RAC Foundation

Mobility • Safety • Economy • Environment

RAC Foundation response to the House of Commons Transport Select Committee into Local Roads Governance and Funding[1]

Contents

1. Introduction.

1.1 The RAC Foundation is an independent transport policy and research organisation which explores the economic, mobility, safety and environmental issues relating to motoring and road use. We have taken an interest in the issue of roads management, maintenance and funding over several years and have published a number of reports which may be of interest to the Committee.

1.2 In particular our November 2015 report 'The Condition of England's Local Roads and how they are Funded' sought to explore similar territory to that of current interest to the Committee. We have subsequently worked with the Association of Directors of Environment, Economy, Planning and Transport (ADEPT) to seek to develop better indicators of local road condition, resulting in our annual survey of highway bridge condition.

[1] HoC Transport Select Committee 2018.

1.3 At the heart of the debate about local road condition is a tension between what, as road users, we should be entitled to expect in terms of the capability of the wide range of local authority managed roads to enable us to drive safely at reasonable speeds and the slightly vague duty in section 41 of the Highways Act 1980 that says "The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, …, to maintain the highway". There is a wide gap between a road that is merely passable and a road that is safe to drive at 30, 40 or 60 miles per hour. Anecdotal evidence suggests that a small but increasing proportion of our local roads are being managed with speed restrictions that, in turn, put the onus on the driver to cope with an uneven road surface.

1.4 A full list of our related publications is at Annex A, and a full bibliography of source material is at Annex B.

2. Background.

2.1 The local road network is a sizeable asset – arguably the most valuable and certainly the most visible asset under public ownership and control. In 2017 roads in England comprised 3,052kms of motorway, 32,351kms of 'A' roads and 268,026kms of minor roads. 1.34% of the motorway network, 87% of 'A' roads and the entirety of minor roads are managed by Local highway Authorities (LHAs); making 97.7% of the complete network (table 2.1). The proportion of roads administered by local highway authorities (LHAs) has grown with the transfer of some roads ('de-trunking') from the Highways Agency (now Highways England) see para 2.5 below. In addition the length of minor roads, as a result of new housing and commercial developments, has also grown slightly – by 3,303 kms (1.25%)[2].

2.2 Local authority roads carry over two thirds of the country's motorised road traffic – roundly 300bn vehicle kilometres (vkms) a year (Table 2.2) - as well as accommodating almost all foot and cycle traffic and providing access to 25 million or so properties in England[3]; these roads act as local distributors, form the bulk of most urban road networks, provide vital regional linkages and, of course, access to the national road network - which would be unable to do its job without the local road system to feed traffic onto and collect traffic from it. As well as enabling mobility and access, local roads provide easements for most of the gas, electricity, drainage, water and cabled telecommunications networks – something that creates its own maintenance headache for highway authorities.

Table 2.1: English Road Network (kilometres) by road and highway authority type – 2016.

	Motorways	Rural 'A' roads	Urban 'A' roads	Minor rural	Minor urban	All roads
Highways England	3,041	3,861	287	0	0	6,902
Local Authorities	44	19,315	8,964	154,496	115,886	296,705
All	3,085	23,176	9,251	152,496	115,886	303,894

Source DfT 2018a.

[2] DTLR 2001.
[3] Estimated from DCLG (2012) & DCLG (2015).

2.3. The Strategic (trunk) Road Network is the responsibility of Highways England (formerly the Highways Agency) which is a government owned company established in April 2015[4]. There is now an agreed (national) Roads Investment Strategy[5] which includes investing over £15bn by 2021 with a specific set of performance specifications[6]. To help underpin the commitment to improve the national roads infrastructure the Vehicle Excise Duty (VED) bands for new vehicles were reformed in April 2018 to protect the revenue yield which is then to be put into a new Roads Fund to pay for sustained investment in roads[7]. The DfT and Highways England have also recently embarked on planning for the second tranche of the national road investment programme from 2021 to 2025[8].

Table 2.2: Traffic (bn vehicle kilometres) on English Roads by road type and highway authority type – 2016.

	Motorways	Rural 'A' roads	Urban 'A' roads	Minor rural roads	Minor urban roads	All roads
Highways England	97.7	49.2	4.6	0	0	151.5
Local Authorities	1	81	62.3	61.0	93.0	298.3
All	98.7	130.2	66.8	61.0	93.0	449.7

Source: DfT 2018b.

2.4 The local road network in England is managed by 153 local highway authorities[9] which are responsible for maintaining, managing and, where necessary, improving their section of the network. This includes carriageways, footways, cycleways and verges and planting; and maintenance activity includes clearing drains and gullies, ensuring signs and road markings are clear and visible[10], operating street lighting, monitoring bridge condition, and clearing culverts. As well as maintaining these assets in good order they have a duty to promote the use of their roads, by all types of road users, in a safe and efficient way and meet increasingly demanding standards of environmental performance[11]. Together these two sets of networks were estimated to be worth £344bn in 2014[12].

2.5 The length of England's local road network has increased in recent years as a result of new construction and de-trunking of parts of the strategic road network. Since 1993 the English trunk 'A' road network has been reduced in length by 3,600 kms whilst the LA 'A' road network has grown by 2,600 kms – mainly through the transfer of urban 'A' roads from central government. Also during that period the English minor road network grew by around 25 thousand kilometres[13].

[4] Highways England 2018a.
[5] DfT 2016.
[6] DfT 2014a.
[7] HMT 2015a.
[8] DfT 2017a.
[9] MHCLG 2017a.
[10] There were an estimated 4.4 million LA traffic signs in England in 2013 (DfT 2013).
[11] Various Acts of Parliament including the Highways Act 1980, the Road Traffic Regulation Act 1984 & the Traffic Management Act 2004.
[12] HoC 2014.
[13] DfT 1993, table 3.18 and DfT 2018a.

3. The condition of local roads in England and how they have fared over time.

3.1 This section is based on published information at the national level. Local Highway Authorities (LHAs) keep records of their highway assets with varying degrees of completeness and accuracy and this process is encouraged by the growing adoption of Highway Asset Management Strategies and Plans. In future it is conceivable that common standards of data definitions and collection protocols will allow a much richer picture of the extent and condition of England's local road assets to be compiled. But we are not there yet.

3.2 The measurement of the condition of roads is a complex task for two reasons:

- there is a huge and diverse range of components on the surface (carriageways, verges, footways/cycleways; beneath the surface (drains tunnels, culverts and bridges); above the surface (bridges) and street furniture (lighting and signage), so a simple metric of highways condition would be of little value; and
- the condition of some types of assets is hard to establish. Many parts of the road fabric are buried, or hidden from view in some other way, making direct inspection difficult and costly. Also the scale and variety of the local road network, with myriads of local variations of condition of its many components, limits the utility of simple indicators.

3.3 Whilst the condition of the carriageway surface is the most obvious and perhaps the most important aspect of highway conditions - uneven footways can cause pedestrians to trip with potentially severe consequences for the frail and elderly and even small defects in the carriageway can be a real threat to cyclists and motorcyclists – the health of the foundations underlying the surface is critical, hence the need to patch potholes swiftly, not just to provide a better surface but also to protect the structural integrity of the road from damage.

3.4 Over recent years increased understanding of the performance of parts of the road system and improvements in measurement techniques have resulted in changes in which the condition of road pavements[14] have been measured[15]. Whilst this means that modern metrics are more reliable it does make comparison over time much more difficult. For example in the 1980s[16] road conditions were indicated by the proportion of the network (carriageways) with more than 5 or 20 years of residual life and whether their condition was improving or deteriorating. In the 2000s condition monitoring also included footways and verges[17]. Whilst these tend to be national-level, local authorities may have more data available to them, but it is possible that this may not be comparable with other LHAs. Currently the main condition indicators are[18]:

[14] Pavement here is used to denote the fabric of the carriageway: sub-base, base and surface material – not the footway as in common parlance.
[15] DfT 2018c.
[16] DoT (1983), tables 2.33 & 2.34.
[17] DTLR (2002), section 3.
[18] DfT 2018d.

- Principal and non-principal classified roads where maintenance should be considered
- Percentage of unclassified roads where maintenance should be considered
- Skidding resistance of principal roads
- Percentage of lane 1 trunk motorway length surveyed surface condition requiring further investigation
- Percentage of lane 1 trunk 'A' road length surveyed surface condition requiring further investigation
- Percentage of lane 1 trunk motorway length surveyed skidding resistance requiring further investigation
- Percentage of lane 1 trunk 'A' road length surveyed skidding resistance requiring further investigation
- Local authority 'A' road lengths receiving maintenance treatment by type of treatment
- Local authority minor road lengths receiving maintenance treatment by type of treatment.

These measurements do not specifically identify potholes[19] despite the fact that road surface defects are a major source of nuisance to motorists and cyclists resulting in vehicle damage and creating road safety risk.

3.5 There is no systematic reporting of the condition of most of the other road asset components at the national level and therefore the national indicators can only be used as a partial measure of roads asset conditions and the need for maintenance and renewal activity. This is less than has been required in the past which has included[20]:

- Visual survey of carriageway defects by, type of deterioration and road class;
- Visual survey of footway deterioration and footway trips by road class;
- Condition of kerbs by road class;
- Percentage of network requiring close monitoring of structural condition by road class;
- Percentage of network where structural maintenance should be considered by road class;
- Skidding resistance by road class; and
- Percentage of road network by residual life.

3.6 At the central level therefore rather less is known currently about the condition of local roads than has been the case in the not too distant past. Indeed in its report on 'maintaining strategic infrastructure: roads' the National Audit Office recommended that the DfT should improve its understanding of the current condition and future needs of the local road network, including structures[21].

3.7 The current system of monitoring road conditions started in 2006/07 but the earlier monitoring system results give some useful insights into the relative condition of different type of road assets and how these changed over time.

[19] DfT 2017d.
[20] DTLR 2002.
[21] NAO 2014.

3.8 Findings from the pre 2006/07 Condition Surveys[22] apply to England and Wales together and found:

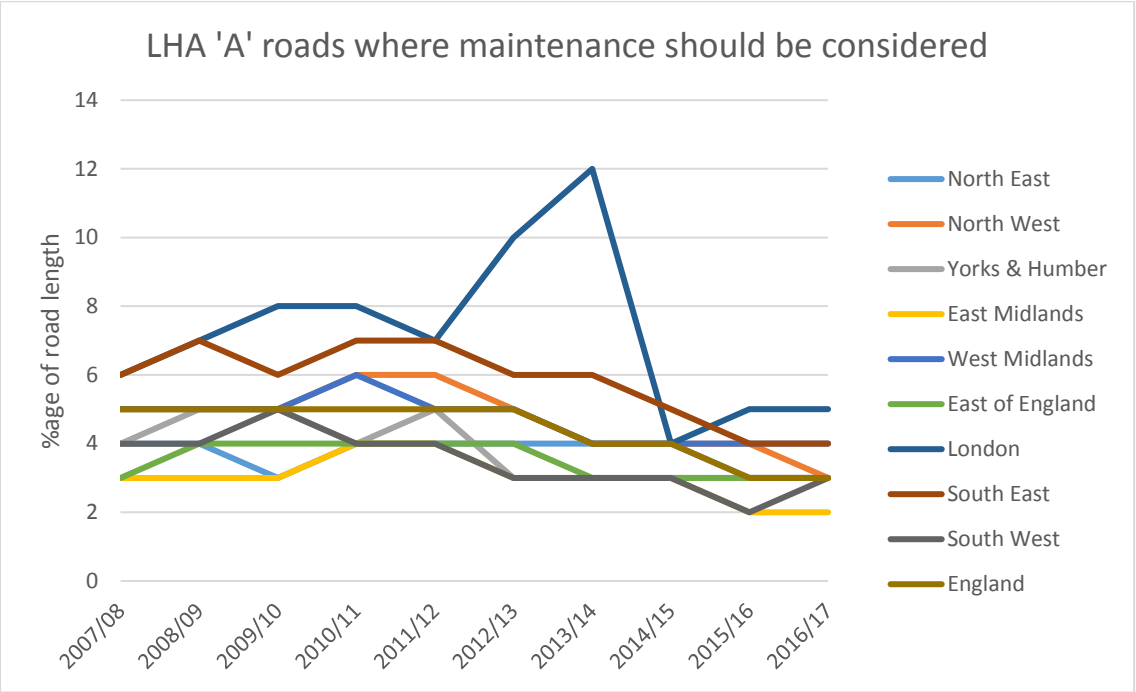
- After an initial deterioration, the condition of All Purpose Trunk Roads (APTRs) gradually improved from the mid-1980s up 'till 2001 when reporting was suspended because of poor data reliability.
- In built up areas carriageway conditions gradually worsened up to the end of the 1990s but improved thereafter particularly for 'A' roads – and this seems also to be the case for trunk 'A' roads.
- Outside the built up areas there was a steady improvement in 'A' road carriageway conditions but relatively little change in the conditions of carriageway on 'B' and 'C' roads. The condition of minor roads worsened but with some recovery seen between 2003 and 2006.
- Footway conditions changed little from the mid-1980s up 'till the end of the 1990s but deteriorated thereafter and, with a quarter of their length affected by deterioration in 2006, should clearly have been a matter for concern.
- The area of verges affected by deterioration worsened slightly from the mid-1980s to the mid-2010s but, at between 5% and 7%, appear to have been in better condition than footways. The percentage of kerbs needing replacing or resetting gradually reduced to just over 3%.

3.9 The remainder of this section covers just England.

3.10 Figures 3.1, 3.2, 3.3, 3.4, & 3.5 illustrate trends by region and for England as a whole in the percentages of the relevant network with a score that is likely to show deterioration and may need maintenance within the next 12 months. Road surface conditions are generally estimated by the use of SCANNER vehicles which, whilst calibrated to perform within defined limits, are not entirely consistent. The programme of SCANNER measurements (approximately 30 measurements every 10 metres of road) produces data that is then used to form a standardised Road Condition Indicator. However, the Department does not collect the raw data from the SCANNER vehicles, nor aggregate values. Instead it only tracks the proportions of roads that score over 100 on this scale. It is quite possible that the distribution of raw RCI values has changed over time, so that lengths scoring 100+ (those road lengths where maintenance should be considered) have diminished, while the mean value has risen. If this is the case, this would not be captured by DfT road condition statistics. The Department only captures the tip of the iceberg in terms of SCANNER data. Caution should be exercised in interpreting small variations between years and regions. From 2014/15 on, alternative estimating technologies have been used by some LHAs in the North West and the East of England; further clouding trend comparisons for these regions[23].

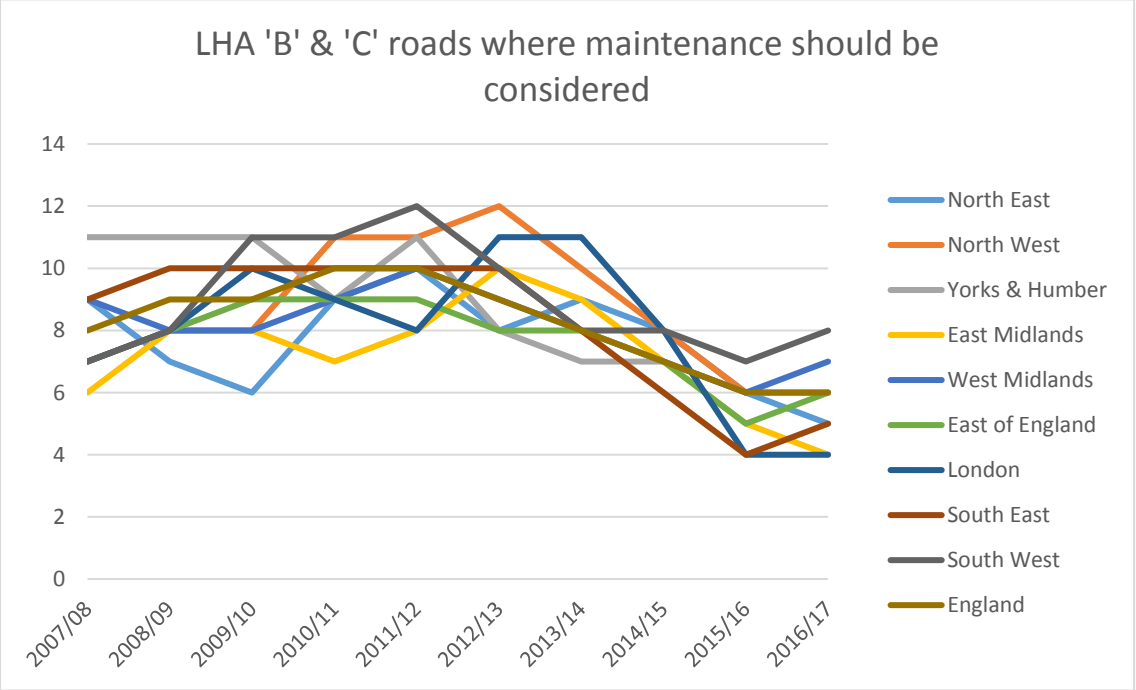
[22] DfT 2002, DfT 2005 and DfT 2007
[23] For more detail see DfT 2018f.

Figure 3.1: Percentage of LHA 'A' roads where maintenance should be considered.



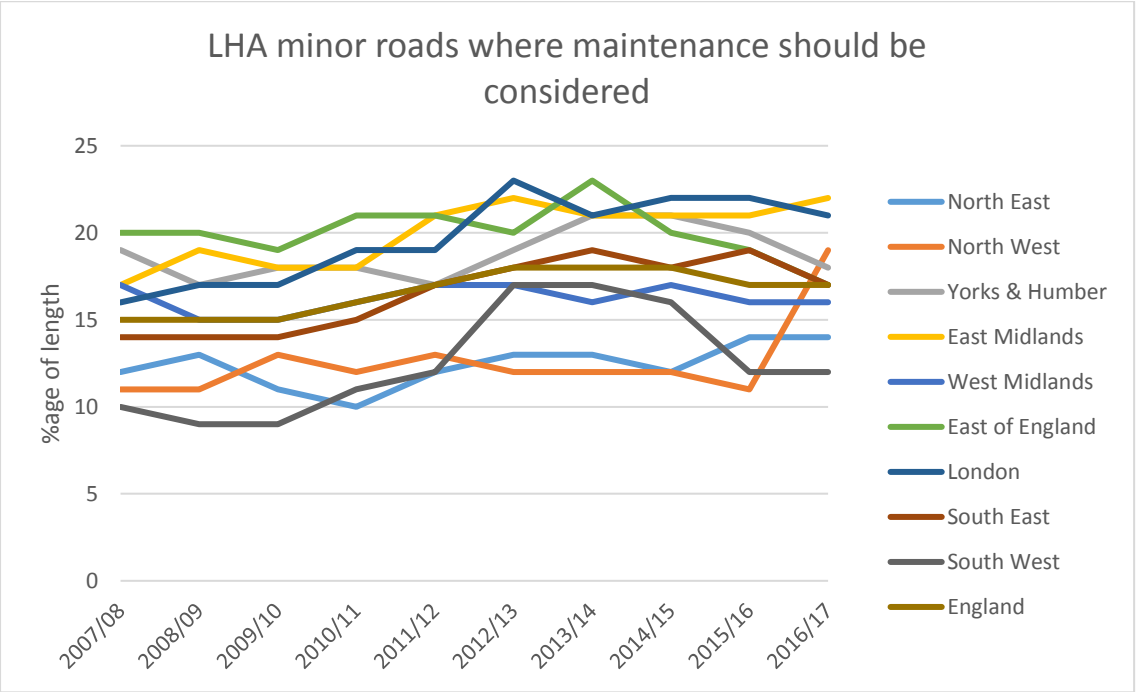
Source: DfT 2018f.

Figure 3.2: Percentage of LHA 'B' & 'C' roads where maintenance should be considered.



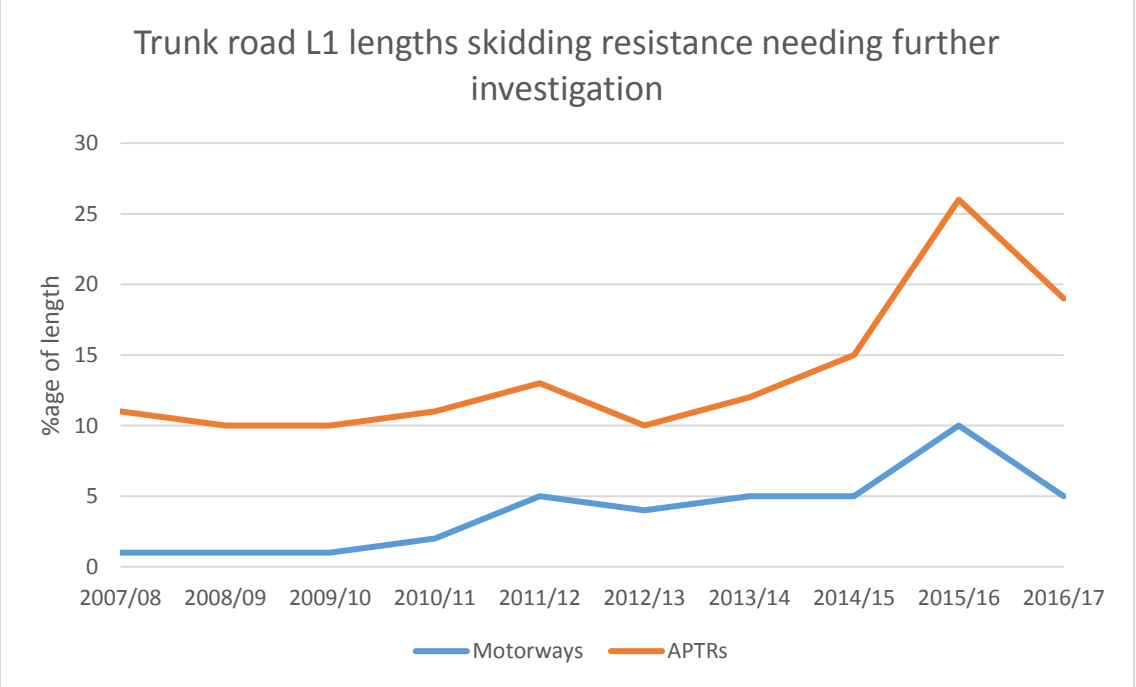
Source: DfT 2018f.

Figure 3.3: Percentage of LHA minor roads where maintenance should be considered.



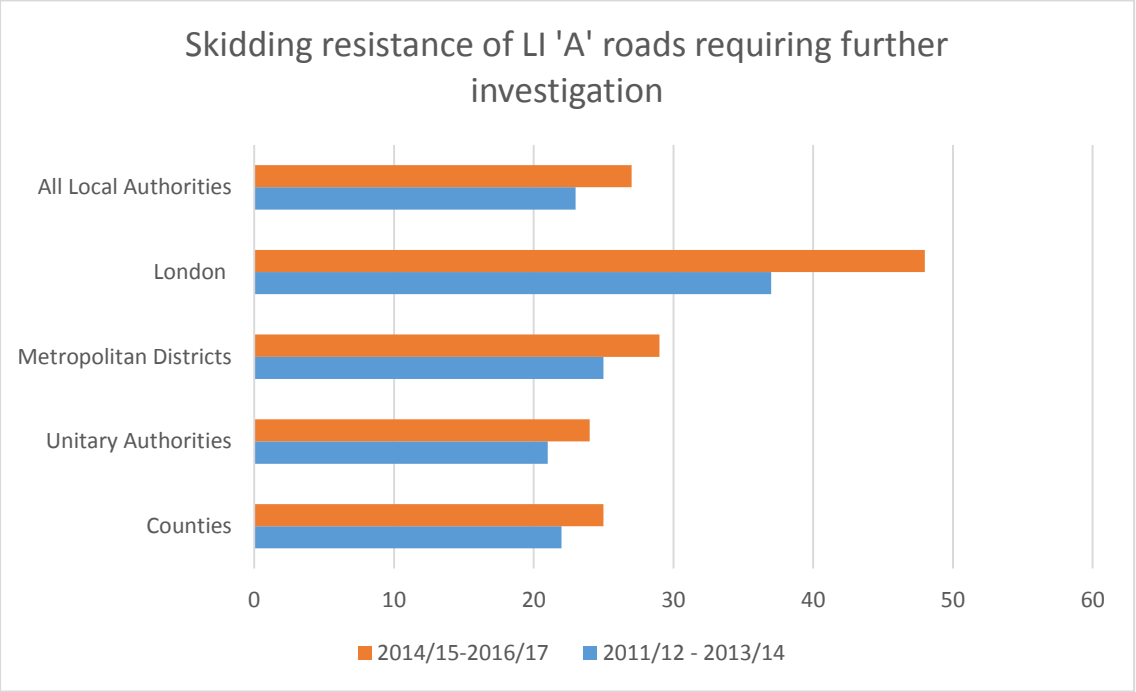
Source: DfT 2018g.

Figure 3.4: Length of lane 1 of Trunk roads where skidding resistance requires further investigation 2007/08 – 2016/17.



Source: DfT 2018h.

Figure 3.5: Skidding resistance of LHA 'A' roads, 3 year average 2011/12 to 2013/14 and 2014/15 to 2016/17.



Source: DfT 2018i.

3.11 Despite these uncertainties a number of conclusions can be drawn from these figures: namely:

- The condition of 'A' roads is generally better than those of 'B' & 'C' roads which are in turn better than those of minor roads, averaging about 4% needing investigation over the ten year period compared with around 8% for 'B'/'C' roads and 16% for minor roads.
- Over the period, by this measure, the condition of 'A', 'B' & 'C' roads improved slightly whilst that of minor roads worsened slightly.
- There are significant regional variations in LHA road conditions with the East of England, East Midlands and the North East having above average classified road conditions; London having below average 'A' and minor roads and the South East and West midlands having below average 'A' roads but with the remainder being in better than average condition.
- All regions, except the South West, saw a small improvement in the condition of their 'A', 'B' and 'C' roads (despite a blip in London in the mid-teens) with the greatest improvement in 'B' and 'C' roads in the North East, Yorkshire and Humber and the South East.
- The only regions to see an improvement in the conditions of their minor roads were Yorkshire and Humber, West Midlands and the East of England. The greatest deteriorations occurred in the North West, East Midlands and London.

3.12 Between 2007/08 and 2016/17 the picture of 'A' roads improving faster than the rest and minor roads deteriorating appears to be a continuation of the trends between the mid-1980s and mid-2000s, although the differences in the monitoring systems for these two periods are such that this can be only a tentative conclusion.

3.13 Figure 3.4 sets out the trends in skidding resistance of motorways and All-Purpose Trunk Roads. Two features stand out. The first is that, by this measure, again motorways are in a much better shape than APTRs – as one would expect with higher speeds on motorways and consequently increased skidding risk. Secondly, over the ten year period, skidding risk has increased on both types of trunk roads. It is not evident why there was a surge in the skidding risk in 2015/16 but, even if this was an aberration, the overall trend of deterioration remains.

3.14 Figure 3.5 gives skidding resistance of LHA 'A' roads by type of authority for two recent three year periods. This indicates that overall their performance, by this measure, was inferior to that of trunk 'A' roads. Moreover there are substantial variations between different types of authority. London stands out as the worst performer with the Metropolitan Counties second worst. There is little to choose between the Unitaries and the shire counties with roughly a quarter of their roads requiring further skidding investigation. Between the two periods all types of area saw a deterioration in skidding resistance but with London standing out as seeing the most marked.

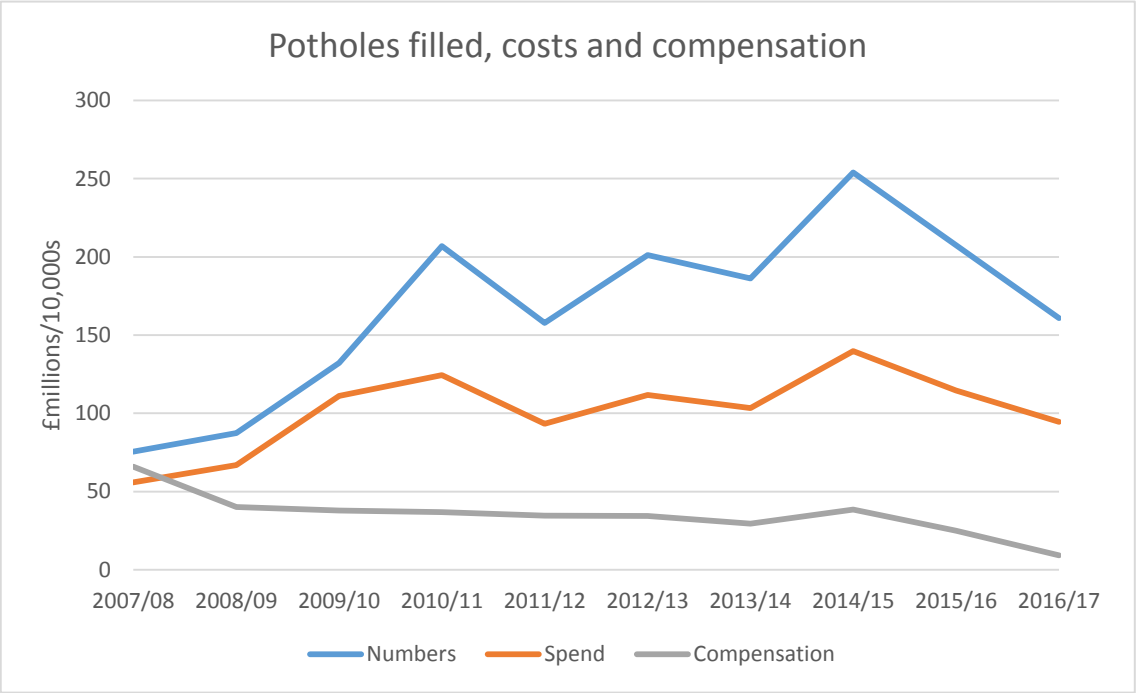
3.15 Since 2000 The Asphalt Industry Alliance has carried out annual surveys amongst local highway authorities in England and Wales on a range of aspects of highway maintenance budgets, road conditions and compensation claims. Not all authorities respond (typically response rates range between two thirds and three quarters of all LHAs) and some of the responses are necessarily subjective rather than factual so the findings again needed to be treated with a degree of caution. However they do contain some interesting insights not available from other sources. The material included in this report is for England[24] and covers 2007/08 to 2016/17 to correspond with the section using the DfT's surveys' findings for that period.

3.16 The ALARM survey deals specifically with potholes[25] and from Figure 3.6 it can be seen how many of these have had to be filled on LHA roads in recent years. From 0.76 million in 2007/08 the number increased to a peak of 2.54 million in 2014/15 since when they have fallen back to 1.6 million in 2016/17. Over the 10 year period 16.67 million pot holes had to be filled in on England's local roads.

3.17 The cost of doing this exceeded £1 billion over the period (at 2016/17 prices) and £230 million was paid out in compensation claims. In addition to this it is estimated that £125 million was spent on processing these claims. There is evidence that suggests that the cost of dealing with claims has increased substantially in relation to the amounts paid out. In the first three years in the chart sums paid were roundly three times the cost of processing claims whilst in the last they were only 15% more. This suggests that LHAs are putting more effort into resisting claims. If money spent on processing claims had been spent on filling in potholes over these three years 2014/15 – 2016/17 it would have been possible to fill in a further three quarters of a million potholes.

[24] London data are published separately in the ALARM reports.
[25] There is not a national definition of a pothole but a minimum depth of 40mms and minimum diameter of 250mms is widely used.

Figure 3.6: Potholes filled, costs and compensation (at 2016/17 prices[26]).



Sources: ALARM 2007 – 2017.

3.18 Other structures including bridges are important highway assets and the RAC Foundation has carried out assessments of substandard bridges in England in 2015/16[27] and 2016/17[28]. These found from an analysis of data for the 2016/17 financial year – received from 150 of the 153 local highway authorities in England – that 2,668 structures over 1.5m in span are not fit to carry the heaviest vehicles now seen on our roads, including lorries of up to 44 tonnes. Many of these bridges have weight restrictions. Others will be under programmes of increased monitoring or even managed decline. The 2,668 bridges represent 5% of the roughly 52,689 bridges to be found on the local road network and the cost of bringing them up to perfect condition is estimated to be about £800 million. The proportion of sub-standard bridges increased slightly between 2015/16 and 2016/17.

4 The direct and wider economic and social costs of not maintaining local roads.

4.1 Poorly maintained roads impose direct costs on road users and result in deterioration of the road fabric, which can be costly to put right. Direct user costs can be difficult to determine as, apart from immediate damage and injury resulting from a clear fault such as a footway trip or damaged wheel, increased journey times and vehicle operating costs, increased accident rates, physical discomfort, and contributory wear and tear all take their toll but are not easily measured objectively. There is some evidence of the costs of poorly maintained roads and the benefits from spending to improve these.

[26] Using the GDP deflator (ONS 2018).
[27] RACF 2017.
[28] RACF 2018.

However these relate to specific cases and care is needed in attempting to generalise from these.

4.2 A study carried out for Transport Scotland[29] explored the wider impacts of varying highway maintenance expenditure in Scotland. This was in the particular circumstances of the finances and physical condition of eight local authorities' roads in 2012. This showed that reducing the road maintenance budget would have an overall negative Net Present Value, as user (mainly vehicle operating) costs increase more than the savings achieved in works costs and that for every £1 (undiscounted) saved by reducing maintenance budgets, there is an increase of more than £2 in non-works costs from the wider impacts of the reduced maintenance. The ratio is £1 to £1.67 for discounted costs with the 40 percent overall reduction in maintenance funding. There would also be unquantified benefits including:

- improved footway condition to encourage walking and, hence, healthier lifestyles;
- increases in the number of cyclists;
- avoidance of the 'broken windows' effect (i.e. general deterioration of the locality; when the area does not appear to be looked after);
- reduced compensation costs from lower claims following accidents;
- reduced health service costs from the reduction in accidents;
- increases in house prices and commercial activity in areas with well-maintained roads and
- reduced litter on well-maintained roads.

4.3 In a more limited study for ADEPT and the RAC Foundation in 2013[30] it was concluded there was no reason to suggest that the key summary conclusion for Scotland would not be true for England and Wales. The Scotland study also confirmed the long-term effect of reducing road maintenance and the fact that savings now will increase costs later if the same standards as today are to continue to be adopted.

4.4. The Passenger Transport Executive Group[31] looked at this issue in a British city regional context and from desk research produced some estimates of the costs and benefits of improved highway maintenance. These were:

- According to the World Bank, going from an IRI[32] of 2 (smooth road) to an IRI of 18 (road in very poor condition) would more than double the overall user cost of operating a bus, from just under $0.6/vehicle-km to over $1.2/vehicle-km. The effect on a heavy goods vehicle would be to take user costs from $0.7/vehicle-km to $1.2/vehicle-km. The effect on a typical passenger car would be to increase total user costs from $0.21/vehicle-km to $0.33/vehicle-km.

[29] Parkman et al 2012.
[30] Gould E. et al 2013.
[31] PTEG 2015.
[32] International Roughness Index.

- Based on work done by the University of Birmingham for the DfT, reducing maintenance spending from an optimal £880m/year to £600m/year would create costs to users of 6p/vkm for cars, 7p/vkm for PSVs and 18p/vkm for HGVs.
- Work done for the West Midlands Highway Authorities[33] showed that the proposed strategy, which involved a significant up-front investment over the first five years, would generate benefits of between £6 and £7.5 for every £1 spent.

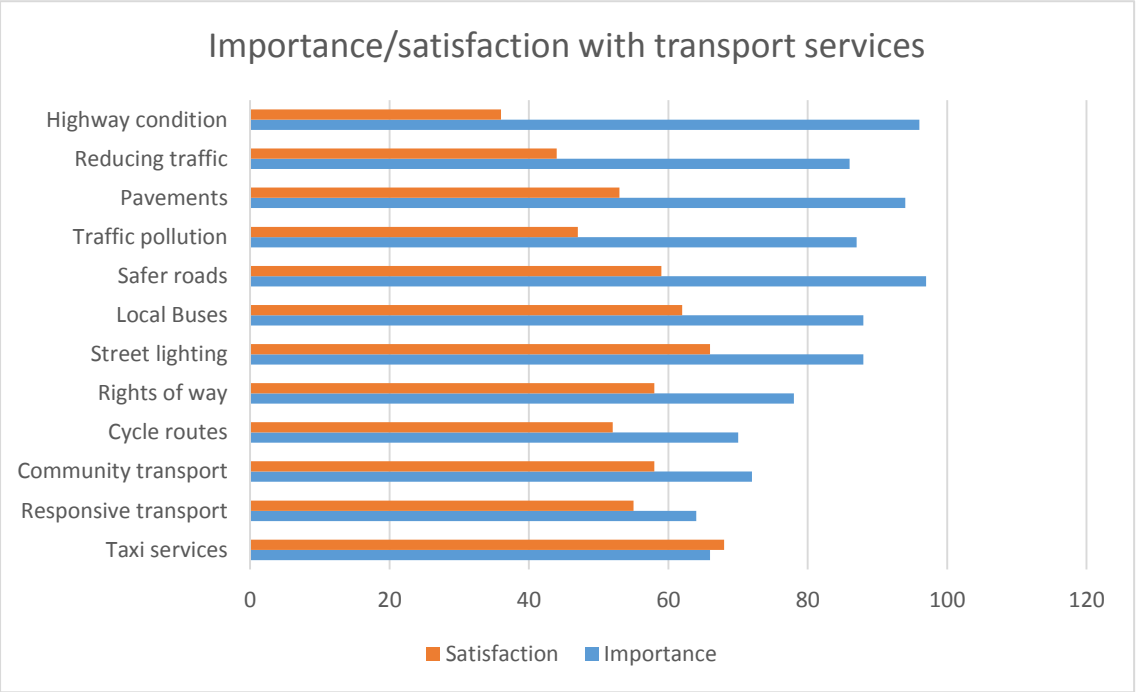
4.5 The costs of poorly maintained roads are reflected in the attitudes of both the public and organisations dependent on road transport for their operations. The National Highways and Transport Public Satisfaction Survey (NHTPSS) is an annual survey benchmarking public perspectives on, and satisfaction with, local authority highway & transport services. It is managed by the National Highways and Transport Network which is a national highways industry benchmarking group and includes returns from 109 English LHAs.

4.6 Respondents were asked what mattered to them about their local transport and the results for 2017 are shown in Figure 4.1. Highway conditions and pavements make up two out of the top three most important aspects, so clearly therefore the condition of local roads and pavements is very important to the public. But how satisfied are the public with road conditions? Figure 4.1 shows that the condition of local highways are least satisfactory by a large margin; with pavements ranking 8th out of the twelve topics. Street lighting on the other hand gets a good relative score as the 2nd most satisfactory. If the difference between the importance of each attribute and the satisfaction score is measured the gap for road conditions is by far the largest (60) followed by reducing traffic (41) and pavements (40) against an average of 27.3. Not surprisingly this is reflected in the public's priorities for improvements.

4.7 In 2011 the Audit Commission[34] reported a Place Survey by the Department of Communities and Local Government[35]. This (see Figure 4.2) puts concerns about road conditions in the broader context of public opinion generally about a wider range of features of the character of the areas in which they live. That showed that at the national level, road and pavement repairs were the second highest priority for improvement in local areas according to residents. Roads and traffic matters made up three of the top five services in need of improvement with cleaner streets also being a high priority.

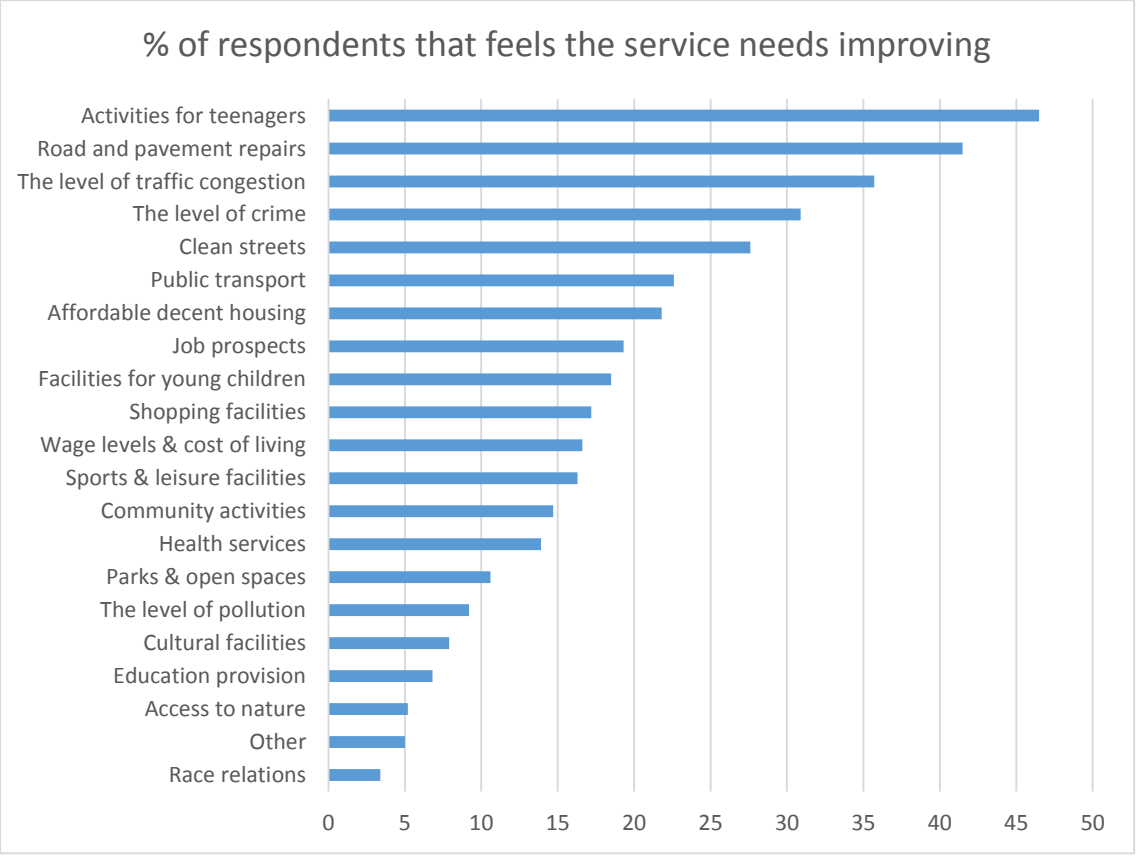
[33] CH2m Hill 2015.
[34] Audit Commission 2011.
[35] DCLG 2009.

Figure 4.1: Results of the 2017 NHTPSS questions 'How important do you consider the following?' and 'How satisfied are you with the following?'



Source: NH&TN 2017.

Figure 4.2: 2008 Place Survey responses on needs for local service improvements.



Source: DCLG 2009.

4.8 Potholes in particular appear to generate negative reactions for motorists and the public more widely. This is probably because there are a lot of them, they are very visible and, unlike many deficiencies in public facilities/services the remedy seems obvious to the road user. A recent investigation on behalf of the AA[36] found that:

- more than nine in ten (92%) drivers are concerned that the condition of the road could damage their vehicle;
- the condition of the roads is also an issue in terms of safety; 85% of panel members are concerned about their and other road users' safety;
- comparing road conditions to that of mainland Western Europe, half of men (50%) believe that road conditions in the UK are worse and
- just over one in ten (12%) panel members were reluctant to go on long journeys due to the condition of the roads.

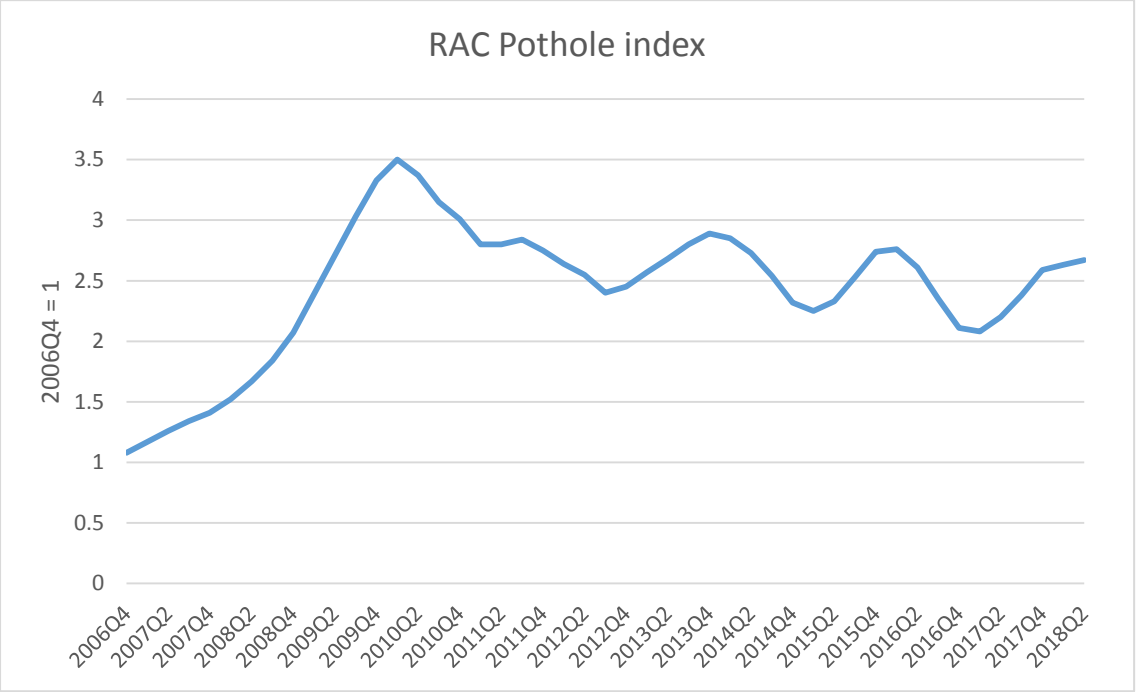
4.9 The RAC Annual Report on Motoring[37] contains results of surveys of motorists' top concerns. Over the last four years road condition and maintenance has appeared top in three; being displaced in 2017 by concerns about the use of mobile phones when driving, but was back on top in the 2018 survey. Maintenance of local roads topped respondents' investment priorities in all four years by a large margin. In the 2016 survey[38] roundly 4 out of every 5 respondents agreed that the state of UK roads is generally poor and 2 out of every 3 that local road conditions had got worse in the last year, with 98% mentioning the road surface as the main factor in this deterioration. The most recent survey found 78% of drivers agreeing that the state of UK roads is generally poor and 83% supporting the ring-fencing of a share of motoring taxes to fund the maintenance of local roads. These sentiments are echoed in other surveys including that by the Wolfson Prize in 2017[39] which found:

- 69% of road users say the state of Britain's roads is not good enough;
- 80% are very concerned about potholes;
- 79% think traffic is getting worse on all roads and action needs to be taken;
- 67% are very concerned about pollution from traffic and
- road users are open to new forms of funding.

4.10 The RAC has also compiled a pothole index which tracks the share of breakdowns it deals with that are attributed to pothole damage. This is shown in Figure 4.3 and shows a clear deterioration between the end of 2006 and the beginning of 2010. Since then there has been a small improvement but conditions are still significantly worse than when the index was first started and the switchback pattern over the last few years indicated the vulnerability of the network to seasonal weather cycles.

[36] AA 2018.
[37] RAC 2014, 2015, 2016, 2017 & 2018.
[38] Not asked later as invariably comes out top.
[39] Policy Exchange 2017.

Figure 4.3: The RAC Pothole Index.



4.11 Other views on roads maintenance are canvassed from time to time by organisations which have an interest in transport and roads. A YouGov survey for the Asphalt Industry Alliance[40] in 2012 found:

- badly maintained local roads are costing small and medium-sized enterprises (SMEs) £5 billion a year in wasted staff time, production delays, increased fuel consumption and vehicle damage repairs;
- sixty per cent of survey respondents said the condition of local roads had deteriorated over the last five years, and over half said the condition had worsened over the past year;
- almost a third (32 per cent) of survey respondents incurred additional costs due to lengthier journey times and used more fuel due to congestion attributable to poor road condition. In addition, more than a quarter (27 per cent) experienced additional damage to their vehicles due to poorly maintained local roads and
- just one in 25 (4 per cent) respondents thought the local roads used by their business were very well maintained, while nearly 10 times as many (37 per cent) said their local roads were not very well maintained.

4.12 In its annual survey for 2014[41] the Confederation of British Industry found:

- UK business sees the road network continuing to deteriorate. More than half of UK companies (52%) report a worsening of motorways in the last five years, and 65% see the same in local roads and

[40] AIA 2012a
[41] CBI 2014.

- the future is seen as equally bleak, with 77% and 86% of respondents expecting motorways and local roads to get worse or stay the same over the coming five years (i.e. 2015 – 2020).

4.13 Cyclists are particularly vulnerable to poor road conditions and in a recent survey for Cycling UK[42] 42% of respondents said that they would be encouraged to cycle more if roads were in a better condition (e.g. not having potholes): the most important factor after having segregated cycle facilities (45%).

4.14 Whilst it is not possible to provide a general estimate of the costs of poorly maintained roads and of the benefits of spending to improve them, the evidence from recent case studies clearly points to healthily positive Benefit/Cost ratios and, in some circumstances, very high BCRs. There is also a clear picture of concern by the public in general and motorists in particular as well as local government and business representatives that the condition of local roads is inadequate and worsening and higher priority should be given to the use of existing, and possibly additional, motoring tax receipts to remedying this situation.

5. The quality of monitoring and reporting of local road conditions.

5.1 Local Highway authorities collect data on the condition of their highway assets for their own management purposes and some guidance exists as to what this should include[43] and how it should be managed[44]. Much of this is not made available outside the individual authority but looking ahead there is potential for sharing (see para 3.1). Central data is heavily focussed on the condition of carriageways, although footways and kerbs have been included in the past.

5.2 For the purposes of highway maintenance grant allocation the data required by the Department for Transport is quite limited, comprising basic information on road lengths, bridge numbers, scale of street lighting equipment and (from 2018/19) lengths of cycleways and footways[45], specifically:

- length of Principal motorways and Principal A roads;
- lengths of 'B' and 'C' roads;
- lengths of unclassified roads;
- number of publicly maintainable highways bridges that highway owned over 1.5 metres in span, whether carrying carriageway or footway as of 1st April 2014 and
- the number of street lighting columns owned by authorities as of 1st April 2014;

with PFI projects excluded from the formula. Thus it would appear that block grant funding relies more on asset volume rather than asset condition, though DfT has recently sought to reward highway authorities through an incentive component, described below.

[42] YouGov 2018.
[43] County Surveyors Society 2004.
[44] UK Roads Liaison Group 2013.
[45] DfT 2014b, Annex B.

5.3 Clearly LHAs themselves need to monitor both the condition of their assets and how these are changing in order to plan the most cost effective maintenance and renewal regime. The Highways Infrastructure Asset Management regime, which the DfT has been supporting is designed to achieve this. Indeed the grant funding formula contains an incentive component (rising to 18% of the total in 2018/19) to pursue increased efficiencies and improved asset management: this component is based on self-certification by LHAs[46].

5.4 In its 2014 report on roads maintenance[47] the National Audit Office recommended that the Department (for Transport) should build on the steps that it has already taken to improve value for money by:

- improving its understanding of the current condition and future needs of the local road network, including structures; and
- identifying criteria to target the Highways Maintenance Efficiency Programme at those local highway authorities that need the most help, and develop evidence for local highway authorities to justify planned preventative maintenance.

Recent DfT initiatives to explore the scope for capturing data from non-traditional sources, such as camera scans from refuse collection vehicles are to be welcomed. It is also possible that useful data could be harvested from motor vehicle telematic systems that monitor, amongst other things, the compression of suspension systems.

5.5 Road users themselves might be expected to be informed about the state of their local roads. However individual needs vary considerably, as an average driver may drive around three thousand kilometres on local roads in a year, the length of the network covered will only be in the order of three hundred kilometres[48] – or around 0.1% of the network length. As such, highly aggregated numbers of the kind contained in section 3 are of little value in painting a picture for the individual road user. With modern mobile technology it is conceivable that micro-monitoring of road conditions may soon become a practical possibility (and may be necessary for safe autonomous vehicle operation).

6. Whether the current approach to maintenance of local roads is appropriate and whether it needs to be improved.

6.1 The local roads maintenance regime has several dimensions of which the three key areas are governance, funding/financing and maintenance practices. The latter included monitoring, intervention criteria and plans and engineering practices (choice of materials, technologies and construction methods).

6.2 The maintenance of local roads has presented challenges for centuries and a history of this subject up until the beginning of the twentieth century can be found in the Webb's English Local Government: The Story of the King's Highway[49]. The medieval stewardship of manors and monasteries was replaced by parochial statute labour under the direction of a

[46] DfT 2014b.
[47] NAO 2014.
[48] Author's estimate based on DfT 2018i & DfT 2018j.
[49] Webb S. & B. 1913.

local (non-professional) surveyor. In turn the neglect of through-roads prompted the creation of turnpike trusts and the gradual replacement of statute labour with a local *rate* which enabled the employment of more skilled supervisors and contractors. With growing industrialisation the need for better constructed and maintained roads became pressing and in the mid nineteenth century formal schemes for this were developed, taking advantage of the developing local government arrangements and by the 1890s County Councils became responsible for main roads in their areas and District Councils for secondary roads. The stand out point is that apart from the establishment of a national government responsibility for trunk roads in the mid-1930s this broad approach remains in place to this day, but with all local roads now the responsibility of county councils and unitary authorities outside the metropolitan areas.

6.3 There is room for debate about the extent of the roles different levels of government should play in the planning and management of the road network exemplified by the proposals for a Major Road Network larger than the Highways England network[50] and the formation of Combined Authorities[51] and Sub Regional Transport Bodies[52]. This is less of an issue for local roads maintenance, although years of tightening budgets have made ensuring an adequate skill base increasingly difficult; as, where advantageous, LHAs can and do combine their maintenance activities either directly or through joint appointment of contractors to secure the necessary expertise and economies of scale, which can be particularly helpful for smaller unitary authorities. Further, we continue to hear from players in the supply chain that greater standardisation of maintenance contracts could help them deliver efficiencies in tendering and subsequent management of maintenance works.

6.4 Roads maintenance methods are being improved following the establishment of the Highways Management Efficiency Programme[53] which was set up to promote and improve best and better road maintenance practices. This involves the development and updating of Highways Asset Management Plans[54] and good practice guidance[55] along with help in appraising the benefits of well-maintained roads[56].

6.5 There is potential for improvement in the further development of road construction materials, in particular to provide genuinely 'permanent' and lasting re-instatement after carriageway works and for patching of potholes. Work is also being pursued to develop 'self-healing' road surfacing. Other aspects of maintenance are benefitting from new technologies, such as LED streetlighting requiring less maintenance and a lower power supply. Although the global market for such innovation is huge, it is not clear that the UK framework creates the right incentives for innovation to flourish, particularly where there is a risk of failure for departing from tried and tested techniques.

[50] Quarmby & Carey 2015 and DfT 2017b.
[51] Sandford 2017.
[52] French 2018.
[53] HMEP 2018.
[54] UK Roads Liaison Group 2013.
[55] HMEP 2017.
[56] DfT 2015.

6.6 This is probably the best place to pick up the particular challenges arising from the fact that the ground beneath our highways often houses an array of utility services – water supply, sewers and drains, gas pipes, electricity cables and, latterly, the fibre-optic connections for telephone and internet services. All these services themselves require repair and maintenance from time to time, which requires the breaking of the road surface, known as 'streetworks'.

6.7 Streetworks are disruptive for road users whilst underway, and many initiatives have been pursued to incentivise better planning and swifter execution to minimise disruptive traffic impacts. But from a highway maintenance perspective there is a particular challenge in the quality of re-instatement of the carriageway. The concept of 'permanent' re-instatement is arguably something of a misnomer – once broken it is an engineering challenge to return the carriageway surface to an even, smooth condition, and to avoid leaving fissures which allow for water ingress and resulting damage when the water freezes in winter.

6.8 We would suggest that the Committee might like specifically to probe the challenge utility works pose to the efficient maintenance of local highways and what might be done, given the inevitable need to access utility networks for maintenance and repair, to minimise the incidence of works and dramatically improve the pace and quality of carriageway re-instatement.

7. The funding requirements of local roads and the suitability of current funding streams for the immediate and longer-term future.

7.1 The benefits of ensuring adequate and stable funding have been recognised in the creation of the Road Investment Strategy for Highways England. The Government announced in June 2013 that it would be making available £5.8 billion capital - £976 million each year - over the course of the forthcoming parliament to tackle highway maintenance on the local highway network – a significant increase on past levels and the downward trend of previous years. But the allocations were not fixed for the full five years, rather funding was to be set for the first three years (from 2015-16 to 2017-18) with indicative allocations for the subsequent three years from 2018-19 to 2020-21. It is also important to recognise that whereas the DfT is the sole funder for Highways England, the capital maintenance block grant only goes part-way to covering local highway authorities' maintenance spend, as this section explains – the funding picture could perhaps best be described as 'messy'.

7.2 Highway maintenance funding is classified as 'capital' or 'revenue' – this is significant because the funding comes from different sources and applies to different types of works:

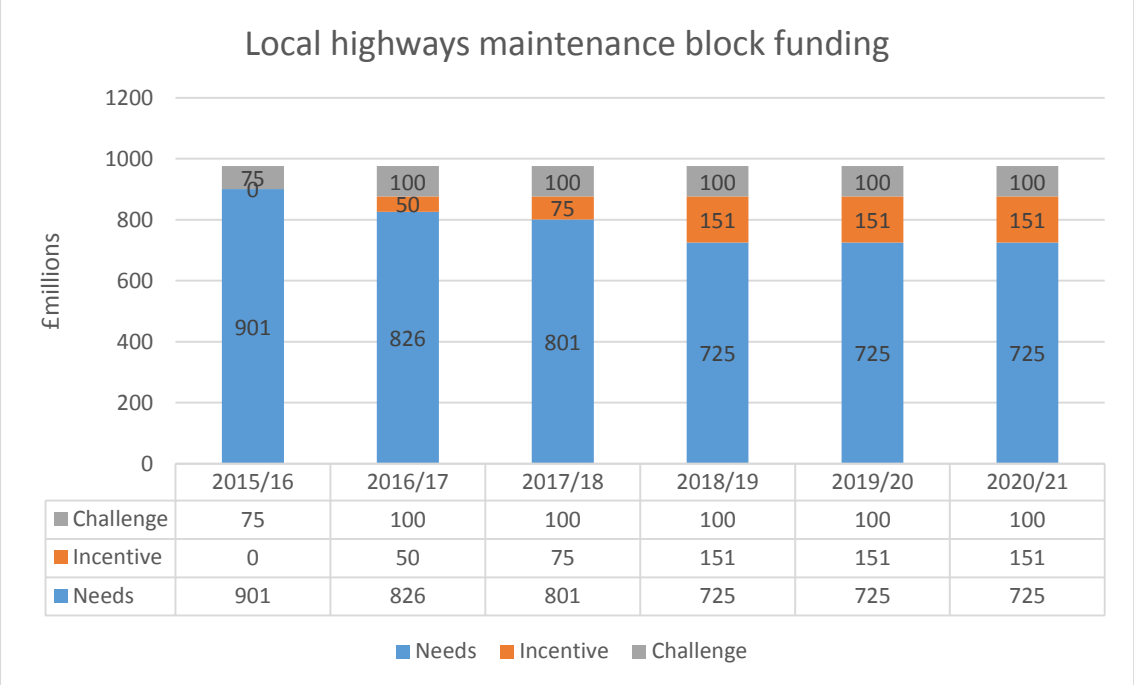
- Capital maintenance is primarily the structural renewal of highway assets (including roads, footways, bridges, drainage and lighting); essentially extending the life of the asset. Preventative treatments such as surface dressing are also treated as capital.
- Revenue maintenance expenditure mainly covers the routine works required to keep the highway serviceable and reactive measures to rectify defects. In addition to maintenance of the road surface itself, it also includes the cost of providing street lighting, footway repair and cyclical maintenance such as cleaning activities (of assets

such as the drainage system), grass cutting and vital services such as snow and ice clearance, and salt spreading[57].

7.3 The Department for Transport provides capital funding to local authorities for highways maintenance – this is known as 'the highways maintenance block', which sits alongside a separate allocation for other transport works called the 'integrated transport block'[58]. Revenue funding is provided by the Ministry of Housing, Communities and Local Government (MHCLG) through the Revenue Support Grant (RSG)[59]. This supplements the revenues from Council Tax receipts and retained Business Rates and, as such contains a component related to roads maintenance. However there is no central government constraint on how the RSG is used.

7.4 For the period 2015/16 – 2020/21 the highways maintenance block grant for English LHAs is made up of three elements as shown in Figure 7.1. The largest (needs) component is calculated in light of the lengths of different classes of roads in each LHA area (75%), the number of bridges (14%) and lighting columns (2%) and lengths of footways and cycleways (9%)[60].

Figure 7.1: English LHA's highways maintenance block grant 2015/16 – 2020/21



Source: DfT 2014e.

7.5 In addition, from 2016/17, there has been an 'incentive' element growing from 5.1% of the total to 15.5% in the last of the six years (the orange component shown in Figure 7.1). This is to be allocated from the results of a self-assessment questionnaire the responses used to determine how far each individual authority is adopting efficiency principles in the planning and execution of its roads maintenance programme. The 'needs' and 'incentive'

[57] DfT 2014d, para 1.9.
[58] DfT 2014e.
[59] DCLG 2013.
[60] DfT 2014b.

components of the maintenance block grant are not ring fenced but it seems they are being used for their intended purpose.

7.6 The Challenge Fund is available for major renewal projects which are difficult to fund through the normal needs based formula with £75m earmarked for 2017/18 rising to £151m in 2018/19 and the following two years. More recently the National Productivity Fund (£185m in 2017/18) is being provided to improve and maintain highway assets outside London and a Safer Roads Fund worth £175m from 2017/18 – 2020/21 to improve safety on 50 stretches of local 'A' roads.

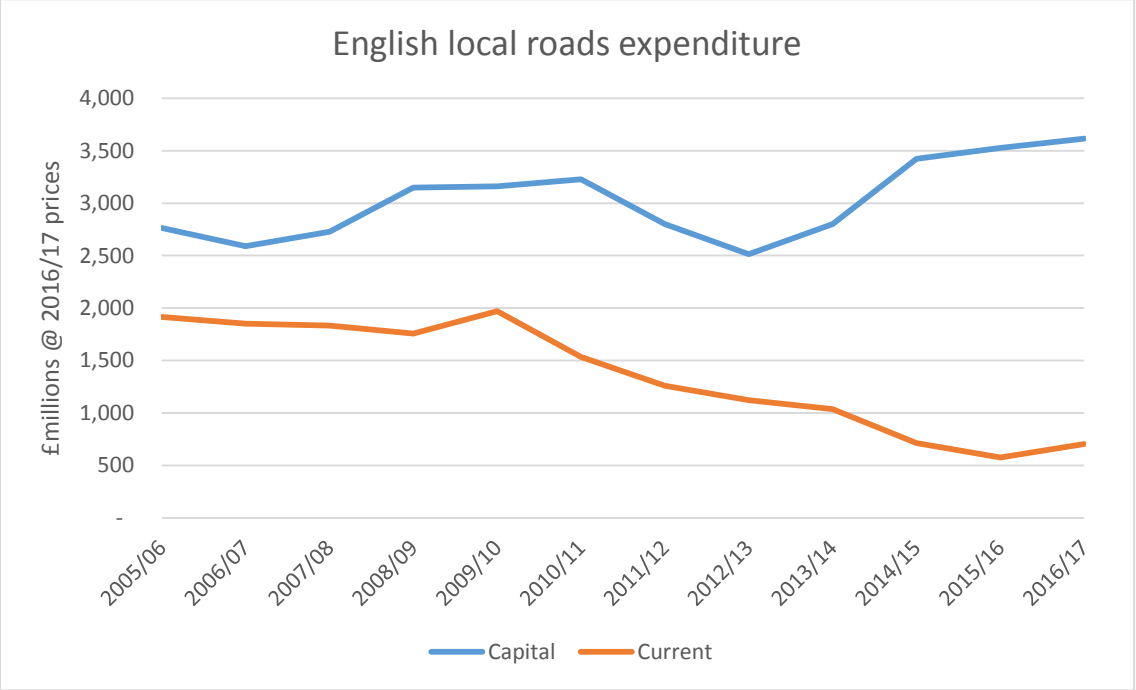
7.7 In addition to these programmed expenditures, from time to time the DfT makes grants to help local authorities in respect of particular problems which standard grants are insufficient to deal with. Recent examples of this have been the £168m from the Pothole Fund in 2014[61]; £46m in December 2017[62] and £100m announced in March 2018[63]. The total to be provided by the Pothole Action Fund is £250m between 2016/17 and 2012[64]. The fact that these 'top up' grants are so heavily focussed on potholes underlines the importance the Government places on tackling this aspect of the deteriorating condition of local roads.

7.8 There are other government funding streams which from time to time have been used to help pay for roads maintenance such as the Integrated Transport Block Grant and the Single Growth Fund. However most of the moneys in these streams are used for other purposes. Of the £1,356m ITBG allocated between 2012/13 and 2015/16 only £17m was spent on highways maintenance[65]. This was replaced by the Single Local Growth Fund in 2015 into which *inter alia* Local Authority Transport Majors, Local Sustainable Transport Block and Integrated Transport Block funds were merged. As of March 2016 £7.27bn of this had been allocated through Local Enterprise Partnerships out of a total of £12bn by 2020/21[66] however it has not been possible to identify any spending on highways maintenance projects[67].

[61] DfT 2014f.
[62] DfT 2017c.
[63] DfT 2018l.
[64] DfT 2017e.
[65] DfT 2016a.
[66] NAO 2016.
[67] DBEIS et al, 2018.

7.9 The Revenue Support Grant from which LHAs obtain support from central government has been reduced significantly in recent years from £15.175bn in 2013/14 to £7.188bn in 2016/17[68]. Along with other pressures on local authority spending this has made it increasingly difficult to maintain a reasonable level of current expenditure on the maintenance of local roads. How sharply this expenditure has reduced in recent years is shown in Figure 7.2. Whilst capital spending has varied from year to year over the eleven year period it has held up reasonably well. By contrast, in real terms, current spending has fallen in every year but two and by the end of the period was only 37% of the level in 2005/06.

Figure 7.2: Public expenditure on local roads in England 2005/06 – 2016/17 (2016/17 prices).

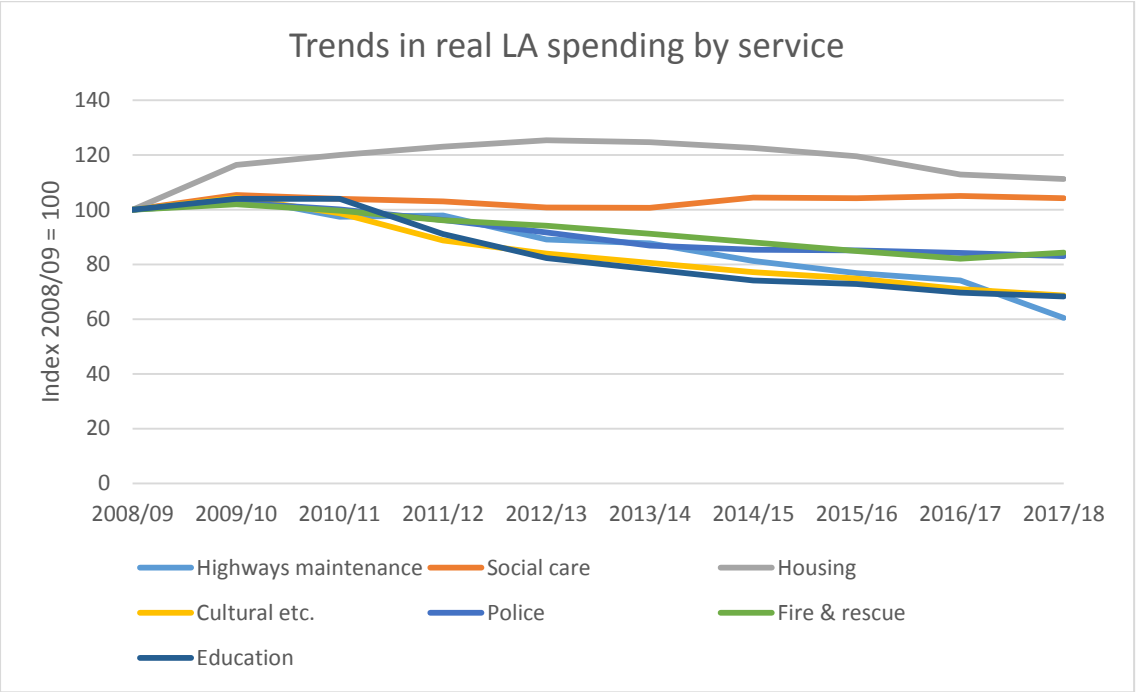


Sources: DfT 2017d & ONS 2018a.

7.10 The growing burden on local authority social services, which is the largest benefactor of RSG, is putting pressure on highways maintenance as, unlike personal services, it can be deferred without immediate widespread impacts. Figure 7.3 shows how roads maintenance expenditure comperes with spending on other local service from 2008/09 to 2017/18 (budgeted). Housing and social care have held up with all other services seeing a real decline. Over the full period highways maintenance will have seen the largest decline of almost 40% and in 2017/18 actual revenue spending on highways and transport fell short of the £4.24bn budget[69] by £246m (6%)[70] as a result of these pressures[71], compared with only 1% for all services combined.

[68] MHCLG 2018a, table 2.1a.
[69] MHCLG 2017c.
[70] MHCLG 2018b.
[71] RSTA 2018.

Figure 7.3: Local Authority real revenue expenditure trends by service 2008/09 – 2017/18.



Sources: MHCLG 2010, 2011, 2012, 2013a, 2014, 2015, 2016a, 2017a & 2017c.

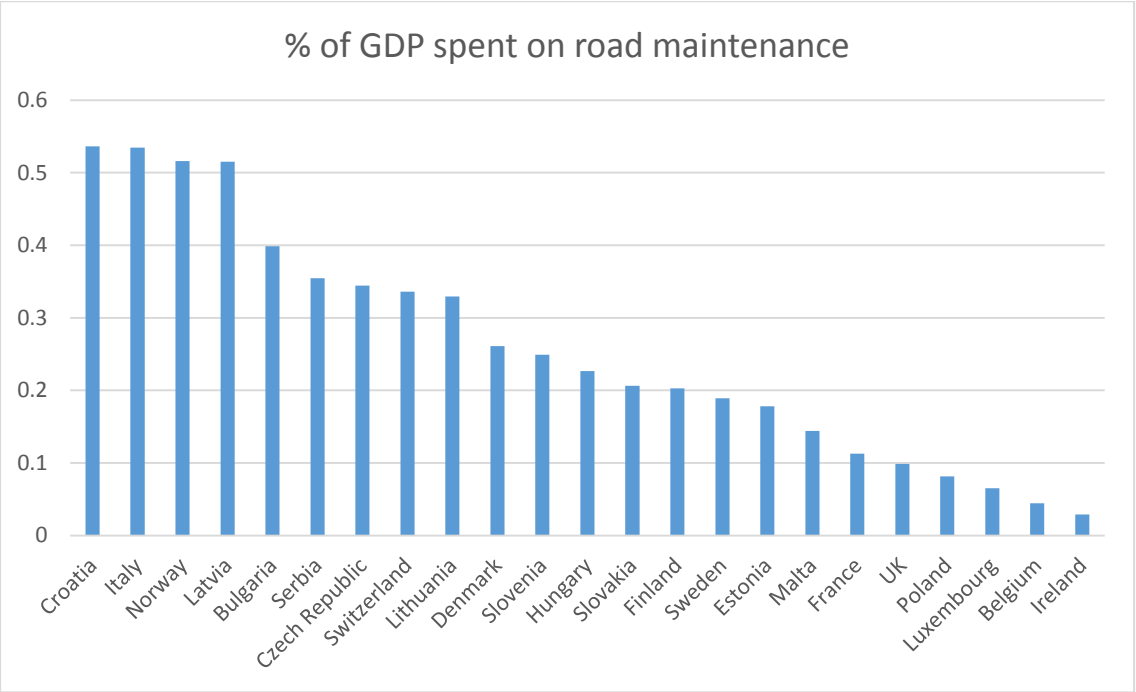
7.11 The Local Government Association has been expressing concern about this decline in government funding for some time[72] and had a Populus poll carried out for it in 2014[73] which found that:

- 83 per cent of people surveyed back LGA plans for existing fuel duty to be reinvested in roads maintenance;
- regionally, this rises to 90 per cent in Eastern England, 88 per cent in Wales and 85 per cent in Yorkshire and Humberside; and
- one in five respondents said they would be more likely to vote for a party which committed extra money to fixing our roads in next year's (i.e. 2015) General Election.

7.12 If the level of expenditure had been excessive in the mid-2000s this would have been justified, but the widespread concerns about local roads conditions suggest that this is unlikely to be the case. This is supported by the European comparison set out in Figure 7.4. Whilst this data is for 2016 and the comparisons must be treated with some caution as they apply to all types of roads, it is clear that the UK does not rate well in this regard and even if its expenditure were to double it would only move from 19th in the rankings to 15th (out of 23).

[72] LGA 2015.
[73] LGA 2014.

Figure 7.4: % of GDP spent on road maintenance in selected European countries (2016).



Sources: ITF 2018 & World Bank 2018.

7.13 The separate sourcing and determination of current and capital grants can lead to distortions in resource allocations as shortage of capital may result in costly maintenance of existing assets where replacement may be more cost effective and concerns about the acquisition of new assets for which maintenance funding cannot be found. An example of the latter has been the effectiveness of the Safer Roads Fund[74] where concerns have been expressed about the ability to keep up proposed roads safety initiatives within already overstretched maintenance budgets[75].

7.14 It is fair to conclude therefore that the funding arrangements for local roads maintenance are deficient in a number of respects. Capital funding arrangements have changed over the years and are now provided on a planned basis but only until 2020/21 which is hardly sufficient for long term planning to deal with the maintenance backlog estimated by the Asphalt Industry Alliance to amount to £9.3bn in value and take 14 years to catch up[76]. The government estimated in 2015 the backlog of maintenance works on the local road network to be up to £8.6 billion[77]. The provision of ad hoc grants such as the various pothole funds is tacit recognition of the inadequacy of existing programmed spending on local roads maintenance. Revenue grants are allocated through a different government department, have been part of a declining total and, not being protected, are under increasing pressure from other local services – notably social care.

7.15 Overall it is clear that funding is insufficient in total and too uncertain looking ahead to give LHAs an adequate basis for maintaining their roads to the standards users expect,

[74] DfT 2017f.
[75] KANTARPUBLIC, 2018.
[76] AIA 2018.
[77] HMT 2015b.

the separation of capital and current funding obstructs the most efficient use of resources, and wider pressures on current expenditure from a growing demand for social care services.

8. Whether there is a role for alternative funding models for local roads maintenance and investment.

8.1 A sound arrangement for funding local roads maintenance would ideally have the following characteristics:

- it should be predictable enough to allow a realistic strategy and rolling programme to be developed and operated;
- it should incentivise efficient and timely interventions;
- it should be sourced fairly from those who benefit from a well maintained local road system; and
- it should match the scale of the task in hand.

The present grant regime does not match these requirements although recent reforms to the arrangements for capital grants go a substantial way to meeting the first two.

8.2 It is important to recognise the difference between funding and financing: the first being where the liability for paying finally rests and the second the range of devices such as loans and PFIs which provide the cash flow at any point in time. The following paragraphs deal with the matter of funding.

8.3 Perhaps the most obvious way of improving the funding regime would be a hypothecation of a share of motoring tax revenues, as motorists are major (by no means the only) beneficiaries of local roads. This would appear to be acceptable to the public generally[78] (unlike some other forms of charging for road use) and hypothecation of road taxes (which had existed between 1910 and 1937[79]) is being introduced in part to provide funds for the trunk road network[80] and to fund enhancements to major roads (of regional and national significance but not part of the SRN). Fuel duty receipts are currently roundly £28bn/year[81] and at a rate of 57.95p/litre[82] a 1p/litre yield is £480m/year so current maintenance block funding would be covered by a 2p/litre hypothecation and 5p/litre hypothecation would provide a 50% increase in the block grant and around £1bn year towards current expenditure. Whilst there are many variations on this theme this shows that there is an apparently acceptable way of providing a stable (at least for the time being) and adequate revenue stream which could be used for local roads maintenance. That said, we recognise that such hypothecation would be a loss to other budgets currently funded through general taxation.

[78] LGA 2014.
[79] Plowden 1971.
[80] HMT 2015a.
[81] DfT 2017g.
[82] DBEIS 2018a.

8.4 The winning entry to the 2017 Wolfson Prize for economics[83] proposed a replacement of existing road taxes with an insurance-linked charge based on mileage, weight and environmental characteristics, with an associated guarantee of funding for local road maintenance. 'LHAs could plan their maintenance work and forecast future revenues based on traffic growth. The central government would not need to worry any longer about which LHA to allocate road investment grants to. The LHAs would become financially independent and would be forced to act more commercially, without the expectation of central government aid in case of need. Furthermore, key indicators such as those used for HE's RIS can be developed and applied to monitor LHAs' spending'[84].

8.5 Other ideas from the shortlisted entrants all involved some form of mileage based charging designed to be more politically palatable than full blown road pricing with, in some cases, payments to highway authorities related to their performance but all recognising the need to improve the fabric of the road network as well as reduce the economic costs of congestion and environmental nuisances.

8.6 An alternative approach, avoiding the early introduction of so-called 'Pay-As-You-Go' mechanisms would be to unfreeze the rate of fuel duty with the additional revenue dedicated to roads expenditure. If these receipts were guaranteed, highway authorities could potentially borrow against them, either through conventional loans or PFI schemes.

8.7 Local roads are important community amenities, enabling access to properties and easements for utilities. It is therefore reasonable for a share of the maintenance costs to be charged to local property owners and utility companies. With household expenditure on energy, water/sewerage and telephone landlines amounting to over £40bn/year[85] along with commercial and industrial spending the total spend for England for utilities must substantially exceed £50bn/year - a 1% levy for local road easements would yield £500m or so – which would make a healthy contribution to local road maintenance costs.

8.8 There is little doubt that, given the level of public and business concern about the condition of local roads, it would be desirable to develop a framework that would deliver a fairer, more stable, more secure and higher level of funding for local roads, building on the precedent of the Road Investment Strategy for the English trunk road network.

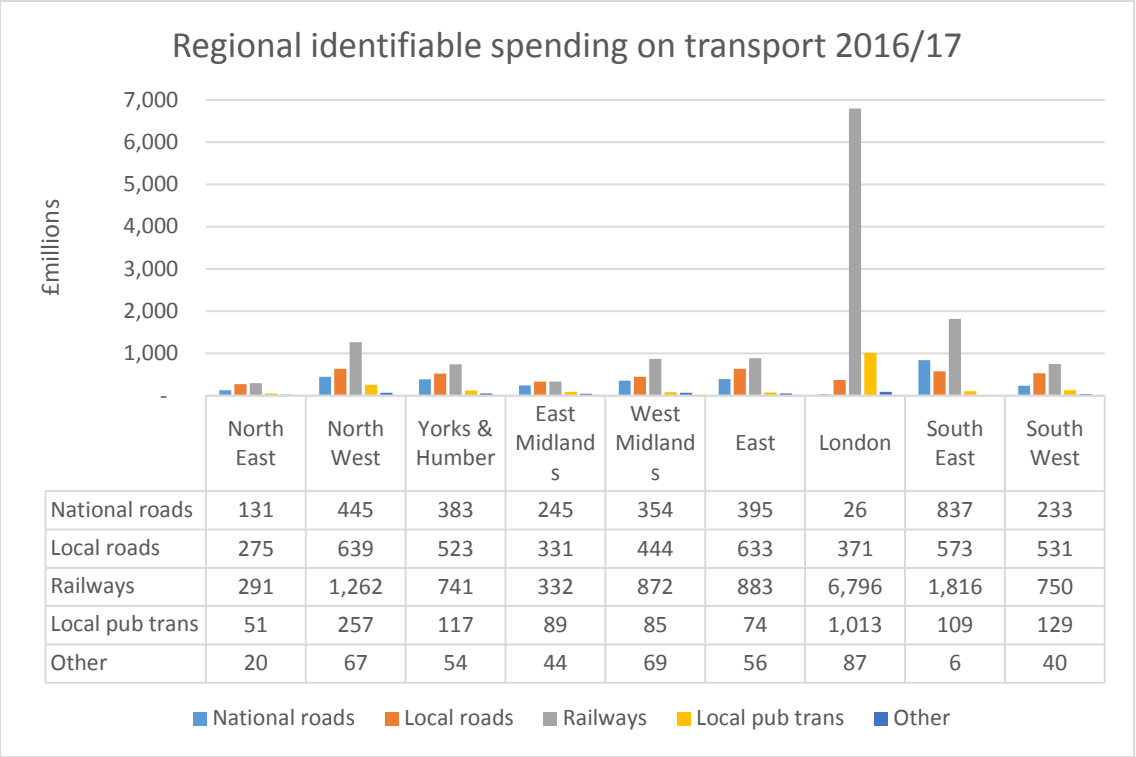
9. The regional distribution of local roads funding across England.

9.1 It is difficult to produce a comprehensive picture of local road funding by region but a partial picture is possible. As shown in Figure 9.1 public spending on rail dominates in all regions but especially in London and the South East. Local roads expenditure comes second to rail except in London where local public transport (Underground, bus and light rail) comes second (though it is worth noting that the quality of the local road network is a material contributor to the quality and reliability of local bus services). Per capita expenditure on

[83] How Can We Pay For Better, Safer, More Reliable Roads In a Way That is Fair To Road Users and Good For the Economy and the Environment?
[84] Raccuja 2017.
[85] Author's estimate based on DBEIS 2018, Water UK 2018, ONS2016 and Openreach 2018.

local roads in 2016/17 is shown in Figure 9.2 with below average spending (£78/capita) seen in the midlands London and the South East and the highest levels in the East and North East.

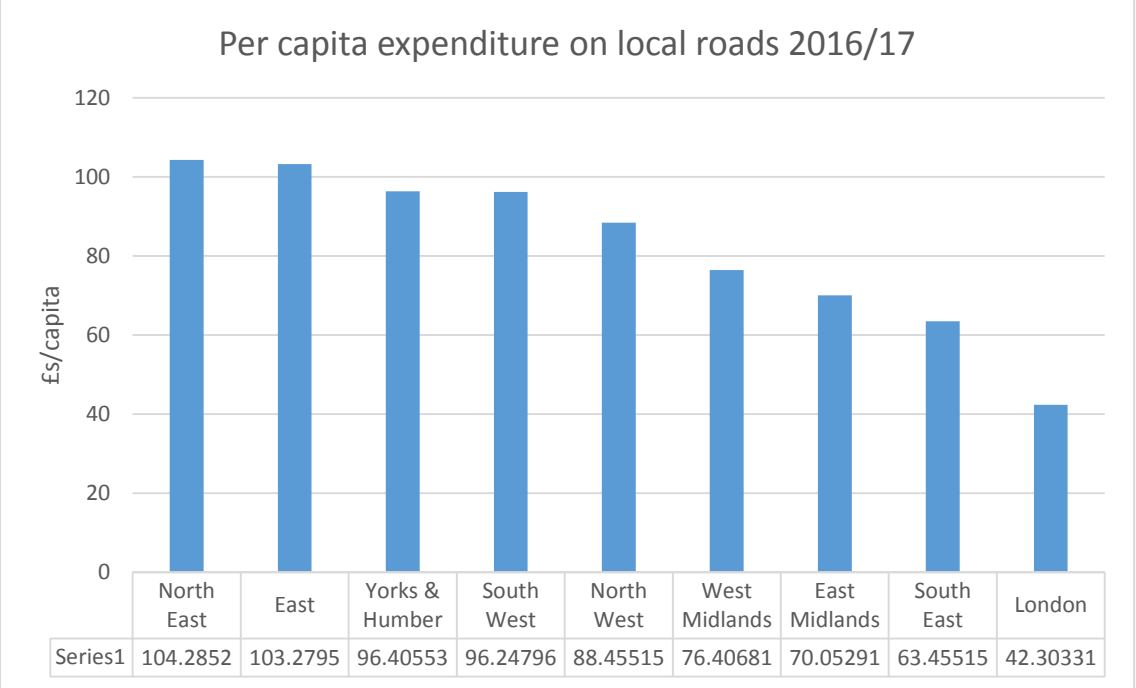
Figure 9.1: Total identifiable expenditure on transport in the English Regions 2016-17



	North East	North West	Yorks & Humber	East Midlands	West Midlands	East	London	South East	South West
National roads	131	445	383	245	354	395	26	837	233
Local roads	275	639	523	331	444	633	371	573	531
Railways	291	1,262	741	332	872	883	6,796	1,816	750
Local pub trans	51	257	117	89	85	74	1,013	109	129
Other	20	67	54	44	69	56	87	6	40

Source: ONS 2017, table B.9.

Figure 9.2: Per capita expenditure on local roads by region – 2016/17

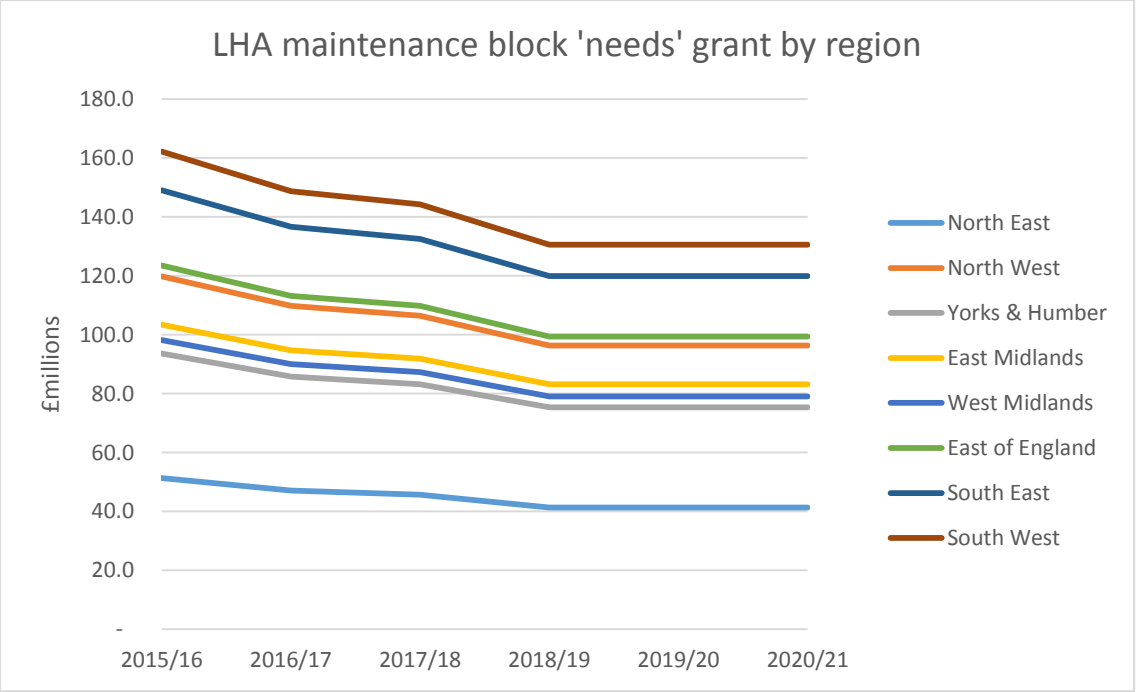


	North East	East	Yorks & Humber	South West	North West	West Midlands	East Midlands	South East	London
Series1	104.2852	103.2795	96.40553	96.24796	88.45515	76.40681	70.05291	63.45515	42.30331

Sources: ONS 2017, table B.9 & ONS 2018b, table 1.

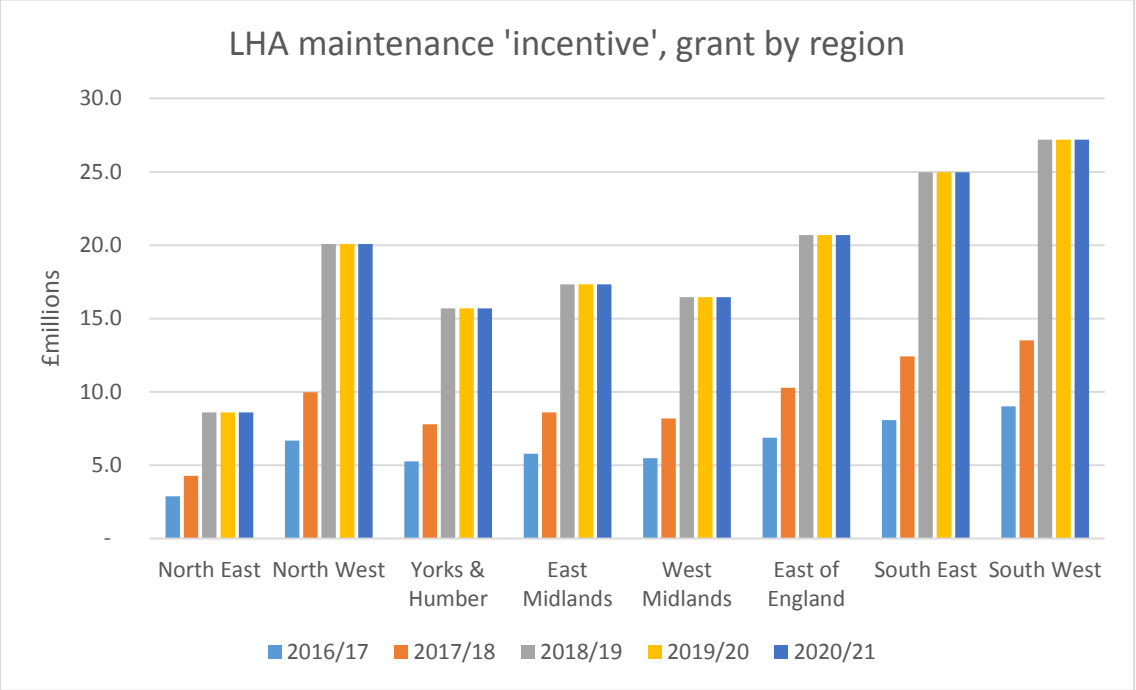
9.2 The main sources of local highways maintenance capital funding from central government are shown in Figure 7.1. The regional distribution of the 'needs' element is shown below in Figure 9.3. The per capita spread is rather less than in Figure 9.2 (excluding London which is subject to a different grant regime from the rest of the country) with the highest rate in 2017/18 £19.45/capita in the East Midlands compared with £14.67/capita in the South East. The distribution of the incentive component of the LHA roads maintenance block grant will depend on the performance of individual LHAs which cannot be determined in advance but the actual 2016/17 and the illustrative allocation, based on all regions obtaining the maximum allowance in later years is shown in Figure 9.4.

Figure 9.3: LHA maintenance block 'needs' grant by region 2015/16 – 2020/21.



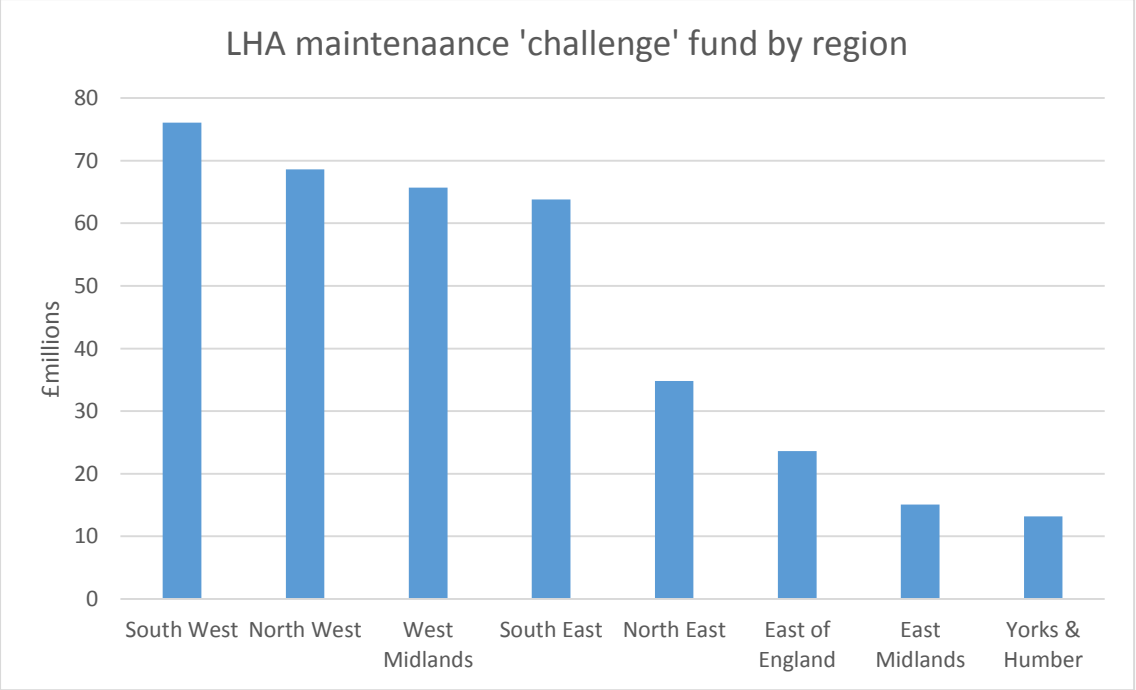
Source: DfT 2014g.

Figure 9.4: LHA maintenance block 'incentive' grant by region 2015/16 – 2020/21.



Source: DfT 2014g & DfT 2016b.

Figure 9.5: LHA maintenance block 'challenge' grant by region, Tranches 1 & 2A.



Source: DfT 2017h.

9.3 The final component of the maintenance block grant is the 'challenge' element – totalling £575m over the six year period. So far there have been two tranches of funding to LHAs amounting to £361m for 53 projects and the regional distribution of these as shown in Figure 9.5. A breakdown of capital spending on roads at an LHA level can be found at

https://www.gov.uk/government/statistics/local-authority-capital-expenditure-and-financing-in-england-2016-to-2017-individual-local-authority-data the categories listed are:

- New construction / improvement of roads
- Structural maintenance - principal roads
- Structural maintenance - other LA roads
- Expenditure on Bridges
- Road Safety
- Street Lighting

and can be aggregated to regional levels.

9.4 Current expenditure on local highways maintenance is aided by the MHCLG Revenue Support Grant as indicated in paragraph 7.2 and it does not appear possible to establish how this was distributed between the different service areas.

Expenditure by individual LHAs is given in https://www.gov.uk/government/statistics/local-authority-revenue-expenditure-and-financing-england-2016-to-2017-individual-local-authority-data-outturn and broken down into:

- Transport planning, policy and strategy
- Structural maintenance
- Environmental, safety and routine maintenance
- Winter service
- Street lighting (including energy costs)
- Traffic management and road safety: congestion charging
- Traffic management and road safety: traffic management – bus lane enforcement
- Traffic management and road safety: road safety education and safe routes (including school crossing patrols)
- Traffic management and road safety: other

and can be aggregated to regional levels.

However the totals of the RSG by local authority can be found at https://www.gov.uk/government/statistics/local-authority-revenue-expenditure-and-financing-england-2017-to-2018-individual-local-authority-data-outturn.

10. Conclusions.

10.1 Currently it is not possible to provide a comprehensive and accurate picture of the condition of local roads. Centrally available information does not cover all highway assets and only measures limited features of those included. Moreover changes in monitoring methods and parameters over time make long term comparisons very difficult. However information on a number of key aspect is available and shows that since the current monitoring regime was introduced in 2007:

- there has been a limited deterioration in LHA 'A' roads' surface conditions since 2012/13 with significant regional variations. However, the Department does not collect the raw data from the SCANNER vehicles, nor aggregate values. Instead it only tracks the proportions of roads that score over 100 on this scale. It is quite possible that the distribution of raw RCI values has changed over time, so that lengths of those road where maintenance should be considered have diminished, while the mean value has risen. If this is the case, this would not be captured by DfT road condition statistics
- there has been a significant deterioration in LHA 'B' and 'C' roads' surface conditions since 2012/13 again with significant regional variations;
- minor roads are the least well maintained but their surface condition has changed little;
- the skidding resistance of local roads is inferior to that of trunk roads and has worsened significantly over the last few years with London standing out as the worst case;
- the number of potholes filled on local roads grew from 0.76 million in 2007/08 to 2.45 million in 2014/15 but has fallen back to 1.6 million since at a cost of £1bn plus £125 million in compensation claims and
- of the 53,000 bridges on England's local roads almost 2,700 thousand (5%) are substandard.

10.2 Generalisations about the wider economic and social costs of not maintaining local roads must be made with some caution as they depend upon the particular circumstance of the roads in questions and the type of maintenance interventions involved. However we have found evidence that:

- in Scotland for every £1 saved by reducing maintenance budgets, there is an increase of more than £2 from the wider impacts of the reduced maintenance, plus a range of unquantified benefits;
- based on work done by the University of Birmingham for the DfT, reducing maintenance spending from an optimal £880m/year to £600m/year would create costs to users of 6p/vkm for cars, 7p/vkm for PSVs and 18p/vkm for HGVs; and
- work done for the West Midlands Highway Authorities showed that the proposed strategy, which involved a significant up-front investment over the first five years, would have generated benefits of between £6 and £7.5 for every £1 spent.

10.3 These quantitative studies are strongly backed up by surveys of motorists' and the general public's attitudes to poorly maintained roads which have found:

- poor conditions of roads and footways were amongst the most important and least satisfactory of local transport services;
- in the broader context of a wider range of features of the character of the areas in which people live, at the national level, road and pavement repairs were the second highest priority for improvement in local areas;

- an overwhelming majority of motorists and cyclists are especially concerned about potholes and the damage they could cause and believe that road conditions are deteriorating;
- the proportion of breakdowns resulting from pothole damage has more than doubled since the RAC started to measure this in 2006 and
- these concerns are shared by business interests which also believe road conditions are worsening and this imposes substantial costs on them from wasted staff time, production delays, increased fuel consumption and vehicle damage repairs.

10.4 The monitoring of local road conditions is focused heavily on carriageway conditions and little is known centrally about most other highway assets, although the recent practice of highway asset management means that there is a growing body of knowledge within LHAs across a wider range of parameters. There is a clear case for making more systematic use of this information to inform central policy making and funding decisions as well as to aid local authorities improve their road maintenance regimes.

10.5 There are three key dimensions to the maintenance of local roads - governance, funding and engineering practices. The Highways Maintenance Efficiency Programme is promoting and improving best and better road maintenance practices, and resources such as the Local highways Maintenance Appraisal Tool are assisting ongoing improvements in roads maintenance practice. It makes sense to let these initiatives continue to develop, but without the certainty and adequacy of funding, steps to improve the incentives for engineering and materials innovation, and an answer to the challenges created by utility streetworks the future looks difficult, and tightening local authority finances are making it increasingly difficult to ensure adequate skills are maintained within LHAs.

10.6 It is not only the quantum of funding that is at issue. The capital/resource split, the preponderance of one-off short notice bidding rounds, and the intense pressures on resource budgets all take their toll.

10.7 Realistically, given the wide range of pressures on the public purse, it appears unlikely that all these issues will be resolved for all local highways. Hopefully the circumstances will improve for the more important local roads, but for those less heavily trafficked routes difficult questions will need to be addressed on what, exactly, the duty in section 41 of the Highways Act 1980– "The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, …, to maintain the highway" – actually means, and how far the definition might depart from road users' legitimate expectations.

RAC Foundation

October 2018

Annex A

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