



27 April 2018

**RESPONSE PREPARED FOR THE NATIONAL ASSEMBLY FOR WALES' ECONOMY, INFRASTRUCTURE AND SKILLS COMMITTEE INQUIRY INTO THE STATE OF ROADS IN WALES.**

AIA response:

1. The Asphalt Industry Alliance (AIA) is submitting findings from its Annual Local Authority Road Maintenance (ALARM) survey 2018 for consideration by the committee. The independent survey gives a snapshot of the general condition of the local road network based on information submitted by those directly responsible for its maintenance, thus providing a means of tracking improvement or deterioration.
2. ALARM 2018 is the 23<sup>rd</sup> consecutive survey. The response rate this year for Welsh local authorities was 36%. The overall response rate for England, London and Wales combined was 61%. Findings from the submissions received are extrapolated to represent the 114 local authorities in England without a PFI arrangement, as well as 32 local authorities in London and **22 in Wales**. The results are collated, analysed and verified by an independent research company.
3. The survey's findings therefore provide a benchmark for establishing the indicative current state of roads in Wales managed by local authorities, as well as providing valuable insight on the correlation between road condition and funding levels.
4. The key findings of the ALARM survey for Wales 2018, with comparable data for the period 2009-2018, is attached. See Appendix 1.
5. The overall results from ALARM 2018 provided a somewhat paradoxical picture, with local authorities in general reporting an increase in overall highway maintenance budgets while simultaneously recording declining road conditions. This indicates that the increase in funding reported has yet to be felt or is a case of too little too late. Qualitative research carried out as part of ALARM 2018 research suggests that, with funding for maintenance falling short for so many years, the rate of deterioration continues to accelerate – despite the increase in funding reported.
6. In precis, the picture provided by ALARM 2018 for Wales differs somewhat from the English picture in that, while the rate of increase in average highways budget received per Welsh authority is less than that enjoyed by English councils, structural road conditions reported are slightly better.
7. Overall ALARM figures (combined findings for England, London and Wales) showed that local authorities reported an increase in highway maintenance budgets of 20% on 2017 figures. **In Wales the increase reported was 17%.**
8. The increase in overall budgets reported obscures the distinct experiences of individual local authorities. In Wales, only **one third** of local authority respondents actually reported an increase in annual highway maintenance budgets. This mirrored the 'winners and losers' scenario reported elsewhere.
9. Welsh authorities reported that 63% of their highways budgets are spent on the carriageway itself – a significantly higher figure than that reported in other regions and one that has steadily increased in Wales over the last decade (33% reported in ALARM 2009).
10. However, in 2018 **Welsh authorities spent over 40% less on local roads on carriageway maintenance per mile** than English councils. In Wales the equivalent of £5,601 per mile was spent on carriageway maintenance – compared to £9,580 per mile in England.

11. In ALARM 2018, Welsh authorities reported a **shortfall in their annual maintenance budgets of £69.1m, the equivalent of a funding gap of £3.1m per authority**. The shortfall is defined 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.
12. Each year the ALARM survey asks highway departments to estimate how much it would cost to 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 in Wales has risen to £27.4m per authority up from £26.9m reported last year.**
13. Figure 1 – extracted from the ALARM report – shows the structural road conditions with the percentage of roads considered good (with 15 or more years of life remaining) fair, (5-15 years of life remaining) and poor (less than five years of life remaining) in Wales. Over the last three years there has been a significant increase in the percentage of roads classed as good. **However, 17% are still defined as poor – the equivalent of one in six of the Welsh network.**
14. For the first time this year, ALARM analysed how roads performed against authorities' own Road Condition Index (RCI) targets. The RCI 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.
15. Figure 2 (extracted from ALARM 2018) shows Welsh authorities actual performance against target and highlights that they are on track in **just two out of nine categories**. Interestingly, the targets set by Welsh authorities is in accordance with authorities' own RCI data, figure 6 shows how, when extrapolated across the whole of the road network it shows that **56% of the total road network in Wales in miles is classed as good** (ALARM 2018 reported levels of 62% for English councils and 62% for London councils). However, it also illustrates that 2,804 miles of Welsh roads are classed as being in poor condition – likely to require maintenance in the next 12 months.
16. Trend data from ALARM surveys 2009-2018 is also attached – see Appendix 2.
17. Reviewing highway maintenance funding in Wales over the last decade one can see that it spiked in 2013, with budgets for the following years significantly less than pre-2013 levels. The 2018 budget was comparable with that reported in back in 2009 – a fall in real terms once inflation is factored in.
18. Despite the higher budgets in the earlier part of the decade, local authority spending on highways maintenance in Wales over the last decade lags significantly behind other regions. Between 2009-2018, **Welsh authorities have spent the equivalent of £40,148 per mile** of local road on highway carriageway maintenance. This compares **to £70,300 per mile** reported for the same time period by English councils.
19. Over the last four years the Welsh annual budget shortfall reported has remained fairly static, implying that local highway engineers have been effective at doing more with less. The implementation of an asset management approach to highways maintenance will also have helped to ensure funds are spent effectively and reduce the variance between what local authorities receive and what they say they need to maintain the roads safely and effectively. Nevertheless, **the combined shortfall in annual carriageway maintenance budgets reported by Welsh authorities is £69.1m.**

20. The amount spent fixing potholes in Wales peaked in 2015 at £8.4m. Since then it has dropped to £7.9m, as reported in ALARM 2018, supporting the shift towards whole life asset management using planned preventative maintenance – which is up to 20 times less expensive than reactive work such as patching and filling potholes.
21. The benefits of a planned approach to highway maintenance is also borne out by the fall in the one-time catch up costs reported over the last decade. Using asset management practices, highway engineers now work to a ‘real- world’ basis in which it is expected that the condition of parts of the network will decline during its life cycle – rather than aiming for an unrealistic gold-plated scenario where all of the network is perfect all of the time. Even with a more realistic approach to managing the network, **£602.8m is still needed by Welsh authorities to bring the roads up to scratch.**
22. The efficiencies and savings found following the introduction of asset management plans will level off. Without further investment in highway maintenance funding, this will lead to a decline in the condition of Welsh roads with continued prioritisation on key routes to the detriment of the rest of the network.
23. The findings from successive ALARM surveys indicates that providing surety of funding to local authorities on a longer-term basis would allow local highway engineers to plan with even more confidence and drive greater efficiencies.
24. Although the ‘Wales Infrastructure Investment Plan 2012’ recognised the importance of tackling the road maintenance backlog in order to support communities and drive economic growth, investment via Prudential borrowing in this area was not sufficient, or sustained over a long enough time period, to allow local authorities to tackle the scale of the backlog.
25. This is borne out by the road conditions reported in ALARM surveys before and after the investment. The percentage of Welsh roads classed as structurally poor (having five years of life remaining) dropped from a high of 20% (ALARM 2012) to 6 % (ALARM 2016). Unfortunately, this was short-lived with the percentage classed as poor in ALARM 2018 now 17%. (See Appendix 1.)
26. Looking ahead, the AIA would advocate the importance of investing to save with further enhanced and accelerated investment in maintaining the existing road network, which ultimately underpins the social and economic development of the entire country.
27. We would also like to raise the issue of inefficiencies relating to the over-specification, or gold-plating, of asphalt. There have been many advances in the performance of materials in recent years, but this is often not reflected in local authorities’ product specifications – leading to unnecessary costs and waste. **We would recommend setting up a Pavement Efficiencies Group**, such as that developed by Highways England, **to carry out a thorough review.** Made up of suppliers, designers, industry and local authority representatives, the aim would be to produce a Best Practice Manual to **identify where efficiencies and cost savings could be achieved** and to set out appropriate specifications for a range of environments.
28. AIA representatives would be happy to present these and further findings from its ALARM surveys to the committee, if required: [info@asphaltuk.org](mailto:info@asphaltuk.org) or telephone: 020 7222 0136.

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
ALARM FINDINGS										
Percentage of authorities responding	Wales 36%	Wales 55%	Wales 55%	Wales 41%	Wales 68%	Wales 64%	Wales 64%	Wales 68%	Wales n/a	Wales 73%
<b>Highway maintenance budgets</b>										
Average highway maintenance budget per authority	£8.1m	£6.9m	£7.8m	£7.0m	£4.4m	£11.1m	£9.1m	£9.4m	£8.5m	£8.1m
Percentage of highway maintenance budget spent on carriageway	63%	58%	47%	52%	55%	52%	40%	32%	34%	33%
Average carriageway maintenance budget	£5.1m	£4.0m	£3.6m	£3.64m	£2.42m	£5.77m	£3.64m	£3m	£2.89m	£2.67m
<b>Shortfall</b>										
Shortfall in annual road structural budget	£69.1m	£80.3m	£81.2m	£80.8m	£62.7m	£2.2m	£72.6m	£112m	£86m	£73m
Average annual budget shortfall per authority	£3.1m	£3.7m	£3.7m	£3.7m	£0.85m	£0.1m	£3.3m	£5.1m	£3.9m	£3.3m
Estimated time to clear carriageway maintenance backlog	24 years	9 years	7 years	15 years	12 years	14 years	17 years	14 years	15 years	16 years
Estimated one-time catch-up costs	£603.4m	£591.5m	£703m	£646m	£440m	£462m	£440m	£506m	£743.6m	£490.6m
Estimated one time catch-up cost per authority	£27.4m	£26.9m	£31.9m	£29.36m	£20m	£21m	£20m	£23m	£33.8m	£22.3m
<b>Road condition</b>										
Frequency of road surfacing (all road classes)	71 years	63 years	59 years	59 years	68 years	107 years	72 years	80 years	92 years	95 years
Number of potholes filled over past year	131,479	141,020	114,783	129,844	148,060	156,000	107,000	133,000	92,664	93,786
Average number filled per authority last year	5,976	6,410	5,217	5,902	6,730	7,082	4,880	6,063	4,212	4,263
Average cost to fill one pothole	£61	£53	£49	£65	£52	£47	£35	£48	£46	£46
Average cost to fill one pothole - planned	£60	£59	£64							
Average cost to fill one pothole - reactive	£7.9m	£7.9m	£6.5m	£8.4m	£7.7m	£1.8m	£3.7m	£6.4m	£4.3m	£4.3m
Total spent filling potholes in past year	17	18	6	£16	16	17	20	17		
percentage of network in poor structural condition										
<b>Compensation claims</b>										
Amount paid in road user compensation claims	£35.2k	£43.5k	£486k	£702k	£1.1m	£1.8m	£1.4m	£2.3m	£6.7m	£10m
Staff costs spent on claims (per year)	£554.7k	£43.8k	£3.5m	£138k	£112k	£41k	£38k	£55k	£80k	£69k

Figure 1

# 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

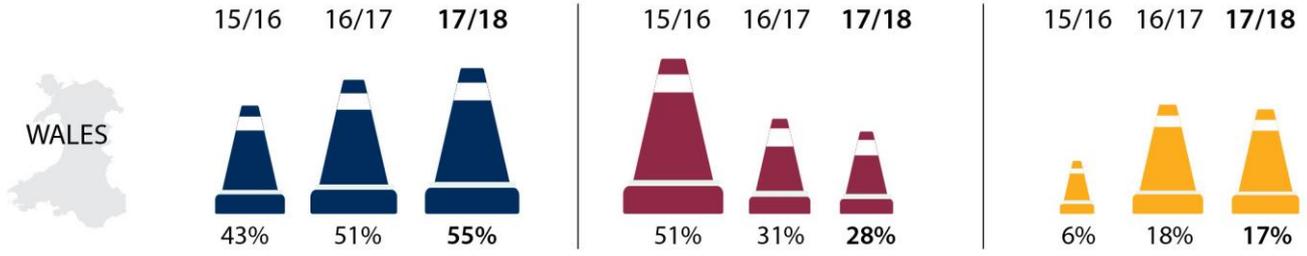


Figure 2

# Road Condition Index

by road category (%)

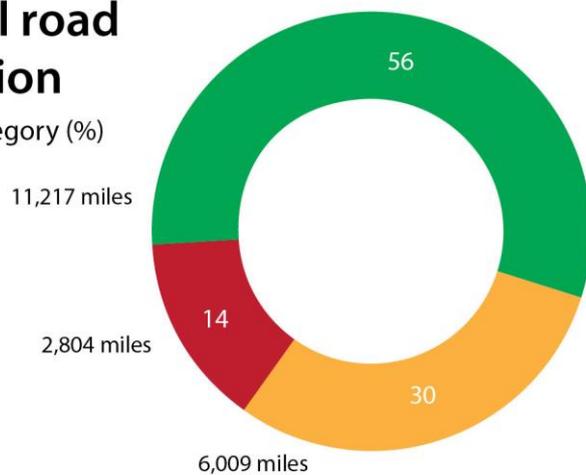
KEY:  **GREEN:** carriageway in a good state of repair  
 **AMBER:** carriageway where some deterioration is apparent  
 **RED:** carriageway in poor overall condition – likely to require maintenance in the next 12 months

		PRINCIPAL		NON-PRINCIPAL		UNCLASSIFIED	
		TARGET	ACTUAL	TARGET	ACTUAL	TARGET	ACTUAL
<b>GREEN</b>	Wales	≥72	70	≥68	64	≥56	54
<b>AMBER</b>	Wales	≤24	27	≤27	30	≤34	34
<b>RED</b>	Wales	≤4	3	≤6	6	≤14	12

Figure 3

# Overall road condition

by road category (%)



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

Figure 4

### Total highway maintenance budget in Wales

(£m)

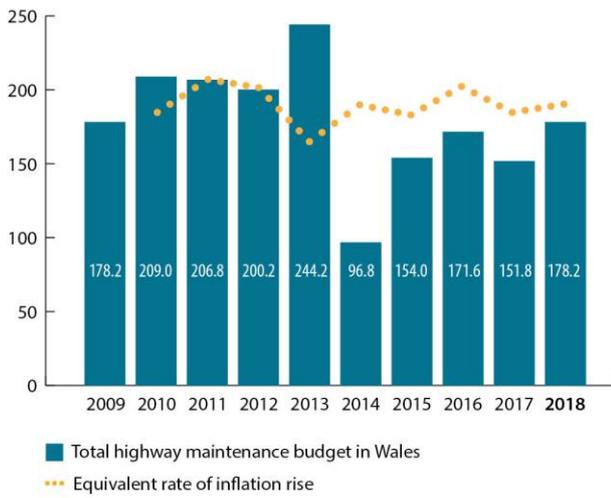


Figure 5

### One-time catch-up costs

Estimate per authority (£m)

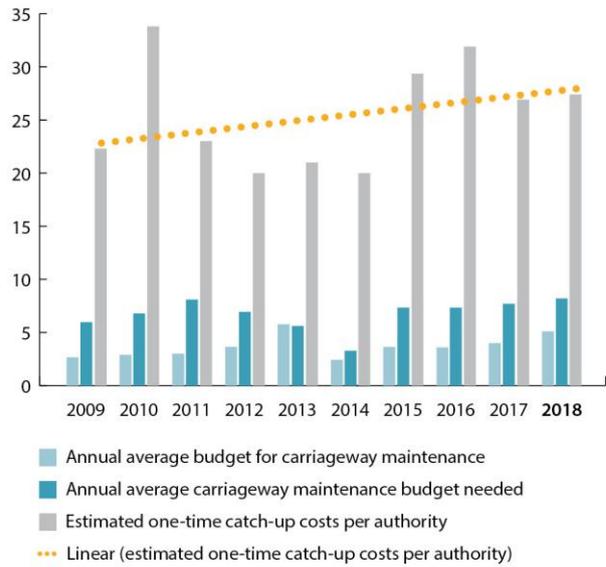


Figure 6

### Carriageway maintenance budget

Annual average per authority (£m)

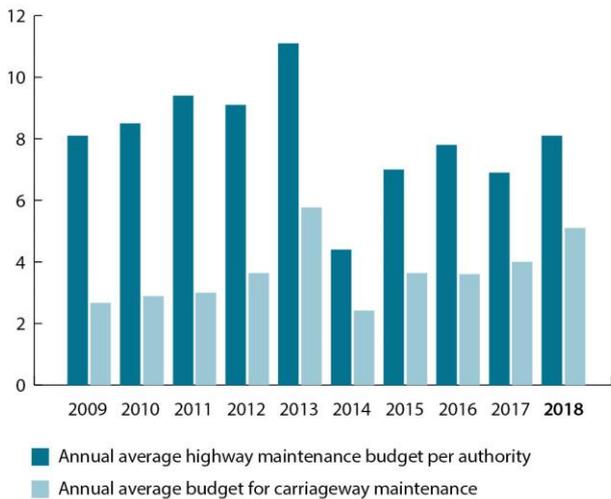
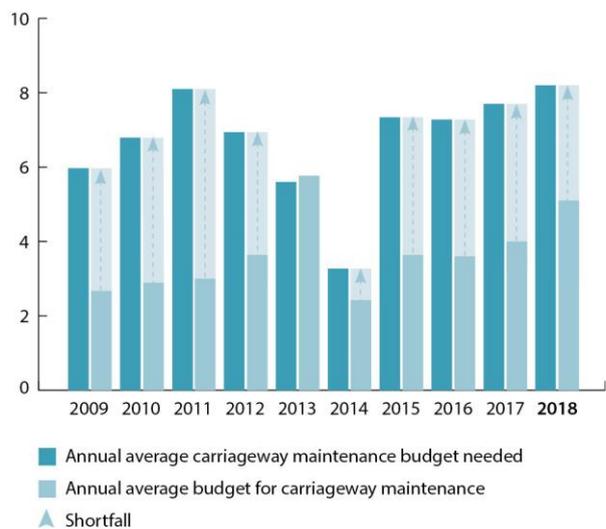


Figure 7

### Carriageway maintenance budget needed

Annual average per authority (£m)



### About the Asphalt Industry Alliance (AIA)

The Asphalt Industry Alliance (AIA) 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.

For ALARM 2018 go to: [www.asphaltuk.org/wp-content/uploads/alarm-survey-2018-FINAL.pdf](http://www.asphaltuk.org/wp-content/uploads/alarm-survey-2018-FINAL.pdf)

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