



# Highways and Winter Maintenance Trend Analysis 2020/21

This briefing provides details on the performance information available from APSE's performance networks service looking at performance indicators and current policy issues for councils who deliver Highways services. This briefing is based on the last full year's figures so it is a reflective analysis and, where appropriate, takes into account the impact of Covid-19.

## Key issues

- The condition of principal roads remains stable, however there has been a marked deterioration in non-principal roads in England & Wales. Scotland remains broadly static.
- The number of Cat 1 defects per Km of maintained highway stands at 0.37.
- Third party claims have fallen over the last 2 years, reflecting the emphasis on asset management
- Planned maintenance now represents 72.12% of expenditure vs proactive maintenance.

## Overview

The APSE performance networks performance indicators for highways and winter maintenance cover the cost, productivity and quality elements of the services. This analysis aims to provide participating authorities with an overview of service trends, what this infers and what further activity and analysis individual authorities and the APSE highways, winter maintenance and street lighting benchmarking group could consider. The analysis in this summary is based on averages across all family groups for the last 5 years.

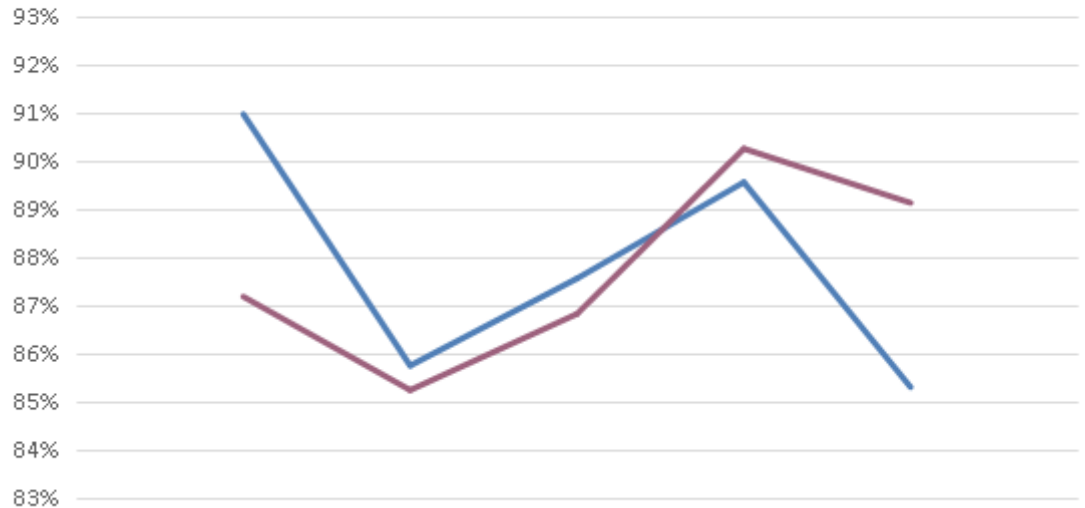
## Trend analysis

Particular points of interest are as follows:

### Carriageways and footways

PI 03a and PI 45a show the percentage of damaged carriageways and footways made safe within their respective target times. Both have fluctuated around 88% for the past 5 years and that trend continues although roads are at the lower point.

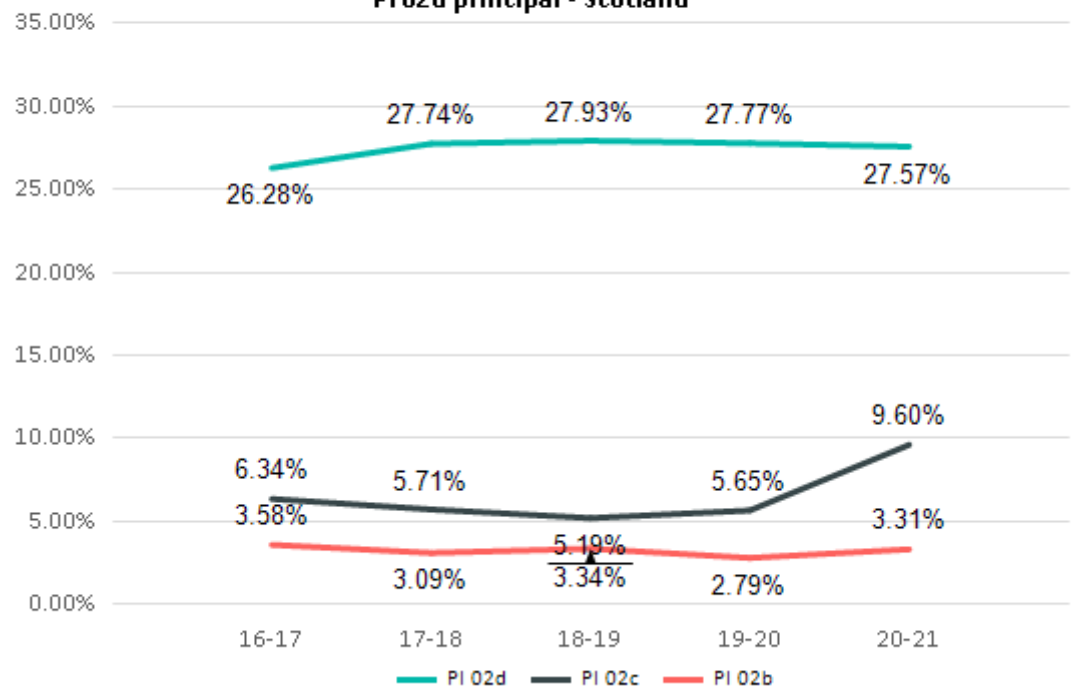
**PI 03a % damaged roads made safe in target times**  
**PI 45a % damaged footways made safe in target times**



	16-17	17-18	18-19	19-20	20-21
PI 03a	90.99%	85.76%	87.57%	89.58%	85.31%
PI 45a	87.20%	85.25%	86.84%	90.28%	89.15%

The performance indicators for the condition of roads in England and Wales are PI02b (principal roads via TRACS) and PI 02c (non-principal roads). In this case the lower the percentage needing attention the better. PI02b, covering the condition of principal roads, shows little improvement since 2016-17 and has been relatively steady over the past 5 years currently flat-lining at 3.31% of the principal road network. Unfortunately, we are beginning to see a divergence for non-principal roads which has deteriorated from a low in 2018-19.

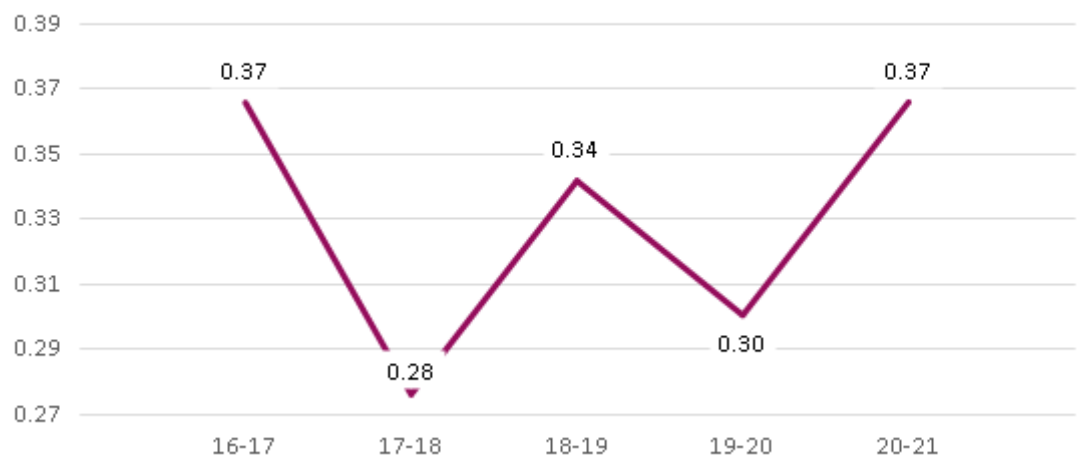
**Condition of roads**  
**PI 02b principal- England/Wales**  
**PI 02c non principal- England/Wales**  
**PI 02d principal - Scotland**



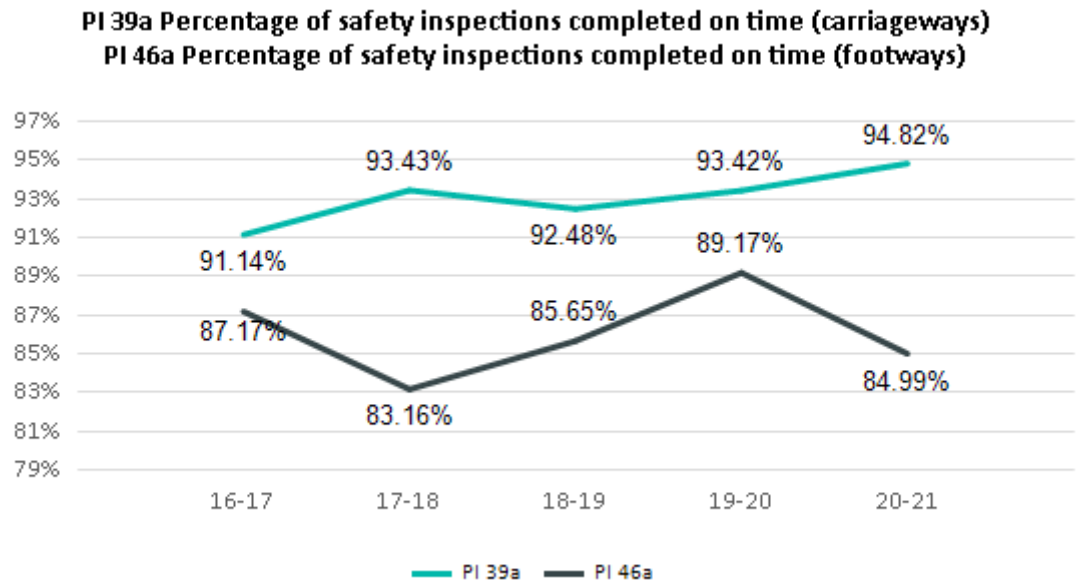
In Scotland PI 02d (principal roads via SMRCS) has remained stable, averaging 27.57% in 2020/21.

There are a number of factors influencing the condition of roads and although the weather is one, historical investment will have a greater effect. The increase in capital funding in England allied to the asset management approach taken across the UK has led to a focus on principal roads in terms of planned work and a resultant improvement in condition.

**PI 28 Number of category one defects per km of maintained carriageway**



PI 28 above shows the number of category 1 defects per kilometre of maintained road. This shows a jump over the past year and is currently at 0.37. This increase is likely related to the more severe winter of 2019/20.

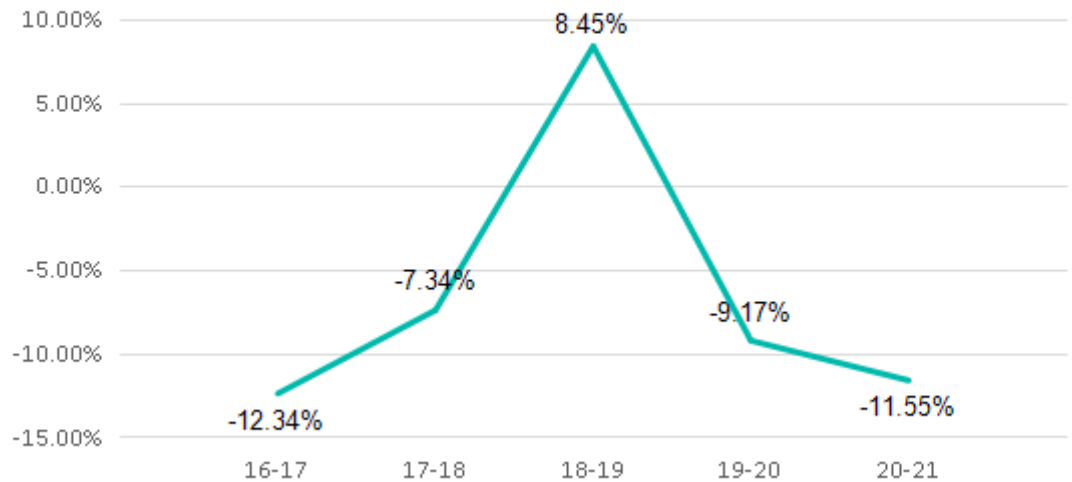


The percentage of carriageway safety inspections carried out on time (PI 39a) has gently risen over the past 5 years to currently stand at 94.82%. It should be noted that the historical percentage has never been below 90% for the same period.

For footways (PI 46a) the level stands at 84.99%, around the 5-year average. Although the figures continue to show a higher focus on the highway rather than the footway, we can see there has been no marked deterioration in either over the past 5 years.

The area that has seen the most dramatic 5-year change is that of 3rd party claims (PI 31). Decreases of over 30% over the period saw the first increase to 8.45% in 2018/19 following a harsher than trend winter. Since then, claims have been further resisted undoubtedly due to a more robust approach to defending spurious claims combined with the continued improvement in response times and improved inspection regimes.

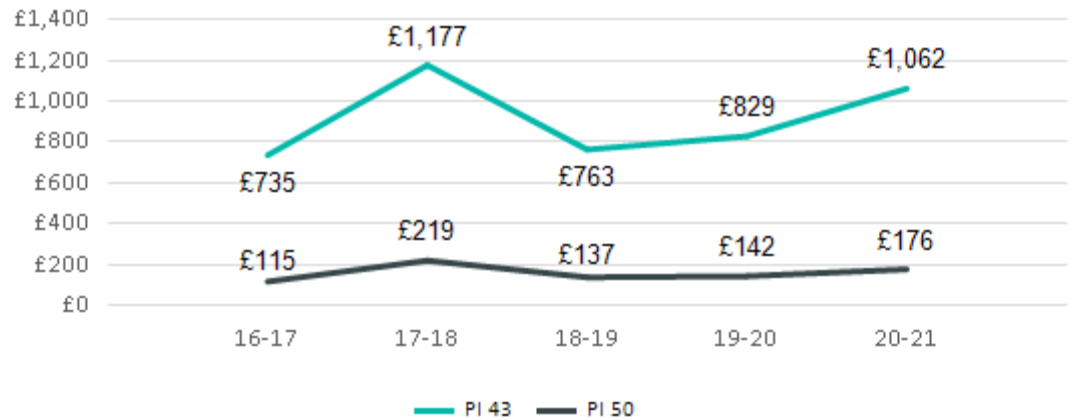
**PI 31a Percentage change in number of non repudiated third party claims in last 3 years compared to previous 3 year period**



**Winter maintenance**

There are 2 PIs which reflect the total cost for carriageway (PI 43) and footway (PI 50) winter maintenance treatment over the entire winter period divided by the total carriageway/footway network length.

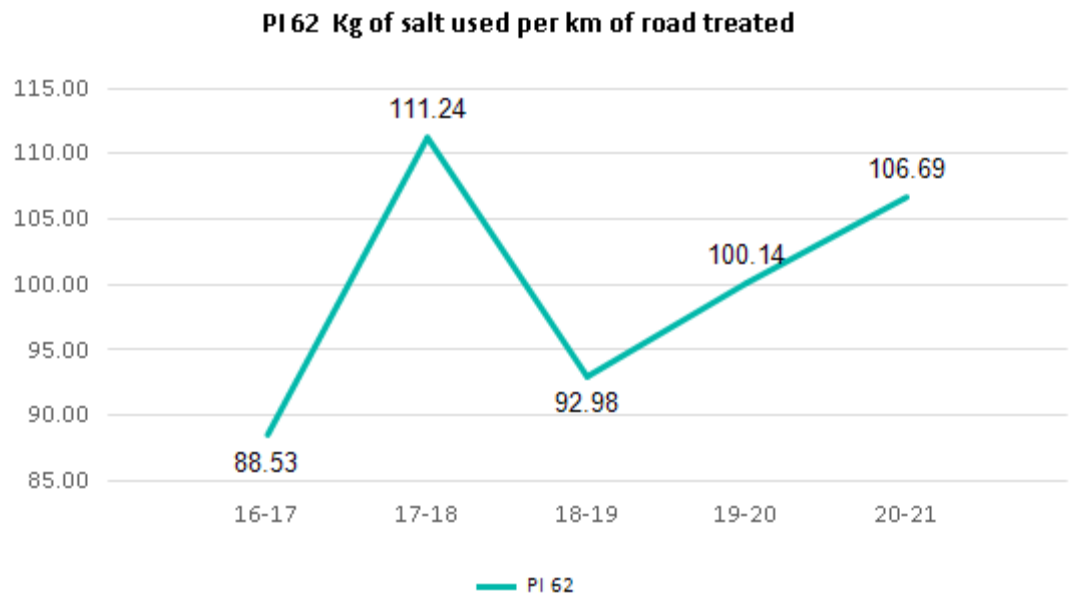
**PI 43 Total cost for carriageway winter maintenance treatment over entire winter period divided by the total carriageway network length**  
**PI 50 Total cost for footway winter maintenance treatment over the entire winter period divided by the total footway network length**



PI 43 covering carriageways stands at £1062, up from a low of £763 in 2018/19. The cost of footways has similarly increased to £176 from a low of £137 in 2017/18. These substantial changes were undoubtedly due to a harsher winter in 2020-21, but also show the danger of complacency and the temptation to cut winter budgets after several years of mild winters. One might expect global warming to reduce the need to salt over the medium to longer term, but that trend hasn't yet become apparent. Indeed, during the recent heat wave some local authorities used surface treatments such as 'dusting' to protect carriageways from damage which may be a factor for consideration in the future, should high temperatures become more commonplace as is predicted to be the case.

PI 62 covers the Kg of salt used per km which will clearly reflect the frequency of

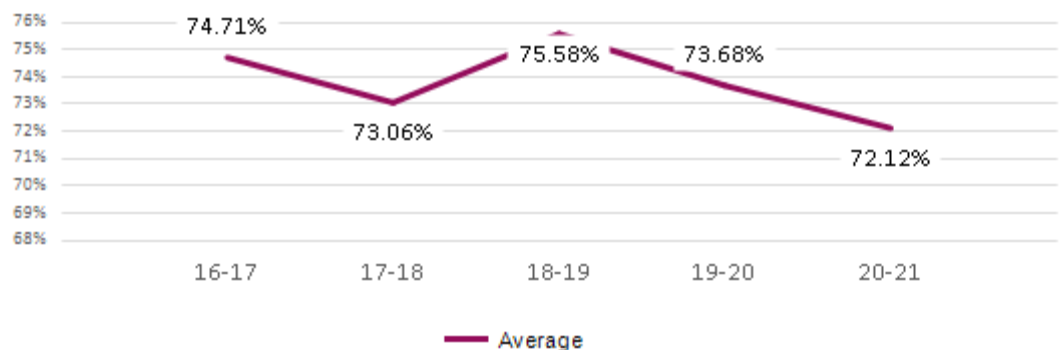
gritting over a particular winter. Highs occurred in 2017-18 and 2020-21. With milder winters, improved forecasting and GPS targeted gritting, one would anticipate the trend to reduce in the medium term.



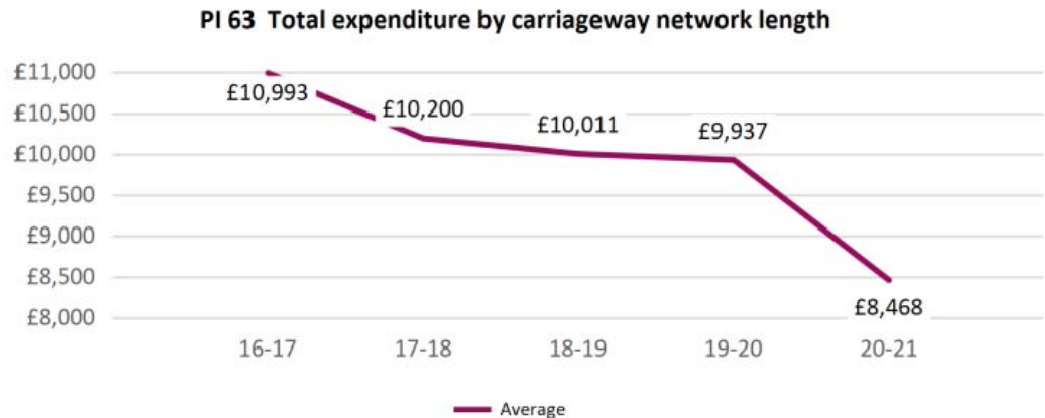
## Expenditure

The average percentage of actual maintenance expenditure which was planned or proactive (PI 16) in 2020-21 stands at 72.12%. This shows a decrease on 2019/20 and the 5-year trend is flat-lining. Perhaps councils took the opportunity of Covid to concentrate on additional repairs as long-term asset management would favour a push towards more planned work and has been a focus within the sector for the last few years.

**PI 16 Percentage of actual maintenance expenditure (carriageways and footways) which is planned**

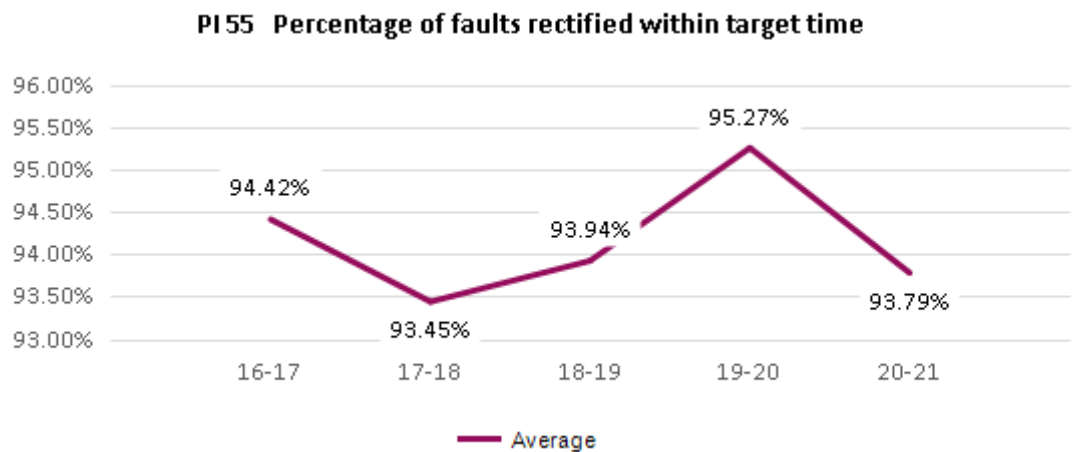


PI 63 total carriageway expenditure showed a marked decline in 2020-21 to £8468. Whilst the last year was plagued by Covid disruptions the trend has been downward over the last 5 years. Spending on National roads has increased over the period but the budget for local has been cut and segmented, which is clearly feeding through to the front line.



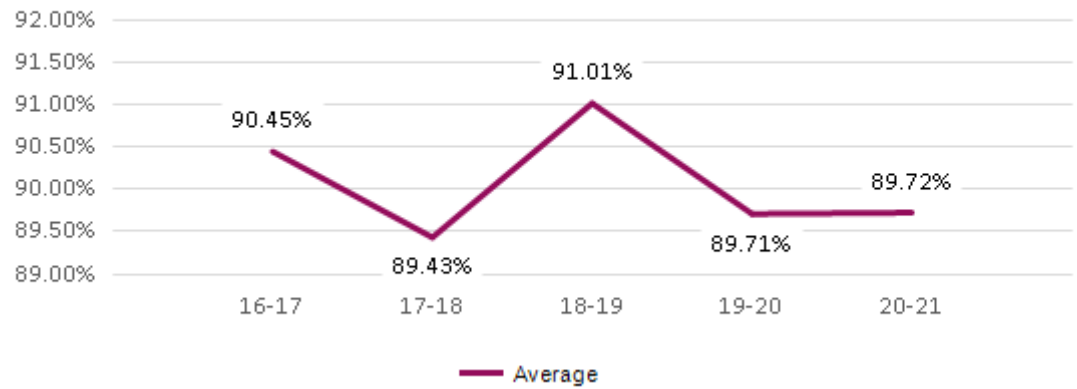
### Traffic management systems

The percentage of traffic management system faults rectified within target times (PI 55) has remained above 92% since 2013-14, with the current figure being 93.79%.



The percentage of faults rectified on first visit (PI 56) has been above 88% in the same period currently at 89.72%.

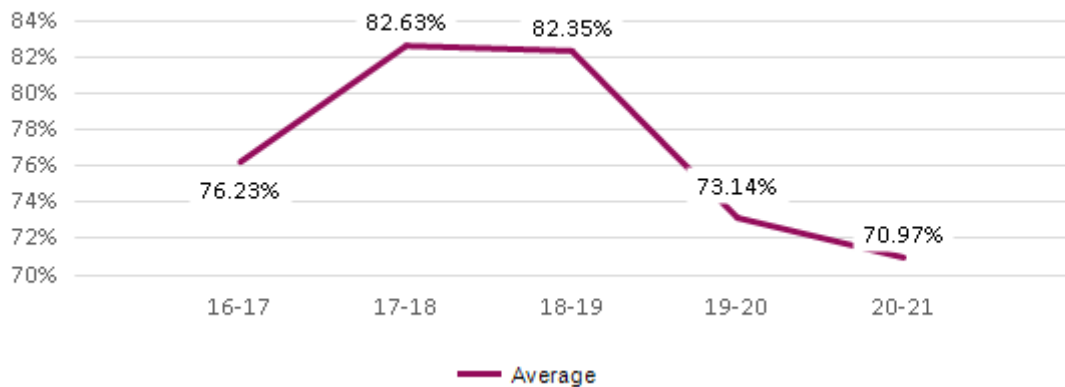
**PI 56 Percentage of faults rectified on first visit**



## Bridges and structures

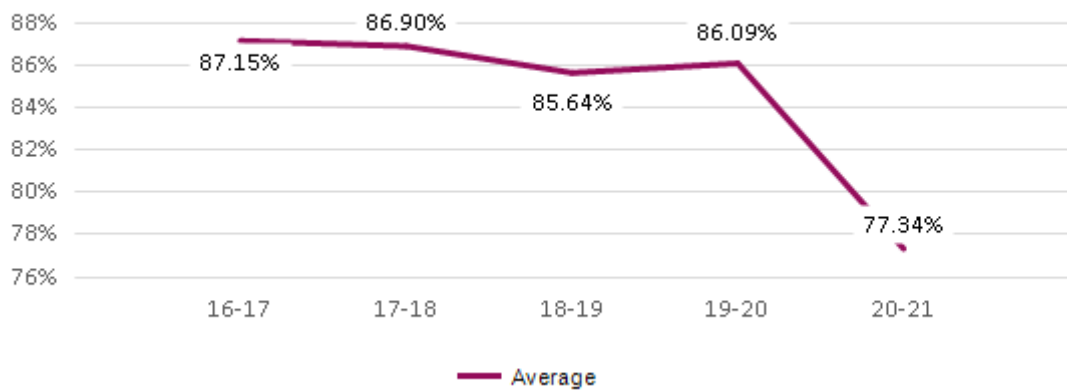
PI 300 and PI 301 look at the percentage of principal and general inspections carried out on time and the average figures for 2020-21 are 70.97% and 77.34% respectively. Both show significant reductions since 2018-19. Whilst Covid would be a factor in 2021-21 it doesn't explain earlier falls. Potentially the squeeze on recruitment may be stressing inspection schedules as fewer inspectors are available.

**PI 300 Percentage of principal inspections carried out on time**



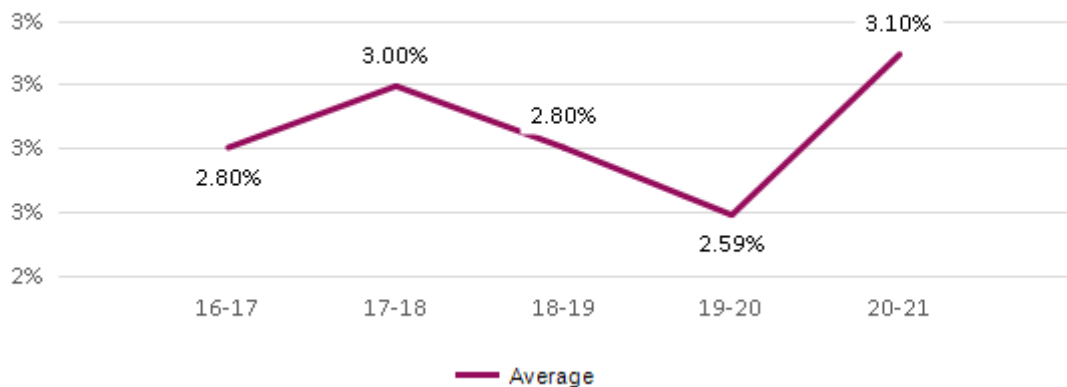


**PI 301 Percentage of general inspections carried out on time**



The average percentage of council owned bridges failing European standards (PI 304) is 3.10%, which is a mild deterioration from 2.59% in 2019-20. One awaits a new standards and inspection regime following UK withdrawal from the EU but for now the failure rate is stable.

**PI 304 Percentage of council owned bridges failing European standards**



### Interpretation of data

Highways services remain one of the most visible and influential of all local authority delivered services. The asset is the most valuable councils own, there is an impact on both the day-to-day activity of nearly everybody as well as the economic performance of the UK.

Highways investment during the past couple of years has become fragmented and target driven from an increasing number of funding pots around City regions and levelling up on top of the block funding and incentive funding elements. During the same timeframe overall funding remained broadly static but the inequality between authorities has seen a gradual deterioration in the state of non-principal roads as the priority focus is on the principal highways. More than half of authorities experience a cut according the 2021 Alarm survey. APSE continues to

campaign for an end to the ineffective mechanisms of competitive bidding pots which often soak up resources, reducing the overall value of the funding streams.

Now several years in from the introduction of the Code of Practice; Well-managed Highway Infrastructure, we are able to see the effects on the service from the risk-based approach. Whilst principal highways are receiving attention, there is a marked drop off in performance elsewhere on inspection and minor roads.

Heavy rain, flooding and high winds in addition to snow on the highway network, and more recently the impact of extreme heat continues to impact on Highway services, having profound effects on local areas and requiring the full co-operation of all partners to minimise disruption to local communities. These severe weather events have a long-term impact on the condition of the network and it appears that although specific elements of the network might be improved, overall investment has not improved the condition of the entire network.

Overall priorities such as investment, skills and capacity as well as innovation and technology will continue to play a major role in the highways network.

Highways and winter maintenance officers, managers and service directors will benefit from attending APSE's Highways, Street Lighting and Winter Maintenance Advisory Group which is free to APSE member councils and you can sign up to attend this group using this [link](#) APSE members attending the [APSE Annual Seminar on the 14-15 September](#) will also be able to select a strategic forum as part of that seminar on Highways, Street Lighting and Active Travel.

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