



To: **Redacted**

8th June 2026

VALIDATION REPORT: M4J23a, Magor
Visit no.2

Objective

To check roundabout operation following reports of delays. We could not determine details of the delays prior to our visit as they have not been passed to SRL. It would have been beneficial to understand the nature of the reports, on which approach they concerned and at what time of day.

Signal Coordination

The M4 off-slip (Phase B) runs with the South A410 circulatory (Phase C) to allow progress for M4 traffic to turn right. Although this is a minor movement when compared with the left turn, there is still sufficient traffic turning right to require a green signal at the downstream circulatory. Following which, the A4810 approach (Phase D) runs with the M4 Bridge circulatory (Phase A), which is necessary to prevent the M4 off-slip from running into a red at the downstream South A410 circulatory as discussed above.

If the A4810 approach (Phase D) runs to a stage maximum, the M4 off-slip will start 5 seconds before the south A4810 circulatory gains green, and if the M4 runs to a stage maximum, the south A4810 circulatory will terminate green 7 seconds before the M4.

Operation

The roundabout was monitored throughout the day on Monday 8th June, including both morning and evening peak periods.

The AM peak cycle-time is longer when compared with other times due to the extremely heavy traffic flow on the A4810 approach from the south. This heavy traffic flow only occurs during the morning peak Monday to Friday, and the signal control has been setup to run a longer maximum green-time to cope with the increased flow. Due to the way the signal control is coordinated, a longer green-time on the A4810 approach, results in a longer green-time on the M5 bridge circulatory; see 'Signal Coordination' paragraph above. There is a queue that forms on the A4810 during the AM peak, however this is due to a combination of two things, firstly most traffic on this approach is in a single lane making it harder to clear the queue and secondly because of the interaction with the permanent signals on the A4810, which under normal circumstances would be linked to these signals. The PM peak cycle-time is much shorter due to the green-time reduction on the A4810 approach.

Operationally the intersection was seen to perform well and is setup in its most optimal form. The coordination could be changed to run both the M4 off-slip and the A4810 approach at the same time, however this would mean running the M4 off-slip into a red signal at the downstream circulatory, which could cause a queue to form preventing vehicles from clearing the off-slip in the off-slip lane and generate complaints.

Timings

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	AM	Revert
(A) M4 Bridge circulatory	34 secs	14 secs
(B) M4 W/B off-slip	31 secs	31 secs
(C) South A4810 circulatory	19 secs	19 secs
(D) A4810 approach	46 secs	26 secs
Maximum cycle-time	77 secs	57 secs

Note 1. The timings above are maximums and the signal control can run less time; determined by real-time traffic flow and demand.

Note 2. The inter-stage times are 12 second per cycle.

Note 3. The AM set of timings operates Monday to Friday, 06:00 to 09:00.

Recommendations

- Continue to monitor the site following the recent changes.

MOVA is operating safely, effectively, and has been left operational. The validated dataset left in use on site is: M4J23a.mxd (CRC32: 339113153)

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