure'<sup>44</sup> states clearly that establishing an effective regime of inspection, surveying, and recording is the most crucial component of highway infrastructure maintenance. These inspections provide the data on which local road asset managers rely to make robust maintenance decisions. A better understanding of conditions across the country is needed, and authorities should be able to take advantage of innovations brought about from the latest technology.

### 3. Recommendation 3: Create a better understanding of the asset through improved data

- 3.1. Create an up-to-date database of national condition information for all key highway assets
- 3.2. Update techniques for collecting data using the latest technology

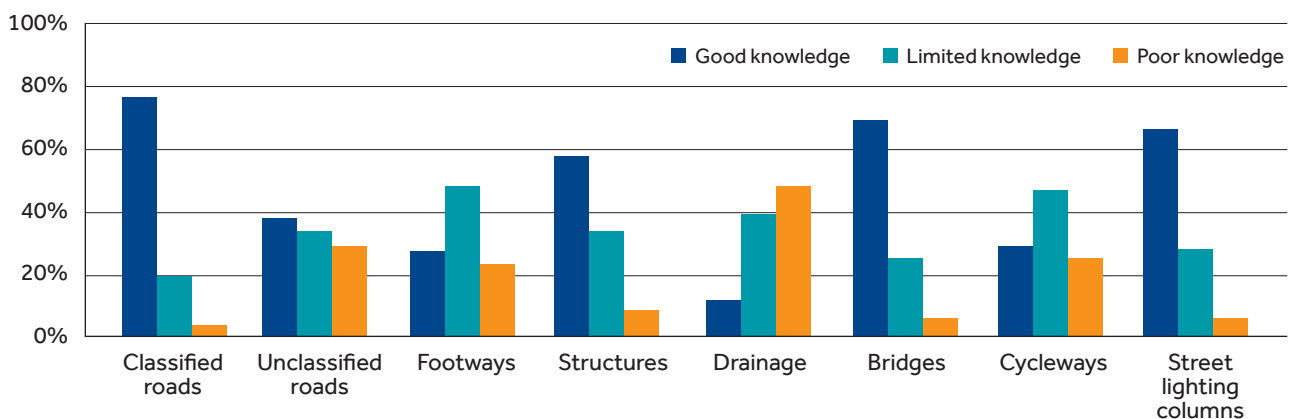
- 3.3. Develop a standard measure to calculate the required funding based on common standards of serviceability from a customer perspective

Understanding asset conditions is vital in deciding the level of funding required to maintain the LHN appropriately. CIHT proposes that a national database of asset conditions be created in parallel with the increase in funding. The collection of this data is enabled through new technology being used in the sector.

### 3.1 Create an up-to-date database of national condition information for all key highway assets

In CIHT's survey,<sup>45</sup> we asked, 'Do local highway authorities have sufficient information on the condition of highway assets for the benefit of all users?' It was clear that our current understanding of asset conditions is insufficient to determine appropriate levels of funding.

Figure 3: Do local highway authorities have sufficient information on the condition of highway assets for the benefit of all users?



<sup>44</sup> UK Roads Liaison Group (2016), Code of Practice 'Well-managed highway infrastructure' <http://www.ukroadsliaisongroup.org/en/codes/>

<sup>45</sup> See Appendix B

Some authorities have a better understanding of their assets than others, and this question probed the perception that the respondents had of asset condition data in general. These views were supported by the evidence and expressed in the TSC's (2019) report on local roads funding and maintenance. The report states,

**“We believe that local authorities will only be able to make better use of available funds for road maintenance if they can target such funding well; this requires good data. Some of the data local authorities collect on the condition of the road network is passed to the Department for Transport. We are not confident that this data gives the DfT a true picture of the state of the local highways or that any comparison of areas would compare ‘like with like’ and allow meaningful conclusions to be drawn.”**

### Key highway asset national database

CIHT thinks that this national data needs to expand further than just road conditions and would like to see an up-to-date database of national conditions for all key highway assets. This would include the following:

- **Street-lighting columns.** A considerable number of streetlights require replacing as they have reached the end of their structural life and are becoming unsafe.

- **Roads.** ADEPT's evidence to the TSC stated, 'More than half of our network is unclassified; [SCANNER] does not work in those environments. We do not have a robust process to pick that up in a consistent way and compare it nationally, but it all boils down to the extent to which each local authority can afford to carry out those surveys.' The lack of data on unclassified roads is not surprising as the DfT does not require that SCANNER data<sup>46</sup> cover unclassified roads.
- **Bridges.** CIHT welcomes work by the RAC Foundation for highlighting the growing maintenance backlog for bridges but notes that the government needs to assess the position overall.<sup>47</sup>
- **Footways and cycleways.** According to the CIHT survey, understanding of the conditions of footways and cycleways is limited. The TSC report<sup>48</sup> noted that CIHT's president said that no national indicators and very little data exist for footways. The footway is where people face trip hazards and unfriendly street furniture, which, in light of changing demographics, is, of course, worrying. Understanding the conditions of cycleways will provide a national picture to assess how areas encourage (or discourage) cycling through the provision (or lack) of good infrastructure. A lack of data might impede other policy aims from the government to improve peoples' health through investing in the support of active travel and defining clear service levels.

### 3.2 Update techniques for collecting data using the latest technology

However, CIHT has examined the issue of how changes in data surveying need to be applied, and this should take into account new technological developments. The TSC welcomed moves by the DfT to explore this.<sup>49</sup> Developments with low-cost sensors mean an easier understanding of the performance of assets.

<sup>46</sup> SCANNER is used more for reporting road conditions than as a reflection of true conditions in preparing programmes according to the results of the CIHT survey. This is perhaps unsurprising and is explained by which national indicators are collected, and the TSC report highlights how SCANNER is not useful for the unclassified road network, so for rural authorities, it has limited value. Thus, programming works for the unclassified network will be less possible with SCANNER.

<sup>47</sup> RAC Foundation (2018) Bridge maintenance backlog grows <https://www.racfoundation.org/media-centre/bridge-maintenance-backlog-grows>

<sup>48</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

<sup>49</sup> Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>

### 3.3 Develop a standard measure to calculate the required funding based on common standards of serviceability from a customer perspective

In the CIHT survey, 96% of the respondents wanted to see a standard approach to calculating the highway maintenance backlog, and 93% said that a standardised way to collect condition data for all assets (classified roads, unclassified roads, footways, structures, drainage, bridges, cycleways, street-lighting columns) is needed.

The DfT will best be able to assess the level of investment required given clear evidence that the local authorities properly understand the conditions of their assets and that data on the assets is collected consistently. This will enable better risk management and support the funding case made by the DfT to the treasury to enable the right level of investment decisions to be made for the LHN. Improved data on local road assets will not only inform our understanding

of the investment and the returns from that investment but also provide more clarity on the prioritisation of all transport infrastructure in England.

One of the responses to the survey was as follows:

**“With the exception of LAs who have completed detailed inventory and condition surveys under PFI [etc.], the level of information is limited as it is expensive to collect, and there is no national format for data collection and storage.”**

To achieve a consistent approach to data collection and how it is used, CIHT proposes that a monitoring function be set up to oversee this.

# Recommendation 4: Establish new sources of funding to support the local highways fund

The imperative is to provide an uplift and certainty of funding for a period of 10 years. This should be split into two five-year blocks, with the investment being ramped up during the first five-year period to allow the sector to gear up to the required level of resources to deliver effective service.

CIHT has consistently called for the income from vehicle excise duty (VED) to be used for the entire highways network rather than just the strategic network. As the percentage of the vehicle fleet powered by electricity rises, current levels of VED will fall, and therefore, alternative sources of funding will be required.

## 4. Recommendation 4: Establish new sources of funding to support the local highways fund

- 4.1. Improve the efficiency of how funding is allocated to local highway authorities by reducing the number of complicated funding mechanisms and bidding processes
- 4.2. Government should identify and develop alternative and additional sources of revenue to finance the future funding of local highways, including moves to where utilities pay the real cost of reinstatement. CIHT sees opportunities for road pricing to address congestion, reduce carbon and provide a potential funding source

CIHT would recommend that a parallel process be undertaken during the proposed uplift in funding from 2021 to 2030, one that explores future funding

arrangements and takes into consideration the problems caused by the current ones.

### 4.1 Improve the efficiency of how funding is allocated to local highway authorities by reducing the number of complicated funding mechanisms and bidding processes

Various funding sources are available to local (highway) authorities, but our experience throughout this review is no appetite exists for more sources but for an increased funding pot overall. The costs to local authorities of bidding for different funds with different criteria are significant. ADEPT members deal with funding issues daily, and their policy position on highway maintenance<sup>50</sup> confirms,

**“The current funding system for local highways infrastructure is broken ... [M]ultiple uncoordinated funding streams and short-term handouts provide an uneconomic model. We need sustainable, long-term, and devolved funding that is aligned with local [highway infrastructure asset management plans].”**

ADEPT adds that the ‘[o]veruse of bidding and competition [diverts] scarce revenue resources away from managing the network’. Further, the TSC report on local roads funding and maintenance<sup>51</sup> verified this:

<sup>50</sup> ADEPT (2018) Policy Position: Highways Maintenance <https://www.adeptnet.org.uk/system/files/documents/Artwork%20PP%20Highways%20Maintenance%20Stage%203.pdf>

<sup>51</sup> Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

**“Having multiple funding streams, many of which must be competitively bid for on an ad hoc basis, makes getting funding a costly process for many local highway authorities. In some cases, it has disincentivised or prevented them from bidding for available funding.”**

The message is clear: too many short-term funding allocations do not allow for good asset management practice, ultimately resulting in the LHN not being managed as cost-efficiently as possible. The central government needs to make available funding sources clear and simple for bidders. As highlighted in CIHT’s survey, ‘[w]hatever decisions are made, the Department for Transport needs to simplify funding and bidding for funding with a much longer-term funding plan for the industry’.

Another point to consider in future funding arrangements is flexibility of choice. The TSC report notes that most funding is available for improvement schemes rather than maintenance: ‘The ability to choose to maintain, rather than improve, in certain areas would be beneficial.’

The increased allocation of both capital and revenue funding through the local highways fund should provide this greater degree of flexibility to provide a balance between improvement schemes and maintenance. The RAC Foundation’s report ‘The Condition of England’s Local Highways and How They Are Funded’<sup>52</sup> states,

**“By contrast, local highway authorities are still operating in a somewhat bewildering framework of expectations, duties, and funding mechanisms. It is hard to see how this will achieve the coherent and efficient operation of the road system as a whole, which is what road users really need.”**

In CIHT’s survey, 70% of local highway authorities described their budget planning for highway maintenance services as ‘annual adjustments to [the] previous year’s budget to reflect budget pressures and savings targets’. The central government has a role to play in facilitating the sharing of best practices in terms of obtaining funding and increasing the revenue raised by councils; CIHT sees this as being part of the monitoring function outlined earlier.

## 4.2 Government should identify and develop alternative and additional sources of revenue to finance the future funding of local highways

Local authorities are currently transitioning to becoming entirely reliant on their own revenue streams as central government grants are set to be phased out by 2024/25.<sup>53</sup> Increased business rate retention is meant to fill part of that gap, but local authorities will have to find new sources of funding to make up for the gap this creates. As the percentage of the vehicle fleet powered by electricity rises, current levels of VED will fall, and additional sources of funding will be required. Now is an opportune moment for the government to consider future funding arrangements.

Although not new, a key element to consider is the balance of costs borne by local highway authorities vis-à-vis the utility companies. Minimising the impact of disruption not just to the network operations but also to the integrity of the asset is vital for renewing the condition of the LHN.

### Utility funding

Utilities need to pay the real cost of reinstatement. They currently perform poorly when filling in the holes they have dug in local highways, with over 30% of reinstatements increasing rates of deterioration. They should be required to reinstate to best practice standards or pay the local authority to do the work.<sup>54</sup>

### Road pricing

A major issue is the potential benefits of a new payment method for roads. The ‘Future of Mobility’ report<sup>55</sup> provides a helpful overview on road pricing:

<sup>52</sup> RAC Foundation (2015) The Condition of England’s Local Roads and how they are Funded [https://www.racfoundation.org/assets/rac\\_foundation/content/downloadables/condition\\_of\\_englands\\_local\\_roads\\_and\\_how\\_they\\_are\\_funded\\_David\\_Bayliss\\_November\\_2015\\_web\\_version.pdf](https://www.racfoundation.org/assets/rac_foundation/content/downloadables/condition_of_englands_local_roads_and_how_they_are_funded_David_Bayliss_November_2015_web_version.pdf)

<sup>53</sup> Local Government Association (LGA) (2018) Local government funding [https://www.local.gov.uk/sites/default/files/documents/5.40\\_01\\_Finance%20publication\\_WEB\\_0.pdf](https://www.local.gov.uk/sites/default/files/documents/5.40_01_Finance%20publication_WEB_0.pdf)

<sup>54</sup> Elphick, R (2018) Written evidence ‘The impact of reinstatements on highway pavements’ Transport Select Committee Inquiry consultation into ‘Local Roads Funding and Governance’ <http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/transport-committee/local-roads-funding-and-governance/written/90706.html>

<sup>55</sup> Government Office for Science (2019), ‘A time of unprecedented change in the transport system’, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/780868/future\\_of\\_mobility\\_final.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/780868/future_of_mobility_final.pdf) see page 75

“Eddington (2006) stated that road pricing could bring the UK benefits totalling £28 billion a year by 2025 and lead to a halving of congestion. Most transport academics view road pricing as the best tool to allow externalities to be priced into the system and to tackle congestion.”

The ‘Future of Mobility’ report goes on to note,

“Currently, automobile users are subsidised by society; they cause more harm to society than they pay for in vehicle and fuel duty (Cabinet Office, 2009). Road pricing offers an opportunity to address this. It also allows demand to be dynamically shaped, for example by potentially being used to incentivise more socially or environmentally friendly travel options, such as [car sharing].”

The report notes issues with road pricing, public acceptability, equity across user groups, and so on but does conclude with:

“[P]ublic support for all major congestion-charging schemes has risen over time wherever they are introduced; a substantial majority of people are in favour of these once they see their efficacy.”

CIHT sees a clear link with how the vision of the LHN (outlined previously) could be delivered through tools such as road pricing funding. More specifically, the vision indicated that the LHN needs to address climate change, and CIHT sees opportunities for road pricing funding to manage congestion and to manage carbon.

#### **New technologies**

A lot of changes regarding technology have been made, and the benefits of investing in established technologies such as LEDs for street lighting should be considered by local highway authorities to deliver net zero-carbon and cost-saving benefits.

Newer technologies are coming on board, and CIHT welcomes work by the DfT to test these on the network through projects such as the Live Labs programme, wherein revenue generation opportunities should be strongly considered, such as leasing lampposts for 5G masts.

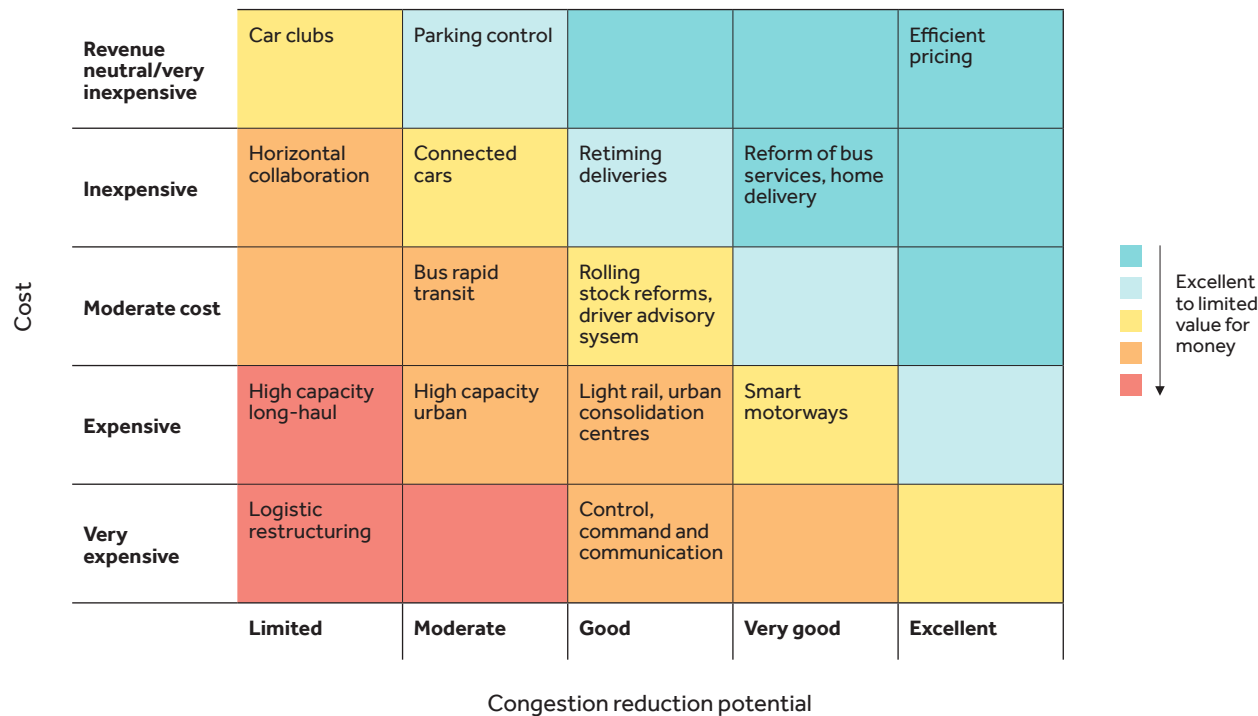
#### **Congestion-reduction measures and their value for money**

A report by the Royal Academy of Engineering noted, ‘Most transport academics view road pricing as the best tool to allow externalities to be priced into the system and to tackle congestion ... [R]oad pricing has low cost and high potential to reduce congestion compared with other potential measures.’<sup>56</sup>

<sup>56</sup> Royal Academy of Engineering. (2015). The Transport Congestion Challenge. Royal Academy of Engineering. Retrieved from [HYPERLINK "http://www.raeng.org.uk/RAE/media/Publications/Reports/The-Transport-Congestion-Challenge.pdf"](http://www.raeng.org.uk/RAE/media/Publications/Reports/The-Transport-Congestion-Challenge.pdf) www.raeng.org.uk/RAE/media/Publications/Reports/The-Transport-Congestion-Challenge.pdf



Figure 4: Congestion-reduction measures and their value for money



Source: Royal Academy of Engineering, 2015

# Summary

CIHT’s review of the LHN sets out a four-point strategy that will allow the country’s most valuable assets to deliver a wide range of benefits.

A new focus is needed to ensure that the network supports key policy areas: the delivery of carbon-neutral, sustainable, resilient, healthy, and accessible places.

A local highways fund, a 10-year additional funding settlement of £15 billion, is required to address the maintenance backlog. The government should provide this on a yearly increasing basis to allow the sector to respond. Further, the fund should include incentivisation to deliver wider outcomes for people and society.

Along with the increase in funding, the necessary evidence to allocate the funding should be collected.

Current knowledge of the condition of the LHN is lacking; this, along with a lack of focus on the wider benefits, means that investment is not targeted where it has the most benefits. Data-collecting techniques need to be updated and a standard measure to calculate funding developed.

Lastly, as transport is experiencing significant changes that influencing how (and how much) the network is funded, additional sources of revenue must be created. The government should identify and develop these and ensure that new funding arrangements are easy to understand and access for those bidding for them.

CIHT will continue to work with the government and the highways sector to help deliver a LHN that will put us on a route to a better future.

# Appendix A - Road classifications in Great Britain

By length, most roads in the UK are managed locally (by a local highway authority or Transport for London). This includes all minor roads ('B', 'C', and 'U' roads) and some major roads (principal 'A' roads and motorways). The rest of the major roads (trunk motorways and 'A' roads) are managed by Highways England.

All UK roads (excluding motorways) fall into the following four categories:

- **'A' roads** – major roads intended to provide large-scale transport links within or between areas
- **'B' roads** – roads intended to connect different areas and to feed traffic between 'A' roads and smaller roads on the network

- **'C' roads (classified, unnumbered)** – smaller roads intended to connect together unclassified roads with 'A' and 'B' roads, often linking a housing estate or a village to the rest of the network, similar to 'minor roads' on an ordnance survey map
- **'U' roads (unclassified)** – local highways intended for local traffic (the vast majority (60%) of roads in the UK fall within this category)

See <https://www.gov.uk/government/publications/guidance-on-road-classification-and-the-primary-route-network/guidance-on-road-classification-and-the-primary-route-network>.

# Appendix B - Summary of the CIHT survey

CIHT carried out a survey with the sector. The survey was available online from December 2018 and received 116 responses. The results provide a useful basis on which CIHT was able to further explore issues around the funding, governance, and operation of the LHN.

## Need for change

The first question in the survey asked, 'Do you consider it useful for the government to consider an alternative approach to the way the LHN is funded, governed, and operated?' This received overwhelming support:



The interpretation of the changes required ranged from funding, to monitoring, delivery models, and a wider articulation of how roads are used. The most common response centred on the need for more predictable funding streams over longer term periods. Some replies noted a need for greater capital funding increases, whilst others made explicit reference to a budget commitment for revenue costs as well as capital works, indicating support for an approach of TOTEX funding.

Responses to this question indicated that the sector wanted a clearer vision of how local highways are to be used. A reform should consider the economic and societal benefits of maintaining our vital infrastructure, and highways should be valued in terms of their impact on communities rather than their condition or capacity.

One reply noted that the focus for roads has typically been on the car and the commute as well as the types of journeys typically made by men. Women, children, older people, and the disabled need to have their road journeys considered (e.g. walking, cycling, and scooting).

The sector stressed the importance of a continued focus on good asset management and lifecycle planning. This connects to the wider performance management approach used and the need for clear governance and KPIs as well as easily available advice and best practice guidance. The concept of incentive funding received approval from one respondent, and another said that preventative maintenance should be rewarded as a means by which highway authority performance could be improved.

Of the total respondents, 57% said that the Highways Act was no longer fit for purpose. This was explained by the fact that it is now almost 40 years old, but other factors included the adoption of roads as well as changes in responsibilities and technology since then and expected in the future. Finally, some replies noted that larger groups of highway authorities would be beneficial as an alternative approach to the way the LHN is operated, and some replies stated a need to move to a regulated asset base model for the LHN.

## Governance structure

The survey further investigated possible changes in governance structure, specifically by exploring the hypothesis that there are too many highway authorities for the optimum delivery of highway maintenance operations. This builds on the idea that larger groups of highway authorities should be able to deliver greater efficiencies through economies of scale. Seven out of ten people said that the number of highway authorities should be reduced, not necessarily confirming the above hypothesis. CIHT was unable to establish robust evidence to support this recommendation or to support what the optimal size would be and, finally, by which model such an optimum size should be delivered (i.e. through voluntary work or through creating new highway authorities).

### Funding horizon

A longer-term funding approach may be needed; only 5% of the respondents considered the current funding system as appropriate in supporting the LHN. A five-year horizon was favoured by 44%, 36% suggested that a 5- to 10-year period would be suitable, and 15% favoured a 10-year-plus horizon. This suggests that providing 10 years of indicative funding over five-year periods would enable the local highways sector to better plan for the future and would align with the funding horizon provided to the SRN.



95%

Provide certainty of funding for 5 years or a longer period

### Funding settlement

Ring-fencing funding was strongly supported by nine out of ten respondents. Meanwhile, TOTEX funding was supported by seven in ten people. However, some respondents cautioned against a move to TOTEX by stating that separating revenue and capital is helpful in terms of measuring and understanding expenditure. Some felt that a TOTEX approach could undermine the focus on revenue funding (where they stated that greater certainty is required). Another reply expressed

this more dramatically, noting a desperate need to understand and accept the dire revenue position in which the industry finds itself, and if this is combined, that position will be hidden.

Clearly, the sector wants an uplift in both the capital and revenue funding provided (i.e. not just a capital funding settlement), and a funding settlement that delivers this is highly supported.

9 out of 10

Support ring fenced funding



7 out of 10

Support **TOTEX** funding



### Future funding

On pay-as-you-go or road user charging, the views were split. On the case against this, several replied that fuel duty is, in effect, a form of pay-as-you-go funding but caveated that this funding needs to be spent on roads. The social equity issue was highlighted, with respondents noting that pay-as-you-go funding could potentially be punitive on low earners. Caution was given that pricing roads could lead to redistributing traffic from one area to another. Furthermore, concerns were raised that a move to pay-as-you-go funding could be complicated and costly to implement.

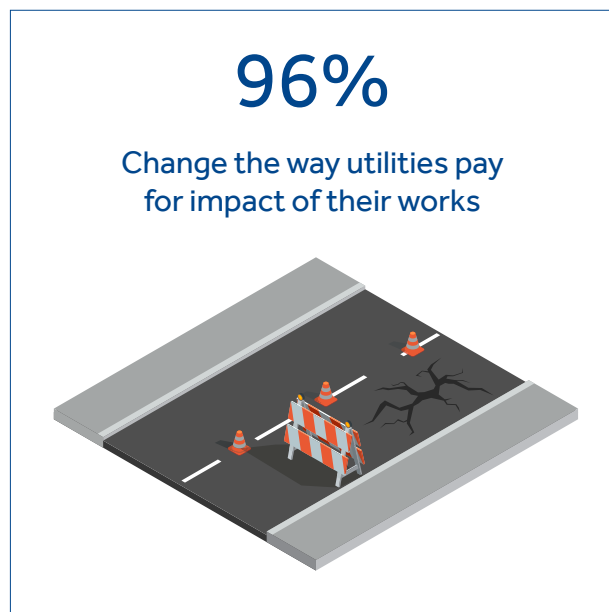
Some favoured a proportional approach to geographic implementation, stating that if it were to be implemented, it should be targeted to specific highly congested areas (i.e. in urban areas but not in inter-urban or suburban areas) with excellent public transport alternatives.

On the case for pricing, this could be used to address other public policy issues such as addressing poor air quality, reducing emissions, and encouraging active travel. One reply said this could provide a good incentive to get people to use alternative forms of transport

(walking, cycling, public transport) but would need to be very carefully considered as to how much income would be generated.

Others replied that now is the time to implement charging as we move towards electric vehicles and as modern technology enables a charge per mile to be implemented so that the user can pay (and it can address environmental issues). Any changes made will need to be simple, transparent, and cost-effective to collect and to not be significantly different in terms of cost for the average highway user.

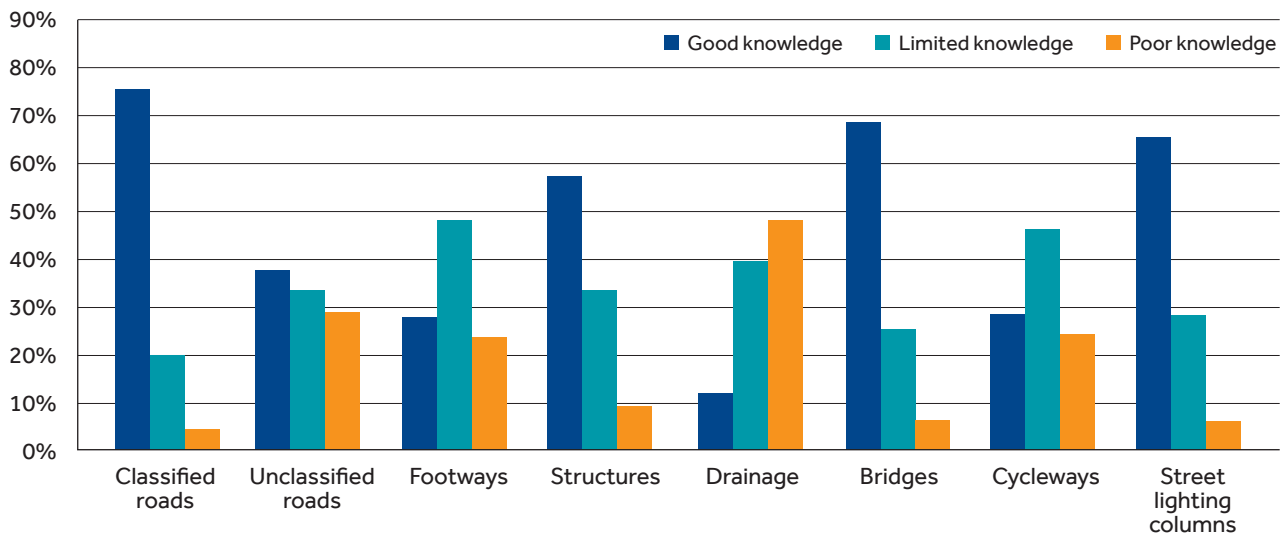
On balance, a number of opportunities from pay-as-you-go funding address both congestion and carbon issues. The implementation would need to overcome hurdles (equity issues, technology, and so on), so further investigation and consultation of this is required. Digging into the question of utilities paying for the impact of their works, a need to change the policy levers by which this could be enacted was clearly indicated. Of the respondents, 59% supported increasing the use of the permit system, 75% favoured increased charges for street works, and 83% felt that the NRSWA legislation needed to be reviewed.



### Understanding of condition

The views from the sector noted that for certain highway assets, there was limited or poor knowledge, for example on drainage assets, footways, and cycleways, to pick a few.

## Do local highway authorities have sufficient information on the condition of highway assets for the benefit of all users?



### Data standardisation

The sector wants to see standardisation of data and consistency of reporting. Several responses stated that technology changes will enable this to be achieved.

**>9 out of 10**

Standard approach to collect condition data

**96%**

We should have a standard approach to calculate backlog

## Responses

Answer Choices	Responses	
Local government	46.96%	54
Central government	1.74%	2
Private sector	13.04%	15
Contractor	7.83%	9
Consultant	18.26%	21
Academia	0.00%	0
Individual	1.74%	2
Other (please specify)	10.43%	12
<b>TOTAL</b>		<b>115</b>

# References and notes

- 1) Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>
- 2) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>
- 3) Chartered Institution of Highways & Transportation (CIHT) (2019), Better Planning, Better Transport, Better Places <https://www.ciht.org.uk/knowledge-resource-centre/resources/better-planning-better-transport-better-places/>
- 4) Department for Transport (2016), Valuing the Benefits of Highways Maintenance, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/487937/highways-maintenance-benefits-summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/487937/highways-maintenance-benefits-summary.pdf)
- 5) Text as per document
- 6) National and Highways & Transport Network (NHT) (2019), NHT Survey Annual Report - Public satisfaction survey <https://nhtnetwork.org/wp-content/uploads/2019/11/2019-NHTPS-Executive-Summary.pdf>
- 7) National and Highways & Transport Network (NHT), <https://nhtnetwork.org/about-us/>
- 8) Legislation Infrastructure Act (2015) <http://www.legislation.gov.uk/ukpga/2015/7/contents/enacted>
- 9) Carey, P. (2019), 'What Do We Want from Our Roads: Outlining a Service Specification', Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2019/04/190410-Roads-as-a-Service-final.pdf>
- 10) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>
- 11) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>
- 12) Quarmby, D and Carey, P (2016), A Major Road Network for England, Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2016/10/A-Major-Road-Network-for-England-David-Quarmby-and-Phil-Carey-Rees-Jeffreys-Road-Fund-October-2016.pdf>
- 13) Department for Transport (2017) Transport Investment Strategy, [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/624990/transport-investment-strategy-web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/624990/transport-investment-strategy-web.pdf)
- 14) See Appendix A of the report for further details on the classification of roads.
- 15) UK Roads Liaison Group (2016), Code of Practice 'Well-managed highway infrastructure' <http://www.ukroadsliaisongroup.org/en/codes/>
- 16) CIHT (2019), Streets And Transport In the Urban Environment, <https://www.ciht.org.uk/knowledge-resource-centre/resources/streets-and-transport-in-the-urban-environment/> CIHT Manual for Streets and Manual for Streets 2. CIHT is exploring Manual for Streets 3 with the Department for Transport. These are also supported through CIHT's 'Streets and Transport in the Urban Environment'
- 17) CIHT's (2018), 'Creating better streets: Inclusive and accessible places' which should be encompassed in 'Roads for places' – see page 9 [https://www.ciht.org.uk/media/4463/ciht\\_shared\\_streets\\_a4\\_v6\\_all\\_combined\\_1.pdf](https://www.ciht.org.uk/media/4463/ciht_shared_streets_a4_v6_all_combined_1.pdf)
- 18) Department for Transport (updated 2020), A better deal for bus users, <https://www.gov.uk/government/publications/a-better-deal-for-bus-users/a-better-deal-for-bus-users> For example, in October, 'A Better Deal for Bus Users' noted that all new road investments in England which receive central UK government funding will be required to either support bus priority measures or explain why doing so would not be necessary or appropriate in that instance.
- 19) Office for National Statistics (2019), Road transport and air emissions, <https://www.ons.gov.uk/economy/environmentalaccounts/articles/roadtransportandairemissions/2019-09-16>
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21) Carey, P. (2019), 'What Do We Want from Our Roads: Outlining a Service Specification', Rees Jeffreys Road Fund, <http://www.reesjeffreys.co.uk/wp-content/uploads/2019/04/190410-Roads-as-a-Service-final.pdf>

22) See Appendix B: Summary of the CIHT survey.

23) Department for Transport (2014), Local authority highways maintenance funding: 2015/16 - 2020/21 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/374566/consultation-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/374566/consultation-document.pdf)

24) The Transport Select Committee (2019) 'Local roads funding and maintenance: filling the gap' see page 15 This data is from the DfT Road Condition Statistics Table RDC0310 'Maintenance expenditure by road class, in England, from 2005/06 to 2017/18 at 2017/18 prices [see: <https://www.gov.uk/government/statistical-data-sets/road-condition-statistics-data-tables-rdc>] CIHT in their analysis rounded this up as the figure was £3.66bn - this included the following components: - Revenue maintenance expenditure mainly covers the routine works required to keep the highway serviceable and reactive measures to rectify defects. The Department for Transport reports expenditure as being apportioned as follows:

- £2.21bn for Structural maintenance
- £1.12bn for Routine and other maintenance
- £0.33bn for Policy, planning & strategy maintenance

25) Department for Transport (2014), Local authority highways maintenance funding: 2015/16 - 2020/21 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/374566/consultation-document.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/374566/consultation-document.pdf)

26) Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>

27) Asphalt Industry Alliance (2019), Annual Independent Survey 2019, <https://www.asphaltuk.org/alarm-survey-page/>

28) National Infrastructure Commission (2018), National Infrastructure Assessment. [https://www.nic.org.uk/wp-content/uploads/CCS001\\_CCS0618917350-001\\_NIC-NIA\\_Accessible.pdf](https://www.nic.org.uk/wp-content/uploads/CCS001_CCS0618917350-001_NIC-NIA_Accessible.pdf)

29) The five PFIs found that £996 million was allocated through PFI credits. These investments were for only 2% of the road network, so scaled up for the rest of England, the amount would be £45 billion. CIHT took off an assumed 20% premium figure to represent the risk transfer and private financing costs inherent in

the PFI model. Data from: UK Government (2014), Private Finance Initiative projects: 2014 summary data <https://www.gov.uk/government/publications/private-finance-initiative-projects-2014-summary-data> and Department for Transport (updated 2020), 'Road network size and condition' <https://www.gov.uk/government/collections/road-network-size-and-condition>

30) CIHT used five years for this approach as this has been the typical period for the core investment period for highway PFIs.

31) Stevens, M. (2019), 'Investing revenue and capital funding into maintaining local highway infrastructure.' Mark is the assistant director of operational highways of the Suffolk County Council and chair of the Engineering Board at the Association of Directors of Environment, Economy, Planning & Transport (ADEPT). Available on [www.ciht.org.uk](http://www.ciht.org.uk)

32) This term is derived from the Hertfordshire County Council's work on making the case for active travel through maintenance expenditure (notably from revenue funding)

33) Cycling UK (2018), news story '156 local authorities spend total of £43.3 million on pothole claims' <https://www.cyclinguk.org/press-release/156-local-authorities-spend-total-ps433-million-pothole-claims>

34) As £2.2 billion of the £3.6 billion is allocated to capital, an 85% uplift would lead to £4 billion of capital funding required, £1.8 billion more than the current £2.2 billion.

35) This is five times the £2.2 billion.

36) According to Suffolk, in-year pressures suggest that current revenue funding is insufficient, so using the 2018/19 funding level (£11.9 million), increasing by a minimum of £4.2 million, lifts this to £16.1 million (i.e. 2011/12 levels). However, the 2010/11 funding level of £17.38 million increasingly seems a more realistic revenue sum. That constitutes a circa 70% increase, but without an 'extra' £16 million per annum spent on preventative carriageway maintenance and lighting energy costs rising at 11% per annum, the revenue spent potentially spirals beyond a sustainable position.

37) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

38) BBC News, 5 December 2018, 'How cuts changed council spending, in seven charts', <https://www.bbc.co.uk/news/uk-england-46443700>

39) The assumption made here is that the maintenance figure across England is £1.12 billion, as indicated in the earlier figures at the start of this section.

40) The difference of £1.26 billion to £1.6 billion is £0.48 billion, calculated over 10 years.

41) Department for Transport (2013), 'Action for Roads' [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/212590/action-for-roads.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/212590/action-for-roads.pdf)

42) Office of Road and Rail Regulation (2019) 'Annual assessment of Highways England's performance, from April 2018 to March 2019' <https://www.gov.uk/government/publications/annual-assessment-of-highways-englands-performance-april-2018-to-march-2019> noted, 'It is essential that a better, [fully funded] baseline plan is developed for RIS2, built on a clear understanding of scheme costs, timings, and scope.'

43) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html> (page 38 of report)

44) UK Roads Liaison Group (2016), Code of Practice 'Well-managed highway infrastructure' <http://www.ukroadsliaisongroup.org/en/codes/>

45) See Appendix B

46) SCANNER is used more for reporting road conditions than as a reflection of true conditions in preparing programmes according to the results of the CIHT survey. This is perhaps unsurprising and is explained by which national indicators are collected, and the TSC report highlights how SCANNER is not useful for the unclassified road network, so for rural authorities, it has limited value. Thus, programming works for the unclassified network will be less possible with SCANNER.

47) RAC Foundation (2018) Bridge maintenance backlog grows <https://www.racfoundation.org/media-centre/bridge-maintenance-backlog-grows>

48) Transport Committee (2019), Local roads funding and maintenance: filling the gap Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201719/cmselect/cmtrans/1486/full-report.html>

49) Department for Transport (2019), Local roads funding and maintenance: filling the gap: Government response to the Committee's Tenth Report of Session 2017-19 <https://publications.parliament.uk/pa/cm201919/cmselect/cmtrans/138/13802.htm>

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