

[REDACTED]

From: [REDACTED]
Sent: 08 February 2024 16:37
To: [REDACTED]
Cc: [REDACTED]
Subject: FW: POW Bridge Traffic Impact on M49 & Almondsbury Interchange

Hi [REDACTED],

[REDACTED] sent through some details relating to concerns about TM as discussed earlier. It is a good summary.

Kind regards
[REDACTED]

From: [REDACTED] <[REDACTED]@nationalhighways.co.uk>
Sent: Thursday, February 8, 2024 4:01 PM
To: [REDACTED] <[REDACTED]@nationalhighways.co.uk>; [REDACTED] <[REDACTED]@nationalhighways.co.uk>
Subject: FW: POW Bridge Traffic Impact on M49 & Almondsbury Interchange

Hi both,

Summary of [REDACTED] concerns re the M49 below.

Kind regards,
[REDACTED]

Route Manager - Gloucestershire & The Severn Crossings

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From: [REDACTED] <[REDACTED]@nationalhighways.co.uk>
Sent: Thursday, February 8, 2024 11:19 AM
To: [REDACTED] <[REDACTED]@nationalhighways.co.uk>
Subject: RE: POW Bridge Traffic Impact on M49 & Almondsbury Interchange

[REDACTED]

As discussed, having modelled the impacts of a closure of the M49 (in either direction), it is very apparent that the additional traffic on the M5/Almondsbury Interchange/M4 will bring with it both significant additional delays and also traffic management and infrastructure challenges.

To summarise, firstly for the M49 northbound closure:

- I would expect delays as a result of an M49 northbound closure to add delays to journeys throughout Saturday and Sunday daytimes, due to the additional traffic on an already saturated network.
- Delays of 30 to 60 minutes would likely occur on M5 J18 to J17 northbound (Hallen Bank) as traffic goes uphill before being squeezed into 3 lanes just prior to M5 J17.
- On the approach to M5 J16, current gantry signage allows only 1 lane for M4 westbound traffic to Wales. With the additional demand from the M49 northbound closure, 2 lanes would be required to accommodate the increased demand.
- Similarly, on the M5/M4 connector (where M5 J16 NB entry slip also joins) there may be some requirement to change lane markings to facilitate 2 lanes of traffic crossing from lane 2/3 to lanes 1/2.
- The M4 westbound between J20 and J21 will require hardshoulder running (so 3 running lanes) to accommodate the additional demand....otherwise additional delay would occur through the interchange as increased traffic wouldn't be able to join the M4...which could be an additional 60 minutes of delay.

And, secondly for the M49 southbound closure:

- I would expect delays as a result of an M49 southbound closure to add delays to journeys throughout Saturday and Sunday daytimes, due to the additional traffic on an already saturated network.
- Delays of 30 to 60 minutes would likely occur on M4 J21 to J20 eastbound (St Catherines Hill) as all M5 traffic (NB and SB) is signed (from J21 onwards) to use only lane 1.
- It is reasonable to assume that some of the M5 demand would use lane 2, which could result in safety issues at J20 (for the J Link) as vehicles would then attempt to cut in to the J link (single lane) from lane 2.
- A change of signing on the M4 eastbound (for M5 traffic to use lane 1 and lane 2) would not solve the problem due to the lack of onward capacity on the single lane J link.

The possible mitigations (for either M49 closure), range from the simple, e.g. black and yellow signs advising of delays at nodes where local traffic may join (e.g. M5 J20 NB entry (Clevedon), M5 J19 NB entry (Portishead), M48 J2 entry (Chepstow), etc), which may reduce non-essential 'local' journeys...to the complex, such as significant lane signing and engineering solutions (e.g. hard shoulder running), which would need to be installed and removed each weekend in order to mitigate delays.

Even with these changes, significant delays would still occur, simply due to the volume of additional traffic (from the M49 closures), and lack of lanes (on the diversion route) to accommodate it.

I'm not sure a strong communications strategy would reap significant reductions in delay, due to the nature of journeys on Saturday and Sunday in the summer months, as it is very difficult to influence getaway/holiday journeys.

I'm happy to walk through the journey (and traffic flow data) with anyone to highlight the challenges.

Regards,

Senior Data & Intelligence Analyst

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Click [here](#) to find out more about Operations Regional Analytical Teams and to access data & analysis

From: [REDACTED]@nationalhighways.co.uk>

Sent: Thursday, February 1, 2024 9:38 AM

To: [REDACTED]@nationalhighways.co.uk>

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[REDACTED]@nationalhighways.co.uk>; [REDACTED]@nationalhighways.co.uk>

Subject: POW Bridge Traffic Impact on M49 & Almondsbury Interchange

Hi [REDACTED]

To summarise our discussion yesterday...

- I understand the current intention is to have one lane available on the otherwise-closed carriageway during the week, and to close that lane at weekends.
- This would mean that each weekend:
 - When traffic can't use the westbound carriageway, there will be no access to the westbound M4 at J22. This will require a full closure of the northbound M49 to prevent traffic driving round in circles. It will also mean that all traffic (except that using the A403/M48) from Avonmouth and the SW heading to S Wales will need to transit through the Almondsbury interchange.
 - When traffic can't use the eastbound carriageway, there will be no access to the southbound M49 at J22, which will effectively close it. This will mean that all (except M48/A403) traffic between S Wales and Avonmouth / the SW will need to transit through the Almondsbury interchange.
 - In both cases, traffic travelling M4E>M5S or M5N>M4W will effectively be throttled down to a single lane at the Almondsbury interchange. This is likely to cause significant delays on the approaches to the junction.
 - There may be a possibility of using TM to increase capacity for the M5N>M4W movement, but this wouldn't be possible for the M4E>M5S.
 - [REDACTED] is going to do some work next week to model delays caused by the lack of access to the M49.
 - We should consider whether it is possible to keep one lane open and maintain access to/from the M49 on a 24/7 basis, and what impact this will have on construction/delivery of the scheme.
- Separately, when we have one eastbound lane on the EB carriageway and the other eastbound lane running in contraflow on the westbound; prior to the split there will need to be signage ensuring traffic heading for M49 takes the lane on the eastbound carriageway and doesn't get trapped in the contraflow.

Hope this helps.

Kind regards,

[REDACTED]

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