

COVID 19
POP UP
CYCLE LANE
AHEAD

ALARM

**Annual Local Authority
Road Maintenance Survey**

2021

About the ALARM survey

Each year the Asphalt Industry Alliance (AIA) commissions an independent survey of local authority highway departments in England (including London) and Wales.

The aim of the survey is to take a snapshot of the general condition of the local road network, based on information provided directly by those responsible for its maintenance. The data received from local authorities provides a means of tracking any improvement or deterioration and the qualitative feedback received from them provides context.

Questions in the survey relate predominantly to the maintenance of the carriageway itself – the road surface and structure – and only that part of the total highway maintenance budget which specifically addresses the condition of the carriageway. Total highway maintenance budgets cover other significant areas of expenditure – including structural work to bridges, street lighting and cyclical maintenance, for example grass-cutting, checking traffic signals and the replacement of street furniture – which are excluded from this report.

ALARM 2021 is the 26th annual survey and 63% of authorities responsible for local roads in England and Wales responded. This demonstrates that, even during the challenges of the COVID-19 pandemic, local authority highway engineers consider it to be a key vehicle for reporting on-going road conditions.

This report summarises the key findings.

The survey and data collation was carried out between December 2020 and February 2021. Unless otherwise stated, the findings are based on the financial year 2020/21, ending 31 March 2021. Where these are unavailable, figures for the calendar year 2020 were requested.

There are four authorities in England, and one in London, which have Private Finance Initiative (PFI) contracts in place to fund and manage their highway maintenance programmes over a 25-year period. These are not included in the survey.

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The ALARM survey 2021 includes the findings of both quantitative and qualitative research. The data received from local authorities has been extrapolated to represent the 113 local authorities in England without a PFI, 22 in Wales and 32 in London. The results have been collated, analysed and verified by an independent researcher. ALARM survey reports from previous years can be accessed via our website: www.asphaltuk.org A broad range of other road-related statistics are collated on RoadFile: www.roadusers.org.uk

Quotations used in this report are from local authority highway officials.

Acknowledging ALARM

The Asphalt Industry Alliance is happy for journalists, researchers, industry organisations, government departments and others to use and/or quote the findings of ALARM 2021 and the infographics contained in this report. We stipulate that it is acknowledged as your source – referencing it as the AIA's ALARM survey 2021 – in all cases.

Please contact the AIA press office on 020 7222 0136 or email: info@asphaltuk.org if you have any queries.

▲ Arrows indicate the direction of change from ALARM 2020.



Short term fix is not a long term solution

Introduction by **Rick Green**, Chair,
Asphalt Industry Alliance

The last 12 months have presented exceptional challenges and those responsible for maintaining our local roads should be proud of delivering seamless operations, despite the disruptions caused by the pandemic. They have been recognised as ‘hidden heroes’ by the Roads Minister, Baroness Vere, and rightly so, for working tirelessly, keeping our key workers and emergency services moving, supermarket shelves stocked and vaccines distributed.

We are extremely grateful that, in these unusual and difficult circumstances, so many local authorities’ highway teams found the time to complete this year’s ALARM survey, with response rates even up in some areas. These contributions allow us to continue to report robust data, track long-term trends, as well as highlight annual funding and condition levels.

This year’s findings (which relate to the 2020/21 financial year) show there is a welcome increase in highway maintenance budgets across England and Wales. This uplift has been, in part, due to additional funding awarded by central Government, including the Pothole Fund, as well as supplementary monies to support changes due to COVID-19 social distancing guidance and advance its active travel ambitions. Nevertheless, local authority reserves and borrowing continue to represent a significant proportion, especially in London.

Even though overall highway budgets are up on last year, it is important to point out that they remain below the levels reported in ALARM 2019, demonstrating that the cuts reported 12 months ago have not been replenished and a long-term inconsistent pattern to funding continues.

Tough decisions

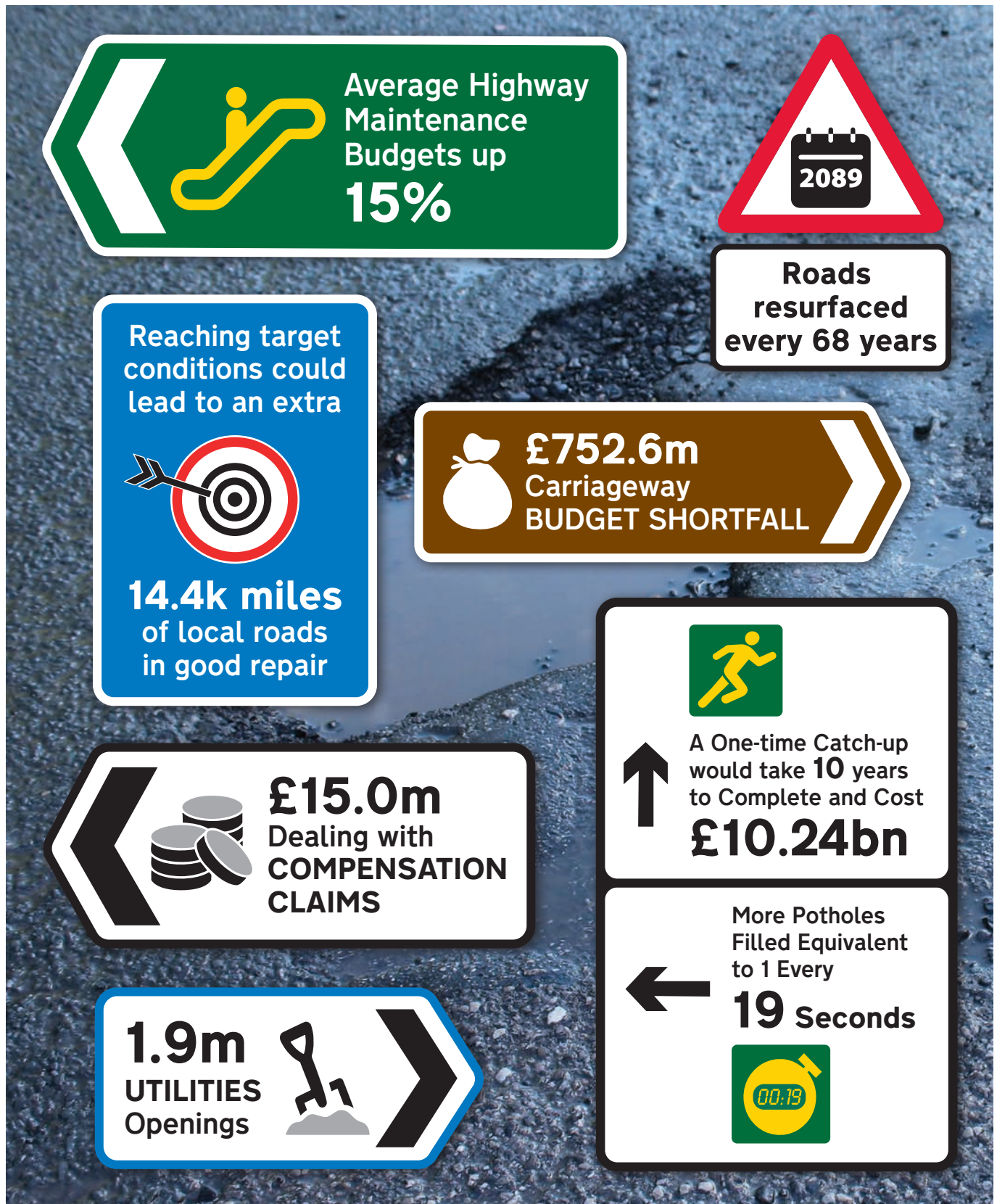
Local authorities have a statutory duty to maintain the highway and are encouraged to do so using asset management principles. However, the up-down approach to funding that ALARM has reported for many years, does not support this. It results in wasteful patch and mend activity – as borne out by the large increase in the number of potholes filled over the past 12 months in England and Wales. Potholes and pothole repairs are the symptoms of an underfunded network, where hard pressed highway teams continue to have to make tough decisions to keep all of their networks functioning.

Against this backdrop, it’s not surprising local authorities report that the increase in carriageway maintenance budgets has not yet translated into significant improvements in road conditions and reaching targets remains well out of reach. ALARM shows that if local authorities had sufficient funds to meet their target conditions there would be an additional 14,400 miles of roads in a good state of repair and another 2,000 fewer miles in urgent need of repair.

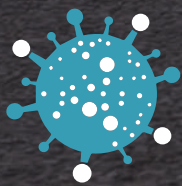
As the nation looks towards the future and reducing carbon emissions, sustainability will become increasingly important. Eight out of ten local authorities have declared a climate change emergency, but ALARM findings indicate that less than a quarter (23%) have targets to reduce the carbon footprint of the road materials they use. This indicates a possible disconnect between policy and practice and that more needs to be done to encourage uptake of the more sustainable material options available.

With the average frequency of road surfacing now once every 68 years and the bill to fix the backlog still in excess of £10 billion, it’s clear that a longer-term approach to local road funding is needed. As part of the post-pandemic reset, we will rely on our local road network to support recovery and underpin levelling-up goals. A five-year Government funding package, similar to the commitment made to the strategic network in the two Roads Investment Strategy (RIS) periods, would allow local authority highway asset managers to plan ahead, invest in and implement a more sustainable, cost effective whole life approach to maintaining our local roads.

Key facts 2020/21



Detailed key findings can be found on page 20.



Impact of COVID-19

Local highway teams, along with the country as a whole, have faced an unparalleled set of challenges over the 2020/21 financial year due to the impacts of working within COVID-19 regulations.

Over a quarter of ALARM respondents (28%) saw their highway maintenance budget impacted as a result of the pandemic, predominantly due to additional costs incurred to ensure workforce and public safety in compliance with COVID-19 guidelines.

However, 70% of respondents reported that their planned highway maintenance

programme of works was impacted – some positively and some negatively. In certain instances, lockdowns resulted in planned works being delayed and some activities were unable to take place due to social distancing restrictions, particularly in urban and residential areas. In other cases, planned and future works were brought forward to take advantage of reduced traffic flow.

The vast majority (90%) of respondents implemented new temporary and/or permanent highway-related schemes as a result of the Government's drive to promote active travel and social distancing across England and Wales

Building bus and cycle lanes and restricting vehicles into one lane is going to have a serious impact on the resilience of our road network going forward.

(permanent schemes: 15%; temporary: 28%; both: 57%). Of these, 79% reported that the Government funding received was sufficient to carry out the works, with the remaining 21% having to reallocate funds from other budgets, significantly from the carriageway maintenance budget.

Highway maintenance budgets

Local highway authorities in England and Wales, including London, are responsible for over 205,100 miles of roads (source: Department for Transport, 2020), which represents 97.3% of the total road network. The DfT puts the network asset value at over £400 billion and HM Treasury's *National Infrastructure Strategy* states: 'high quality local roads are also central to the future of transport, playing an important role in the take-up of autonomous vehicles and greener forms of transport, such as cycling and buses.'

Highway maintenance is just one aspect of local authority responsibility. Feedback suggests that the proportion of their total budgets allocated to this area in 2020/21 in England is 5.5%, back up to the same level as 2018/19 following a significant drop last year (2019/20: 4.2%). In London this figure was up, but still just 2.0% (2019/20: 1.3%), while in Wales it increased to 4.5% (2019/20: 2.9%).

This up and down funding is causing problems. We shouldn't be looking at one-year funding – it is not compatible with asset management principles.

These budgets are funded by central government as well as local authority sources, which includes borrowing, use of capital reserves and monies collected through council taxes and a share of business rates as well as parking fines and other fees.

Average total local authority budgets for highway maintenance increased across all areas, and included additional funds awarded to implement changes due to COVID-19 and the Government's active travel ambitions (see page 4). In **England (excluding London)** the reported increase was 15% to £30.9 million per authority –

Local roads in England and Wales

Proportion by type:



- Principal roads: 10%
- Non principal roads: 29%
- Unclassified roads: 61%

back more in line with 2018/19 budgets (£31.5m) following a drop last year.

Funding streams

Of the budgets allocated for highway maintenance, 60% is reported to be funded by central government, while the other 40% comes from local authorities' own sources.

The DfT provides around 87% of the central government funding to English highway authorities – equating to approximately 52% of local authorities' total highway budgets. The remainder comes from other sources, such as the Ministry of Housing, Communities and Local Government (MHCLG), Environment Agency grants and regional growth funding.

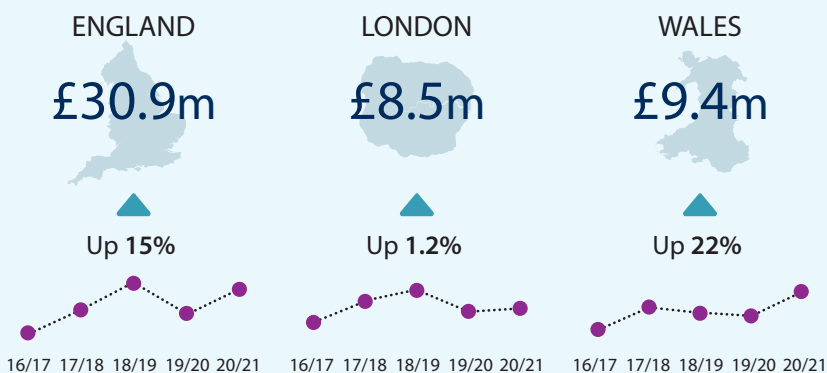
DfT funding is split into several pots, the majority of which are not ring-fenced. The exception is bid-for funds, such as the Challenge Fund, which are ring-fenced specifically for highway improvements but also include the need for local authorities to secure funding to match or contribute.

Highway maintenance budgets

Average per authority 2020/21, with change from 2019/20



Includes bridge maintenance and structural work, cyclical maintenance (such as sweeping, grass cutting, checking traffic signals and replacing street furniture) and maintaining street lighting



Highway maintenance budgets continued

English authorities received a share of the £198 million Challenge Fund for 2020/21, announced in July 2019.

The time invested in bids is huge, with no certainty of success. It would be much better to streamline the process, perhaps by submitting an outline of intent with only those shortlisted required to complete a full submission.

Incentive-based funding was introduced in England by the DfT in April 2016 to promote efficiency improvements and reward success. To secure this funding, local authorities must respond to an annual self-assessment questionnaire covering asset management, resilience, customer satisfaction, benchmarking and efficiency, and operational delivery.

The results determine which of three bands they are placed in – and therefore how much from the £151 million

incentive funding available in 2020/21 they were allocated – with band 1 at the lowest end (receiving no incentive funding, for the first time, in 2020/21) and band 3 at the highest.

Responses show there has been a further increase in the number of local authorities placing themselves in the highest band, which has increased to 93% (2019/20: 89%).

Qualitative research highlights that authorities are generally supportive of this shift in allocating funds and efficiencies have been achieved as a result.

Now the vast majority of local authorities are in band 3, the incentive fund should be extended to encourage continual improvement.

Regional funding

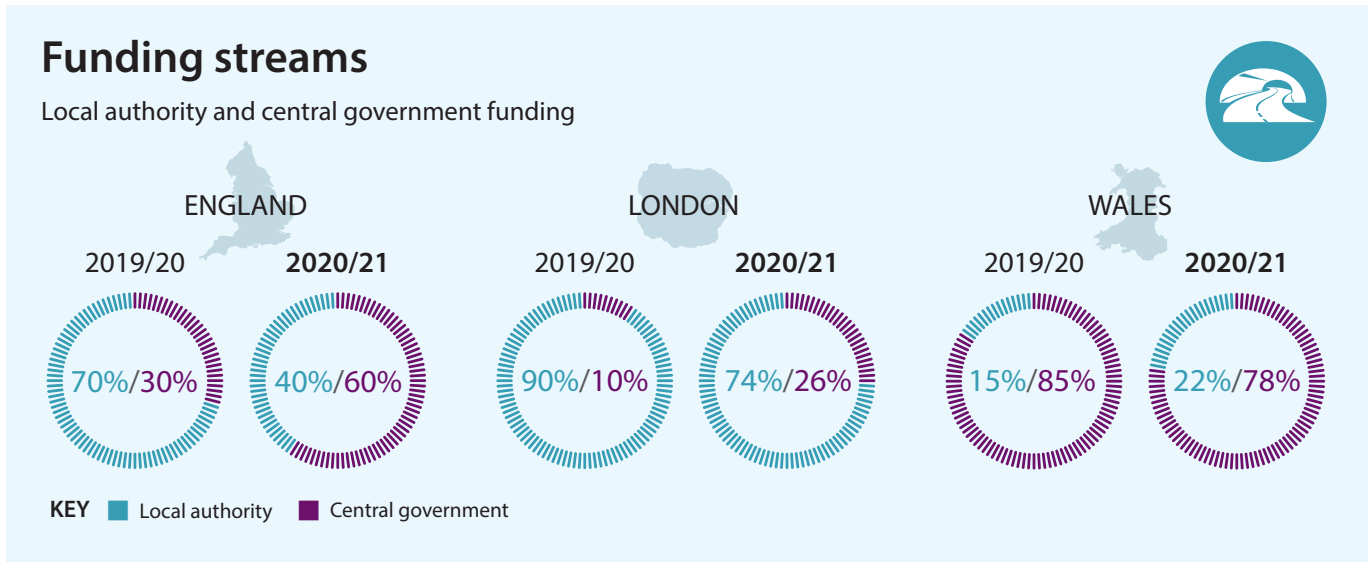
Respondents in **London** have reported a modest increase in their overall highway maintenance budget to an average of £8.5 million, up from £8.4m last year. The

The only money available from TfL now is bid for.

impact of the Government’s decision in 2018 to withdraw funding to TfL, which previously funded a significant proportion of highway maintenance in the capital, has taken its toll, with only 1.4% of budgets coming via this route. Overall, 26% of funding is reported as originating from central government sources, with the overwhelming portion – 74% – coming from London boroughs’ reserves and borrowing.

Average budgets reported by authorities in **Wales** have seen an increase to £9.4 million, however these figures are impacted by significant capital investment projects in a small number of authorities. If adjusted to exclude this, the highway budget per authority would be marginally up on last year at £7.8m (2019/20: £7.7 million).

Of the total, 78% of funding came through the Welsh Assembly Government and 22% from authorities’ own sources.



Winners and losers

The average totals hide a wide disparity between those seeing increased highway maintenance funding and those local authorities who have experienced a cut, with funds reportedly being diverted to other areas of council expenditure, such as education and social care. In England 28% of all local authorities reported a cut in last year's highway maintenance budgets, while in London this figure was 60% and, in Wales, 40% reported a year-on-year reduction.

This disparity is particularly apparent when considering the range of highway maintenance budgets per mile of local road in England and Wales, which varies in individual authorities from just £2,900 per mile to £62,500 per mile.

Overall, the reported total highway maintenance budget across England and Wales for 2020/21 has increased to £3.97 billion, moving towards the £4.1bn of 2018/19 levels and is up by over £500 million on last year. The trend graphic on page 9 (top left) demonstrates the fluctuating level of highway maintenance budgets over the last decade.

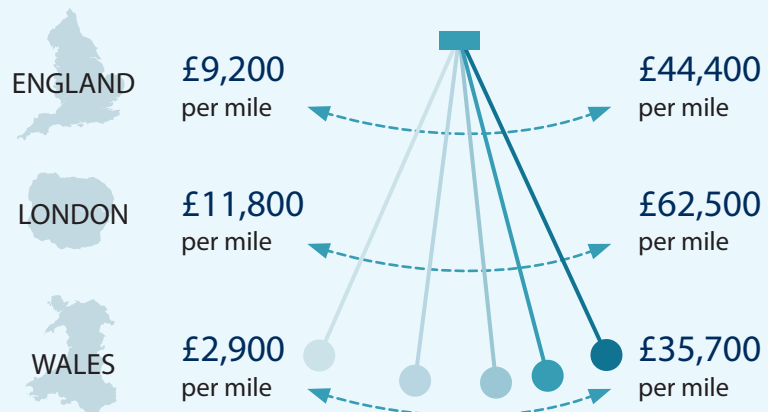
Carriageway maintenance

Defined in the survey as: *the percentage of the highway maintenance budget spent on the carriageway itself*, the carriageway maintenance budget has increased marginally to 52% across ALARM respondents, from 50% in 2019/20, but is still lower than it was two years ago (56%). Consequently, total carriageway maintenance expenditure across England and Wales in 2020/21 was around £2.17 billion, up from £1.77bn last year but less than the £2.23bn reported in ALARM 2019.

The majority of local authorities (75% of responses) spent all of this, with 16% reporting an **overspend** (in line with the

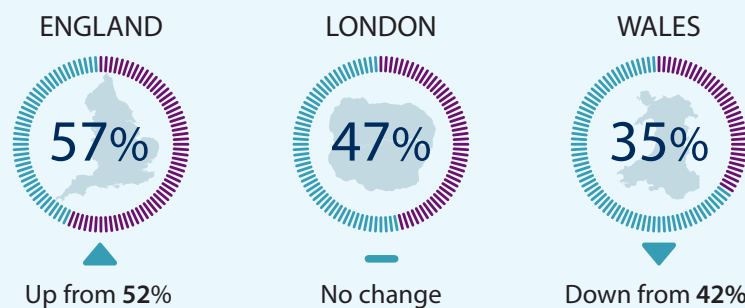
Winners and losers

Highway maintenance budget range per mile of local road



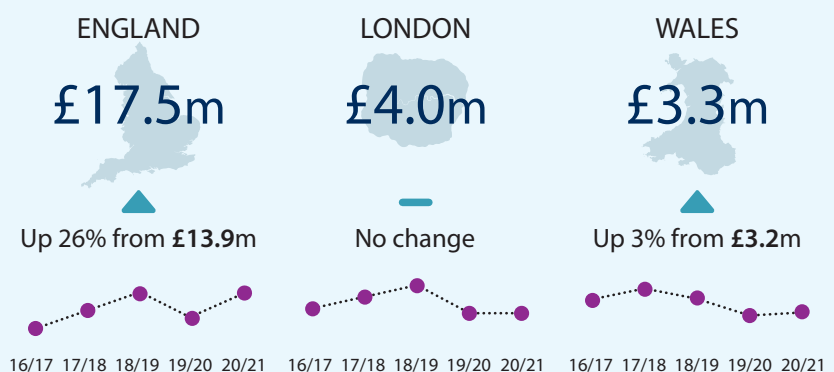
Carriageway spend

Proportion of the overall highway maintenance budget spent on the carriageway itself



Carriageway maintenance budgets

Average per authority, with change from 2019/20



Highway maintenance budgets continued

We are struggling to carry out preventative maintenance as we don't have enough in the carriageway budget, which means we are constantly fire-fighting and carrying out reactive works.

17% reported in ALARM 2020) due to a wide range of factors including schemes carried over from the previous financial year and the scope of projects changing at the point of delivery (some due to the impacts of the COVID-19 crisis).

The average proportion of the carriageway maintenance budget spent on reactive maintenance (that not planned for at the beginning of the year) was 21% in England, 25% in London and 30% in Wales. These figures acknowledge that circumstances can create an immediate need for maintenance to keep the roads safe and serviceable. It is extremely difficult for local authorities to predict and allocate the percentage of budget required for this kind of work, but it is generally agreed that around 16% is considered a more ideal level, significantly less than the reported reality.

Successive dry summers have caused excessive ground shrinkage which has resulted in a significant number of sites where subsidence has necessitated structural maintenance.

Unforeseen costs

There has again been a sizeable number of respondents who had to cope with unforeseen costs over the last year, primarily due to the effects of extreme weather events as well as increased traffic weights and volumes on a deteriorating network.

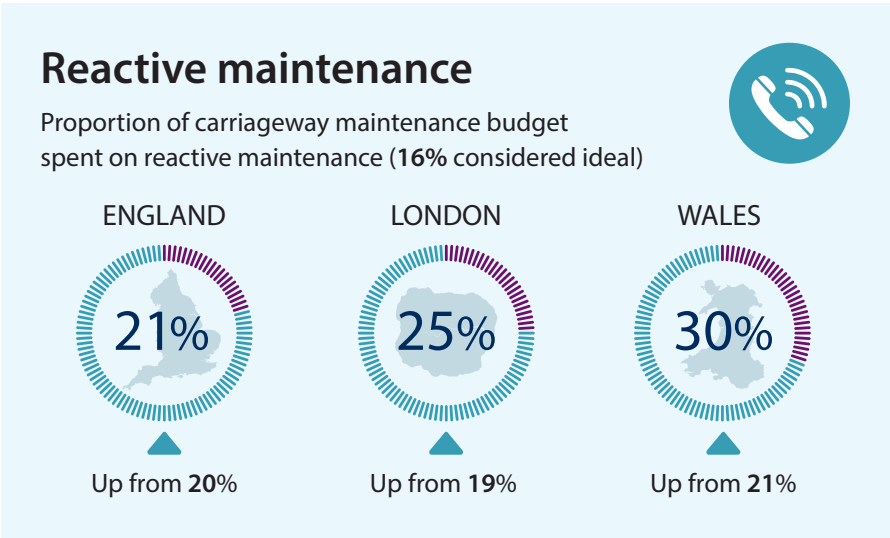
In England 40% of respondents have dealt with unforeseen costs while in London and Wales this figure showed increases from the previous year, to 47% from 36%; and 43% from 40% respectively.

The severity of the weather experienced – both flooding and heat damage – and the resulting structural

We have seen a big increase in unforeseen costs due to carriageway collapse and major failures caused by lack of investment.

failures, is reflected in the average additional cost incurred, which in England was £1.2 million per authority (2019/20: £1.8m).

In London the average additional cost almost doubled to £306,400 from £166,700 reported in 2019/20. Data was unavailable for Wales.



Adverse weather

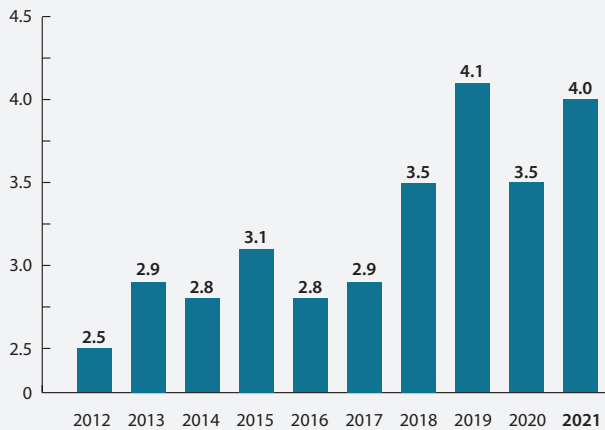
Adverse weather conditions, particularly wetter winters with more intense downpours and hotter, drier summers, coupled with increased volume and weight of traffic and the age of the network, can result in accelerated deterioration and unpredicted failures.

The impact is particularly acute on less well maintained – and therefore less resilient – roads, where water can penetrate existing cracks or defects, leading to the formation of potholes and, in time, undermine the entire structure of the road.

Highway/carriageway maintenance trends

Total highway maintenance budget in England and Wales

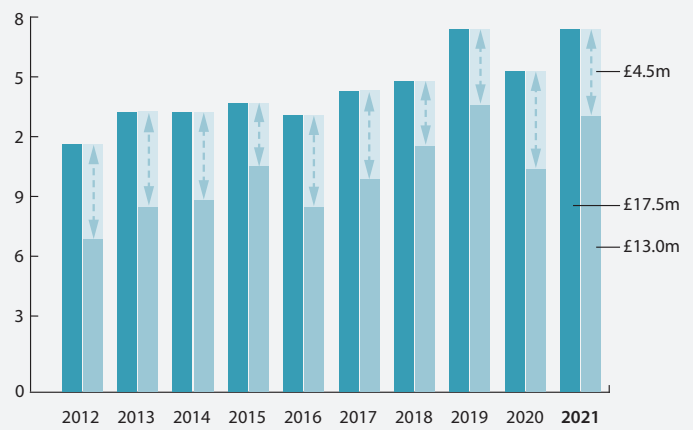
(£bn)



■ Total highway maintenance budget in England and Wales

Carriageway maintenance budget needed

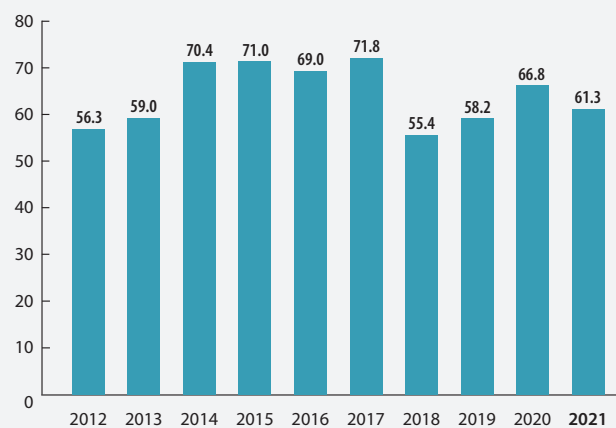
Annual average per authority (£m)



■ Annual average carriageway maintenance budget needed
 ■ Annual average budget for carriageway maintenance
 ▲ Shortfall

One-time catch-up costs

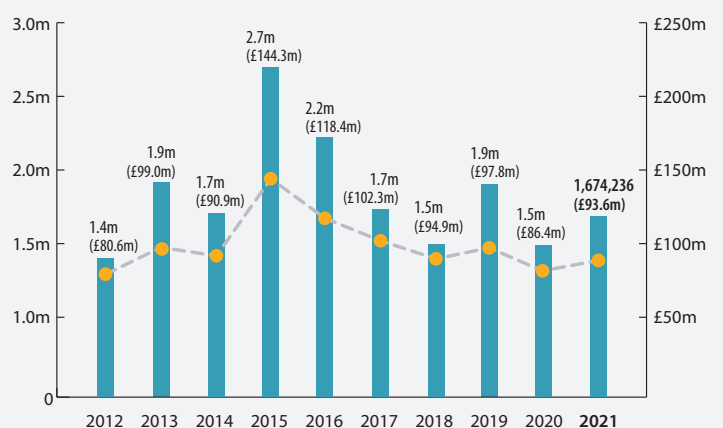
Estimate per authority (£m)



■ Estimated one-time catch-up costs per authority

Potholes

Number of potholes filled (with cost £m)



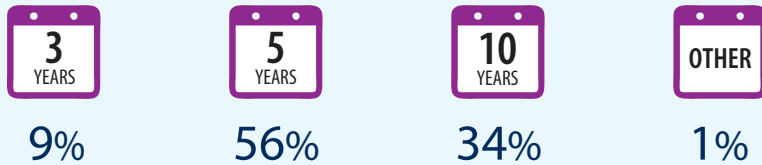
■ Number of potholes filled
 ● Cost of filling in potholes (£m)

Years shown in the charts above are financial years. For example, 2020 represents data from 2019/20.

Highway maintenance budgets continued

Longer term funding

Reported ideal term funding in England and Wales



What we need is five years of guaranteed funding to give us the certainty we need to maximise the efficiency of our asset management plans in order to deliver the best value for money.

Longer term funding

Highway maintenance budgets are set annually, but all respondents agreed that guaranteed, longer term funding helps increase efficiency and provide a more durable road network. More than half (56%) indicate that 5 years is the optimum term with a further 34% stating that 10 years would be ideal.

Security of funding helps authorities plan with more confidence and drive greater efficiencies. Previous research carried out by the AIA has indicated that planned, preventative maintenance is 20

times more cost effective per square metre than reactive work, such as patching and filling potholes.

Budget shortfall

The shortfall is measured as the difference between the annual budget that highway departments calculate they require to keep the carriageway in reasonable order and the actual budget they receive in the same period.

The total shortfall in annual carriageway maintenance budget reported in England and Wales is £752.6 million (2019/20:

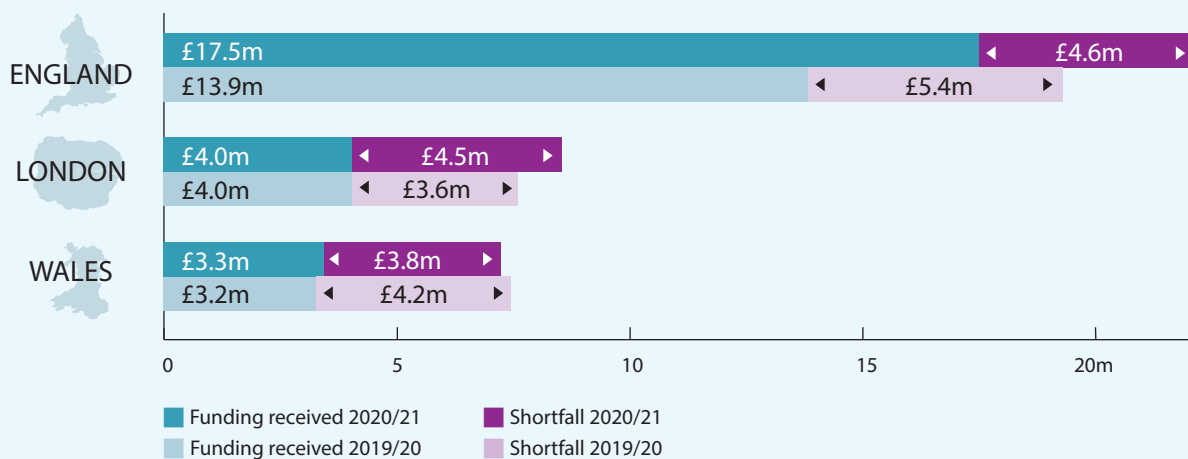
£826.6 million), the equivalent of a funding gap of £4.5 million per authority.

The shortfall in England is reported as £4.6 million per authority, a drop of 15% on last year (2019/20: £5.4m), while in London the gap has widened to £4.5 million, a 25% jump (from £3.6m in 2019/20) between what authorities received and what they needed.

In Wales, the average shortfall reported has dropped by 10% to £3.8 million per authority from £4.2m in 2019/20. Despite the size of the average shortfall, its real

Budget shortfall

Average annual carriageway maintenance budget received and average shortfall (£m)



extent could be being masked by the fact that 44% of local authorities report transferring capital funds, intended for highway improvements, to supplement revenue budgets for 'traditionally' maintenance work. Of course, carrying out road maintenance as part of capital works, still leads to efficient highway improvements, regardless of the funding stream.

One-time catch-up costs

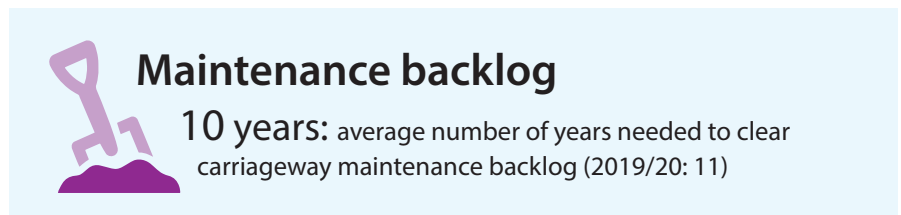
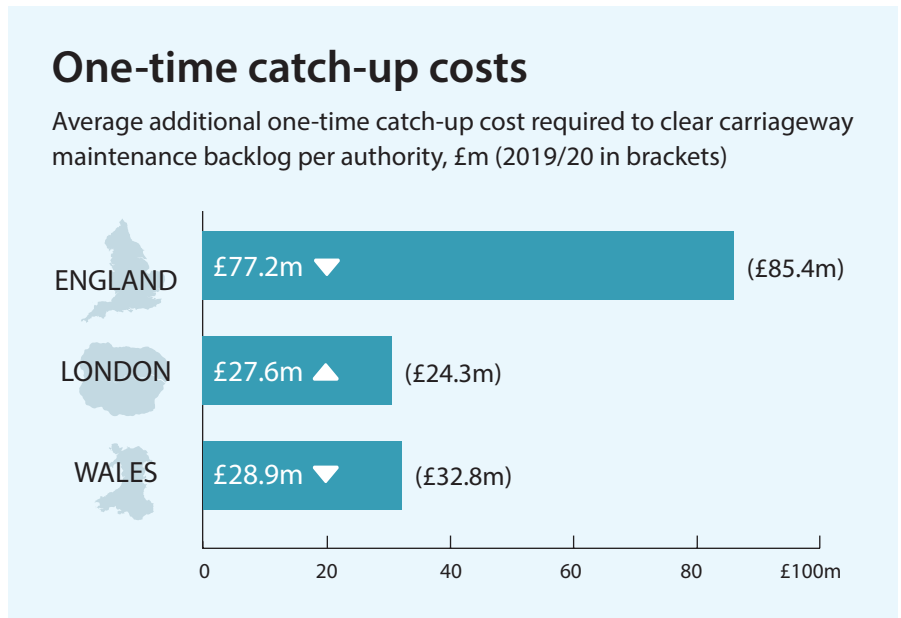
Each year the ALARM survey asks highway departments to estimate how much it would cost to address the effects of the legacy of shortfalls and bring their road networks up to scratch (assuming they had the resources in place to make it practical to do so as a one-off project). This would be the condition from which longer term and cost effective, planned preventative maintenance programmes could be put into place, reducing the future cost of more extensive repairs or replacement.

The estimate for this one-time 'catch-up' cost – **over and above what local authorities indicate they receive** – decreased by 8% in 2020/21 but is still £10.24 billion, in excess of the same figures in 2017/18 (£9.79bn) and 2018/19 (£9.31bn). This equates to an average 'backlog' cost of £49,573 **per mile** of local road in England and Wales.

The one-time catch-up cost is an average of £77.2 million **per authority** in England; £27.6 million in London and £28.9 million in Wales.

Maintenance backlog

Highway departments estimated that it would still take 10 years to get local roads back into a reasonable steady state, if adequate funding and resources were in place, albeit this was down on the 11



years reported in ALARM 2020. This breaks down as an average of 10 years in England and 8 years in both London and Wales.

It will take us years and years to get the roads into reasonable condition.



Road condition

Road Condition Index (RCI)

For the first time this year local authorities were asked what their **ideal** RCI profile would look like – if they had sufficient funds and resources. Assuming that an asset management approach to highway maintenance means that 100% of the network will not be in 100% perfect condition 100% of the time, local authorities in England and Wales told us that the ideal profile of their networks should be: 73% GREEN, 21% AMBER and 6% RED. Responses received show that, unsurprisingly, no category of road currently achieves these aspirational ideal levels in England, London or Wales.

This year’s findings do, however, show that the reduction in target levels reported over the last two years has halted, as target



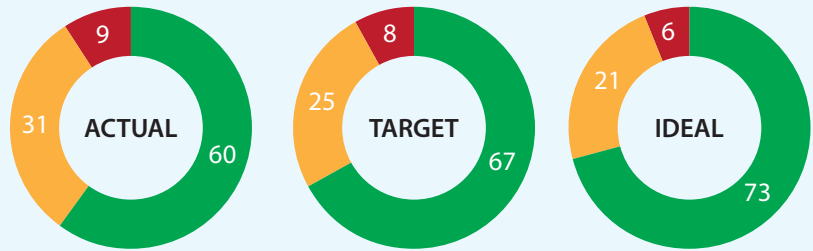
The RCI index features three condition categories – GREEN, AMBER and RED – across three road classes – principal, classified (non-principal) and unclassified – and compares current road conditions against these targets.

Local authorities can adjust the precise definitions of the categories to reflect the individual nature of their networks. However, in general, GREEN defines lengths where the carriageway is in a good state of repair, AMBER is for lengths where some deterioration is apparent which should be investigated to determine the optimum time for planned maintenance, and RED for lengths of carriageway in poor overall condition, likely to require planned maintenance within a year or so.

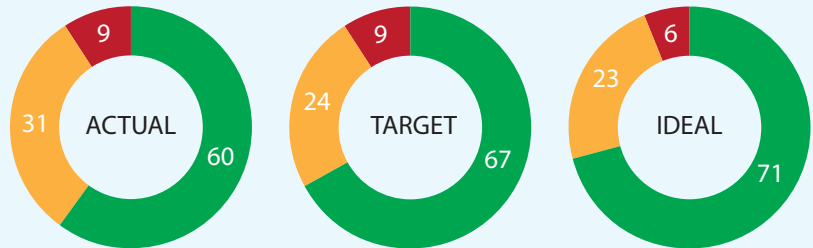
Overall Road Condition Index

Performance in England and Wales (% of network)

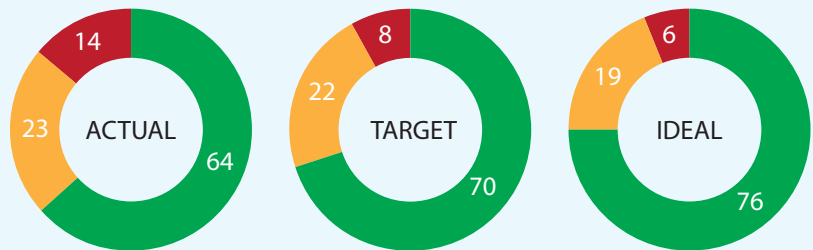
Overall:



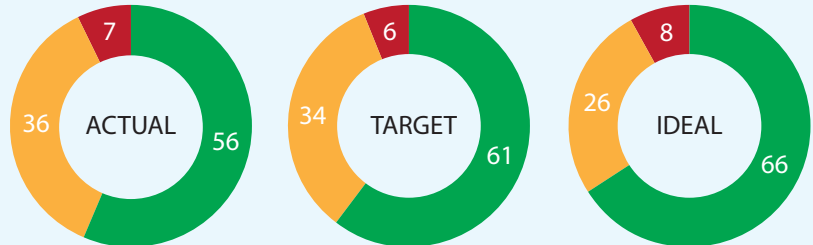
England:



London:



Wales:



CARRIAGEWAY STATUS:

- GREEN:** good state of repair
- AMBER:** some deterioration is apparent
- RED:** poor overall condition – likely to require maintenance in next 12 months

We try really hard to keep roads out of the RED, but it is really difficult when we don't have enough money to plan ahead.

We are fighting a losing battle as far as the public is concerned. They have an ever increasing expectation and no knowledge of the budget issues we face.

Certain defects in the road surface will impact on the Government's active travel ambitions: the surface may be fine if you are driving in a car or lorry but could be uncomfortable or even unsafe for cyclists.

figures are now similar to those reported in ALARM 2019. Feedback from highway engineers indicates that network target conditions are often formulated in line with available budgets. The implementation of the Well-Managed Highway Code – which allows authorities to develop levels of service in line with local needs, priorities and affordability – also impacts on target aspirations.

Although the increased budgets reported this year may have led to the prospect of achieving more ambitious targets, the reality is that these are still not being met. Overall, across England (including London) and Wales, the percentage of the network categorised as

GREEN has fallen compared with last year's data, with the result that there are now around 2% fewer roads, or over 4,000 miles, in a good state of repair.

The number of roads classified as AMBER (roads where signs of deterioration are apparent) continues on the upward trajectory reported since 2018. More than 64,000 miles, or 31% of the network is now classified in this category – up the equivalent of 4,000 miles on last year's data. Since ALARM started collating RCI numbers in 2017/18, the percentage of the network classified as AMBER has increased by 5%: an additional 10,295 miles of the

local road network. Overall, the percentage of the network classified as RED remains the same as last year at 9%, meaning that around 18,500 miles of road are still classed as being in poor overall condition (likely to require maintenance within the next 12 months).

However, this masks the story in London, where the data received reports a significant increase in the percentage of the network marked as RED, up from 9% last year to 14% this, the equivalent of an additional 500+ miles of the capital's roads likely to need urgent attention.

Actual Road Condition Index

Performance in England and Wales (% of network)

		PRINCIPAL	NON-PRINCIPAL	UNCLASSIFIED
GREEN	England	69 ↓	64 ↓	56 ↓
	London	64 ↓	63 ↓	63 ↓
	Wales	69 ↓	63 ↓	49 –
AMBER	England	27 ↑	31 ↑	32 ↑
	London	23 ↑	24 ↑	23 ↑
	Wales	28 ↑	30 ↑	43 –
RED	England	3 ↓	5 –	12 ↓
	London	12 ↑	12 ↑	14 ↑
	Wales	3 ↓	7 ↑	8 –

↑ Up from ALARM survey 2020 ↓ Down from ALARM survey 2020 – Same as ALARM survey 2020



30
SLOW BUS

GIVE WAY

THE ROAD WILL BE CLOSED FROM 11/01/21 FOR 3 MONTHS

Diversion

ROAD AHEAD CLOSED

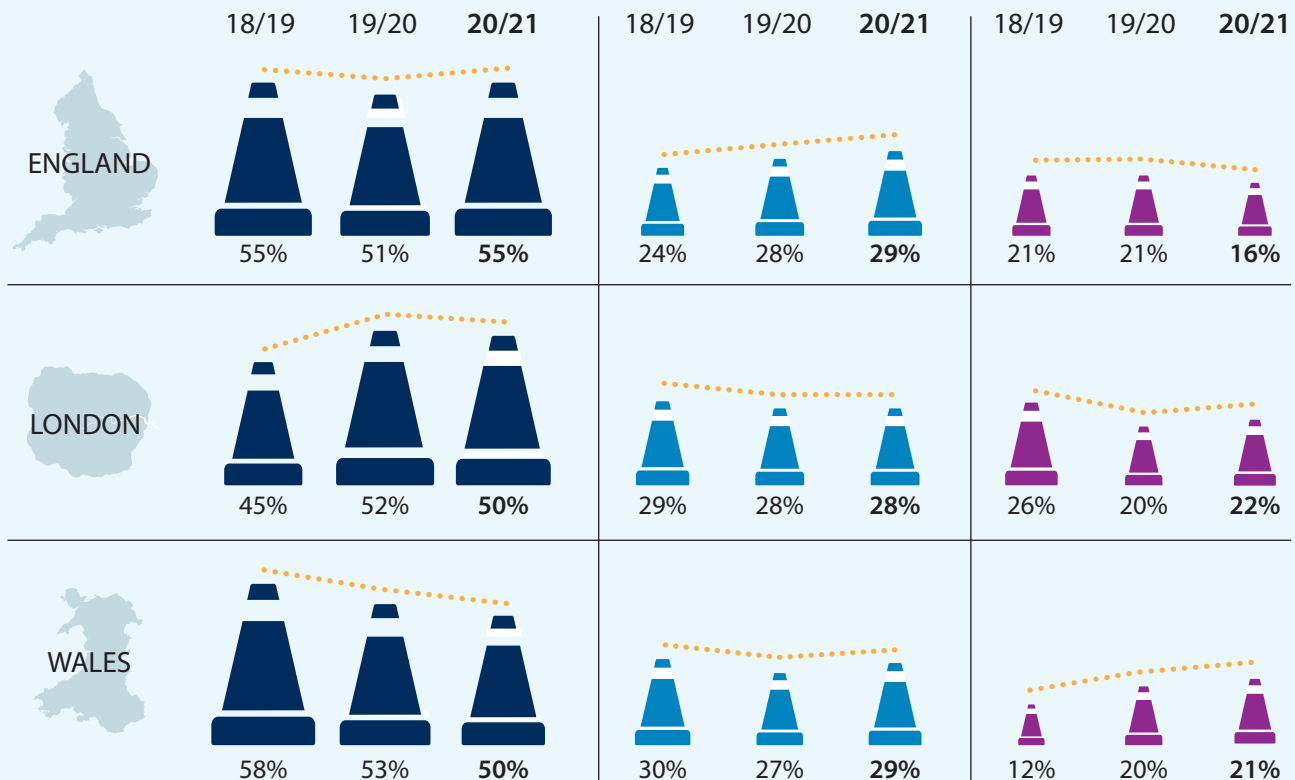
BUSINESS OPEN AS USUAL

Road condition continued

Structural road condition

Percentage of roads in good, adequate and poor condition

KEY: GOOD: 15 years' or more life remaining
 ADEQUATE: 5-15 years' life remaining
 POOR: less than 5 years' life remaining



Structural road condition

Structural maintenance is required when the condition of the road has deteriorated beyond the point at which surface maintenance will suffice.

As shown in the chart above, the picture is again mixed, with improvements in some areas and further decline in others. Overall, around 54% (2019/20: 51%) of the local road network is reported to be in good condition (with 15 or more years of life remaining), equivalent to 110,754 miles.

Over a quarter (29%, equivalent to 59,479 miles) is now reported to be in adequate condition (5-15 years of life remaining) and 17% – 34,867 miles – in poor condition and having less than

Roads deteriorate slowly but when they start to decline, the process accelerates rapidly.

five years of life remaining. This means, compared with last year, there are more 'good' roads and less 'poor' but a growing number that fall into the 'adequate' category, which will inevitably slide into 'poor' without intervention. Structural assessments are carried out against engineering properties and criteria and may not always identically reflect the

visually evident conditions and road user experience indicated by RCI.

Potholes

Potholes are symptomatic of poorly maintained roads and have always been used as indicators of resilience, potentially pointing to underlying structural issues.

After the drop in the total number of potholes filled in last year's report, this year's figure has jumped again to 1.7 million (2019/20: 1.5m; 2018/19: 1.9m) – the equivalent of one pothole being repaired every 19 seconds in England (including London) and Wales.

The increase in the number of potholes filled is only part of the story, however.

Road condition continued

The increased number of potholes filled is a reflection of the reduced investment in programmed work, which has resulted in poorer road conditions.

Qualitative feedback reported that continuing weather extremes are taking their toll across the network as pothole repairs account for around 70% of all defects local authorities reported they dealt with in the last year.

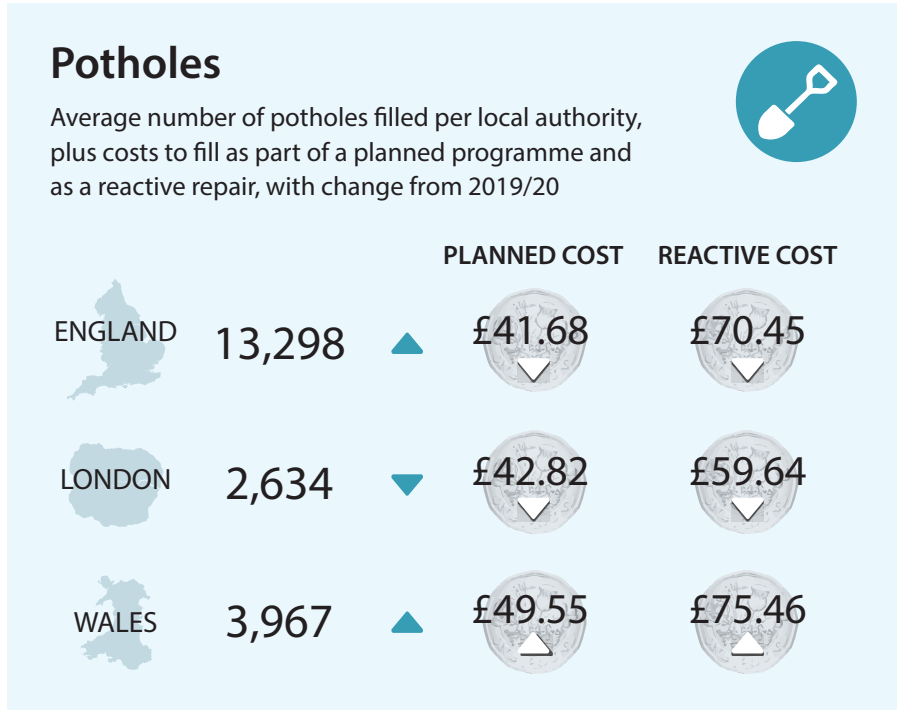
More than two-thirds (70%) of authorities responding to the ALARM survey stated that they use the guideline depth of 40mm (or less) to define a pothole. As the effect of a pothole can vary dramatically depending on the nature of the traffic on the road and its location, depth definition is not always the only means of prioritising repairs.

The disparity in cost between filling potholes as part of a planned programme of carriageway repairs and as a reactive repair is again apparent. Taking the average cost for filling a pothole across each region to be £55.90, the total amount spent in England and Wales last year is estimated at £93.6 million, up 8% from the £86.4 million reported in ALARM 2020.

Filling potholes isn't a victory: it's a failure.

Road surfacing frequency

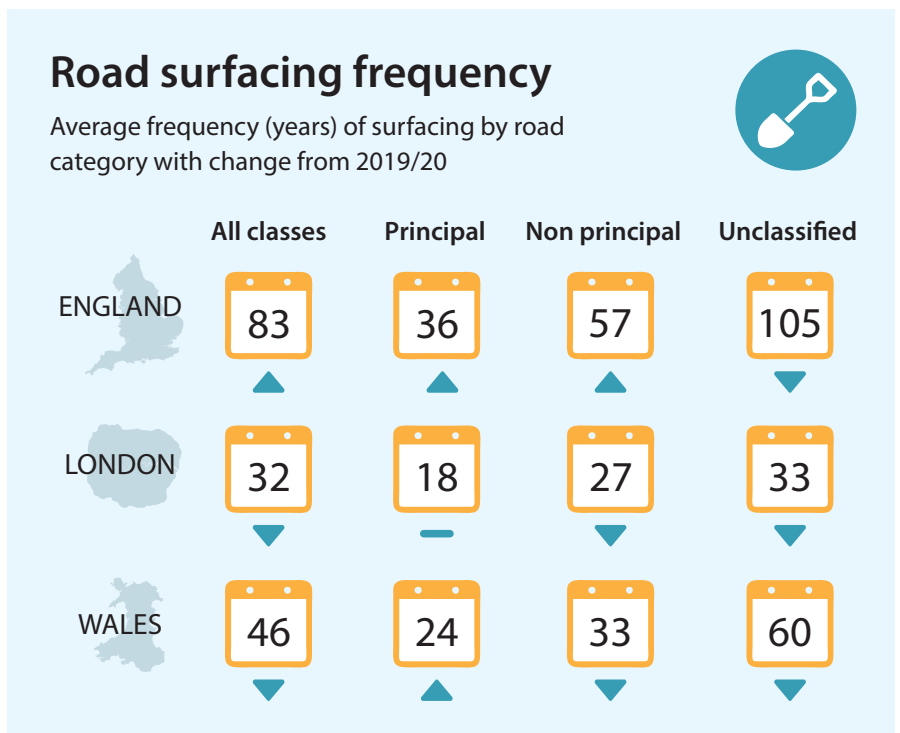
Replacing the entire surface layer of roads at regular intervals maintains an appropriate level of grip, vital for road safety, and guards against water ingress and freeze-thaw



effects by maintaining a weatherproof seal on the road's surface. It also offers the opportunity to identify and address any deeper issues arising which are not initially

evident and enhances resilience.

Taking into account the lifespan of particular materials, the type of road and the level and nature of its traffic,



the recommended frequency of road resurfacing is between 10 and 20 years – an ideal, again, only achieved on principal roads in London.

In England, average road surfacing frequency is reported to be once every 83 years across all road types – up from once every 76 years reported in ALARM 2020. There has been a slight improvement, overall, in road surfacing frequency reported in London and Wales, to once every 32 years in the capital (2019/20: 36 years) and once in every 46 years in Wales (2019/20: 58 years).

The discrepancy between the reported resurfacing frequency for principal roads and the rest of the network in all regions, continues to highlight how local authorities understandably have to prioritise key routes as current budgets are not sufficient to adequately maintain the whole network.

Utility company openings

Number of utility openings in past year (average per authority)



Utility company road openings

Opening a road to create a trench can reduce its structural life by up to 30% and the continuing high level of utility openings in England and Wales – reported as 1.9 million in 2020/21, up 15% on the previous year – can have a detrimental effect. Even though the majority (91% based on responses received) are

completed in accordance with legislation, local authorities reported they spent an average of 5% of their carriageway maintenance budget addressing premature maintenance arising from utilities openings.

This amounts to an average of £651,000 per authority or £108.7 million in England and Wales.



Road condition continued

Road user compensation claims

Overall, the amount of time and money spent settling claims has decreased for the third successive year. Clearly road use has been significantly reduced due to lower traffic levels as a result of COVID-19 restrictions, while local authorities and their legal advisors have become better at challenging potentially fraudulent claims.

The total paid in road user compensation claims – 72% of which relate specifically to potholes – in England and Wales was nonetheless £3.6 million. A further £11.4 million was spent on staff

costs to deal with the claims, bringing the overall total spent addressing claims to £15.0 million. This is the equivalent of £73.14 paid out each year per mile of local road.

Materials innovation

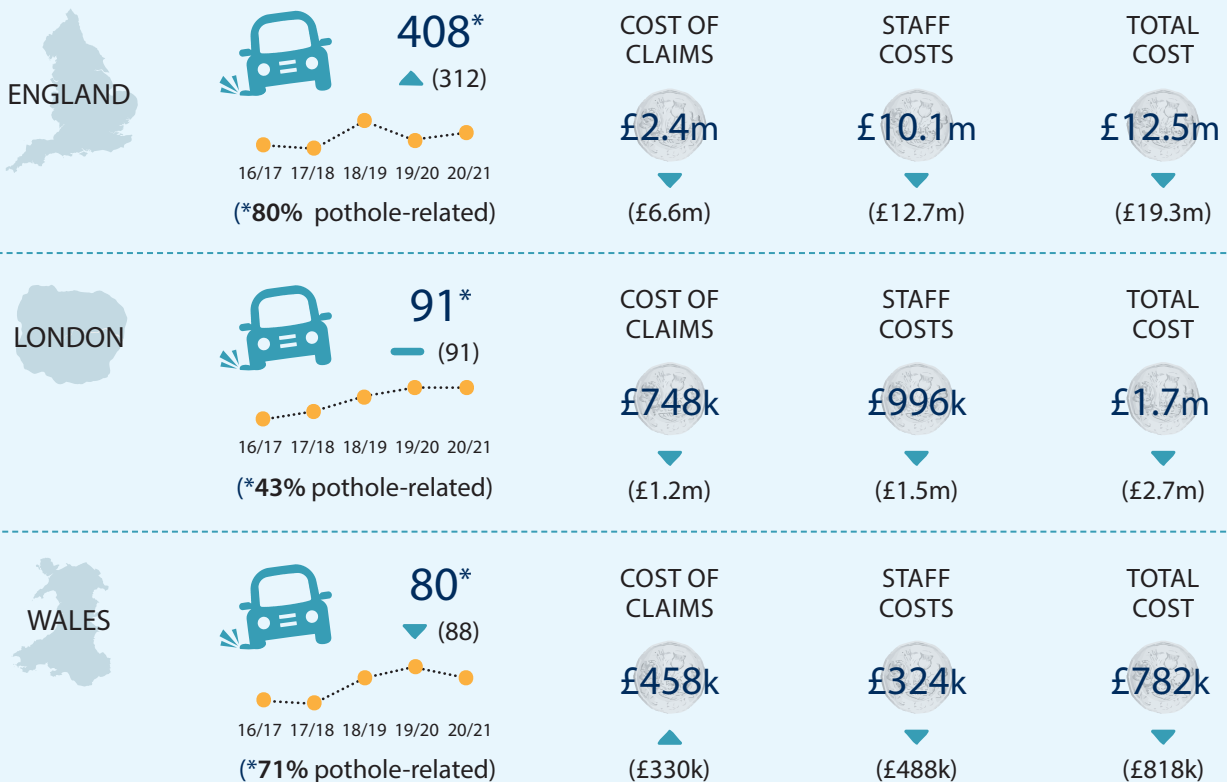
Almost 80% of local authorities in England and Wales have declared a climate emergency (www.climateemergency.uk/) yet only 23% of respondents confirmed that their authority has a quantified target to reduce the carbon footprint resulting from the procurement of road surfacing materials.

But, when planning and specifying road maintenance, local authorities do take a number of measures to reduce the carbon footprint, including using Warm Mix Asphalts (WMA).

These can reduce carbon emissions and improve efficiencies on highway projects. They are manufactured and laid at lower temperatures than traditional asphalts, reducing the CO₂ emissions associated with asphalt production by up to 15%. Their use also improves conditions for the workforce and, as less time is required to cool to trafficking temperatures, carriageways can be re-

Road user compensation claims

Number of claims in past year (average per authority) plus **total** cost (£) of dealing with claims (2019/20 figures in brackets)



opened earlier – minimising disruption for road users.

Over 60% (62%) of respondents include WMA on their asphalt specification list and, of those that are not currently including it, 72% are looking to adopt it in the future.

Materials innovation

Percentage of responding local authorities in England and Wales implementing measures to reduce their carbon footprint including, or combinations of:



61%
using Warm Mix
Asphalts



82%
using recycled
materials



33%
choosing materials
with lowest initial
carbon footprint



75%
promoting more
efficient working
to reduce emissions



85%
selecting surfacing
materials with
longer life



Key findings

	TOTAL*	England**	London	Wales
Percentage of authorities responding	↓ 63%	↓ 68%	↑ 59%	↑ 45%
Highway maintenance budgets				
Average highway maintenance budget per authority	↑ £23.8m	↑ £30.9m	↑ £8.5m	↑ £9.4m
Percentage of highway maintenance budget spent on carriageway	↑ 52%	↑ 57%	− 47%	↓ 35%
Average carriageway maintenance budget per authority	↑ £13.0m	↑ £17.5m	− £4.0m	↑ £3.3m
Shortfall				
Shortfall in road carriageway budget 2020/21	↓ £752.6m	↓ £522.9m	↑ £145.0m	↓ £84.7m
Average carriageway maintenance budget shortfall per authority 2020/21	↓ £4.5m	↓ £4.6m	↑ £4.5m	↓ £3.8m
Estimated time to clear carriageway maintenance backlog	↓ 10 yrs	↓ 10 yrs	− 8 yrs	↓ 8 yrs
Estimated one-time catch-up costs	↓ £10.24bn	↓ £8.72bn	↑ £881.7m	↓ £636.8m
Estimated one time catch-up cost per authority	↓ £61.3m	↓ £77.2m	↑ £27.6m	↓ £28.9m
Road condition				
Frequency of road surfacing (all road classes)	↑ 68 yrs	↑ 83 yrs	↓ 31 yrs	↓ 46 yrs
Number of potholes filled over past year	↑ 1,674,236	↑ 1,502,674	↓ 84,288	↑ 87,274
Average number of potholes filled per authority over past year	↑ 10,025	↑ 13,298	↓ 2,634	↑ 3,967
Average cost to fill one pothole - planned	↓ £42.94	↓ £41.68	↓ £42.82	↑ £49.55
Average cost to fill one pothole - reactive	↓ £69.04	↓ £70.45	↓ £59.64	↑ £75.46
Total spent filling potholes in past year	↑ £93.6m	↑ £84.2m	↓ £4.3m	↑ £5.5m
Compensation claims				
Amount paid in road user compensation claims	↓ £3.6m	↓ £2.4m	↓ £748k	↑ £458k
Staff costs spent on claims (per year)	↓ £11.4m	↓ £10.1m	↓ £996k	↓ £324k

* England, London and Wales

** excludes London

↑ Up from ALARM survey 2020
 ↓ Down from ALARM survey 2020
 − Same as ALARM survey 2020

About the AIA



Asphalt Industry Alliance

The Asphalt Industry Alliance (AIA – www.asphaltuk.org) is a partnership of the two principal bodies which represent the suppliers of raw materials used to produce asphalt, as well as asphalt producers and laying contractors: the Mineral Products Association (MPA) and Eurobitume UK. It draws on the knowledge and resources of each association and its members.

The AIA was established in 2000 to increase awareness of the asphalt industry and its activities, and the uses and benefits of asphalt. Asphalt is the generic term used to refer to the range of bitumen coated materials available in the UK that are used in road construction and surfacing. Asphalt also has other, non-road applications such as airport runways, sports arenas and parking areas.



Mineral Products Association

MPA Asphalt is part of the Mineral Products Association (MPA – www.mineralproducts.org), the trade association for the aggregates, asphalt, cement, concrete, dimension stone, lime, mortar and silica sand industries. It continues to have a growing membership since its formation and is the sectoral voice for mineral products.

MPA Asphalt represents the interests of its asphalt producer and contractor members through representation and liaison with national and European clients, specifiers, regulators, researchers and standards bodies as well as with trade associations from other countries and related industry sectors. It also funds research into asphalt and its uses and operates the Asphalt Information Service which provides general guidance and information on the use of asphalts in the wide range of their applications.



Eurobitume UK


Eurobitume UK (www.eurobitume.eu) is the trade association of the UK bitumen supply industry and its members produce most of the UK's bitumen. Almost all of this is used in the construction and maintenance of bituminous, or asphalt, roads, which account for over 95 per cent of all UK roads.

Eurobitume UK is a consultative body formed to promote the technical benefits of bitumen to the construction industry; to provide the industry with information and advice; and to fund research into bituminous products. It also works with contractors and authorities on issues relating to the use and recycling of bituminous materials.

It is involved in the development of industry policy on quality assurance and standards relating to issues such as safety, storage and the handling of bitumen as well as the development of specifications and test methods for bitumen.

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