

TEHCNICAL NOTE – SIP Schemes Modelling Results**Introduction**

Modelling of SIP schemes (Do Something) has been undertaken and comparisons made with the Do Minimum model

Modelled Vehicle Kilometres

Model vehicle kilometres in the Western Gateway area reduce by 0.25 to 0.325% in the Do Something.

	DM	DS	diff	%
2041 AM	5,999,910	5,983,352	-16,557.6	-0.27596
2041 IP	5,230,636	5,215,687	-14,948.8	-0.28579
2041 PM	6,140,041	6,121,018	-19,022.1	-0.3098
2051 AM	6,239,563	6,223,069	-16,494.4	-0.26435
2051 IP	5,534,342	5,520,275	-14,067.5	-0.25419
2051 PM	6,373,556	6,352,788	-20,767.2	-0.32583

Modelled Vehicle Kilometres**Carbon Emissions**

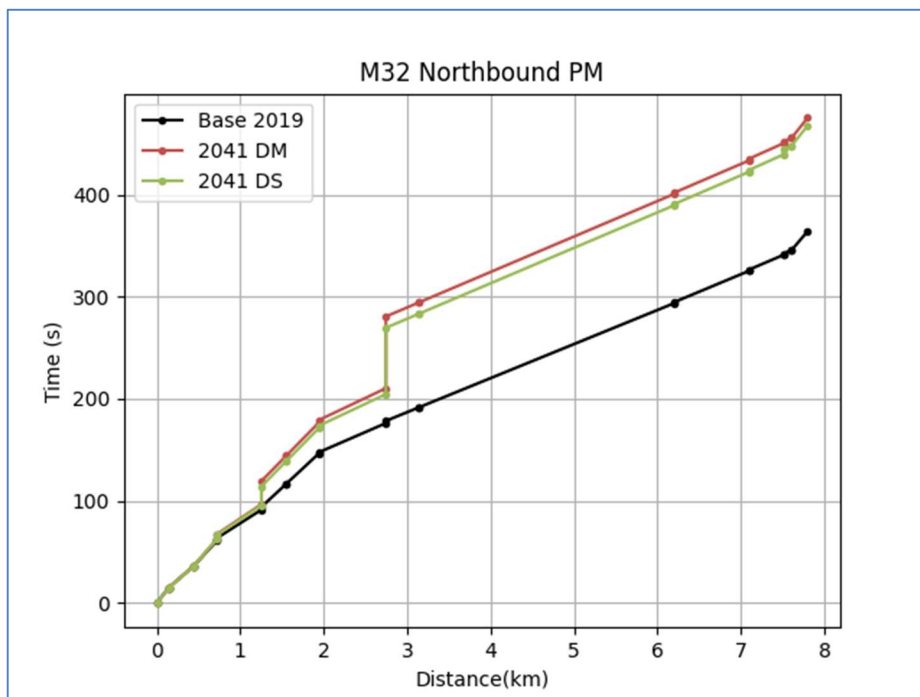
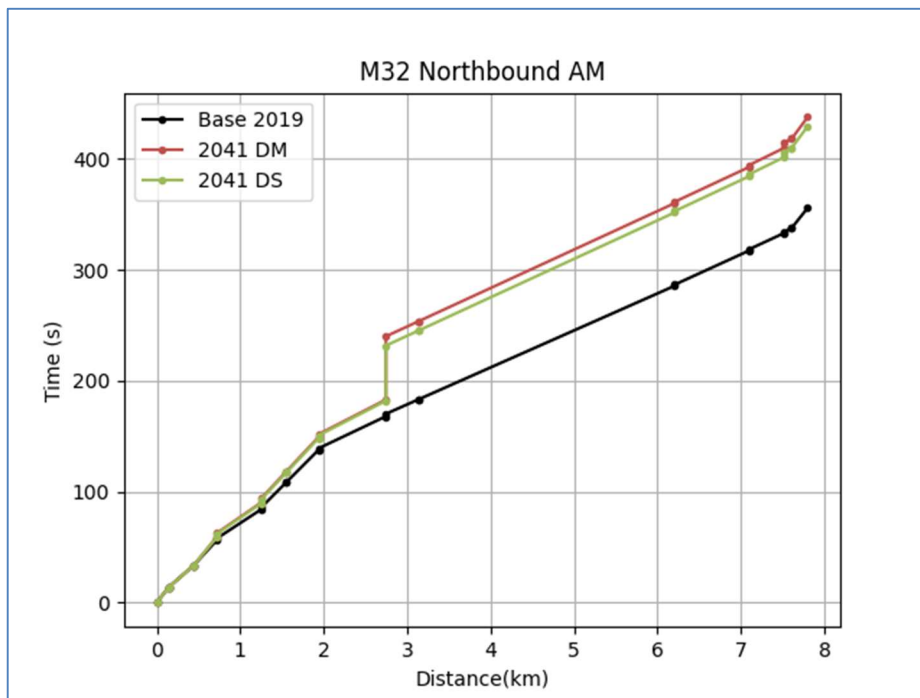
Carbon Emissions reduce slightly in the Do Something (although goods vehicle emissions increase)

	Carbon emissions CO ₂ e (Kt) - (12Hr)			
Option	Car	LGV	HGV	Total
2041 DM	925.6	355.3	748.9	2029.8
2041 DS	922.4	356.1	749.7	2028.2
DS - DM	-3.2	0.7	0.8	-1.6
2051 DM	949.9	399.4	790.8	2140.1
2051 DS	946.2	399.9	791.4	2137.4
DS - DM	-3.7	0.4	0.6	-2.6

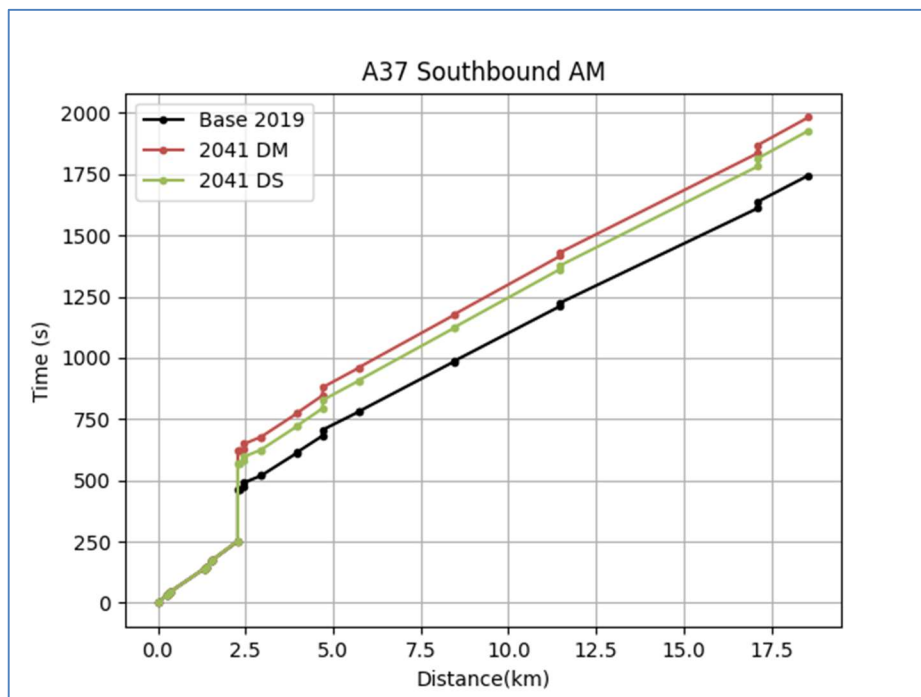
Journey Times

Most journey times on the appear relatively unaffected however there are some differences at the following locations:

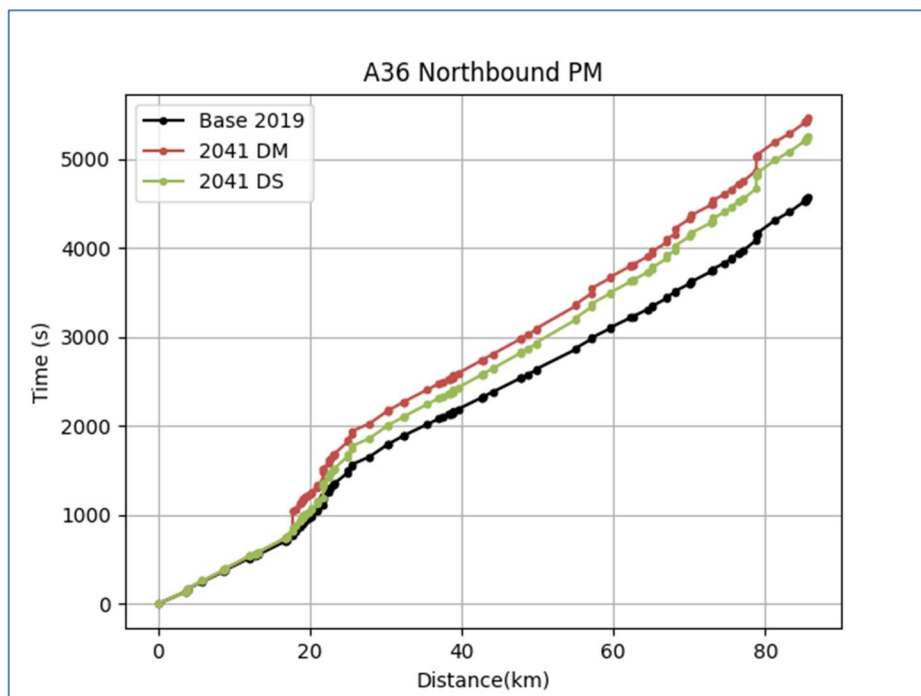
2041 and 2051 M32 northbound at Junction 2 improvement of a few seconds due to slight reduction in traffic.



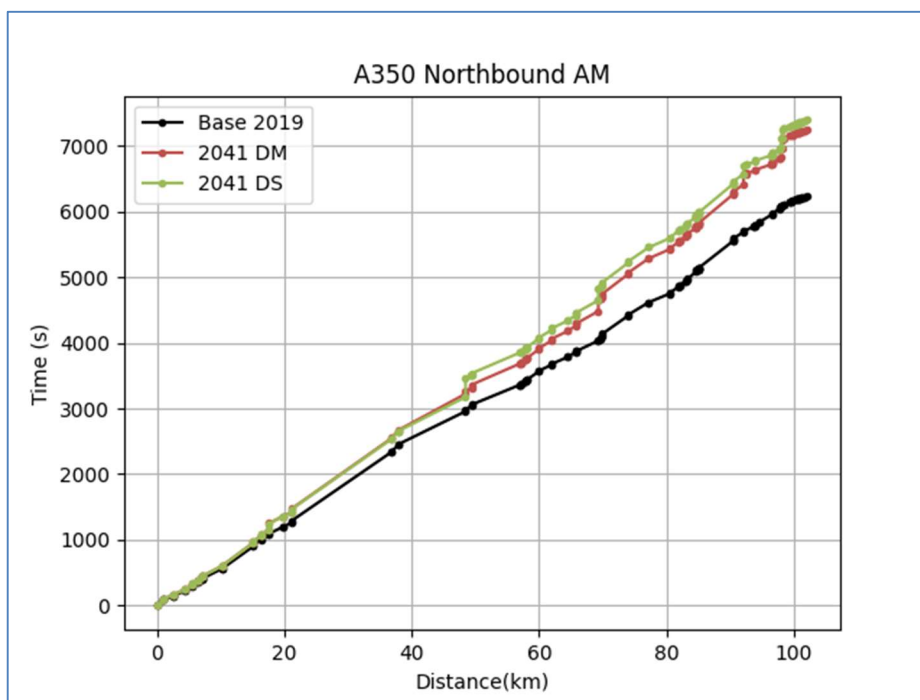
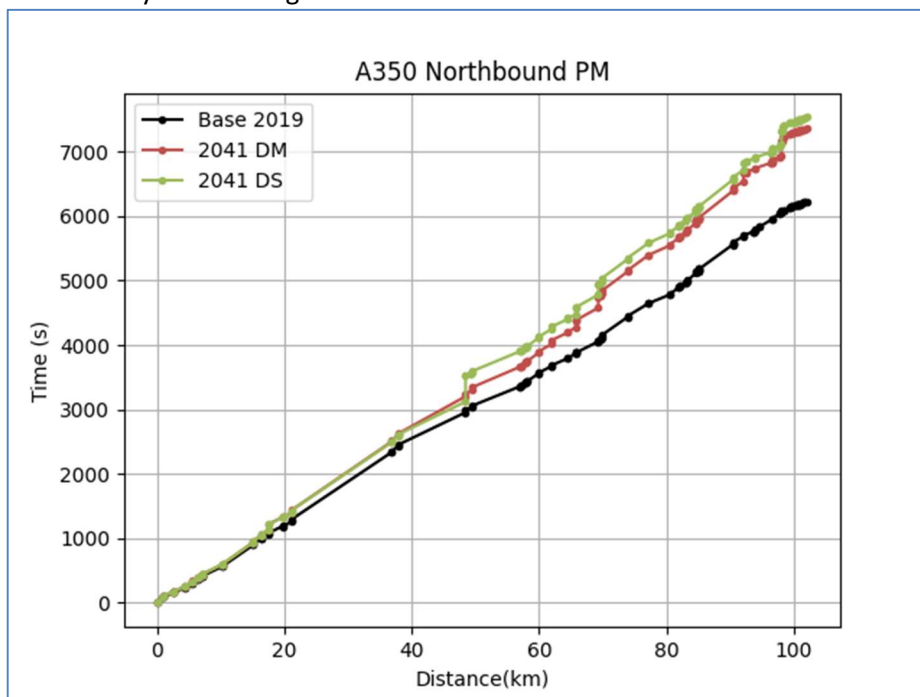
2041 and 2051 A37 Southbound a 50 second improvement at the signalised junction with the A4174. Likely due to the small reduction of traffic in the Bristol area.



2041 and 2051 A36 North-Westbound – small improvements through Salisbury due to slight reduction in traffic.



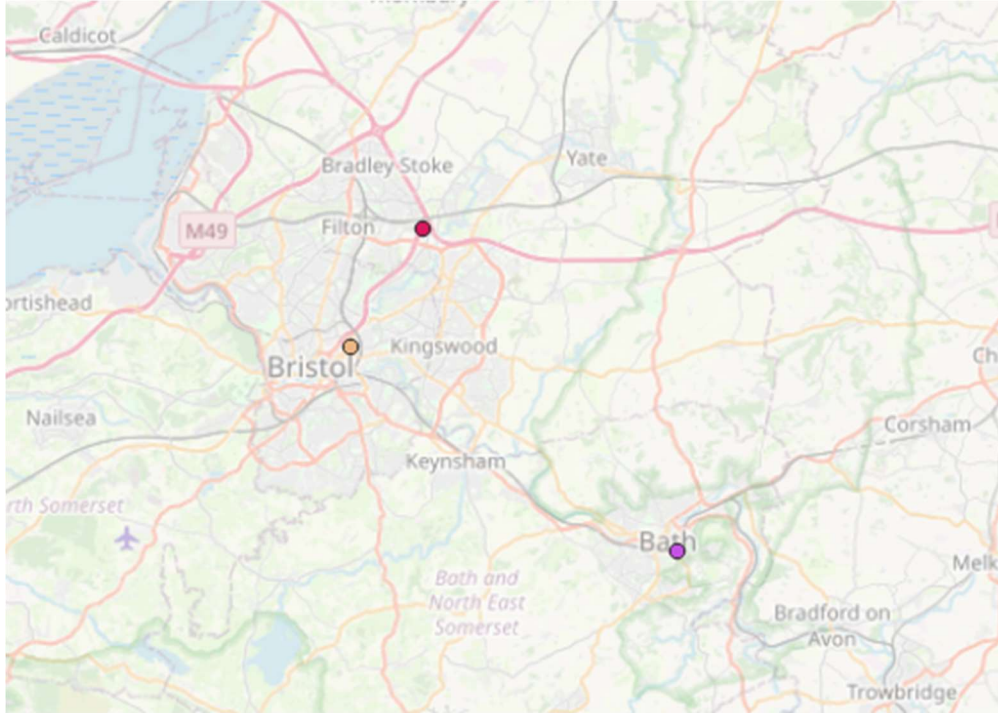
2041 and 2051 A350 Northbound - Additional delays caused by changes to signal timings at junction with A303. Likely a modelling issue as traffic has re-routed in this area.



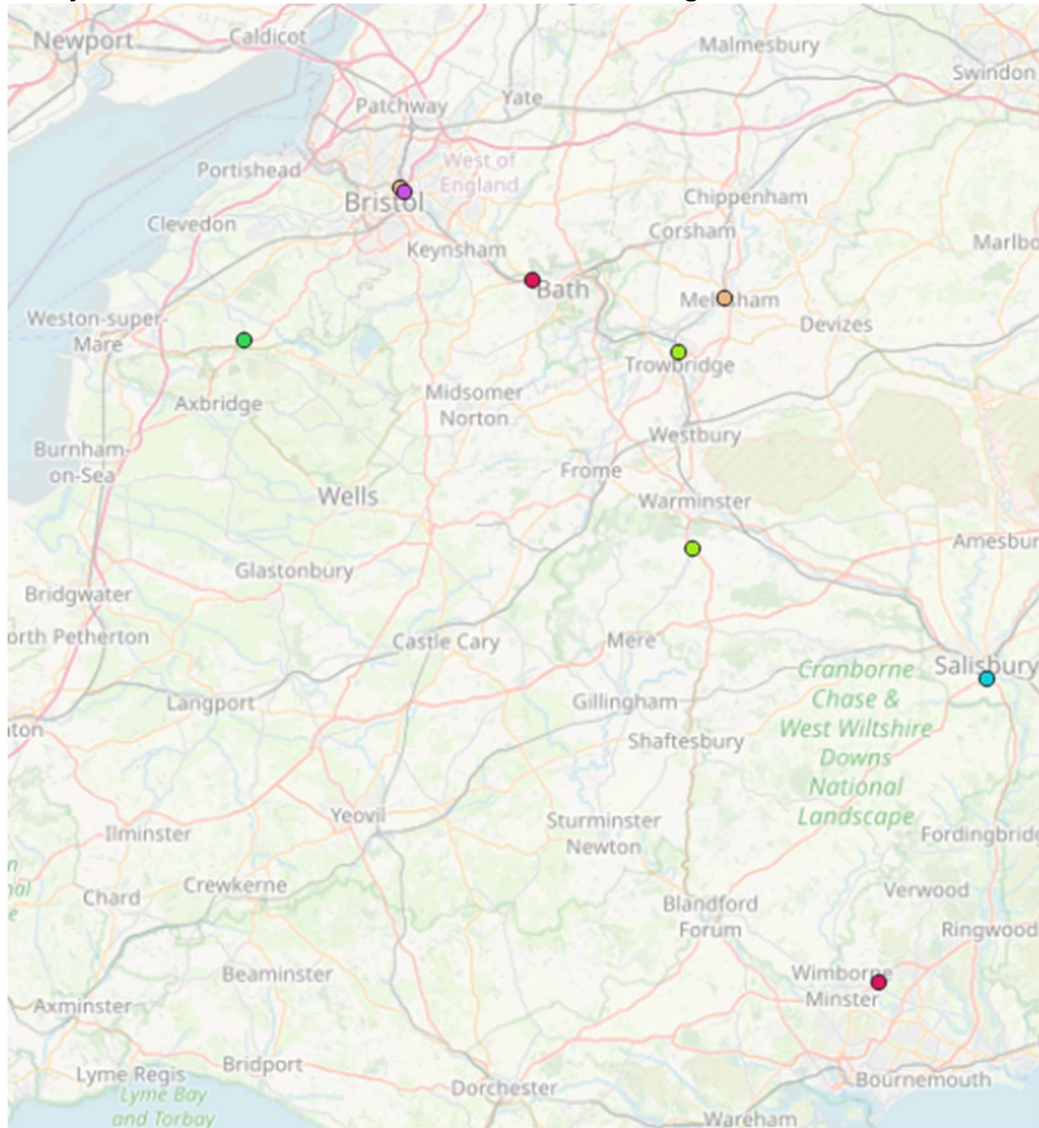
Volume over Capacity (2041 and or 2051)

The plots below only contain junctions that have changed by more than 5%. We have assumed smaller changes are 'noise' in the modelling. The coloured dots in the figures represent the following

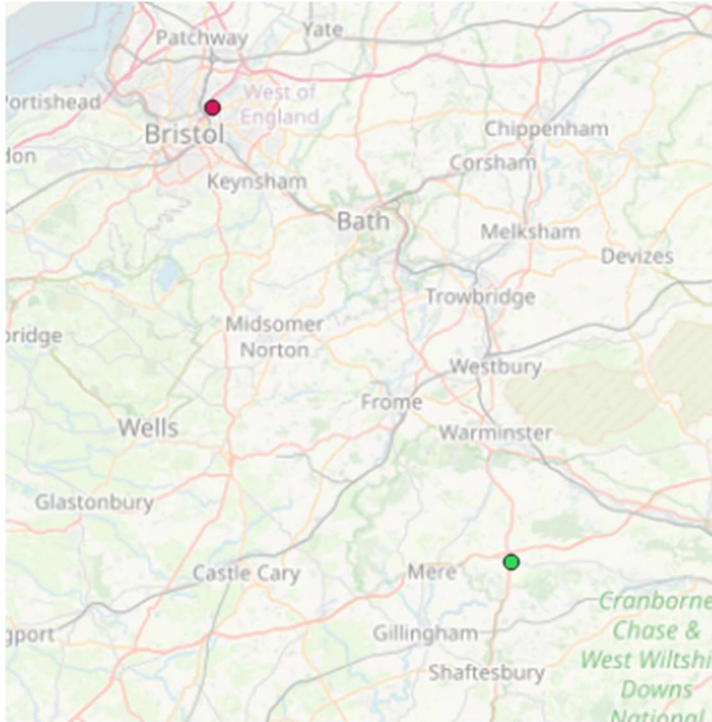
Three junctions increase to over 85% in the Do Something



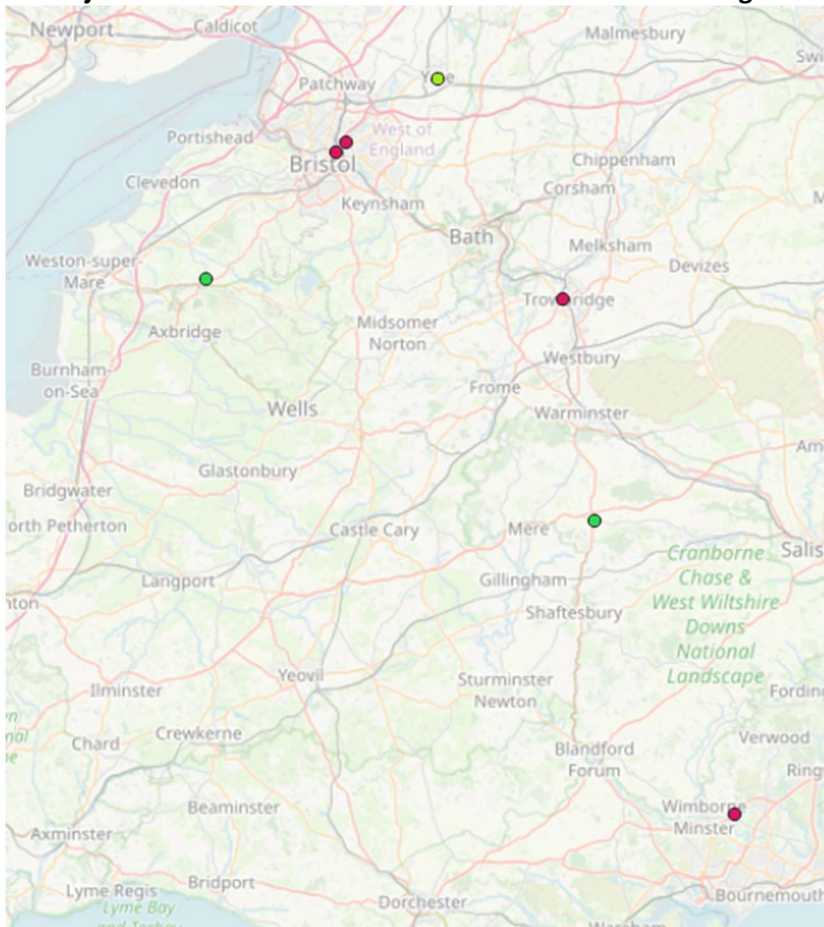
Nine junctions reduce to under 85% in the Do Something



Two junctions increase to over 100% in the Do Something



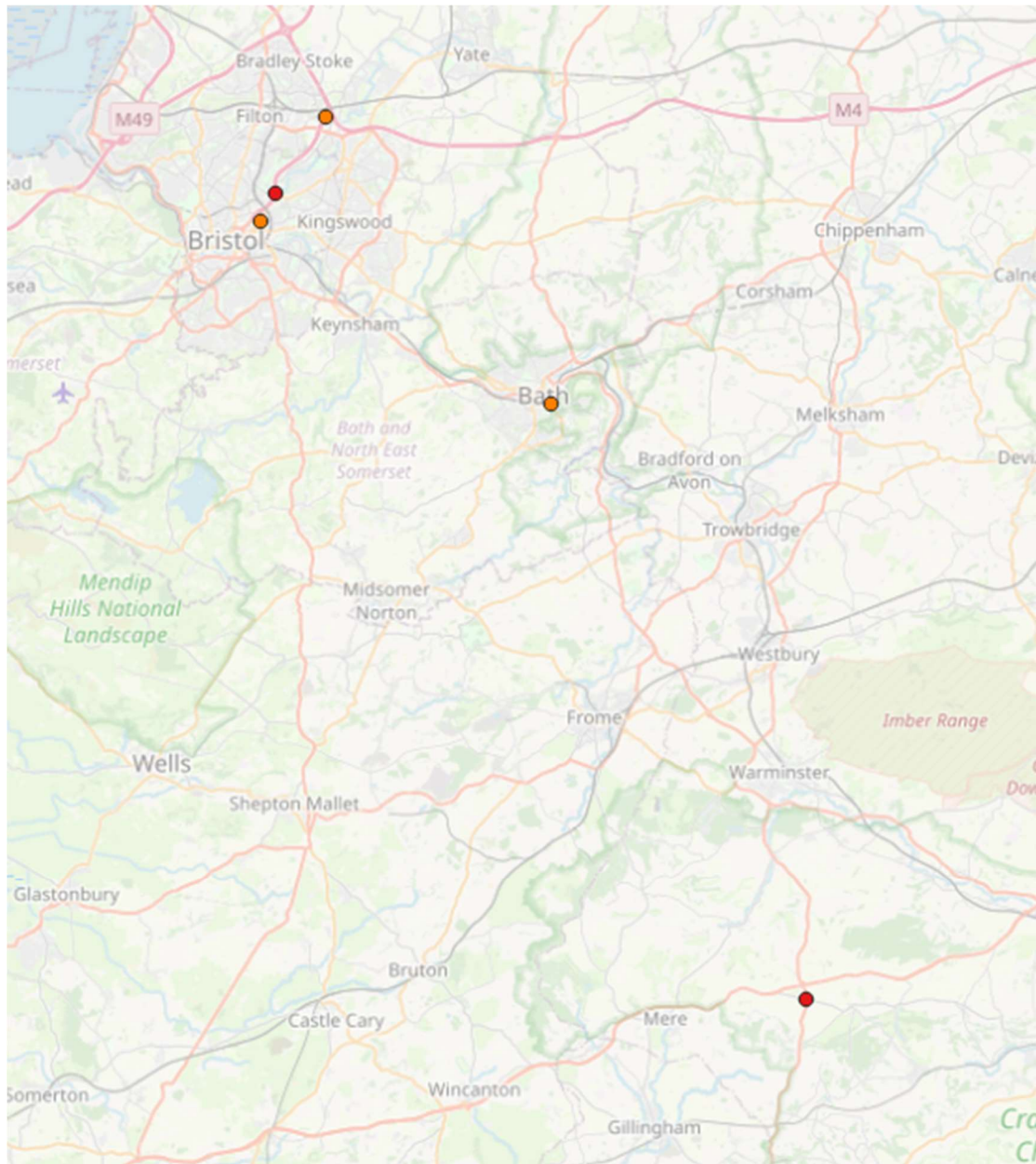
Seven junctions decrease to under 100% in the Do Something



All junctions where there is an *increase* of more than 5% of Volume/Capacity (VoC) of the worst turning movement

Orange = 85% < DS VoC < 100%

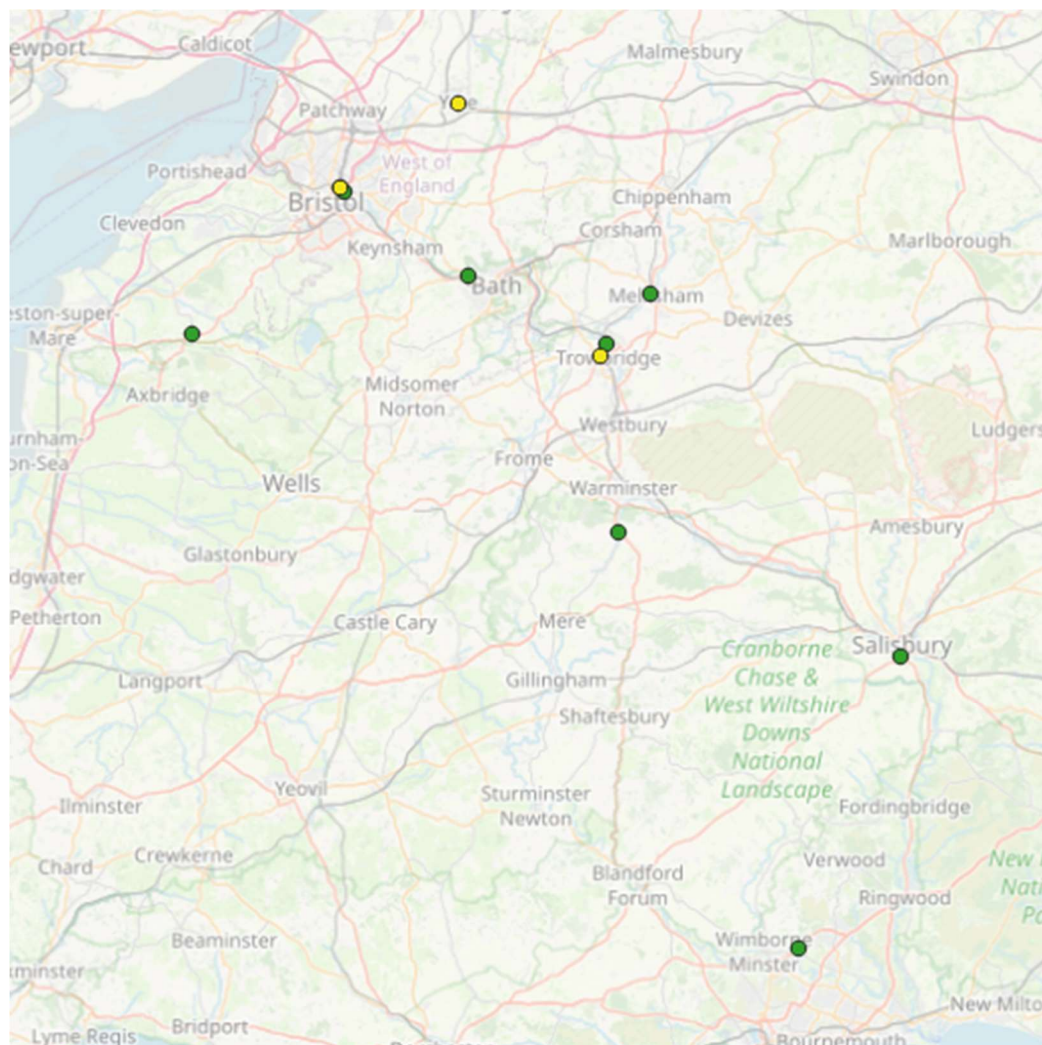
Red = DS VoC > 100%



All junctions where there is a *decrease* of more than 5% of the Volume/Capacity of the worst turning movement, and that decrease reduces the VoC below 100%.

Green: DS VoC < 85%

Yellow: 85% < DS VoC < 100% - note that this final condition excludes junctions that are still over 100% capacity, even if they have reduced by more than 5%!



Two junctions that are still over 100% capacity, but have reduced by more than 5%

The Salisbury junction from 108% to 101%, and the other junction drops from 166% to 103%

