

M4 bus lane

The Impact of the Suspension of the M4 Bus Lane report Q&A

The Impact of the Suspension of the M4 Bus Lane report was published on 11 April 2012 and can be found [here](#):

Key messages

- Overall journey times have improved since the bus lane was suspended and the reliability of journeys has improved.
- Road users now have smoother journeys.
- There has been an average reduction of one minute 18 seconds in journey time on the M4 into London.
- While journeys for previous users of the bus lane have increased, the reliability of journey times in this lane is now similar to that of lanes 1 and 2.

So what does the report show?

The report shows that overall journey times have improved following the suspension of the bus lane, and the reliability of journeys has improved. The new design appears to be at least as safe as the previous layout and although there has been a small increase in noise and emissions, this is mostly attributable to higher flows and speeds.

What happens now?

These findings support the proposal to permanently remove the M4 Bus Lane, so the Highways Agency will publish a notice of a Revocation Order which is part of that process, and consult on the proposal.

What is a notice of a Revocation Order?

It is a public notice signalling the proposal to permanently remove the lane. It gives people a chance to ask any questions and lodge any comments. The period for submitting comments will finish in May 2012 and depending on the nature of the comments, a decision letter could be published in June 2012.

What happens if there are objections?

These will be reviewed as part of the statutory process and considered in detail as appropriate. If necessary a public inquiry could be held.

So when are we likely to see the bus lane permanently removed?

The lane is currently suspended until October 2013. If a decision letter was published in June, then the earliest it could be removed would be in October 2013. The suspended and removed layouts will be identical and there are no physical works needed to remove the suspended Bus Lane.

How many vehicles use the M4 each day?

We measure flow by links between junctions. For example, the total daily flow in 2011 between junctions 4 and 3 was just over 75,000 on an average weekday in 2011.

So you're saying journeys have improved. What has led to the improvement in overall journey times?

Flows have increased on the eastbound M4 in the last year, but despite this, journey times are now quicker overall following the suspension of the M4 Bus Lane. Journey times for buses and taxis have increased, but this has been outweighed by gains for other road users. In addition, journey times for all vehicles are slightly higher between Junctions 3 and 2 during the busiest period (the morning peak), but this is again outweighed by benefits in between Junctions 4b and 3 and also between Junctions 3 and 2 over the rest of the day (including the evening peak). The suspension of the M4 Bus Lane has led to the improvement in overall journey times.

In April 2011 it was said that initial findings showed a saving in the order of 30-40 seconds, and in October 2011 interim results indicated a saving for drivers in the order of 60 seconds. What is the comparative saving shown by the latest analysis?

The April results related to vehicles travelling between junctions 4 and 1 using NTCC ANPR data set from September 2009 to end of February 2010 average journey times, compared with September 2010 to the end of February 2011 average journey times. The October comparison used the same data bit comparing January to June 2010 average journey times with those from January to June 2011. The detail data in the report is based on actual traffic flows between junctions 4b and 2 and between junctions 3 and 2 for 6 weeks in October and early November 2010 compared with the same period in 2011 and uses MIDAS data which is a more robust data source. All data sources show the same trend.,

The detailed analysis shows that on the whole between junctions 4b and 2 on a weekday, journeys have improved – or reduced – by an average of 1 minute 18 seconds. On a weekend day the average improvement (or reduction) is 2 minutes 11 seconds.

Journeys between junctions 4b and 2 have been included as these account for a large proportion of the journeys along this section of the M4. Journeys with the Bus lane were affected by delays caused by 'shockwave' queuing conditions resulting from traffic demand and capacity constraint issues along the M4 between the Junction 4 and Heston Services, (after Junction 3).

Haven't you just used different parameters to ensure your findings show the suspension in a positive light?

No, not at all, we have used the data sources available to the Highways Agency in an appropriate manner. Detailed analysis used a more robust data source and involved more in depth analysis than the initial data source used. All data sources show the same trend.

You say there is an average improvement of 1 minute 18 seconds, but the analysis shows in the morning peak between junctions 4b and 2 there is only an improvement of 44 seconds. Where does your inflated figure come from?

The 1 minute 18 seconds represents the total journey times for all lanes, averaged to provide a per lane, per vehicle journey time saving throughout the day. This gives an accurate picture in general.

The 44 seconds saving is per vehicle during the morning peak period (6am to 10am), and when you consider the number of vehicles using this section of the M4 the cumulative savings are very worthwhile.

But 44 seconds is not much is it? Was it worth it?

Every saving is a benefit, and when you consider the number of vehicles using the M4 every day, the cumulative savings are very worthwhile. Between the junctions during the inter peak period (10am to 4pm) the saving is of just over a minute, and in the evening peak period (4pm to 7pm) the saving is one minute 49 seconds. During the off peak period (7pm to 6am) journeys have improved by an average 1 minute 38 seconds.

But between junctions 3 and 2 there is an average increase in journey times for the weekday morning peak of 18 seconds per vehicle, so it's worse than it was before.

The section between junctions 3 and 2 is the section which includes the M4 Bus Lane. The journey times referenced here effectively are only relevant to traffic joining at junction 3 and rejoining following a break in journey at Heston Services, which is the minority of the traffic along this section.

There is an 18 second average increase during the morning peak period, however, there is an improvement of at least a minute in all other time periods.

What is the impact on previous users of the bus lane, how have their journeys been affected?

There has been an increase in journey times in lane 3 since the bus lane has been suspended. This is to be expected since more traffic can now use that lane. Only 10% of traffic used the bus lane from data observed in October/November 2010. In the same period in 2011 25% of traffic used the bus lane. It is most noticeable during the morning peak period. The overall savings however for all road users show an improvement and the journey time reliability for users of lane 3 is now similar to that of the other two lanes.

But you said the impact on users other than motorists and hauliers would be minimal – the report shows 3-4 mins, or 43 hours in person hours delays, neither of which is minimal.

While it is correct that journey times have increased for previous users of lane 3, overall journey times for all road users have decreased. The person hours delay for the journey between junctions 4b and 2 has reduced overall by 207 hours for the average weekday following suspension of the bus lane.

But the person hour delay for junction 3 to 2 has increased – by 85 hours in the morning peak period. Isn't this just the time when road users actually need the benefit?

The proposal to suspend the bus lane was made with the aim of benefitting as many road users as possible, and the data shows this has been achieved. There has been a person hour delay increase between junctions 3 and 2. However this is outweighed by savings accumulated both in the same period between junctions 4b and 1 - by eradication of the shockwave the Bus Lane previously caused – and by benefits between junctions 3 and 2, and during the inter peak and evening peak periods, which in a daily saving of 22 person hours during an average weekday.

The report shows congestion is worse now during the morning peak at the approach to the two-lane section; isn't that further evidence that this has all been a waste of time?

With the M4 Bus Lane in operation, most traffic travelling through junction 3 (a 2-lane section) remained in two lanes up to and over the elevated section. Any disturbances in flow on the elevated section caused 'ripples' to travel back upstream. These ripples took some time to dissipate along the two lane section.

With the M4 bus lane suspended, there is enhanced capacity with the third lane between junction 3 and the start of the elevated section, so the congestion no longer affects junction 3. And it should be remembered that overall the morning peak period journey time from junction 4b to 2 has decreased.

What has been the effect on safety?

We currently have limited data regarding incidents and cannot draw robust conclusions until several years after suspension. From the 36 months of validated accident data provided before the suspension of the M4 Bus Lane there were 41 reported personal injury accidents on the eastbound carriageway; six of these results in serious injury (Approximately 1.1 per month). Between 26 November 2010 and 31 July 2011, our operational records indicate there have been three reported personal injury accident, all of which resulted in slight injury (Approximately 0.4 per month).

What data source has been used in your analysis?

The main data source is traffic flow and journey time data from the Highway's Agency's Motorway Incident Detection and Automatic Signalling (MIDAS) system. The data is supplemented by Manual Classified Counts (MCC) data and vehicle occupancy data which was carried out by a specialist traffic surveying company.

In the analysis of vehicle occupancy why have you only got results for white coloured vehicles?

Given the large number of vehicles using the M4 it is not practical to record the occupancy of all cars and recording the occupancy of white cars only is considered standard practice to provide a representative sample of the total number of cars for the purposes of vehicle occupancy analyses.

The report indicates there was not enough enforcement of the M4 bus lane. What is your comment on that?

Enforcement is a matter for the police. However the onus is on drivers to abide by the laws of the road.

What is headway? Page 35

Headway is the time between successive vehicles in a given lane.

Why is data for traffic flow on the A4 Great West Road not available for October and November 2011?

This is because no data is available for this period for this road which is not part of the Highways Agency Strategic Road Network..

What has been the effect on the A4?

There is no evidence to suggest any impact on the A4 as a result of the suspension of the bus lane.

The report shows air quality has got worse since the bus lane was suspended. Why is that?

Concentrations at receptors near the M4 are predicted to be higher with the suspension of the bus lane. This is probably due to more buses and coaches moving away from what was the bus lane (lane 3) to lanes 1 and 2. All these type vehicles are now restricted to lanes 1 and 2 which are closer to the receptors. Average speeds are now shown to be higher without the bus lane in operation which would have contributed to higher concentrations. There has also been an increase in traffic in 2011 compared to 2010.

Noise levels are predicted to be higher between junctions 3 and 2. That's not a good result is it?

This again can be attributed to the increase in average speed and in buses/coaches travelling in lanes 1 and 2. The change would be considered to be 'minor adverse' which is minimal.

The conclusion on page 47 says flows have increased on the eastbound M4 in the past year, and that daily flows into London have decreased by 4,000 vehicles. Explain the contradiction.

Since the M4 Bus Lane and associated changes were introduced in 1999, there have been changes to the traffic patterns on the M4. Daily flows into London have decreased by 4000 vehicles, and there are now substantially fewer buses and taxis than there were in 1999. Since the Bus Lane was suspended in 2010 there has been an increase in flows between 2010 and 2011. The 2011 flows are still significantly lower than those in 1999.

