Briefing 13- 59 December 2013

# Trend analysis – Roads and Highway

To: all contacts

**Key issues**

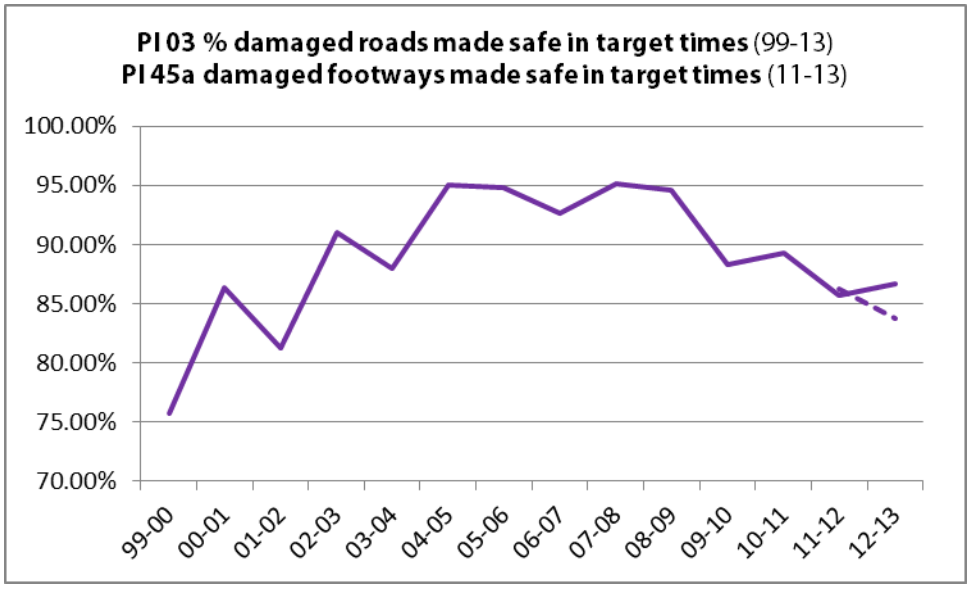
Historic under investment has had a significant on impact upon roads and highways assets.
The performance of elements of the sector influenced by severe weather and reducing budgets.
Template reviewed in conjunction with SCOTS and CSS Wales

## 1 Introduction

This briefing highlights some of the main points emerging from the APSE Performance Networks model for roads and highways for the year 2012-13.

## 2.1 Carriageways and footways

For carriageways and footways, PI 03 and PI 45a show the percentage of damaged carriageways and footways made safe within target times respectively. The carriageways figure had improved steadily over the collection period from a low point of 75% in 1999. There was a reduction in average performance since 2008-09 with a slight improvement last year. It is important to place this trend in the context of recent severe winter weather, reducing budgets and historical under investment. After a period of improved performance, the recent past reflects a downturn in performance. The footways indicator was collected last year and this year and although the output is similar to the roads figure, more data is needed to reveal real trends.



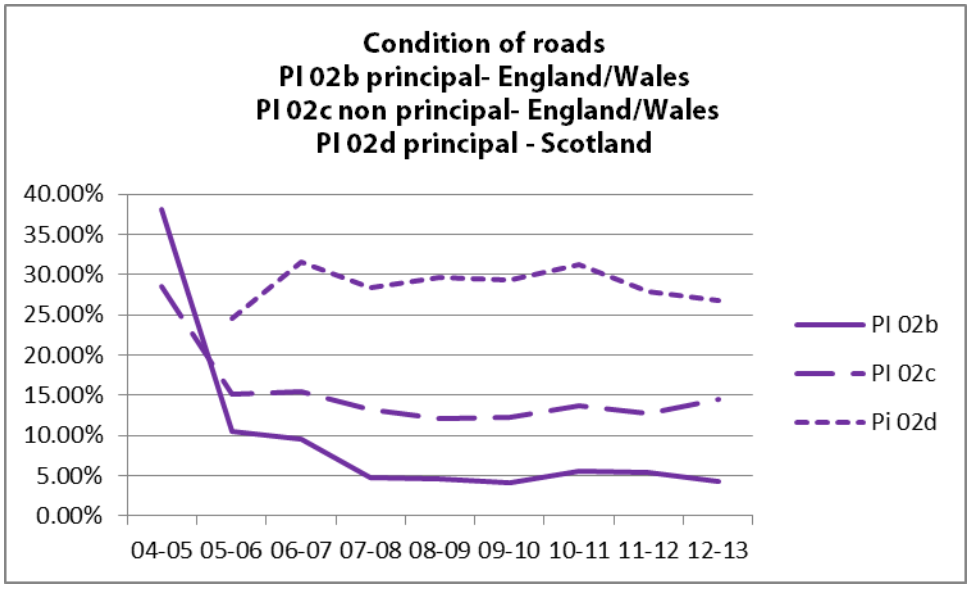
The survey PIs for the condition of roads in England and Wales, PIs 02b (principal roads via TRACS) and 02c (non principal roads), show differing outcomes. The former (PI 02b) covering principal roads shows a large improvement in the condition of roads since 2005-06 and has been steady over the past 5 years.

The non-principal road survey (PI 02c) had remained steady around 12% and has increased slightly to over 14% last year. These are both substantially lower than when these PIs were first collected. Improvements become more difficult bearing in mind the significant improvements made over the first 2 years of data collection. In Scotland PI 02d (principal roads via SMRCS) has improved from 31.2% in 2010-11 to 26.81% in 2012-13.

Councils recognise the importance of roads and highways as a valuable asset and the impact on the local economy. They understand the need to maintain them appropriately and these figures reflect the fact that there are minor levels of decline in the condition of the network which councils are managing in very difficult circumstances.

The increase in poor condition reflects three years of extremely bad winter weather and the impacts of freeze/thaw on the road and footway surface. Spending resources on reactive work obviously reduces the overall pot available for planned work and limits the time that can be spent keeping the network in good condition. Initial cuts in budgets are beginning to bite although to date, the impact, as reflected by this PI, is slight. It will be interesting to see how the condition of road surfaces develops over the next couple of years as budget cuts bite and the effect of a number of bad winters on the asset emerges.

Councils are balancing public demand to fix individual potholes in short timescales with their own plans to manage the entire asset and address larger stretches of road. Working on an asset basis rather than fixing potholes first will cause some discomfort especially amongst councillors and highways professionals will have to put a lot of effort into explaining the reasoning for taking an asset management approach.




There are priorities to be set when spending budgets and reductions in overall spend has implications for highways funding. When looking at spend on footpaths, the percentage of fabric maintenance expenditure that was spent on footpaths (PI 24) has reduced significantly over the past 5 years from over 25% in 2007-08, to 12.2% in 2010-11. This is a substantial decrease and most likely reflects the pressure on services as a result of severe winter weather on the highway. There has been a slight

increase from 12.2% to 15.1% in 2011-12 as councils have reacted to more calls for footway work but balancing highway and footway work remains difficult. This is at 13.7% in 2012-13.

PI 28 shows the number of category 1 defects per kilometre of maintained road. This has varied over the past 8 years but it currently stands at the lower end of the variation at 0.45, from 0.44 last year. Category 1 defects remain highest priority for highways managers and it would appear that the similar scores for the last 2 years reflect a similar level of focus on this issue. Maintaining these figures will have a big impact across the network.

The percentage of carriageway safety inspections carried out on time (PI 39) stands at an average of 87.8% and at 88.4% for footways (PI 46). These measures are new and it will take a number of years for trends to appear.

## 2.2 Winter Maintenance

There are 2 new 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 network length.

They stand at £1240.37 and £239.09 respectively. Severe weather will clearly push these figures up as spending on winter maintenance increases. There has been a focus on footway gritting more recently as concern grows about slipping claims, more appropriate equipment is available and people become more used to snow in winter again.`

The total cost per km of carriageway (PI 57) and footway (PI 58) travelled for precautionary treatment is £299.16 and £982.06 respectively. The cost of footway gritting is more expensive due to the nature of the smaller areas covered and the man power needed. There has also been an increase in the length of footways where precautionary gritting had taken place over recent years.

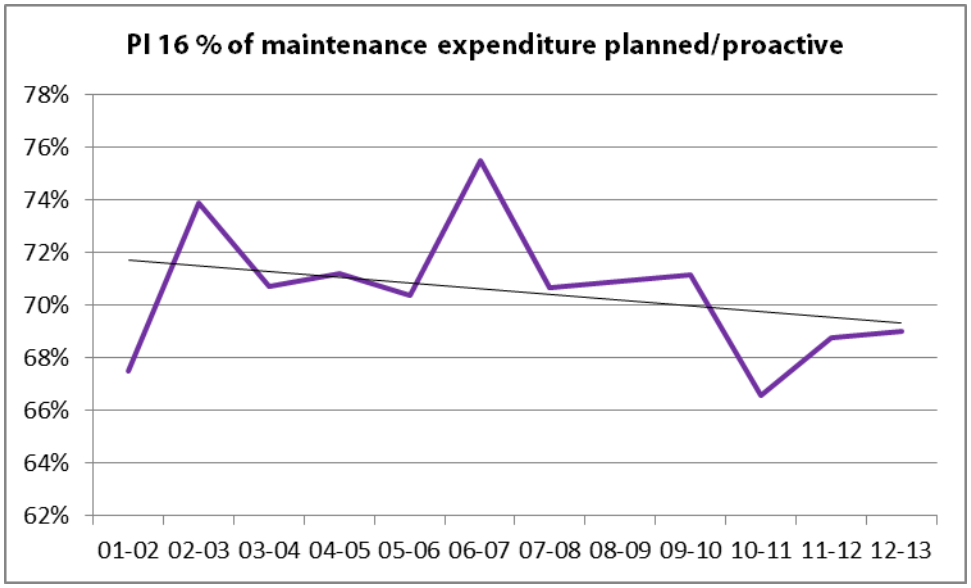
The general cost of winter maintenance has increased over recent years simply due to the amount of snow which has fallen. However in terms of the quality of service nearly all roads have remained open in difficult circumstances.

Government guidance has pointed councils towards greater levels of resilience and most have far bigger salt stocks now than in previous years as well as having invested in storage facilities, vehicles, ploughs, training and other elements of the service.

Anecdotal evidence suggests that there is public demand for gritting on a greater extent of the footway network, outside shops on major pedestrian routes and at shopping centres and this has become more of a priority in some councils. This is backed up with the figures above and part of the reason may be that Scottish councils have made more submissions. The use of kubotas and manual spreaders for footways has increased as has the use of liquid de-icer in some areas.

## 2.3 Combined asset types

The percentage of actual maintenance expenditure which was planned or proactive (PI 16) in 20012-13 stands at 69%. This is very similar to the previous year. Although this figure has fluctuated over the period of data collection, the trend line highlights the slight downward trend over the 12 years. As noted above, recent guidance points to asset management rather than reactive maintenance as the method most likely to lead to a well maintained network. It is important to consider this approach in the long term when hopefully more planned work will have impacts upon the number of pot holes appearing.




PI 31, the percentage change in the number of third party claims in last 3 years compared to the previous 3 years, has fluctuated between 2005-06 and 20012-13. The trend line shows a gradual increase in the numbers of claims compared with the previous period. Although procedures employed by councils are much improved and they are more likely to challenge claims where they have valid evidence and inspection regimes, this has been and remains a significant concern for councils. Clearly the number of claims is linked to the weather as they are to the state of the roads and footways.

### 2.4 Traffic Management Systems

PI 55 the percentage of faults rectified within target times and percentage rectified on first visit are average figures of 90.3% and 86.3% respectively. The range of responses across all those who responded was significant from below 10% up to 100% so this is an area where there appears to be a lack of consistency in approach.

### 2.5 Bridges and Structures

PI 300 and 301look at the percentage of principal and general inspections carried out on time and the figures are 80.1% and 88.2% respectively. The average percentage of council owned buildings failing European standards (PI 304) is 4.4% with the range stretching from 0 up to over 32%. This is an important element of local highway authority work but anecdotal evidence points to some local authorities prioritising bridge work more than others.

### 2.6 Staff Absence

Front line and all staff absences have gradually improved over the duration of the collection period and have remained steady over the past 3 years. For all staff absence (PI 202a) in 2011-12 the figure was 4.3% and the average figure for PI 54b stands at 4% in 2012-13. In terms of days per FTE this stands at 11.1 days. The range of figures here is from 3.3 days up to 16.9 days. Staff absence is an area where poor performance can increase costs and inefficiency heavily so it is imperative that good procedures are in place to minimise it. Longer term trends in sickness absence have improved but reduced staff numbers and loss of experience and expertise in many services and councils will inevitably lead to increase pressure on remaining staff to continue to provide services. Higher levels of stress would be an expected result leading to potentially higher levels of absence in future.

## 3 APSE comment

Recent severe weather has influenced managers to review their arrangements and this, along with reductions in budgets, has had a profound impact on the asset and so the demands of the service. The immediate responsibilities on councils to keep traffic moving and ensure that the network is safe to drive and walk on are obvious and are the first response when bad weather is expected. Councils are skilled in providing these services and any infrequent examples of gridlock can normally be put down to snow falling quicker than it can be moved rather than an operational problem within the service.

However, the wider issues of the transport network being fit to support the local and national economy tend to be overlooked after the snow is cleared. Long term damage to the network requires management and investment and unless both are available the network will deteriorate. The condition of local roads remains an issue with some estimating that only a fund of £10billion will bring it up to an acceptable condition.

The Department of Transport in England has put in place a strategic salt stock for the first time this year. They are however stating that use of this is a last resort and local authorities should have sufficient stocks of their own in place and work with neighbouring authorities prior to requesting salt from the strategic stock.

Management of the highways asset remains a high profile issue with the benefits of better asset data being promoted. Equally a move away from fixing the worst potholes first towards a wider consideration of the network and asset management approach also has longer term benefits.
Such changes require longer term planning and allocation of funding so it will be interesting to see how these approaches develop over future years.

Research and development of new materials for roads and footways requires investment by suppliers and they will not do it without local authorities taking a degree of risk. Highways engineers need to be fully informed to make those decisions so there is a responsibility on the aggregate companies to understand the needs and local circumstances of highways engineers. Similarly engineers need to engage fully with those producing materials to find the best materials for their specific road as well as how best to lay them.

APSE has invested resources in reviewing and this model on to an asset management basis working alongside SCOTS and CSS Wales to accomplish this. We would actively encourage all APSE members to engage in benchmarking using the PN template to ensure that local highway authorities are able to address problems, promote their own good practice and learn from others where appropriate.

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