

VALIDATION REPORT: M4J23a, Magor

Objective

To setup, check and validate MOVA control, which form part of this temporary traffic signal setup during refurbishment / improvement works.

MOVA Validation

The roundabout runs a maximum cycle-time of around 70 seconds, which is typically for this type of intersection and allows the M4 approaches to run for up to 30 seconds and the A4810 for up to 50 seconds during the morning peak, 30 seconds at all other times. The aim was to keep the M4 approach from queueing back to the main-line motorway where stationary queueing can cause a safety concern. The morning peak experiences high traffic flows on the A4810, including traffic joining from Newport Road, which mostly turn right to the M4. The high number of right vehicles can create queueing in the offside lane, so a time-of-day dataset has been used to generate extra green time.

Some special conditions have been setup within the dataset, both to help maintain green times should the radar detection become unreliable, which is one of several measures including increasing the stage minimums to 12 seconds and another to extend green from the Phase B stop-line detector.

Operationally the intersection was seen to perform well and is setup in its most optimal form.

Hardware and Implementation

Smartmicro Radars for IN and X detection and FLiR video for stop-line detection.

Faults = CX8

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: 1536041190)

Redacted

JSTSM Ltd