



association for public service excellence

# Trend Analysis 2021/22

## Highways and Winter Maintenance



Briefing 23/07

February 2023

## Table of Contents

Results at a glance .....	3
1 Overview.....	4
2 Carriageways and footways .....	4
3 Winter maintenance .....	7
4 Expenditure.....	8
5 Traffic management systems.....	9
6 Bridges and structures.....	10
7 APSE Comment.....	12

### Trend Analysis 2021/22

#### Local authority highways and winter maintenance services

This analysis was conducted by Rob Bailey, APSE Principal Advisor for Highways and Winter Maintenance

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#### About APSE

The Association for Public Service Excellence (APSE) is a not-for-profit local government body working with over 300 councils throughout the UK.

Promoting excellence in public services, APSE is the foremost specialist in local authority frontline services and operates one of the UK's largest research programmes in local government policy and frontline service delivery matters.

# Results at a glance

## Highway Condition

Condition of principal roads England Wales (0% is target)	<b>2.92%</b>
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Condition of secondary roads England Wales (0% is target)	<b>6.38%</b>
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Condition of principal roads Scotland (0% is target)	<b>25.85%</b>
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## Maintenance

% of actual maintenance expenditure which was planned	<b>70.96%</b>
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% of damaged carriageways made safe within their target time.	<b>88.58%</b>
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## Winter Maintenance

Total cost for carriageway winter maintenance treatment over the entire winter period divided by the total carriageway network length.	<b>£822/km</b>
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Kg of salt used per km treated	<b>105.12</b>
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## Bridges

% of principal and general inspections carried out on time	<b>75.74%</b>
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% of council owned bridges failing European standards	<b>2.57%</b>
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## Traffic management systems

% of faults rectified on first visit	<b>89.53%</b>
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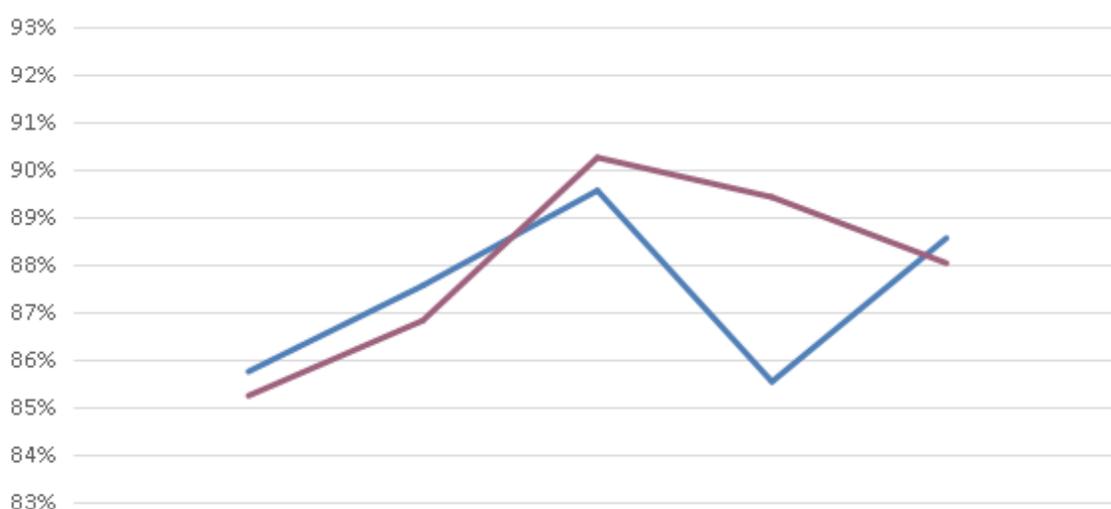
## 1 Overview

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. Data is collected at year end (21/22) to provide a reflective analysis, and relies upon data submitted by local authorities to the service. The data is then triangulated through discussion groups at the APSE Performance Networks seminar held in December each year.

## 2 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.

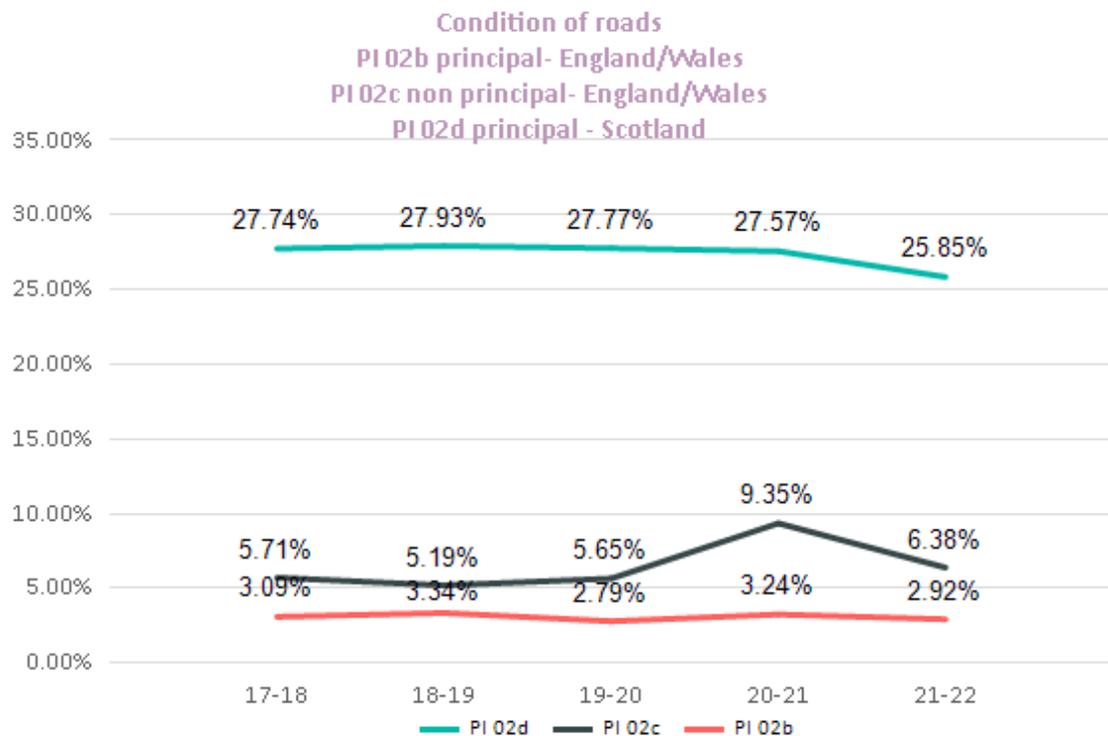
PI 03a % damaged roads made safe in target times  
PI 45a % damaged footways made safe in target times



	17-18	18-19	19-20	20-21	21-22
PI 03a	85.76%	87.57%	89.58%	85.55%	88.58%
PI 45a	85.25%	86.84%	90.28%	89.44%	88.05%

The performance indicators for the condition of roads in England and Wales are PI 02b (principal roads via TRACS) and PI 02c (non-principal roads). In this case the lower the percentage needing attention the better. PI 02b, 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 2.92% of the principal road network. Unfortunately, we are beginning to see a divergence for non-principal roads which has not improved since a low in 2018-19.

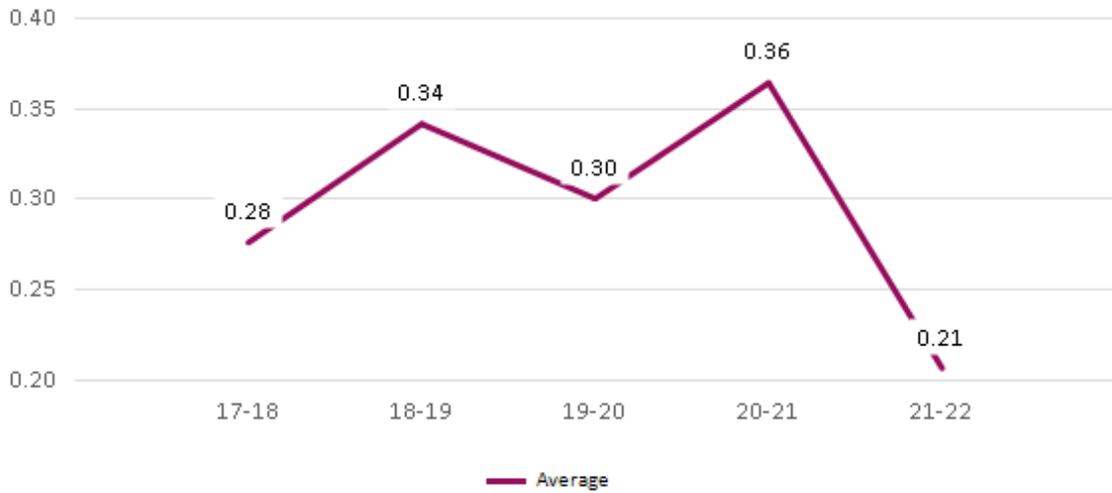


In Scotland PI 02d (principal roads via SMRCS) has improved, averaging 28.85% in 2021/22.

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 below shows the number of category 1 defects per kilometre of maintained road. This shows a decline over the past year and is currently at 0.21. This decrease is likely related to the milder winter of 2021/22.

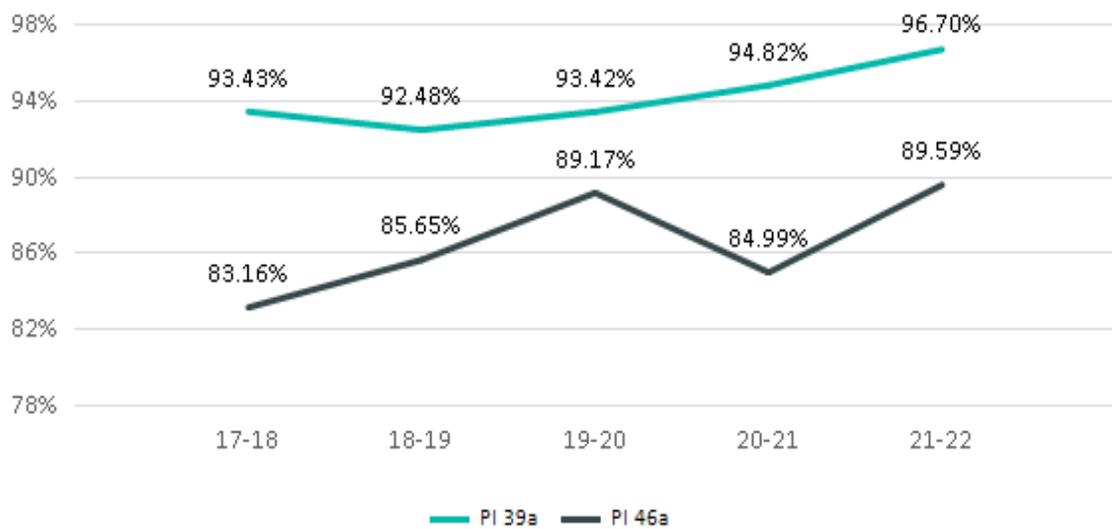
**PI 28 Number of category one defects per km of maintained carriageway**



The percentage of carriageway safety inspections carried out on time (PI 39a) has gently risen over the past 5 years to currently stand at 96.70%. It should be noted that the historical percentage has never been below 90% for the same period.

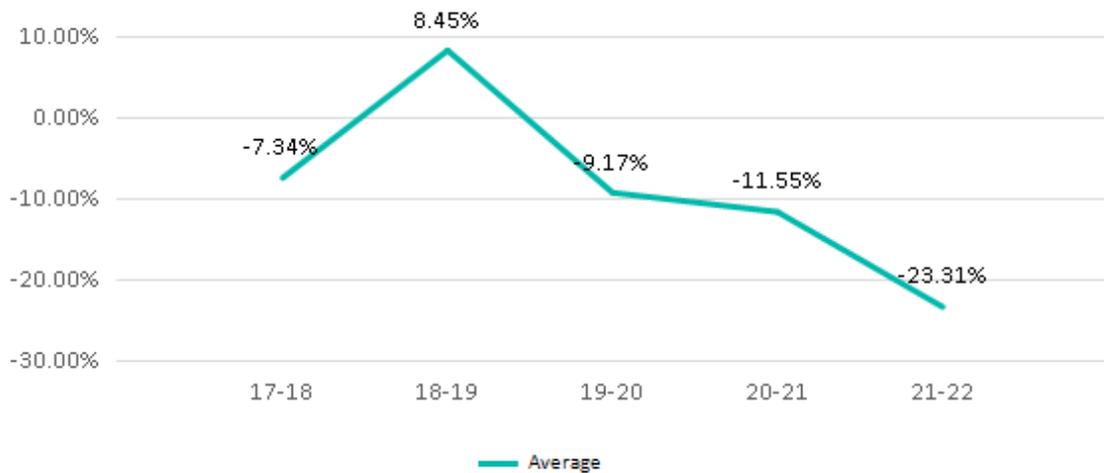
For footways (PI 46a) the level stands at 89.59%, at a 5-year high. Although the figures continue to show a higher focus on the highway rather than the footway, we can see there has been a sustained improvement over the past 5 years.

**PI 39a Percentage of safety inspections completed on time (carriageways)**  
**PI 46a Percentage of safety inspections completed on time (footways)**



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.

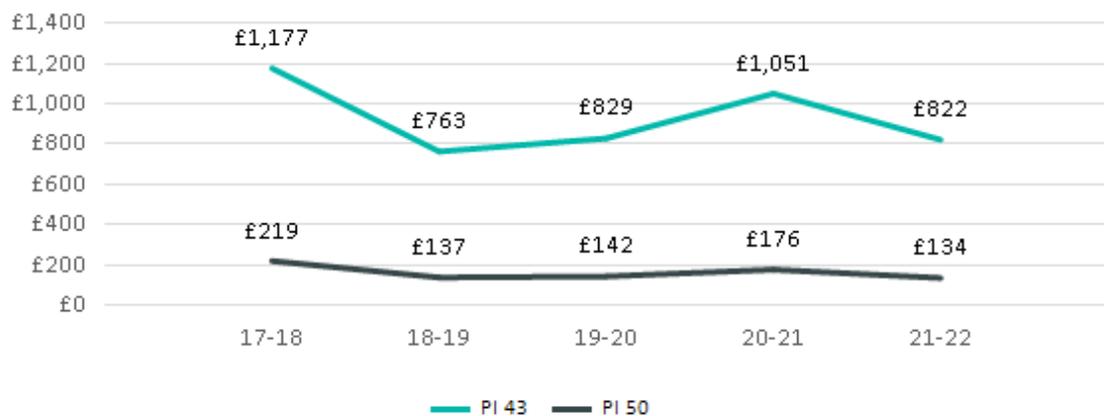
**PI 31a Percentage change in number of non repudiated third party claims in last 3 years compared to previous 3 year period**



### 3 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.

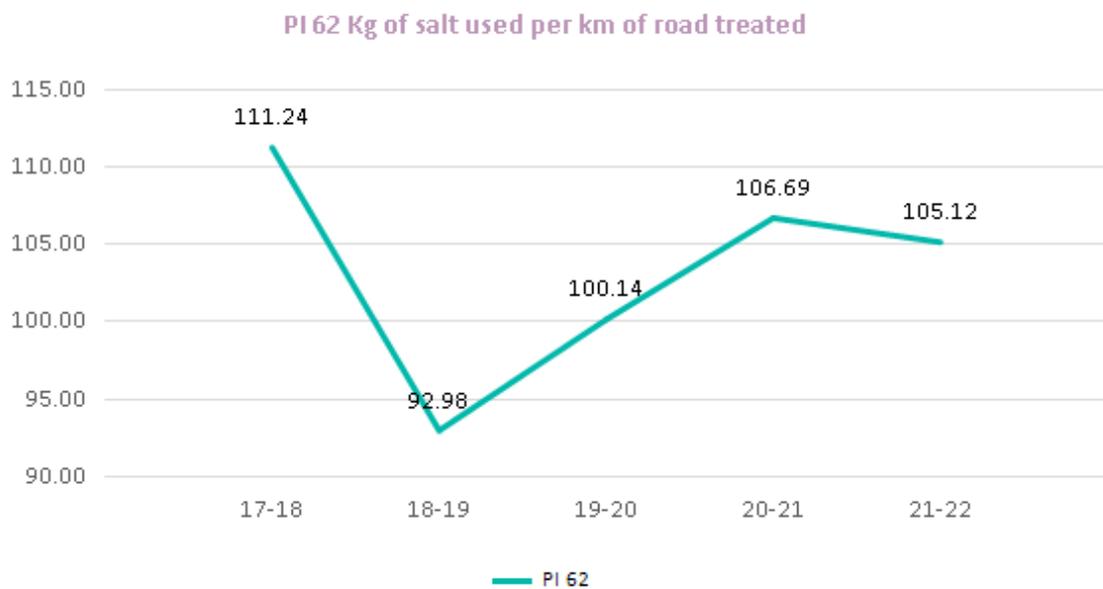
**PI 43 Total cost for carriageway winter maintenance treatment over entire winter period divided by the total carriageway network length**  
**PI 50 Total cost for footway winter maintenance treatment over the entire winter period divided by the total footway network length**



PI 43 covering carriageways stands at £822, up from a low of £763 in 2018/19. The cost of footways

has decreased slightly to £134 from a previous low of £137 in 2017/18. These substantial falls 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.

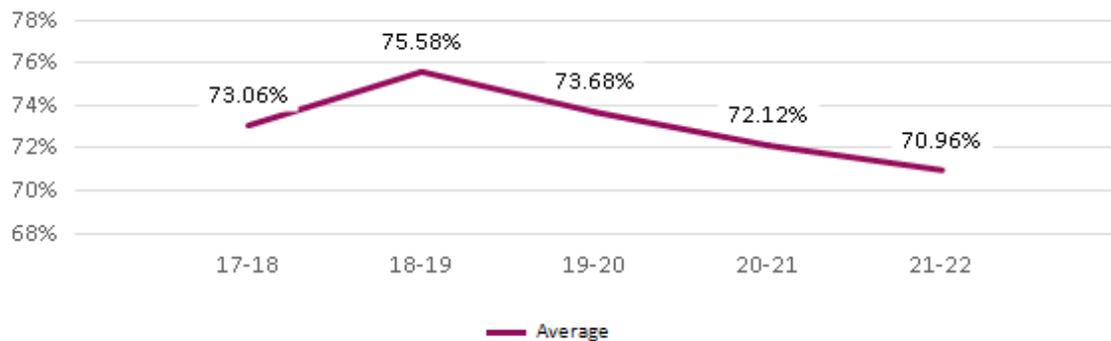
PI 62 covers the Kg of salt used per km which will clearly reflect the frequency of gritting over a particular winter. Highs occurred in 2017-18 and 2020-21. With milder winters, improved forecasting and GPS targeted gritting, one would anticipate the trend to reduce in the medium term.



#### **4 Expenditure**

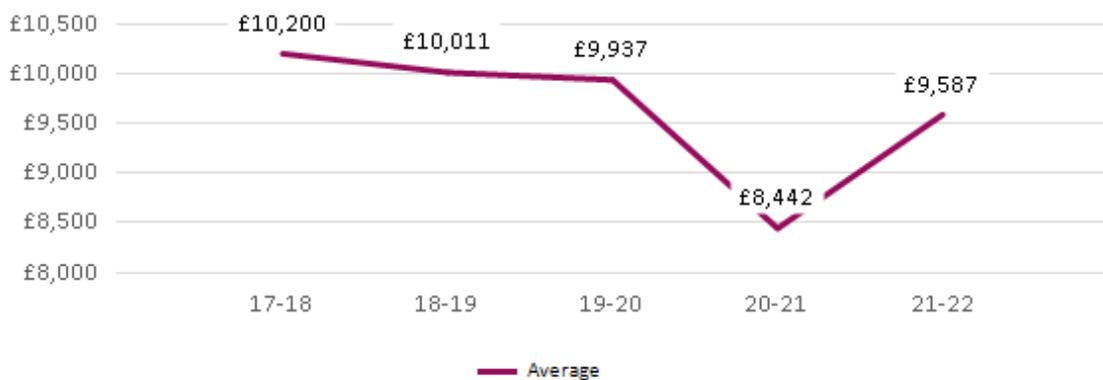
The average percentage of actual maintenance expenditure which was planned or proactive (PI 16) in 2021-22 stands at 70.96%. This shows a decrease on 2020-21 and the 5-year trend is reducing. Perhaps councils took the opportunity of Covid to concentrate on additional repairs as long-term asset management 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**



After a dip in 2020-21, PI 63 total carriageway expenditure showed a marked increase in 202/22 to £9,587. Whilst the last year was plagued by Covid disruptions the trend has been downward over the last 5 years and this return to that trend. 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.

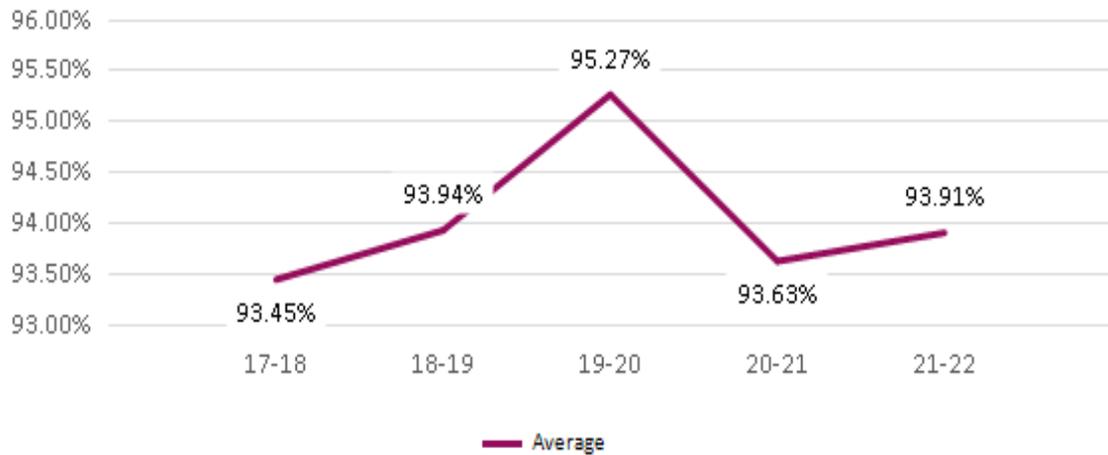
**PI 63 Total expenditure by carriageway network length**



**5 Traffic management systems**

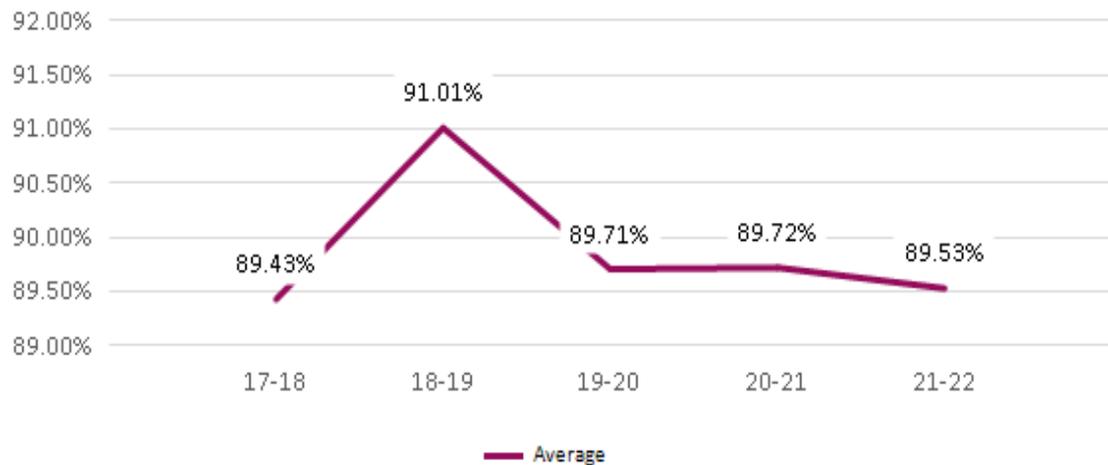
The percentage of traffic management system faults rectified within target times (PI 55) has remained above 92% since 2013-14, with the current figure being 93.91%.

PI 55 Percentage of faults rectified within target time



The percentage of faults rectified on first visit (PI 56) has been above 88% in the same period currently at 89.53%.

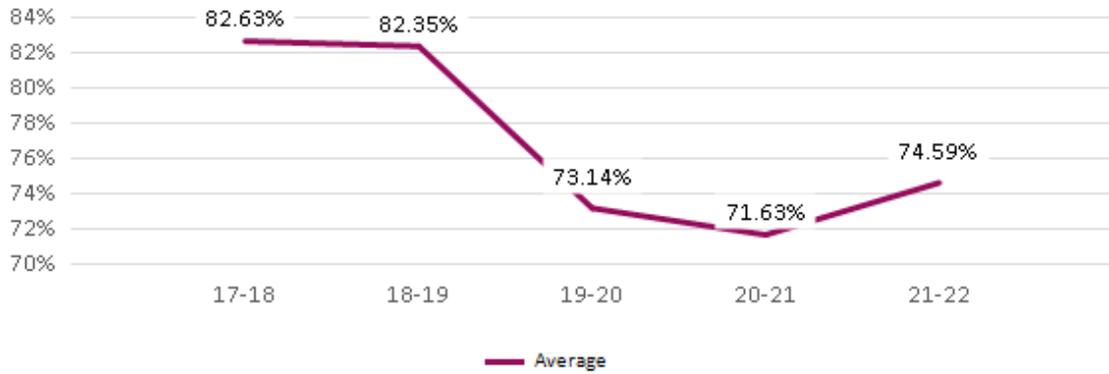
PI 56 Percentage of faults rectified on first visit



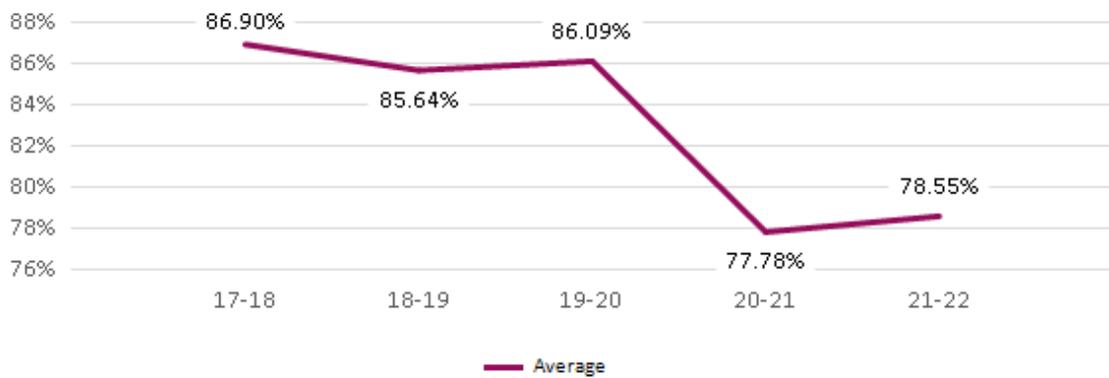
## 6 Bridges and structures

PI 300 and PI 301 look at the percentage of principal and general inspections carried out on time and the average figures for 2021-22 are 74.59% and 78.55% respectively. Both show significant reductions since 2018-19. Whilst Covid would be a factor in 2020-21 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 completed on time**

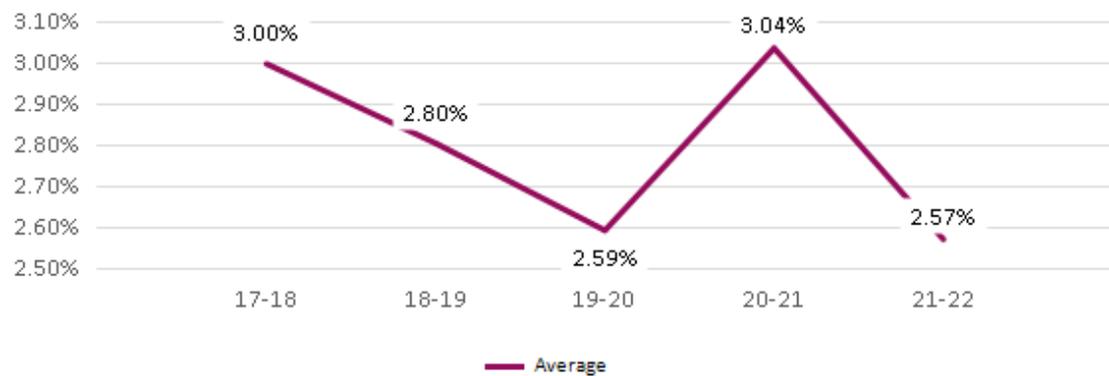


**PI 301 Percentage of general inspections completed on time**



The average percentage of council owned bridges failing European standards (PI 304) is 2.57%, which is an improvement from 3.04% in 2020-21. 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**



## **7 APSE Comment**

Local authority highways operated throughout the pandemic and some used the quieter roads, which resulted in lower traffic levels during the lockdown period, as an opportunity to undertake additional work. The underlying focus has been on primary routes and these have remained in a fairly good state over the past 5 years. The emphasis on asset management has however been to the detriment of secondary roads and these are now showing clear signs of increasing deterioration. Budgets remain tight and things are unlikely to get better in the near future.

These trends predate the war in Ukraine and the subsequent surge in energy and oil prices. 2022-23 had seen significant increases in the price of oil-based asphalt and pressure on wage rates as inflation passed 10%. Overall costs have risen way beyond forecast meaning curtailment of yearly resurfacing and maintenance plans.

Most councils run apprenticeship schemes but levels in the wider industry are falling. This can only lead to a further tightening of the labour market as skills become scarcer and even greater difficulty in filling highway posts.

Rob Bailey  
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[www.apse.org.uk](http://www.apse.org.uk)

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