

Midlands to Wales and Gloucestershire Route Strategy Evidence Report Technical Annex April 2014



Document History

Technical annex to Midlands to Wales and Gloucestershire route-based strategy evidence report

Highways Agency

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Part A Supporting evidence

A1 Introduction

A1.3 Route description

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A2 Route capability, condition and constraints

A2.1 Route performance

50 busiest sections on the route

RoadLinkDescription	AADF vehicles per day	AADF National Rank (out of 2475 road links -rank 1 is the busiest)
M54 between M54 J1 and M54 J2 (LM604)	28,139	985
A419 between M4 J15 and A4259 (AL2508)	27,675	1,004
A419 between A4259 and M4 J15 (AL2506)	27,328	1,023
M54 between M54 J2 and M54 J1 (LM605)	27,023	1,030
A419 between A4259 and A420 (AL2511)	26,488	1,057
A419 between A361 and A420 (AL69)	25,309	1,116
A419 between A420 and A4259 (AL2510)	25,043	1,126
A419 between A420 and A361 (AL70)	24,855	1,140
M54 between M54 J3 and M54 J2 (LM607)	24,386	1,165
M54 between M54 J4 and M54 J3 (LM609)	24,207	1,179
M54 between M54 J2 and M54 J3 (LM606)	24,066	1,195
M54 between M54 J5 and M54 J6 (LM612)	23,972	1,199
M54 between M54 J3 and M54 J4 (LM608)	23,730	1,214
A49 between A438 and A465 (AL809)	23,180	1,255
A417 between M5 J11A and A46 (AL2523)	23,125	1,259
A419 between A361 and A4311 (AL2512)	23,069	1,267
A49 between A465 and A438 (AL811)	22,885	1,279
A417 between A46 and M5 J11A (AL2524)	21,906	1,342
A419 between A4311 and A361 (AL2513)	21,572	1,364
M54 between M6 J10A and M54 J1 (LM616)	21,113	1,410
M54 between M54 J4 and M54 J5 (LM610)	20,655	1,448
A419 between A419 and A4311 (AL2519)	20,464	1,462
A419 between A4311 and A419 (AL2516)	20,425	1,466
M54 between M54 J5 and M54 J4 (LM611)	20,225	1,492
M54 between M54 J6 and M54 J7 (LM614)	19,828	1,515
M54 between M54 J1 and M6 J10A (LM617)	19,681	1,525
M54 between M54 J7 and M54 J6 (LM615)	19,237	1,557
M54 between M54 J6 and M54 J5 (LM613)	18,889	1,570
A417 between A46 and A436 (AL3784)	18,033	1,606
A5 between A5064 and A49 (AL830)	17,945	1,616
A5 between A49 and A5064 (AL831)	17,828	1,633
A5 between A49 and M54 J7 (AL828)	17,229	1,672
A5 between M54 J7 and A49 (AL827)	17,225	1,673
A417 between A436 and A46 (AL3785)	16,647	1,702

A5 between A5112 and A458 (AL820)	16,519	1,713
A449 between M50 J4 and A40 (AL2474)	16,357	1,727
A5 between A5112 and A488 (AL821)	16,275	1,738
A5 between A458 and A5112 (AL968)	16,264	1,739
A5 between A488 and A5112 (AL822)	16,185	1,744
A449 between A40 and M50 J4 (AL80)	15,177	1,810
A40 between A4137 and A40 (AL95)	14,027	1,889
A5 between A488 and A458 (AL818)	14,008	1,891
A5 between A458 and A5064 (AL825)	13,969	1,898
A5 between A5064 and A458 (AL824)	13,924	1,901
A40 between A449 and A49 (AL2476)	13,824	1,904
A417 between A436 and A429 (AL2521)	13,759	1,911
A417 between A429 and A436 (AL2520)	13,465	1,927
A417 between A419 and A429 (AL71)	13,355	1,931
A5 between A5 and A495 (AL3514)	13,185	1,945
A5 between A458 and A488 (AL817)	13,121	1,947

50 links with highest proportion of freight on the route

RoadLinkDescription	Goods vehicles (>5.2m long) as a proportion of all traffic	Goods Vehicle Rank (out of 1977 road links - rank 1 has highest Goods traffic proportion)	Flow_Bin1 vehicles (<5.2m long) as a proportion of all traffic	Flow_Bin2 vehicles (5.2m to 6.6m long) as a proportion of all traffic	Flow_Bin3 vehicles (6.6m to 11.6m long) as a proportion of all traffic	Flow_Bin4 vehicles (>11.6m long) as a proportion of all traffic
M50 between M50 J2 and M50 J1 (LM574)	43%	22	57%	18%	8%	17%
M50 between M50 J1 and M50 J2 (LM575)	40%	31	60%	14%	8%	18%
M50 between M50 J2 and M50 J3 (LM577)	30%	119	70%	7%	7%	16%
M50 between M5 J8 and M50 J1 (LM573)	28%	169	72%	7%	7%	15%
M50 between M50 J3 and M50 J4 (LM579)	25%	304	75%	5%	7%	13%
M50 between M50 J3 and M50 J2 (LM576)	24%	314	76%	5%	6%	13%
A40 between A449 and A49 (AL2476)	24%	343	76%	5%	7%	12%
A40 between A49 and A4137 (AL96)	23%	348	77%	5%	6%	12%
M50 between M50 J4 and M50 J3 (LM578)	23%	351	77%	6%	6%	12%
A40 between A4137 and A40 (AL95)	23%	378	77%	5%	6%	12%
A40 between A49 and A449 (AL2470)	22%	391	78%	5%	6%	11%
A40 between A4137 and A49 (AL2471)	22%	412	78%	5%	6%	11%
M54 between M54 J3 and M54 J2 (LM607)	22%	439	78%	7%	5%	9%
A40 between A40 and A4137 (AL94)	21%	482	79%	5%	6%	11%
A417 between A419 and A429 (AL71)	20%	542	80%	9%	6%	5%
M54 between M54 J2 and M54 J3 (LM606)	20%	597	80%	5%	5%	9%
M54 between M54 J1 and M54 J2 (LM604)	19%	636	81%	8%	5%	6%
M54 between M54 J1 and M6 J10A (LM617)	19%	670	81%	5%	6%	8%
A417 between A429 and A419 (AL72)	19%	687	81%	7%	5%	7%
A49 between A466 and A4137 (AL3746)	18%	711	82%	6%	6%	7%
M54 between M6 J10A and M54 J1 (LM616)	18%	728	82%	5%	5%	7%

A5 between A495 and A483 (AL3505)	18%	739	82%	6%	6%	6%
A49 between A4112 and A44 (AL3526)	18%	770	82%	6%	6%	6%
A49 between A456 and A4112 (AL97)	18%	770	82%	6%	6%	6%
A49 between A489 and A5 (AL3518)	17%	791	83%	6%	6%	6%
A49 between A4112 and A456 (AL3524)	17%	796	83%	6%	6%	6%
A49 between A44 and A4112 (AL3525)	17%	796	83%	6%	6%	6%
A49 between A4113 and A4117 (AL3521)	17%	805	83%	5%	6%	6%
A5 between A483 and A495 (AL3512)	17%	815	83%	6%	6%	6%
A49 between A4137 and A466 (AL3747)	17%	823	83%	5%	6%	6%
A49 between A5 and A489 (AL3517)	17%	829	83%	6%	6%	6%
A49 between A4113 and A489 (AL3519)	17%	839	83%	5%	6%	6%
M54 between M54 J2 and M54 J1 (LM605)	17%	842	83%	5%	5%	7%
A49 between A489 and A4113 (AL98)	17%	865	83%	5%	6%	6%
A417 between A429 and A436 (AL2520)	16%	902	84%	4%	5%	6%
A49 between A4117 and A4113 (AL3520)	16%	925	84%	5%	6%	5%
A49 between A417 and A44 (AL3528)	16%	932	84%	5%	5%	5%
A49 between A44 and A417 (AL3530)	16%	932	84%	5%	5%	5%
A5 between A458 and A5112 (AL968)	16%	960	84%	5%	6%	5%
A5 between M54 J7 and A49 (AL827)	16%	974	84%	6%	5%	4%
A49 between A4117 and A456 (AL3522)	16%	980	84%	5%	5%	5%
M54 between M54 J4 and M54 J3 (LM609)	16%	984	84%	4%	5%	6%
A5 between A458 and A5064 (AL825)	16%	989	84%	4%	6%	6%
A5 between A49 and A5064 (AL831)	16%	991	84%	6%	5%	5%
A417 between A436 and A429 (AL2521)	16%	992	84%	4%	5%	6%
M54 between M54 J6 and M54 J7 (LM614)	15%	998	85%	6%	5%	4%
A5 between A5064 and A458 (AL824)	15%	1024	85%	4%	6%	5%
A49 between A4137 and A40 (AL3745)	15%	1027	85%	5%	5%	5%
A483 between A5 and A495 (AL3515)	15%	1032	85%	5%	6%	5%
M54 between M54 J7 and M54 J6 (LM615)	15%	1039	85%	6%	5%	4%

50 least reliable journey-time locations on the route 2012/13

RoadLinkDescription	On Time Reliability - Percentage Vehicle Miles On Time	On Time Reliability National Rank (out of 2497 road links - rank 1 has lowest OTRM score)
M50 between M5 J8 and M50 J1 (LM573)	8.2%	1
M50 between M50 J1 and M5 J8 (LM572)	51.6%	14
A40 between A4137 and A49 (AL2471)	55.2%	25
A49 between A465 and A438 (AL811)	60.0%	77
A419 between A4259 and M4 J15 (AL2506)	60.2%	80
A49 between A438 and A465 (AL809)	60.5%	85
M54 between M54 J6 and M54 J7 (LM614)	63.4%	180
A5 between A483 and A495 (AL3512)	63.6%	187
A40 between A49 and A4137 (AL96)	64.2%	222
A417 between A429 and A436 (AL2520)	64.4%	237
A449 between M50 J4 and A40 (AL2474)	65.6%	295
A449 between A40 and M50 J4 (AL80)	66.0%	324
M54 between M54 J1 and M54 J2 (LM604)	66.2%	340
A5 between A488 and A5112 (AL822)	66.7%	378
M54 between M54 J1 and M6 J10A (LM617)	67.2%	417
A419 between A361 and A4311 (AL2512)	67.4%	435
A417 between A40 and M5 J11A (AL1803)	67.9%	487
A419 between A4259 and A420 (AL2511)	68.1%	494
A5 between A495 and A483 (AL3505)	68.7%	553
A419 between M4 J15 and A4259 (AL2508)	68.9%	586
A419 between A420 and A361 (AL70)	69.2%	613
A417 between M5 J11A and A40 (AL1802)	69.7%	678
A40 between A4137 and A40 (AL95)	69.8%	688
M54 between M54 J4 and M54 J5 (LM610)	69.8%	689
A5 between A458 and A5064 (AL825)	69.9%	697
A5 between A458 and A488 (AL817)	69.9%	701
A5 between A5112 and A488 (AL821)	70.0%	710
M54 between M54 J6 and M54 J5 (LM613)	70.1%	717
A417 between A46 and A436 (AL3784)	70.4%	765
A5 between A488 and A458 (AL818)	70.9%	839
A5 between A495 and A5 (AL3513)	71.0%	853
A40 between A40 and A4137 (AL94)	71.0%	855
A5 between A49 and A5064 (AL831)	71.1%	862
A5 between A5064 and A49 (AL830)	71.2%	878
M54 between M54 J3 and M54 J4 (LM608)	71.6%	929
M54 between M6 J10A and M54 J1 (LM616)	71.9%	971
A419 between A420 and A4259 (AL2510)	72.3%	1,029

M54 between M54 J7 and M54 J6 (LM615)	72.4%	1,039
A417 between A436 and A46 (AL3785)	72.4%	1,041
A5 between A5 and A495 (AL3514)	72.6%	1,059
M54 between M54 J4 and M54 J3 (LM609)	73.0%	1,122
A5 between A5064 and A458 (AL824)	73.4%	1,190
A419 between A361 and A420 (AL69)	73.5%	1,199
A49 between A44 and A44 (AL3529)	73.9%	1,260
M50 between M50 J4 and M50 J3 (LM578)	74.0%	1,261
M54 between M54 J5 and M54 J4 (LM611)	74.0%	1,270
A5 between A5112 and A458 (AL820)	74.0%	1,273
A5 between A458 and A5112 (AL968)	74.2%	1,298
M54 between M54 J5 and M54 J6 (LM612)	74.3%	1,315
A49 between A466 and A465 (AL3749)	74.4%	1,334

A2.2 Road Safety

The information set out in this technical annex supports the Midlands to Wales and Gloucester Route Based Strategy evidence report. Tables 1 to 5 below set out the latest available accident statistics over the period from 2002 to 2011 and show the 2011 performance of the roads comprising the Midlands to Wales and Gloucester Route in relation to the average baseline figures for the period 2005 to 2009.

Table 1 - Collision Numbers Summary

Route	05-09 Average Baseline	02	03	04	05	06	07	08	09	10	11	% Diff 2011to 05-09 average
M50	10.4	12	15	18	13	10	5	11	13	8	11	6%
M54	29.8	24	30	28	42	33	30	20	24	44	25	-16%
A49	125.6	122	124	122	127	139	131	118	113	99	84	-33%
A5	224.4	277	271	248	253	234	238	195	202	222	186	-17%
A458	11.6	9	16	10	10	17	12	7	12	10	7	-40%
A483	10.6	5	9	9	9	5	11	14	14	9	8	-25%
A40 (Midlands)	18.0	15	15	14	18	11	24	22	15	21	15	-17%
A40	41.0	69	45	61	58	41	36	37	33	13	35	-15%
A417	20.2	36	27	39	26	27	20	14	14	25	15	-26%
A419	46.2	76	69	56	57	62	47	31	34	27	24	-48%

Table 2 - Collision Rates per 100 million vehicle miles Summary

Route	05-09 Average Baseline	02	03	04	05	06	07	08	09	10	11	% Diff 2-11 to 05-09 average
M50	4.9	6.1	7.8	8.9	6.4	4.9	2.3	5.0	6.0	3.8	5.2	7%
M54	8.1	7.0	8.2	7.4	11.0	8.9	8.2	5.4	6.6	12.8	7.5	-6%
A49	47.8	49.1	47.5	46.8	48.3	52.7	51.8	44.1	42.5	37.5	31.9	-33%
A5	28.4	36.4	36.1	33.0	32.9	29.6	29.5	24.5	25.7	28.2	23.3	-18%
A458	34.9	29.0	50.4	30.9	30.6	51.5	35.3	21.0	36.3	30.5	21.5	-39%
A483	42.5	20.7	37.3	36.9	36.2	19.9	44.7	55.5	56.0	36.3	32.5	-24%
A40 (Midlands)	21.2	17.8	17.5	16.2	20.8	12.9	26.7	26.9	18.7	26.5	15.8	-26%
A40	39.0	68.6	43.0	57.8	55.5	38.4	33.9	35.0	32.3	12.9	29.9	-23%
A417	10.5	20.0	14.8	21.7	13.4	13.7	10.8	7.3	7.3	13.0	8.9	-15%
A419	19.8	36.5	30.3	24.5	24.6	26.3	19.8	13.4	14.7	10.8	9.6	-51%

Table 3 - Casualty Numbers

Route	KSI 05-09 Average Baseline	KSI 09	KSI 10	KSI 11	KSI 3 year average	Slight 09	Slight 10	Slight 11	Slight 3 year average	Current Year Monitoring Point B	KSI Diff*
				A							
M50	2.0	1	0	4	1.7	16	9	17	14.0	1.6	2.4
M54	2.6	1	8	10	6.3	30	53	29	37.3	2.1	7.9
A49	33.4	33	15	18	22.0	157	144	107	136.0	27.3	-9.3
A5	40.8	39	36	35	36.7	252	291	257	266.7	33.4	1.6
A458	1.6	1	2	2	1.7	19	15	15	16.3	1.3	0.7
A483	1.6	3	3	1	2.3	17	9	11	12.3	1.3	-0.3
A40 (Midlands)	3.6	4	2	1	2.3	19	34	18	23.7	2.9	-1.9

A40	5.2	0	1	4	1.7	52	13	47	37.3	Not given	
A417	3.2	2	3	1	2.0	19	33	22	24.7	Not given	
A419	6.6	5	8	10	7.7	48	32	30	36.7	Not given	

*KSI difference between Current Annual Performance (column A) and Current Year Monitoring Point (Column B)

4 - KSI Rates per 100 million vehicles miles

Route	05-09 Average Baseline	02	03	04	05	06	07	08	09	10	11	% Diff 2-11 to 05-09 average
M50	0.9	1.0	1.0	4.0	1.5	1.0	0.9	0.9	0.5	0.0	1.9	102%
M54	0.7	0.9	1.9	1.1	0.8	1.1	0.3	1.1	0.3	2.3	3.0	329%
A49	12.7	19.3	7.7	7.7	14.1	11.0	15.8	10.5	12.4	5.7	6.8	-46%
A5	5.2	9.2	8.3	7.8	7.6	5.1	4.7	3.6	5.0	4.6	4.4	-15%
A458	4.8	19.3	6.3	3.1	3.1	9.1	8.8	0.0	3.0	6.1	6.1	27%
A483	6.4	33.2	4.1	4.1	12.1	0.0	4.1	4.0	12.0	12.1	4.1	-37%
A40 (Midlands)	4.2	2.4	5.8	1.2	4.6	2.3	6.7	2.4	5.0	2.5	1.1	-75%
A40	4.9	13.9	9.6	2.8	9.6	7.5	2.8	4.7	0.0	1.0	3.4	-31%
A417	1.7	5.6	2.7	5.6	1.5	1.5	1.6	2.6	1.0	1.6	0.6	-64%
A419	2.8	4.3	2.6	1.3	2.6	4.7	3.8	0.9	2.2	3.2	4.0	+42%

Table 5 - Slight Casualty Rates per 100 million vehicles

Route	05-09 Average Baseline	02	03	04	05	06	07	08	09	10	11	% Diff 2-11 to 05-09 average
M50	6.2	5.1	12.4	13.4	9.3	5.9	3.2	5.5	7.4	4.3	8.1	30%
M54	11.6	9.0	11.8	8.0	16.4	12.9	12.0	7.9	8.3	15.4	8.7	-24%
A49	62.6	60.4	62.4	61.4	65.1	67.8	61.3	59.7	59.0	54.5	40.6	-35%

A5	36.3	41.2	44.1	41.1	44.3	37.0	38.7	29.8	32.0	36.9	32.1	-12%
A458	51.8	61.2	88.2	64.9	61.2	54.5	38.3	48.1	57.5	45.7	46.0	-11%
A483	54.5	12.4	53.9	53.3	40.3	27.9	56.9	79.3	68.0	36.3	44.6	-18%
A40 (Midlands)	27.6	26.1	24.5	23.2	27.7	18.8	23.3	45.3	23.7	42.8	18.9	-32%
A40	49.9	92.5	47.8	72.0	66.0	49.6	44.2	38.8	50.9	12.9	40.2	-19%
A417	13.6	25.0	14.8	30.1	17.5	19.3	14.6	6.7	9.9	17.1	13.1	-4%
A419	24.4	46.1	43.9	35.9	33.7	27.1	23.6	16.8	20.8	12.9	12.0	-51%

The statistics demonstrate the recent performance of the M50 and M54 are of concern with both suffering from an increase in 2011 of 102% and 329% respectively in KSI, compared to the baseline period of 2005- 2009. For all purpose trunk roads the recent performance of the A458 and A419 is also of concern with both suffering from an increase in 2011 of 27% and 42% respectively in KSI compared to the baseline period of 2005 – 2009. Other than that, the A49, A5, A458, A483, A40, A417 and A419 all demonstrate a generally downward trend in all categories of collision information.

Cluster Sites Information

The types of cluster analysis undertaken that are relevant to the Midlands to Wales and Gloucester Route are:

- Trunk Road Clusters occurring within certain a certain radius by collision rates, type of road and speed limit
- Motorway Links by collision rates
- Motorway Junctions.

The Midlands to Wales and Gloucester route comprises motorway standard roads and all- purpose standard routes and different types of cluster analysis are used to identify areas for further action. The methodology used to determine trunk road clusters varies depending on route. For the A40, A417 and A419 the method used is to identify locations where 6 or more personal injury collisions have occurred within 50 m of each other over a 3 year period. For non- motorway trunk roads elsewhere on the Midlands to Wales and Gloucester Route the method used is to identify locations where 4-6 collisions have taken place within 150m radius and with additional criteria dependent on speed limit and whether or not the road is a dual or single carriageway. The methodology for identifying motorway link clusters is that all motorway links are split by direction and have their respective collision rate calculated annually. They are also analysed by cause, such as loss of control, lane change and entering/leaving collision types and compared over the previous 5 year period to determine trends. This analysis determines a list of links requiring action which is prioritised according to the collision rate trends, and severity of collisions. The

methodology for determining motorway junction clusters is similar, whereby annually each motorway junction performance is analysed individually and compared over the previous 5 year period and ranked by collision trend and severity.

Tables 6, 7 and 8 show the current status of locations identified by these methodologies on the Midlands to Wales and Gloucester Route and the proposed actions.

Table 6 – Trunk Road Cluster Sites within the Top 10

Location	Proposed Action
A49 Junction with Asda Hereford.	PPP scheme started November 2012
A5 junction with A5064 Emstrey Roundabout.	PPP scheme design starts April 2014 and a LMMS.
A5 Junction with A488 Edgebold Roundabout	PPP scheme starts January 2014
A40 Elmbridge Court Roundabout	Safety Improvements installed early 2011. Gloucestershire County Council propose larger works including a “hamburger” type roundabout.
A419 at A420 southbound exit slip	Further investigation
A417 at Crickley Hill	Further investigation
A419 Crickdale to Blunson North bound	Further investigation

Table 7 - Motorway Junction Locations relevant to the Midlands to Wales and Gloucestershire Route

Junction	Proposed Action
M54 J2	Section 278 scheme in progress
M54 J6	Scheme currently under construction

Table 8 – Motorway Links Cluster Sites

Location	Proposed Action
M54 Junction1	To be investigated 2013-14
M54 Junction 7	Study Completed 2011-12 – may be conclusions available
M54 Junction 5	PPP scheme 2013-14
M54 Junction 1 to Junction 2	West Bound scheme implemented 2011

M54 Junction 5 to 4 Eastbound	To be investigated 2013-14
M54 Junction 6 to 7 Westbound	To be investigated 2013-14
M54 Junction 4 to 5 Westbound	To be investigated 2013-14
M54 Junction 2 to Junction 1	To be investigated

No cluster sites have been identified on the M50.

A number of Local Network Management Schemes are relevant to the Midlands to Wales and Gloucestershire Route. These are shown in Table 9 below.

Table 9 - LNMS Schemes in 2013/14 relevant to the Midlands to Wales and Gloucestershire Route

Route	LNMS Category	Project Title	PIC	KSI	Cost £m	Proposed Completion	Comments
M50	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M54	Pinch point	M54 junction 5	15	0	£2,223,110	2015	Predicted annual collision saving of 1.0
A49	Pinch point	A49 Newmarket Street	5	2	£376,803	2015	Predicted annual collision saving of 0.4
A49	Pinch point	A49/A465 Belmont	9	0	£261,161	2015	Predicted annual collision saving of 0.7
A49	Pinch point	A49 Starting Gate roundabout	6	0	£222.215	2015	Predicted annual collision saving of 0.4
A5	Pinch point	A5 Churchbridge	40	0	£2,028,359	2015	Predicted annual collision saving of 2.5
A5	Pinch point	A5 Mile end roundabout	5	0	£3,948,631	2015	Predicted annual collision saving of 0.3
A5	Pinch point	A5 Wall Island	36	2	£879,439	2015	Predicted annual collision saving of 2.9
A5	Pinch point	A5 Edgebold	19	1	£378,433	2015	Predicted annual collision saving of 1.5
A5	Pinch point	A5 Churncote	9	0	£1,456,182	2015	Predicted annual collision saving of 1.1

A5	Pinch point	A5 Preston Boats	12	1	£3,358,147	2015	Predicted annual collision saving of 0
A5	Pinch point	A5 Emstrey	23	0	£3,846,005	2015	Predicted annual collision saving of 1.0
A458	n/a	n/a	n/a	n/a	n/a	n/a	n/a
A483	n/a	n/a	n/a	n/a	n/a	n/a	n/a
A40	LNMS Safety	A40(W) Junction Safety		n/a	£78,000	2014	n/a

A2.3 Asset Condition

Pavements

The Midlands to Wales and Gloucestershire Route consists of sections of all-purpose trunk roads and motorways. Roads included within the route are shown in Table 1 below:

Table 1 – Roads in the Midlands to Wales and Gloucester Route

Road	Standard	Location
M54	Motorway	Runs from M6 Junction 10A west to M54 Junction 7 with the A5
M50	Motorway	Runs from M5 Junction 8 west to the junction of the M50 with the A449/A40
A417	All Purpose	Runs from its junction with the A419 at Cirencester to M5 Junction 11A.
A419	All Purpose	Runs from the M4 Junction 15 to its junction with the A417 at Cirencester
A40	All Purpose	Runs from M5 Junction 11A to west of Ross on Wye
A49	All Purpose	Runs from Ross on Wye to the A5 at Shrewsbury
A5	All Purpose	Runs from M50 junction 7 to the Welsh Border
A458	All purpose	Runs from its junction with the A5 at Shrewsbury to the Welsh Border
A483	All purpose	Runs from its junction with the A5 at Oswestry to the Welsh Border.

The general condition of pavement assets is shown on the National Asset Condition Map. The pavement condition is categorised according to the proportion of flexible pavement surfacing reaching the end of its design life by 2020. Using a red amber green (RAG) colour coding the carriageway is categorised into 6 bands, depending on the percentage of pavement within that section likely to reach its design life by 2020. Sections of carriageway pavement where 100% of the surfacing is expected to reach the end of its design life by 2020 are shown in red through to green where 0% of the surfacing is expected to reach the end of its design life by 2020.

The carriageway condition is assessed using a variety of assessment techniques. The National Asset Condition Map is supported by other information provided in the relevant Asset Management Plans.

Carriageway condition is assessed by considering the following aspects:

- Enhanced Longitudinal Profile Variance
- SCRIM – measuring the skidding resistance of the surface
- Cracking – visual inspection and High Speed Road Monitor information
- Rutting – measuring the degree of longitudinal rutting caused by HGVs
- Fretting
- Texture

The National Pavement Asset Condition Map summarises the condition of section of carriageway taking into account these above factors at individual road level.

Structures - General Issues

The Asset Management Plans for Areas 2 and Area 9 reference additional relevant information. Much of this information is general to the asset management of the Area however any specific information relevant to the Midlands to Wales and Gloucestershire Route is included in this technical annex.

In common with the network as a whole, critical to the condition scoring indices with structures, is that many were constructed within the period 1964-1979, a period of boom in the motorway/trunk road building programme. The period saw the introduction of many initiatives with regard to both construction techniques and material specifications, some of which have resulted in underlying defects that have significant impact on the original 120 year design life required. In addition the design processes did not tend to consider the need for proactive maintenance during the lifetime of a structure. Particular issues with the bridge stock of this era are:

Thaumasite Attack – Construction techniques have resulted in the situation that bridge foundations and substructure concrete members in bridges have been subject to sulphate attack that has led to:

- i. Reduction in capacity that could eventually result in structural failure/collapse if left untreated.
- ii. Reduced capacity to withstand pier impact loading

Identified measures:

- i. Extensive reconstruction of all sub-surface concrete, including measures to prevent reoccurrence OR demolition and reconstruction.
- ii. Pier protection measures.

Alkali Carbonate Reaction (ACR) Affected Structures

Material specification to a section of the M5 (junctions 9 -13) has resulted in deterioration to 13 structures for which ACR has been confirmed as having a contributory factor. Levels of deterioration have varied from localised surface crazed cracking with loss of bond, to extensive delamination of deck construction. These are

not within the Midlands to Wales and Gloucestershire Route but included as a general example of issues with structures built around this time and which may occur elsewhere.

Concerns for affected structures are:

- i. Deterioration of deck edge beams continuing to be exacerbated by annual freeze-thaw action, resulting in loose and friable concrete over live carriageway with a potential for detaching and falling onto traffic below.
- ii. Further deterioration of deck edge beams resulting in containment capability of parapets being affected.
- iii. Delamination of deck structure leading to reduced capacity and ultimately failure of the structure.

Bearing Failure

Many structures on the route are carrying higher traffic levels than they were designed for and as such bearings are at risk of failing sooner than designed for.

Bridge Deck Waterproofing

Some structures have waterproofing systems in place > 30 years old, where the accepted effective life span of waterproofing systems is 30 years. Failure to repair can lead to water ingress into structural elements causing corrosion and delaminating of surfaces due to freeze/thaw

Steel Parapets

Parapets and other barrier types on structures are in exposed positions and are subject to corrosion from the effects of winter salting of roads and general exposure. By their nature they are also subject to damage. Recent investigations have identified a number of locations where corrosive action within both posts and rails has significantly reduced containment capability. Localised replacement of rails and wholesale provision of temporary secondary protection measures have been utilised previously.

Post-tensioned Structures

During the 1980`s problems in the UK were identified in an increasing number of post-tensioned bridges such bridges were mainly constructed in the 1970's and previous investigations have highlighted significant underlying defects that could compromise long term stability. Defects include voided and ungrouted post-tensioning ducts, water filled ducts and corrosion to post-tensioning strands

Steel Beam Painting

Structures with main span steel beams that have protective coating systems that have reached the limit of their effectiveness will be a risk of further deterioration due to their age and the effects of weathering. Whilst the risk factors built into the SMIS database do not place these in a high risk category, the defects associated have a major impact on structure condition indicator scoring.

Expansion Joints and Half-Joints

High levels of traffic and lack of regular maintenance are causing expansion joints to fail sooner than might be expected.

Alkali Silicate Reaction

Evidence of initiation of Alkali Silica Reaction at structures can lead to the need for deck refurbishment works to eliminate the potential for future significant deterioration at these types of structures.

Specific Issues Relating to the Midlands to Wales and Gloucestershire Route

Necessary refurbishments to M50 structures are being delayed due to the priority given to the Midlands Link Motorway Viaducts (M6 and M5 elevated sections). This may lead to a risk of more serious problems with these structures over time. It is noted that there a number of structures on the M50 which are particularly vulnerable due to their form of construction including examples reinforced concrete half joints and hinged joints.

A scheme to replace the deteriorated paint system on the M50 Kempley Road Overbridge exists within the EIOCG bid.

Information available relating to the A40 indicates that A40 Walham Viaduct and an A40 Overbridge are particularly critical structures in relation to the operation of the network and works at these structures could lead to network reliability issues.

A2.4 Route Operation

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A2.5 Technology

Route	asset type	asset count	distance in km	assets per km
M54	Midas Out Stations	18	34.7	0.5
	Message Signs	12		0.3
	Signals	28		0.8
	Ramp Metering	0		0.0
	Phones	58		1.7
	CCTV	12		0.3
M50	Midas Out Stations	5	33.9	0.1
	Message Signs	2		0.1
	Signals	29		0.9
	Ramp Metering	0		0.0
	Phones	77		2.3
	CCTV	6		0.2
A49	Midas Out Stations	0	Due to referencing system on A roads Geog addresses are not available to calculate asset count per KM or road	
	Message Signs	0		
	Signals	0		
	Ramp Metering	0		
	Phones	19		
	CCTV	2		
A5	Midas Out Stations	0	Due to referencing system on A roads Geog addresses are not available to calculate	
	Message Signs	5		

	Signals	0	asset count per KM or road	
	Ramp Metering	0		
	Phones	15		
	CCTV	1		
A40	Midas Out Stations	0	Due to referencing system on A roads Geog addresses are not available to calculate asset count per KM or road	
	Message Signs	0		
	Signals	0		
	Ramp Metering	0		
	Phones	17		
	CCTV	0		
A483	Midas Out Stations	0	Due to referencing system on A roads Geog addresses are not available to calculate asset count per KM or road	
	Message Signs	0		
	Signals	0		
	Ramp Metering	0		
	Phones	2		
	CCTV	0		
A417	Midas Out Stations	0		
	Message Signs	0		
	Signals	0		
	Ramp Metering	0		
	Phones	0		
	CCTV	5		
A419	Midas Out Stations	0		
	Message Signs	0		
	Signals	0		
	Ramp Metering	0		
	Phones	0		
	CCTV	4		

A2.6 Vulnerable Road Users

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A2.7 Environment

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A3 Future considerations

A3.2 Economic development and surrounding environment

The source for this information is referenced in the Bibliography within Part C.

LEP	Development Type	Scale by 2021	Anticipated Location of Impact on Route
Stoke-on-Trent and Staffordshire	Housing	42,373 dwellings	M54 passes through South Staffordshire.
	Economic	100,975 dwellings	
Worcestershire	Housing	32,540 dwellings	M50 passes through very small sections of two districts.
	Economic	48,783 jobs	
Gloucestershire	Housing	33,245 dwellings	Sections of M50 pass through two districts. A417 passes through length of LEP.
	Economic	43,907 jobs	
The Marches	Housing	44,825 dwellings	End of M50 and M54. A49 and eastern section of A5 passes through length/width of LEP. Small section of A40 in southern section.
	Economic	59,611 jobs	

Note: All economic growth figures are for the entire Core Strategy/Local Plan period.

Stoke-on-Trent and Staffordshire

Location development	of	Development type	Scale by 2012	Scale by 2021	Scale by 2031
East Staffordshire		Residential Commercial	302 dwellings 30ha over plan period	4,679 dwellings	5,217 dwellings
Staffordshire Moorlands		Residential Commercial	490 dwellings 18ha over plan period	1,888 dwellings	1,720 dwellings
Newcastle-under-Lyme		Residential Commercial	601 dwellings	1752 dwellings	1293 dwellings
Newcastle-under-Lyme and Stoke-on-Trent joint		Residential Commercial	6257/13500 dwellings 112/220 (over plan period)		
South Staffordshire		Residential Commercial	3850 dwellings 14 ha (both over plan period)		
Stafford		Residential	11523 dwellings		

	Commercial	25ha (both over plan period)		
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Worcestershire

Swindon and Wiltshire

Local Planning Authority	2021 provision				2031 provision			
	Residential		Commercial		Residential		Commercial	
Swindon UA Total	13187	dwellings	7229	jobs	20513	dwellings	11245	jobs
Wiltshire UA Total	16560	dwellings	7569	jobs	25760	dwellings	11775	jobs
Swindon and Wiltshire TOTAL	29747	dwellings	14798	jobs	46273	dwellings	23019	jobs

Gloucestershire

Local Planning Authority	2021 provision				2031 provision			
	Residential		Commercial		Residential		Commercial	
Gloucester/Tewkesbury /Cheltenham District Total	11835	dwellings	1953	jobs	24985	dwellings	4123	jobs
Cotswold District Total	3051	dwellings	599	jobs	4746	dwellings	931	jobs
Stroud Total	2571	dwellings	3921	jobs	4000	dwellings	6100	jobs
Forest of Dean District Total	2323	dwellings	2751	jobs	3613	dwellings	4279	jobs
Gloucestershire TOTAL	19780	dwellings	9224	jobs	37344	dwellings	15433	jobs

A3.3 Network improvements and operational changes

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A3.4 Wider transport networks

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A4 Key challenges and opportunities

A4.2 Timescales

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A4.3 Stakeholder priorities

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A4.4 Operational challenges and opportunities

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A4.5 Asset condition challenges and opportunities

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A4.6 Capacity challenges and opportunities

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A4.7 Safety challenges and opportunities

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A4.8 Social and environmental challenges and opportunities

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Table A4.1 Schedule of challenges and opportunities

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
Network operation	A417 / A419 (heading north west)	Some drivers heading from the south east to Wales use this road as an alternative to the M4 on the grounds that the M4 might be congested. With better advance signage on the M4 this could be avoided.	No	X			✓	✓		
	A417 / A419 (heading south east)	Some drivers heading from the Midlands to Chippenham and the west side of Swindon use this road as an alternative to the M5 on the grounds that the M5 might be congested. With better advance signage on the M5 this could be avoided.	No	X			✓	✓		
	APTR sections	The majority of the route is APTR where we have limited data on incident types (especially where there is no injury) and durations. This is a challenge to understand the operational needs for the route	Yes	X			X			
Asset condition	A40	A40 carries local traffic, although designated as SRN. Has significant maintenance issues. Need to resolve before could consider for de-trunking	No	X			✓	✓		
	M50 (River Severn Crossing to junction with M5)	70% of the pavement is predicted to reach the end of its design life by 2021	Yes		X		X			
	A49 (junction with A40 to junction with A5)	50% of the pavement is predicted to reach the end of its design life by 2021.	Yes		X		X			
	A5 from M54 to Welsh border	Section is predicted to reach the end of its design life by 2021			X		X			

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
	A40 Walham viaduct and overbridge	Aging structure which has access challenges for maintenance	Yes		X		X			
Capacity	M54	There are two Local Enterprise Zones in the black country: (DSDA Walsall and IS4 Wolverhampton) that will introduce significant growth and travel demand on SRN. Area Action Plans in Wolverhampton and for the Stratford Road. These are based on the LDFs, update key areas of development.	Yes	X	X	X	✓	✓		
	M6T-M6-M54 Featherstone Link,	Potential transport impact of strategic employment sites in the vicinity. Slow journey times between M54 and M6 Toll.	Partial		X		✓			✓
	A49 Hereford	Capacity of A49 is a challenge to development in Hereford. Lack of resilience with only one bridge crossing of the river Wye at Hereford. Has impact on M5/M6/M50 as other routes are used to avoid area	Yes		X		✓			✓
	A49 Dorrington / Bayston Hill	Accessibility is limited due to single carriageways through Dorrington and Bayston Hill. Vehicles get stuck behind lorries on single-carriageways, leading to unreliable travel times and slow journey times speeds.	Partial	X			✓	✓		
	A5 Shrewsbury	25% more housing expected and Oswestry bypass is congested. Travelling from Shrewsbury to south-east is difficult without using M54 towards centre of Birmingham	Partial	X		X	✓	✓		
	Shrewsbury Bypass	Housing growth is increasing congestion, need a Shrewsbury bypass	No	X	X		✓	✓		

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
	A5 Shropshire	A5 Shrewsbury east to west Midlands - should be upgraded to motorway network to attract inward investment and increase safety.	No	X			✓	✓		
	A5 / A483	A5 / A483 exhibit general poor performance. With development growth between Ostwestry and Wrexham there is a need for additional capacity.	Yes	X			✓		✓*	
	A417 Air Balloon Roundabout	Slow moving vehicles on approach to Air Balloon Roundabout	No				✓	✓		
	Air Balloon roundabout	Air Balloon roundabout suffers congestion and queuing. In Gloucester area, but has significant impact on Swindon and Wiltshire. Linkages to the M5 are significant.					✓	✓		
	A417 Cowley Roundabout	Congestion issues, particularly at peak times	No				✓	✓		
	Missing Link, A417/419	Congestion both ways. This is particularly at the top of Crickley Hill during the peak hours. In the evenings, returning from Swindon is a particular problem. Single carriageway length a particular problem.	No				✓	✓		
	A417/A419 Route	Issues with journey time reliability. Increased transport costs to route via M5/M4 route. Road standard. Change from dual to single carriageway. Missing link. First section of single carriageway if travelling from Italy to Scotland.	No				✓	✓		
	M50 Motorway	Some resilience issues. Pressure on A417 through Gloucester when used as a diversionary route	No				✓	✓		

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
	A40 north and west of Gloucester	Congestion is caused as the road goes from dual to single carriageway. This road is the only access to Gloucester and Cheltenham from west of the river so any problems here impact hard on residents and businesses. Question raised as to whether this road should still be a strategic road.	No				✓	✓		
	A40	There are strategic allocations to the west of junction 11a (North of Gloucester). Another development is proposed at Twigworth, with a possible new roundabout on the SRN,	No				✓	✓		
	All	Access on to SRN is difficult because of traffic growth and causes additional HGV delay	No	X			✓		✓	
	All	Employment is needed ASAP, so the SRN shouldn't constrain anticipated growth. Growth more regionally outside of this region needs to be accounted for as they will impact on this route.	No	X			✓		✓	
Safety	A483	A483 has a bad safety record	Yes	X			✓		✓*	
	A49 Dobbies junction	Accident blackspot	Yes	X			✓	✓		
	A417 Air Balloon Roundabout	Issues for traffic leaving roundabout down Crickley Hill					✓	✓		

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
	All	Lorry parking and the location and availability of lay-bys is becoming an increasing issue. Lay-bys on the SRN are being used increasingly by HGV drivers to take rest breaks which they are required to take by law. However the HGV's often become a target of anti-social behaviour. Recent expansion of parks on A5; similar facilities are required in other areas.	Partial	X			✓	✓		
	A49 Hereford	In the top 50 ranked cluster sites across the SRN	Yes	X			X			
	A40 Gloucester	In the top 100 ranked cluster sites across the SRN	Yes	X			X			
	A419 Swindon	In the top 100 ranked cluster sites across the SRN	Yes	X			X			
	A49/A5 Shrewsbury	In the top 250 ranked cluster sites across the SRN	Yes	X			X			
	A449/M50 Ross-on-Wye	In the top 100 ranked cluster sites across the SRN	Yes	X			X			
Social and environment	All	Flood risk map shows flooding issues to be a lot less extensive than the Environment Agency have ascertained. Need to improve forward planning of maintenance to address environmental damage caused by flooding at bridges and culverts. Night maintenance has improved network performance. Need to consider Water Framework Directive when planning new roads. Possible need for new drainage technology	Yes	X	X	X	✓			✓
	All	Water pollution – Outfalls of non permitted discharge not included on HA maps but can be a risk depending on what water bodies they flow into.	No	X	X	X	✓	✓		

	Location	Description	Is there supporting evidence?	Timescales			Was this Identified through stakeholder engagement?	Top Priorities		
				Short-term	Medium-term	Long-term		Low	Medium	High
	A417 Air Balloon Roundabout	Air quality issues at Air Balloon Roundabout		X			✓	✓		
	A419	Noise is a problem, and an action group has now been set up because of this. There is a concrete section from Cirencester to Cricklade which causes particular problems.		X			✓	✓		
Other	A417/A419	Economic growth in Gloucestershire is hampered by 'missing link'. The challenge is finding evidence to support this. Road users avoid this road.	Partial	X			✓	✓		
	A417 (lighting and signage)	Signs seem overly large for the size of road.	No	X			✓	✓		

Part B Stakeholder engagement

B1 Stakeholder engagement events

B1.1 Engagement events

Stakeholder engagement events for the route based strategies were undertaken on a geographical (LEP area) rather than route basis. Therefore, there were xx stakeholder events held by the Agency relating to the London to Scotland West route;

- The Marches and Worcestershire areas, on Thursday 19 September 2013, at Sixways Stadium, Worcester
- Swindon and Wiltshire, on 19 September 2013 at Braeside Education and Conference Centre, Devizes
- Greater Birmingham and Solihull, Stoke and Staffordshire and Black Country, on 20 September 2013, at Maple House, Birmingham
- Gloucestershire, on 27 September 2013 at Merchants' Meeting Rooms, Gloucester

The table below sets out which sections of the route are covered by the stakeholder events.

Stakeholder workshop	Relevant route based strategy	Section of route covered
The Marches and Worcestershire	Midlands to Wales and Gloucestershire	M50 M54 A5 (M54 to Welsh border) A40 A49 A483 A458
Greater Birmingham and Solihull, Stoke and Staffordshire and Black Country	Midlands to Wales and Gloucestershire	M54
Swindon and Wiltshire	Midlands to Wales and Gloucestershire	A419
Gloucestershire	Midlands to Wales and Gloucestershire	A40 A417

B3.1 Stakeholder event attendees

The Marches and Worcestershire

Break out group	Delegates name	Initials	Organisation
Red	Peter Hardy		Facilitator
Red	Jan Gondzio		Note-taker
Red	Jeremy Callard	JC	Herefordshire County Council
Red	Sally Gilson	SG	Freight Transport Association
Red	Stephen Harrison	SH	Worcester County Council
Red	John Pattison	JP	Wychavon District Council
Red	Peter Pawsey	PP	Worcestershire LEP
Red	Kevin Postones	KP	BIS
Red	Serena Howell	SH	Highways Agency
Orange	Lee White		Facilitator
Orange	Anthony Hogan		Note-taker
Orange	Emma Baker	EB	Redditch Borough Council
Orange	Michael Dunphy	MD	Bromsgrove District Council
Orange	Nick Payne	NP	Road Haulage Association
Orange	Anthony Werren	AW	BIS
Orange	Henry Harbord	HH	Sustrans
Orange	Jan Cooke	JC	Shropshire County Council
Orange	Patrick Thomas	PT	Highways Agency

Swindon and Wiltshire

Break out group	Delegates name	Initials	Organisation
One	Paul Johnson	PJ	Local Enterprise Partnership
One	Margaret Wilmot	MW	Cyclists Touring Club (CTC)
One	Gwilliam Lloyd	GL	Swindon Borough Council
One	Peter Birley	PB	Wiltshire Council
One	Michael Thomspson	MT	SWAST
One	Ian Parsons	IP	Facilitator
One	Vicky Edge	VE	Note taker
Three	Fleur de Rhe-Philippe	FRP	Wiltshire Council
Three	John Smale	JS	Wiltshire County Council
Three	Alistair Millington	AM	Sustrans
Three	Walter Girven	WG	Wiltshire Constabulary
Three	Steve Hellier	SH	Facilitator
Three	Gavin Nicholson	GN	Note taker

Gloucestershire

Break out group	Delegates name	Initials	Organisation
One	Heddwyn Owen	HO	Caravan Club
One	Jason Keates	JK	Gloucestershire Constabulary
One	Mally Findlater	MF	Local Enterprise Partnership
One	Ian Gallagher	IG	Freight Transport Association
One	John Cordwell	JC	Wotton-under-Edge MP
One	Jeremy Williamson	JW	Cheltenham Borough Council
One	Patsy Dray	PD	Highways Agency
One	Ian Parsons	IP	Facilitator
One	Joanna Mole	JM	Note taker
Two	Pete O'Brien	POB	British Motorcycling Federation
Two	John Franklin	JF	Gloucestershire Council
Two	Ed Halford	EH	Highways Agency
Two	Christine Shine	CS	Campaign for Better Transport Gloucestershire Local Transport Board
Two	James Llewellyn	JL	
Two	Rupert Crosbee	RC	Sustrans
Two	Christine Fowler	CF	Facilitator
Two	Peter Triplow	PT	Note taker
Three	Amanda Lawson-Smith	ALS	Gloucestershire Council
Three	Holly Jones	HJ	Tewkesbury Borough Council
Three	Nigel Robbins	NR	Cirencester Beeches MP
Three	Louise Follet	LF	Gloucester City Council
Three	Steve Hellier	SH	Facilitator
Three	Vicky Edge	VE	Note taker

Greater Birmingham and Solihull, Stoke and Staffordshire and Black Country

Break out group	Delegates name	Initials	Organisation
Orange	Richard Banner	RB	Black Country representative
Orange	Philip Somerfield	PS	East Staffordshire Borough Council
Orange	Maria-Pilar Machancoses	MPM	Centro
Orange	James Hodson	JH	Midlands Expressway Ltd
Orange	Paul Leighton	PL	Walsall Council
Orange	Orminder Bharj	OB	Highways Agency
Orange	Peter Hardy		Facilitator
Orange	Andrew Rattan		Note-taker
Blue	Ann Osola	AO	Greater Birmingham and Solihull LEP and Birmingham City Council
Blue	Guy Benson	GB	Newcastle under Lyme Borough

			Council
Blue	Sally Gilson	SG	Freight Transport Association
Blue	Bhanu Dhir	BD	Black Country Chamber of Commerce
Blue	Andrea Whitworth	AW	BIS
Blue	Patrick Walker	PW	South Staffordshire Council
Blue	Adrian Slack	AS	Highways Agency
Blue	Alan Bain		Facilitator
Blue	Jan Gondzio		Note-taker
Red	Peter Davenport	PD	Staff & Stoke LEP
Red	Austin Knott	AK	Stoke-on-trent City Council
Red	Gerard Kells	GK	Campaign for Rural England
Red	Gary Masters	GM	NEC group
Red	Lisa Maric	LM	Highways Agency
Red	Elizabeth Boden	EB	Lichfield District Council
Red	Danny Lamb		Facilitator
Red	Oliver McLaughlin		Note-taker
Yellow	Mark Corbin	MC	Walsall Council
Yellow	Adam McCusker	AMC	Friends of the Earth
Yellow	Ann Morris	AM	Road Haulage Association
Yellow	Will Spencer	WS	Staffordshire County Council
Yellow	Rosemary Williams	RW	Bromsgrove District Council
Yellow	Andy Butterfield	AB	Highways Agency
Yellow	Sarah Loynes		Facilitator
Yellow	Derek Jones		Note-taker
Green	John Morgan	JM	Cannock Chase District Council
Green	Amrik Manku	AM	Solihull Metropolitan Borough Council
Green	Laura Shoaf	LS	Black Country Director of Transport
Green	Colin Bell	CB	GVA
Green	Will Heyes	WH	Birmingham Airport
Green	Fiona Keates	FK	Environment Agency
Green	Matt Taylor	MT	Highways Agency
Green	Lee White		Facilitator
Green	Anthony Hogan		Note-taker

B4.1 Note-taker's sheets from the engagement events

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Marches & Worcestershire	Date:	19th September 2013	Breakout Group	Orange
Group Facilitator	Lee White	Note-taker	Anthony Hogan		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what evidence is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)
			Already is	2018-21	x After 2021			
Redditch	Planned development with affect local and strategic routes to the north of Redditch	Capacity			x	No	Warwickshire County Council - Alan Law / Adrian Hart, Redditch Strategic Transport Assessment	
Redditch / Bromsgrove	Congestion at M42 J3, M42 J1, M5 J5, M5 J4 and M5 J3. Pressure on the SRN result in knock on problems for A38 problems – particularly serious in Bromsgrove. “Every week, Bromsgrove is gridlocked”	Capacity	x			Yes	Gravity model for HA, anecdotal, Longbridge regeneration, VISSIM models (Birmingham CC, Worcestershire CC)	
Redditch / Bromsgrove	30,000 houses deficit for Birmingham will have to be built to north or south. IF south this will be Bromsgrove/Redditch	Capacity			x	No		
Network-wide	More housing equals more home deliveries through internet buying and creates further congestion concerns	Capacity			x	No		
Shrewsbury	25% more housing expected and Oswestry bypass is congested Travelling from Shrewsbury to south-east is difficult without using M54 towards centre of Birmingham	Capacity	x		x	Yes	Online planning documents, models from Las, HA studies, infrastructure delivery plans	
Network-wide	Lack of truckstops / laybys - HGVs stop on SRN for scheduled breaks	Safety	x			No	Closures of existing stops	
A5 Shopshire	A5 Shrewsbury east to west Midlands - should be upgraded to motorway netowrk to attract inward investment	Capacity	x			Yes - safety		Emails with evidence to s from JC
Shrewsbury	Housing growth is increasing congestion, need a Shrewsbury bypass	Capacity				No		

A5 / A483	A5 / A483 exhibit general poor performance. With development growth between Ostwestry and Wrexham there is a need for additional capacity. A483 has a bad safety record	Capacity / Safety	x			Yes		
A49 Dorrington / Bayston Hill	Accessibility is limited due to single carriageways through Dorrington and Bayston Hill. Vehicles get stuck behind lorries on single-carriageways, leading to unreliable travel times and slow journey times speeds.	Operational	x			Yes - congestion / delay		
A49	Road is not HGV friendly. With planned growth, more people equals more HGVs to supply goods. Development to east of A49	Capacity	x			No		
Shropshire - Worcester	Hereford - Shrewsbury corridor is not a suitable route for HGVs. Require a strategic route from Shropshire to Worcestershire	Capacity	x			No		
A49/B4368 Craven Arms	Development around Craven Arms, creates new employment, junction is required to accommodate growth	Capacity	x			No		
Network-wide	Access on to SRN is difficult because of traffic growth and causes additional HGV delay	Capacity	x			Yes		
M54 / M6 toll	Slow journey times between M54 and M6 Toll, needs motorway standard link	Capacity	x			Yes		
Network-wide	People use SRN because they cannot easily get across it. The severance is constraining economic growth. This is network-wide with specific issues on A46 around Evesham and links to Worcester	Society	x			No	Living Streets, social equity, passive transport	Documents to provided by Sustrans
A46 Evesham	Lack of safe crossing point at Bengeworth (Evesham) prevents Sustrans from developing major tourism / leisure route from Worcester to Oxford via the Cotswolds	Society	x			No		
Bridgnorth / Kidderminster	Local road links on to SRN are not suitable	Capacity	x			No	Wyre Forest can provide evidence to support, but not present at the engagement	
The Marches	Area-wide underdeveloped transport network - slow, unsafe, unreliable journey times	Capacity	x			No		
A49 Dobbies junction	Specific accident blackspot	Safety	x			Yes		

Breakout Session 2: what should the priorities be?

Workshop Name	Marches & Worcestershire	Date:	19th September 2013	Breakout Group	Orange
Group Facilitator	Lee White	Note-taker	Anthony Hogan		

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals / Operational / Junction improvement / Adding capacity / New road / other
The historic trunk road network in the area does not function adequately for today's needs. Upgrade to existing roads, work to the west of Birmingham required	Capacity	Impacting upon issues in Birmingham - motorway exceeding capacity. Can some of this be drawn out of Birmingham - JC	High priority	
Journeys from Shrewsbury to Worcester mean going into Birmingham	Capacity	Poor connectivity, longer journeys Travellers coming in from Wales add to the problem - JC		Upgrade the A49 to resolve Birmingham capacity and provide western solution for Hereford Enterprise Zone connectivity
The standard of A49 is barely trunk road standard and should be addressed. Potential demand may be suppressed as road users avoid the A49 in favour of motorway network, therefore increasing congestion in Birmingham	Capacity	A49 must be improved to enable the Hereford enterprise zone to flourish. Housing in Telford adds further to potential problems - JC / AW Birmingham Box / M6 is fundamental to performance of the area - JC Current layout not conducive with future growth, evidence that development in the area will cause gridlock - JC	High priority	Upgrade the A49 to resolve Birmingham capacity and provide western solution for Hereford Enterprise Zone connectivity
Connectivity from M54 to M6	Capacity	Not possible to travel north from M54 to M6 without using local roads		
Housing growth is increasing congestion need A5 Shrewsbury bypass	Capacity		Deemed high priority by Shropshire representative	Bypass
Bromsgroves LDF considerations direct employment sites away from Bromsgrove and into Birmingham / Black Country	Capacity		Bromsgrove representative emphasised the priority set out in their LDF considerations	

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Marches & Worcestershire	Date:	19/09/2013	Breakout Group	Red
Group Facilitator	Peter Hardy	Note-taker	Jan Gondzio		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by	Number of sticky dots received
			Already is	2018-21	After 2021					
Enterprise zone, Hereford	Capacity of A49 is a challenge to development in Hereford	Capacity		X		Yes		JC	13	
Hereford	Lack of resilience with only one bridge crossing of the river Wye at Hereford. Has impact on M5/M6/M50 as other routes are used to avoid area	Capacity	X			Yes		JC		
A49 Hereford to Shrewsbury	Cars overtaking HGVs on only link road North-South through Hereford	Safety	X			Yes - Safety	Anecdotal from drivers of Freight Transport Association	SG		
Barton Road/A49 Hereford	Need to improve carriageway maintenance	Asset condition	X			No		JC		
M42 J1	M42 at J1 air quality impacts more on WCC roads than on SRN.	Environment			X	Yes - Environment	Modelling done. Assessment of BDP and R&P. Evidence shared with HA.	SH	7	
M5 J6 south of Worcester	Unreliable journey times due and congestion/delays on local roads in vicinity of M5J6	Capacity	X			Yes - Delay		SH	14	
A46	A46, capacity issues, especially junctions around Evesham, impacted by development growth	Capacity	X			No		SH	5	

M5 J7 Worcester	Worcester Parkway rail station planned near M5 J7. This is an opportunity to enable mode shift to rail, but may also be a challenge as cars are attracted to Parkway station.	Capacity		X					SH	1
South and East of Worcester	Significant development spread across S & E edges of Worcester city. Additional traffic will require area-wide investment in local/strategic transport infrastructure e.g. M5/A44	Operational Capacity	X	X					JP	5
Whole region	Need to increase/improve promotion of behavioural change (e.g. through roadside advertising of alternative transport modes)	Society	X						JC	
Whole region	Package approach needed to deliver modal shift and alleviate pressure on roads by providing sustainable transport alternatives	Operational		X	X				SH	
Whole region	Need to join-up relationship and thinking, between those responsible for investment plans for the SRN and local transport network	Operational	X						JP	
Whole region	Tension between SRN being used as a corridor of movement and serving new development	Social	X						JP	
Worcestershire	Poor performance of SRN, especially junctions (M5 J6 and J7), has adverse impact on WCC road network. Therefore schemes cannot be limited to SRN only – need a joined up approach.		X						SH	2
M5/M6 interchange (not in this region)	Unreliable journey times due to volume of traffic results in traffic always being slow	Capacity	X			Yes - Delay	Anecdotal from FTA		SG	
Whole region	Need to consider challenge of reducing CO ₂ impacts across the network	Environment	X	X	X				JC	

A49 Hereford	in Delivery of LDF needs significant increase in capacity on A49 in Hereford								JC	
Bromsgrove area	Adverse impacts on local roads due to “rat-running” near Bromsgrove to avoid M42/M5 congestion	Safety	X						SH	

Breakout Session 2: what should the priorities be?

Workshop Name	Marches & Worcestershire	Date:	19/09/2013	Breakout Group	Red
Group Facilitator	Peter Hardy	Note-taker	Jan Gondzio		

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities? Why? Are there any trade-offs?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.
<p>Nb. these could be from any of the groups – not limited to the ones raised by this group</p>	<p>Prompt if the same types are raised to consider whether they are viewed as a higher priority than other types</p>	<p>Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary</p>	<p>Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.</p>	<p>Solution Type (& additional notes)</p> <p>Maintenance & renewals / Operational / Junction improvement / Adding capacity / New road / other</p>
<p>General congestion, insufficient capacity, poor reliability and resilience</p> <ul style="list-style-type: none"> - M42 J1 - M5 J6 - Hereford city <p>Support for Hereford enterprise zone</p>	<p>Capacity Operational</p>	<p>The group considered that transport is a constraint to economic development and needs to be addressed.</p>	<p>The group discussion centred on establishing <i>how</i> transport priorities should be decided, rather than <i>what</i> those priorities are.</p>	<p>There is an opportunity to encourage behavioural change (particularly through the LSTF process) to encourage mode shift and reduce congestion.</p> <p>This has to be done in partnership with the local businesses.</p> <p>Specific places/issues were highlighted in the discussions and logged elsewhere in these notes. These are also identified in the current LTPs/LDFs and LEP proposals.</p>

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Swindon and Wiltshire	Date:	19th September	Breakout Group	One
Group Facilitator	Ian Parsons	Note-taker	Vicky Edge		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
Region-wide	1. Economic growth and jobs is important. The focus of jobs is around existing towns and centres. Transport and infrastructure are key to facilitating this growth.	Economic growth	Not to a full extent			Paul Johnson
Region-wide	2. Potholes and debris on the margins of the road is dangerous for cyclists.	Safety	No			Margaret Wilmot
Swindon	3. Honda an important employer. Relies on 'just in time' delivery, using the A417/A419. Safety and capacity issues at shift change time. It is not just about growth, but also retention. Swindon is also a key communication hub.	Economic growth	No			Gwilliam Lloyd
Bath	4. All sorts of issues in Bath. Need to look at the A350 routing in order to 'un-clog' Bath.	Economic growth				Margaret Wilmot
Salisbury	5. At risk of flooding as it is in a valley.	Environment				Margaret Wilmot
M4	6. Most of the M4 works ok now, but future growth is planned. There are short term pressures on the link. Constraining development. Access to Great Western Hospital is important (Bath is the next nearest). There are delays when part of it is closed.	Economic Growth	No information about how developments will effect capacity on the links			Peter Birley Michael Thompson
M4 J15	7. A key strategic junction which is constrained. There are congestion issues now.	Capacity	No information about junction operation			Gwilliam Lloyd
M4 J16	8. Potential for a park and ride site at Wooten Bassett. Will be close to the MOD Lineham facility. There is a need to develop a long term strategy for Wooten Bassett. Is there the possibility of a rail station at Wooten Bassett?	Capacity	No			Paul Johnson

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
M4 J17	9. No demands on this junction currently. It is strategically important for growth.		No information about junction operation			Paul Johnson
A350 (North of Warminster)	10. This is a key route serving north-south. It is significant also due to the number of towns along the route. It is a local corridor, but should be seen in relation to the A46. Is the A46 fulfilling its role as a strategic road? For the A350 to work, it needs to be a dual route. Has the potential to take on the role of the A36/A46. Trans-Wilts rail line could ease A350 capacity issues. Development is constrained to the West side due to AONB etc. Infrastructure needs to support this side. Closure of smaller ambulance stations is proposed. One 'hub' is proposed to be stationed at Melksham.	Capacity / Safety			Michael Thompson has evidence about the ambulance proposals.	Margaret Wilmot / Paul Johnson / Peter Birley
A350 (South of Warminster)	11. Severance issues.	Society	No			Peter Birley
A303	12. A strategic link, which is of less interest to Wiltshire Council. Looking at the A350 route could alter the use of the A303. A lot of severance, as few crossing points on the route. Safety issues with at-grade crossing points on the A303. If facilities were improved, there is an opportunity to take traffic off the network and onto cycling instead. The unimproved lengths of the A303 need addressing. Seasonal issues for ambulances using the route. Need for crawler lanes for caravans, as this causes safety and capacity issues.	Society / Capacity			Michael Thompson – SWAST have evidence of not meeting response time targets due to delays on A303 and at J15.	Paul Johnson Peter Birley Margaret Wilmot

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A303 (Stonehenge)	<p>13. There is an issue around Stonehenge. Is the option to push the route south, rather than tunnelling underneath. The route could then serve Salisbury.</p> <p>This option would require a change in strategic thinking.</p> <p>There is an option to dual past Stonehenge but English Heritage are not supporting. But could provide 14 km of dual carriageway for the same price as 2km tunnelling.</p> <p>Safety issues caused by cars slowing to take photographs. Can cause queues and accidents.</p> <p>The impact of the new Stonehenge visitor centre is not known yet. Solstice Park site also not yet fully developed.</p> <p>Having a dual carriageway passing Stonehenge doesn't help Wiltshire's economy. If a National Park were created, it would force people to stop. This would help traffic speeds and the economy.</p> <p>The cost of tourists waiting in traffic is hard to capture. Does it put people off visiting the region?</p> <p>There is a National Cycle Network from Salisbury. No route to the new visitor centre.</p>	Capacity / Safety / Environment	No	<p>The economic case for the A303 has previously been considered.</p> <p>Further work being done on the value of Stonehenge nationally.</p>	<p>Margaret Wilmot has provided additional evidence.</p>	<p>Paul Johnson</p> <p>Peter Birley</p> <p>Paul Johnson</p> <p>Margaret Wilmot</p>
A303 (West of Wiltshire)	<p>14. Development of areas West of Wiltshire should be the focus of the study.</p> <p>Some businesses in the Somerset area don't do business on a Friday afternoon due to congestion in the area.</p>	Capacity / Economic growth	No			Paul Johnson
A417/A419	<p>15. Flooding and capacity issues.</p> <p>White Hart roundabout needs improving to facilitate development.</p> <p>Noise and quality of life issues. High speed dual carriageway on the edge of an existing area.</p>	Environment / Capacity			Road safety team at Swindon Council has more information on this.	Gwilliam Lloyd

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A36	16. Salisbury bypass was considered. An issue/challenge on some junctions. Carries both local and other traffic and therefore there are some capacity issues. Out of town shopping in Southampton (from Salisbury) causes issues.	Capacity				Peter Birley Margaret Wilmot
A344	17. The closure of this road has caused queues. HA maps don't show this as it happened recently.	Capacity	No			Margaret Wilmot
Countess Roundabout	18. Often blocked in the summer. Capacity issues need addressing.	Capacity				Peter Birley
Air Balloon roundabout	19. Dualling to single carriageway an issue. A constraint to housing growth and economic growth and retention.	Economic growth				Gwilliam Lloyd

Breakout Session 2: what should the priorities be?

Workshop Name	Swindon and Wiltshire	Date:	19th September	Breakout Group	One
Group Facilitator	Ian Parsons	Note-taker	Vicky Edge		

When does this issue become critical?			Why is this considered to be a priority?	How does this compare to other priorities?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021	Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.		
✓			3. The link from Swindon to Oxford (A419/A420) is strategically important. A420 is not a trunk road.	Honda is part of the Hydrogen Highway, and so is strategically important (links Wales and London).	Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	
✓			7. M4 J15 is an immediate issue to the growth that is there now, and coming forward in the future. M4 J15 is the second priority for the LEP and third priority for the LTB.			●
✓			8. M4 J16 is a key constraint for Stagecoach and their Wiltshire and Swindon services. The Swindon Transport Strategy is looking at this.	This is felt to be the biggest issue due to the planned development in the area. Is an ongoing issue, although there are also immediate problems.		● ● ● ● ●
	✓		9. M4 J17 will need to be looked at more long term.			
✓			10. A350 north is an immediate issue as HGVs may use other routes in Wiltshire out of Bath. Needs for an A36/A350 strategy north of Warminster. Growth at M4 J17 would also feed into this route.			● ● ●
			11. A350 south severance issues.			● ● ●
✓			12. A303 feasibility study should consider alternatives to tunnelling and dualling. Capacity is an immediate priority if living locally. Dual to			● ●

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021				
			single carriageway causes capacity issues. Winterbourne Stoke residents are particularly effected by severance.			● ● ● ● ● ● ●
✓			15. The A417/A419 is so congested that it is pushing traffic onto other local roads. Some particular parts of the network are choked. Constrains growth as effects travel to East and West Midlands, Birmingham Airport etc.			● ●
✓	✓		16. A36 severance an immediate issue. A36 Southampton Road capacity is an immediate issue. The rest of the A36 would need consideration as development comes online (outside Salisbury).			● ● ● ●
			19. Air Balloon roundabout suffers congestion and queuing. In Gloucester area, but has significant impact on Swindon and Wiltshire. Linkages to the M5 are significant.			

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Swindon & Wiltshire	Date:	19 th September	Breakout Group	Three
Group Facilitator	Steve Hellier	Note-taker	Gavin Nicholson		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A303(T) at Stonehenge and Winterborune Stoke	2. The above congestion causes some economic issues with businesses avoiding the network at certain times of the day.	Capacity / Economy	No			Fleur de Rhe-Philippe / John Snale
A303(T) at Stonehenge and Winterborune Stoke	3. The above congestion causes further issues on the local network (vehicles rat running to avoid the congestion)	Capacity / Society	No	Data or evidence should be able to be provided	Fleur de Rhe-Philippe / John Snale	Fleur de Rhe-Philippe / John Snale
A303(T) Stonehenge to Countess junction	4. Severance caused by A303(T) to the satellite communities north. There is no provision for cyclists between these communities and Amesbury.	Society	No	No current evidence available – AM threw it back to the HA that they should be doing some work (heat maps) to consider potential demand in the future.		Alistair Millington
Stonehenge	5. Stonehenge visitors centre likely to increase activity and future growth in trips on the network.	Capacity	No	HA - potential to identify in growth plans / incorporate into future network operation?)		Fleur de Rhe-Philippe / John Snale
Stonehenge	6. Lack of connectivity to the site for non-car modes. Public transport hubs, rail, bus are all disconnected from the attraction).	Society	No			Alistair Millington
A303(T) / M5	7. Interactivity between the two corridors – incidents on one of them have a knock on effect on the other.	Capacity / Operational	No	HA - consideration of such interactivity should be able to be considered through HA data?)		Fleur de Rhe-Philippe / John Snale
Network-wide	8. Lack of locations for caravans to move over which would ease congestion.	Capacity / Operational	No	HA – could identify the locations where there is physical availability for such to occur,		Walter Girven
A303(T) Lark Hill MoD site	9. Will become a significant base for army returning back from Germany	Capacity / Operational	No	HA – expand the growth data to consider other significant sites that do not specifically fall into the Economic or Housing policies?	Identified that the site should be in the Core Strategy – contact Alistair Cunningham / Kevin Lander if required.	Fleur de Rhe-Philippe
10. A36(T) Cleveland Bridge, Bath	10. Capacity issues on this local connection as the strategic traffic is effectively dumped onto the local road network for a stretch. BANES have worked to close the stretch to heavy goods vehicles but HA and others opposed.	Capacity / Society	No	HA is already involved in detailed discussions about the issue.		Fleur de Rhe-Philippe
Bath (in general)	11. Capacity issues	Capacity	No			Fleur de Rhe-Philippe
A36(T) Southampton Road, Salisbury	12. An issue in congestion terms and some operational issues. The HA scheme implemented has not helped in some cases.	Capacity / Operational	No	Wiltshire County Council likely to have evidence.		John Snale / Fleur de Rhe-Philippe

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A36(T) Upton Lovell stretch	13. Missing dualling section means that issues are particularly prevalent at junctions. However considered that the situation is not that bad.	Capacity	No			Fleur de Rhe-Philipe
A36(T) Wilton	14. NMU initiatives have been put in place, but further measures are needed particularly considering the future shift from arm residences to normal residential.	Society	No		Reference was made to the 'Wilton Community Plan' in discussion	Alistair Millington
M4 Bristol	15. General capacity issues	Capacity	Yes			Fleur de Rhe-Philipe
M4 Junction 16	16. Major developments taking place. Is currently a busy junction and with the future development, it is likely to get worse.	Capacity	Yes			
M4 Junction 17	17. May become a challenge as there is the prospect of a development coming forward in this location that is not in the Core Strategy,	Capacity	No	HA – how to consider such (if not in public domain?)		
M4 Junction 18	18. Some NMU work has been taking place with the Highways Agency in relation to cycling initiatives.	Capacity / Safety	No	HA evidence of scheme?		
A419	19. No specific issues from Wiltshire County Council	-	n/a			Fleur de Rhe-Philipe
Study	20. Maps presented at the event are a little misleading in that they show average values and do not show the whole of the problem.	n/a	n/a	HA – requirement to develop region specific evidence?		All
<u>Note for the South East team:</u>	21. The A34(T) is under-utilised by freight as trip use the route to the west (A350) instead.	Capacity / Operational	n/a			

Breakout Session 2: what should the priorities be?

Workshop Name	Swindon & Wiltshire	Date:	19th September	Breakout Group	Three
Group Facilitator	Steve Hellier	Note-taker	Gavin Nicholson		

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well) <u>Note, sticky dots exercise was undertaken on a separate summary sheet</u>
Already is	Before 2021	After 2021				
✓	✓		<p>1. A303(T) at Stonehenge and Winterborune Stoke . This represents a current capacity (congestion) issue that requires short term amelioration.</p> <p>A longer term strategic solution is required but which needs to be advanced now.</p> <p>Ultimate solution is for the dualling of the A303(T) in full length in Wiltshire.</p>	<p>This is considered to be the main priority (the section between Countess and the west side of Winterbourne Stoke).</p> <p>Economic growth is currently (and will be further) hindered.</p> <p>Delegates considered that they thought that the Somerset consultation event would raise this as the main priority too.</p>	<p>The main problem is concerned with switching from dualling to single lanes.</p> <p>Expected that the A303(T) feasibility study will tackle this issue.</p> <p>The problem requires a longer term large-scale solution.</p> <p>Need for a balance between priorities and benefits – e.g. Wiltshire want the view of the stones to be maintained.</p> <p>Needs to be accepted that the tunnel is not going to happen (for financial reasons).</p> <p>English heritage are using a booking system to manage demand</p>	
			2. A303(T) at Stonehenge and Winterborune Stoke . Linked to 1 above			
			3. A303(T) at Stonehenge and Winterborune Stoke . Linked to 1 above			
✓			5. Stonehenge			

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well) <u>Note, sticky dots exercise was undertaken on a separate summary sheet</u>
Already is	Before 2021	After 2021				
	✓		9. Impacts of future development of the MoD site on the capacity of the network			
			10. Freight partnerships seek to promote routes to organisations, but roads are open to individual choice and use. Will require a solution to be worked up definitely by the long term.			
			11. Linked to 10 above			
	✓	✓	12. Likely to become a greater issue in the future	Identified as the second priority, The current situation is of long delays on the network which has economic disbenefits every day.		
✓			14. A current issue.			
✓	✓	✓	16. Issues at this location are a current problem and will become worse in the future as a result of development growth.	This is a Wiltshire priority because of the economic benefits to Whichelstowe. This is considered to be the biggest NMU / safety issue which is likely to offer significant Vfm.	Difficulties arise because of the location of the junction and the Local Authority boundaries. May prove difficult for the HA to put a business case forward if there are no SRN benefits achieved.	
		✓	17. Linked to delivery of future development growth in the long term.		Local pinch point funding gained for a scheme on Chippenham bypass.	
			21.		Openness to discussion of potential trunking / detrunking proposals.	

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Gloucestershire	Date:	27th September	Breakout Group	One
Group Facilitator	Ian Parsons	Note-taker	Joanna Mole		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what evidence is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A417 Air Balloon Roundabout	1. Slow moving vehicles on approach to Air Balloon Roundabout	Capacity / Operational				Heddwyn Owen
A417 Cowley Roundabout	2. Congestion issues, particularly at peak times. Damage only accidents	Capacity / Safety				Jason Keates / Mally Findlater
A417/A419 Route	3. Issues with journey time reliability. Increased transport costs to route via M5/M4 route	Capacity		Impact of poor journey time reliability on freight operations	Ian Gallagher	Ian Gallagher / John Cordwell
A417/A419	4. Road standard. Change from dual to single carriageway. Missing link. First section of single carriageway if travelling from Italy to Scotland.	Capacity				Jason Keates
M5 Motorway J9	5. Pinch point scheme increases capacity A46 arms, although not motorway	Capacity				Patricia Day
Network wide	6. Poor road surface condition. Gloucestershire considered to be worst in country	Asset Condition				Heddwyn Jones
A40	7. A40 carries local traffic, although designated as SRN. Has significant maintenance issues. Need to resolve before could consider for de-trunking	Asset Condition		Need to determine the level of strategic or local traffic and level of hgv use		Jason Keates
M5 Motorway J10	8. Configuration of M5 J10 hampers operation of police and emergency services. If major incident, M5 J11 - 9, unable to take injured persons or motorway traffic off SRN at M5 J10.	Operational				Jason Keates
M5 Motorway J10	9. Proposed new fire station near M5 J10. Can only access motorway to travel northbound. Will present challenges for fire service	Operational		Potential evidence re delayed response times		Jeremy
M5 Motorway	10. Poor driving conditions during snowfall. Managing agents cleared snow far better in Worcestershire than agent in Gloucestershire. Inconsistencies are evident	Operational				Jason Keates

Location	Description of challenge	Type of challenge	Is the evidence for	If not, what evidence is there to	Promises to provide supporting	Raised by
Motorway Service Areas	11. Parking for caravans is only available in areas designated for heavy goods vehicles. Potential safety issues.	Operational Safety /				Heddwyn Jones
Network wide	12. Difficulties in finding locations to pull in and let other vehicles overtake	Operational Safety /				Heddwyn Jones
M5 Motorway J9	13. Use of full time signalisation at M5 J9. Delays in off-peak periods when not required.	Operational				Jeremy
M5 Motorway J14	14. Signalisation at roundabout. Do timings reflect traffic conditions?	Operational				Jeremy
M5 Motorway J14	17. Car-share parking in lay-by	Operational Safety /				John Cordwell
M50 Motorway	15. Some resilience issues. Pressure on A417 through Gloucester when used as a diversionary route	Operational				Jason Keates
Network wide	16. Signage for Motorway Service Areas does not include fuel information, although the operator is named	Operational				Ian Gallagher / Jeremy
A417 Air Balloon Roundabout	18. Issues for traffic leaving roundabout down Crickley Hill	Safety				Jason Keates
A417 Air Balloon Roundabout	19. Air quality issues at Air Balloon Roundabout	Environment				John Cordwell / Ian Gallagher
Severn Bridge	20. Capacity on Severn Bridge can be reduced by collection of tolls. Need improved toll collection. Traffic reassigns to other roads to avoid toll in one direction	Technology		Directional traffic volumes on bridge and alternative parallel routes		Ian Gallagher / John Cordwell
A417/A419	21. Economic growth in Gloucestershire is hampered by 'missing link'. The challenge is finding evidence to support this. Road users avoid this road.	Economic Growth		Evidence to support economic case is unknown		Mally Findlater
M5 Motorway J9	22. Development pressures at Ashchurch e.g. MOD site, Cotswolds Retail Centre. Need road network to support future growth	Economic Growth				John Cordwell / Patricia Day / Mally Findlater
M5 Motorway J10	23. Junction is not all movements junction. Current configuration is limiting opportunities for growth. Joint core strategy identifies new residential and employment locations. Employment growth zone from J9 – 10. Anticipate several applications will go to appeal. Successful companies leaving Gloucestershire	Economic Growth				John Cordwell / Mally Findlater / Jeremy

Location	Description of challenge	Type of challenge	Is the evidence for	If not, what <u>evidence</u> is there to	Promises to provide supporting	Raised by
M5 Motorway J11	24. Employment based development	Economic Growth				
M5 Motorway J12	25. Current and future housing development. Junction saturation issues at location already at capacity in peak hours	Economic Growth				Jeremy
M5 Motorway J14	26. Growth identified at Sharpness Docks	Economic Growth				Mally Findlater
M50 Motorway	27. Development around M50	Economic Growth				
A40	28. Major regeneration at Cinderford. Significant housing units at Lydney	Economic Growth				Jeremy

Breakout Session 2: what should the priorities be?

Workshop Name	Avonmouth	Date:	27th September	Breakout Group	One
Group Facilitator	Ian Parsons	Note-taker	Joanna Mole		

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021				
✓			1. A417 Air Balloon Roundabout is a priority for economic, safety, resilience and environmental reasons.	County Council considers this highest priority (John Cordwell). LEP considers this within the top three priorities, although not the highest (Mally Findlater)		● ● ● ● ● ●
✓			2. A417 Cowley Roundabout. Similar issues to Air Balloon (Jason Keates)			●
			3.A417/A419. Freight Transport Association considers this a priority for the area.			
			7. A40 de-trunking. Carries local traffic.		De-trunking. Must be initiated by local authority	
✓			11. Caravan parking at Motorway Service Areas. Creates poor image for caravans. Safety issue			●
✓			12. Lay bys for caravans to pull in. Creates poor image for caravans. Safety issue			
✓			13. M5 J9 Signalisation. Priority as delays in off-peak period		Part-time signalisation	
			16. Motorway Service Areas signage - information re fuel		Motorway Service Areas signage to indicate fuel provider	
✓	✓		20. Severn Bridge tolls. Delays at tolls. Must utilise new technology		Technology improvements at toll. Must be 'free flow' through tolls	

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021				
	✓		21. A417/A419. Missing link. Potentially hampering economic development	Missing link is not the top priority for the LEP. Need to justify in terms of Value for Money, GVA, although the evidence case is not as strong (Mally Findlater)		● ●
✓	✓		22. M5 J9. Development pressures now and future	Development pressures at J9 and J10, therefore higher priority than Air Balloon (Jason Keates)		● ● ●
	✓		23. M5 J10. This is a priority as a result of configuration, development pressures, impact on operations of policy and emergency services and proposed location of fire station.	M5 J10 considered to be a higher priority than J9 (general consensus)		● ● ● ● ● ● ●
		✓	24. M5 J11.	Not considered to be same priority as J9 and J10		
✓			25. M5 J12. Current and future development pressures.		Review signage at M5 J12. Counter-intuitive to destination	●

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Gloucestershire	Date:	27th September	Breakout Group	Two
Group Facilitator	Christine Fowler	Note-taker	Peter Triplow		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
Study	1. Important to get all information in place before making decisions as this challenge underpins all others. If we rely only on the information as shown the South West may lose out.					
M5 Bristol	2. This stretch of the M5 always seems to have roadworks, plus some of the junctions are confusing. This creates a negative impression of Gloucestershire to visitors from the south.	Capacity	Yes			Pete O'Brien
M5 junction 10	3. Question of how well this junction relates to the local road network. If the junction is made accessible to traffic from the south this would encourage more local traffic onto the motorway. This then raises the question of whether the Agency should try and direct local drivers away from the motorway.	Capacity Operational	No			John Franklin
M5 junction 12	4. Too many traffic lights at this junction which cause congestion locally.	Operational	No			Pete O'Brien
M50	5. This road never seems to be open. Question raised as to where it serves and why it was built. Junction 1 is confusing, even to locals.	Asset condition	Yes			Pete O'Brien
A40 north and west of Gloucester	6. Congestion is caused as the road goes from dual to single carriageway. This road is the only access to Gloucester and Cheltenham from west of the river so any problems here impact hard on residents and businesses. Question raised as to whether this road should still be a strategic road.	Capacity Society & Environment	No			Ed Halford supported by Pete O'Brien
A417 south of Cheltenham	7. There is bad congestion on the single carriageway section from Birdlip to Nettleton Bottom. Slopes and landscape designations are likely to make solutions difficult. The hilltop has its own microclimate which can surprise drivers. Together with the volume of traffic, this makes it an accident blackspot. Drivers who do not know the road tend to drive down the hill with their brakes on, which can create confusion at night. The turning into Birdlip at the top of the hill can be tricky for cyclists.	Capacity Safety Society & Environment	Yes	No evidence offered but agreed that we need evidence on journey time, accidents and air quality. We also need businesses and haulage firms to say how much this stretch of road is costing them.	LEP is trying to get evidence together.	Christine Shine supported by Pete O'Brien Ed Halford John Franklin

A417 (lighting and signage)	8. Signs seem overly large for the size of road. Could they be smaller and do all stretches of the road need lighting? Suggestion that it may be possible to turn off more lights than at present.	Operational Society & Environment	No			Christine Shine
A417 / A419 (heading north west)	9. Some drivers heading from the south east to Wales use this road as an alternative to the M4 on the grounds that the M4 <i>might</i> be congested. With better advance signage on the M4 this could be avoided.	Operational	No			Ed Halford
A417 / A419 (heading south east)	10. Some drivers heading from the Midlands to Chippenham and the west side of Swindon use this road as an alternative to the M5 on the grounds that the M5 <i>might</i> be congested. With better advance signage on the M5 this could be avoided.	Operational	No			Pete O'Brien
Countywide information) (journey)	11. There is a lack of information on the origins and destinations of traffic so it is hard to distinguish between long distance and local travellers. For known pinchpoints such as the Air Balloon this information would be useful.	Capacity	No	Christine Shine has information on traffic through Nettleton Bottom. Ed Halford has a traffic model for the central Severn Vale. Travel to work data is available from the census.		James Llewellyn supported by Christine Shine
Countywide (accidents)	12. How useful are the present statistics we have on accidents? Is safety becoming a greater or lesser problem? We need to understand the whole picture rather than relying on injury data.	Safety	Yes			James Llewellyn
Countywide (diversions)	13. Need to think more carefully about where traffic is diverted when strategic roads are shut or congested. Traffic figures plateau once a road become blocked so it can be hard to tell whether traffic is diverting and, if so, how much and where to.	Capacity	No		Christine Shine	Christine Shine
Countywide (crossings)	14. It can be very hard to cross strategic roads at flat junctions, particularly for those on bikes. Examples given of the A419 at Cricklade, the A46 south of Evesham and the M5 at Tewkesbury. Although cycle lanes and crossings have been provided, many cyclists choose not to use them. To date it has been assumed that one solution will fit all cyclists, whereas in fact there are different kinds of cyclists with different needs. The narrowness of unimproved sections also makes things tricky. The growth planned east of Tewkesbury will make the M5 junction even harder to cross.	Safety Society & Environment	No			John Franklin supported by Rupert Crosbee

Countywide (service areas)	15. There is nowhere to park motorbikes at service stations. Also need a lorry park for the M5.	Asset condition	No			Pete O'Brien
Countywide (satnavs)	16. Need to tackle the problem of satnavs sending drivers down roads which are ill-suited to their needs (particular problem with lorries being sent down country lanes. Could the satnav makers be persuaded to provide different settings for cars, bikes, lorries, caravans etc.?)	Operational	No			Pete O'Brien supported by Christine Shine

Breakout Session 2: what should the priorities be?

Workshop Name	Gloucestershire	Date:	27th September	Breakout Group	Two
Group Facilitator	Christine Fowler	Note-taker	Peter Triplow		

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021				
✓			1. Important to get all information in place before making decisions.	Needs to happen before other challenges are tackled.		●
✓			2. The M5 is the main gateway into Gloucestershire from the south so problems around Bristol affect the whole county.	Work is already underway on this stretch of the M5 so it could be a quick win.	Rebuild the Almondsbury interchange to make it less confusing.	
	✓		3. Could make an already congested part of the M5 even busier.	Would only become a problem if the junction were to be made accessible to drivers from the south as well as from the north.		
✓			4. More a local issue than a strategic one.	Not as high a priority as other challenges.		
			5. This road has little impact on Gloucestershire so this is more of an observation than a challenge.	Agreed by all to be a low priority.		
✓			6. A40 north and west of Gloucester. Affects economic activity and connectivity for those living and / or working west of the Severn.	One scheme is already going ahead which may help. Could be a quick win but other priorities are higher.	Redesign of Over Island.	● ● ●
✓			7. A417 south of Cheltenham. Big issue for business, freight and tourism, as well as for local residents. Affects the whole economic attractiveness of Gloucestershire. Causes hold ups in getting fresh fruit and vegetables out of the county.	All agreed this should be the top priority.		● ●

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can	How does this compare to other priorities? Why?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.	Sticky dots (also to be placed on)
			8. Has a big visual impact in sensitive areas like the Cotswold AONB.	Something to consider when other changes and improvements are made.		
✓			9. Hard to quantify but could be putting unnecessary strain on the A417 through Nettleton Bottom.	Cannot do much until we know the start and end points of journeys. Could be a quick win as it is only a signage issue.		
✓			10. A417 / A419 (heading south east) used if M5 congested. Hard to quantify but could be putting unnecessary strain on the A417 through Nettleton Bottom.	Cannot do much until we know the start and end points of journeys. Could be a quick win as it is only a signage issue.		●
✓			11. A lack of information on the origins and destinations of traffic. Other challenges, such as 9 and 10, rely on us having this information.	Needs to happen before certain other challenges can be tackled.		● ●
✓			12. Important to understand this issue before making decisions on other challenges.	Needs to happen before other challenges are tackled.		●
✓			13. Important to understand this issue before making decisions on other challenges.	Needs to happen before other challenges are tackled.		●
✓			14. It can be very hard to cross strategic roads at flat junctions. Planned growth will only make this problem worse so we need to act now.	A big priority for cyclists.	Investment should be directed towards growth areas.	● ● ● ●
✓			15. Not a huge priority but something to be borne in mind when new services are proposed.	Less of a priority than solving congestion problems.		●
✓			16. Some lorries and caravans are using unsuitable roads as their satnavs only have one setting.	A high priority but not within the Agency's control.		●

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Gloucestershire	Date:	27th September	Breakout Group	Three
Group Facilitator	Steve Hellier	Note-taker	Vicky Edge		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
Region-wide	2. Diversionary routes when the motorway is closed – must make sure that signs are correct and there is a joined up approach (police, HA, council).	Operational	No			Amanda Lawson-Smith
M5 J11a	3. This is a limited movement junction, which causes some vehicles to undertake strange movements. Vehicles can't turn left from the trading estate. Vehicles can't turn onto the A417, so come out at Zoon's Court roundabout, which causes congestion. There is queuing on the A417, formed by traffic joining Cheltenham (am peak). At the Brockworth roundabout area, there is potential for around 3,000 dwellings to be developed (half of these are committed, half are proposed).	Safety	No			Amanda Lawson-Smith Holly Jones
Missing Link, A417/419	4. Congestion both ways. This is particularly at the top of Crickley Hill during the peak hours. In the evenings, returning from Swindon is a particular problem. Single carriageway length a particular problem.	Capacity				Nigel Robbins
Air Balloon (out of Birdlip), A417	5. Accident blackspot. Congestion and safety issues. Right turn movements, in particular, cause accidents. 20 years ago, the Government upgraded the route to be used as an alternative to the M4/M5. Improvements have since then stagnated. Country lanes are used as rat runs as the Air Balloon is being avoided. This proves difficult for villages. AQMA	Capacity / Safety / Society / Environment	Not to the full extent			Amanda Lawson-Smith Nigel Robbins

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
A419	<p>6. Noise is a problem, and an action group has now been set up because of this. There is a concrete section from Cirencester to Cricklade which causes particular problems.</p> <p>It was noted that this is a problem which may get worse if traffic levels increase (AL).</p> <p>Accidents are caused by people slowing down and speeding up along this route. The variable speed limits are felt to pose a problem.</p> <p>Links to Swindon/Reading etc are important as this is a key aerospace/technological area.</p> <p>The A419 is a DBFO with a 30 year contract (phantom toll), managed by RBS. RBS could argue against reducing traffic as their revenue would be reduced as a consequence.</p> <p>The local authority has heard that RMS are happy with the current situation. If their income is capped, there may be no incentive for solutions to be developed (an increase in traffic would not see their income increase if there is a cap imposed).</p>	Safety / Environment	No	The LEP has recently surveyed businesses in the area about what the effect would be of improvements to J9, J10 and Air Balloon.	The results of the survey should be published soon (LF).	<p>Nigel Robbins</p> <p>Louise Follet</p> <p>Nigel Robbins</p> <p>Amanda Lawson-Smith</p>
M5 J9 (with A46)	<p>7. Congestion at this junction is significant.</p> <p>Right on the junction, there is an area allocated for housing development. A short way to the east, there is a proposal for 2,200 homes, plus employment (currently an MOD site).</p> <p>Worcestershire are requesting dualling of the A46 to Stratford, and a pinch point scheme is currently underway at this junction.</p>	Capacity / Economic growth	Information on junctions not shown			<p>Holly Jones</p> <p>Amanda Lawson-Smith</p>
M5 J10	<p>8. Currently a limited movement junction. Desire for it to become an all-movement junction (LEP priority).</p> <p>4,800 dwellings are proposed very close to the junction.</p> <p>If coming south, have to travel through Cheltenham residential areas to access the motorway.</p> <p>Heading east to Cheltenham, queuing back onto motorway, which is a safety issue.</p>	Capacity / Safety	No			<p>Holly Jones</p> <p>Amanda Lawson-Smith</p>

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by
M5 J11	<p>9. Development planned towards the A46.</p> <p>To the west, it is Highways Agency maintained, and to the east it is local authority maintained.</p> <p>A new park and ride plus improvements to the junction are planned at Elmbridge Court.</p> <p>This junction is currently felt to be operating ok, but will be put under huge pressures by development.</p>	Capacity / Economic growth				Holly Jones
M5 J12	<p>10. Committed development is planned south of Gloucester (some as part of Stroud's plans too). Incinerator site has also been allocated for development. The junction is unlikely to cope with any future development.</p> <p>Queues go back onto the motorway carriageway.</p> <p>A rail strategy is currently being developed. New stations are proposed at: Huntsgrove, Stonehouse, Gloucester Parkway.</p>	Capacity				Amanda Lawson-Smith
M5 J13	<p>11. Congestion on A419, into Stroud.</p> <p>Stroud District Council have development proposals in the area.</p>	Capacity				Amanda Lawson-Smith
A40	<p>12. There are strategic allocations to the west of J11a (North of Gloucester). Another development is proposed at Twigworth, with a possible new roundabout on the SRN,</p> <p>West of Gloucester, there is congestion on A417 (has some pinch point funding).</p> <p>Perceived to be part of 'virtual detrunking', so it is maintained but not improved.</p>	Capacity				Louise Follet
M5/M4	<p>13. Massive congestion problems.</p> <p>Will be over capacity, even with the managed motorway scheme. This makes the case for improving the A419 even stronger.</p>	Capacity				
A40 (council stretch, Gloucester)	<p>14. Lorries using lay-by. Lack of overlay facilities causes a problem as they then rest on A40 and pull out to dual carriageway from a cold start, which poses a safety risk.</p>	Safety				
Elmbridge transport scheme	<p>15. Once Elmbridge transport scheme is in place, need to communicate and understand the impacts on the whole network.</p> <p>Some lorries and vehicles use A417/Chepstow to get to Wales, rather than pay the toll.</p>					

Breakout Session 2: what should the priorities be?

Workshop Name	Gloucestershire	Date:	27 th September	Breakout Group	Three
Group Facilitator	Steve Hellier	Note-taker	Vicky Edge		

When does this issue become critical?			Why is this considered to be a priority?	How does this compare to other priorities?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021	Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.		
✓	✓		3. M5 J11a an issue due to the limited movements. More development is coming forward, which will have an impact upon capacity. Traffic queuing on the A417 is going to get worse.		Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	
✓			4. Missing Link is an issue, as unlocking capacity on this route would unlock bigger economic benefits for Gloucestershire as a whole.		A pilot project was planned (raised by Nigel Robbins) but not sure it would have worked anyway due to the unpredictability of accidents.	● ● ● ● ●
✓			5. Air Balloon an issue due to safety. It can be included within Missing Link comments as it is all one problem, and requires one solution. All single section carriageways need addressing.			●
✓			6. A419 is a problem due to noise and accidents.			
✓			7. M5 J9 an issue due to significant congestion.			● ●
✓	✓		8. M5 J10 a priority due to the benefits which would be offered by making an all-way junction. There is currently queuing, which will get worse with the significant development proposed. Effects of development need to be mitigated to stop the junction deteriorating further.			● ● ●
	✓		9. M5 J11 will be under pressure due to development from 2021 onwards.			

When does this issue become critical?			Why is this considered to be a priority? Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	How does this compare to other priorities? Why? Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals /operational / Junction improvement / Adding capacity / New road / other	Sticky dots (also to be placed on the map as well)
Already is	Before 2021	After 2021				
✓			10. M5 J12 a priority for the City Council. Congestion backs onto the carriageway both northbound and southbound. A safety issue as queuing vehicles may not be noticed by oncoming vehicles.			
			11. M5 J13 a lower priority for the area. Unsure of Stroud's proposals, so not sure when it would become a priority.	Lower priority		
✓			12. A40 west of Gloucester an issue. Approach to the region from the Forest/Hereford. There is a P&R, but no bus lane so doesn't really help vehicles.	The scheme at Elbridge roundabout doesn't take account of the huge developments going on in the area.	There are proposals to detrunk, but the current position of the county is that they don't want to take it on (financial liability).	● ● ●

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Birmingham	Date:	20/09/2013	Breakout Group	Blue
Group Facilitator	Alan Bain	Note-taker	Jan Gondzio		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by	Number of sticky dots received
			Already is	2018-21	After 2021					

M6 J15,16,17 Stoke	Getting on and off at junctions, especially A500(T) with M6 is difficult, leading to a constraint on economic development around the A500	Operational Capacity	X			Yes - Peak hour speeds		GB	4
M6 J13-19	Delays to trade traffic	Operational	X				Freight company journey times, e.g. from DHL	SG	2
A50 east of Stoke, towards M1	Unreliable journey times; delays on important trunk route	Operational	X					SG	1
M5/M6 interchange	Unpredictable journey times and delays due to insufficient capacity affect all users	Capacity	X					SG, AO, BD	4
A500(T)	Lack of safe and secure stopping points/lay-bys for HGVs / freight Trucks are stuck in traffic just before they are due a break.	Safety	X					SG, BD	2
M6	Sufficient capacity to allow development around M6	Operational	X		X		BCC: city mobility action plan – March 2014 LEP models: economic (KPMG) and transport	AO	
M6 / M6 Toll	M6 Toll empty while M6 congested	Operational	X					BD	10
A5 to A38	Single carriageway on journey to M1 causes delays (See Delay Map)	Capacity	X			Yes - Delays		BD	2
Black Country	Poor accessibility to/from the SRN across Black Country, e.g. journey time/distance to get onto M6 from Dudley	Operational	X					BD	1
Black Country	Business relocating outside Black Country because of congestion	Society	X					BD	
i54, M6 North	Need to improve accessibility once Jaguar Land Rover plant open	Capacity		X				BD	11
Featherstone, M54-M6 link	Potential transport impact of strategic employment sites in the vicinity	Society					Study ongoing	PW	3

Whole network	Need to provide additional information to drivers to let them know where to stop if there is congestion up ahead on the network	Safety	X			n/a			SG	
Whole network	Need to ensure there is network resiliency and efficiency optimisation of the strategic/local routes. Incidents on the strategic network have knock-on effects elsewhere. The appropriate use of technology (e.g. VMS) could be provided	Operational							AO	
North Staffordshire	Need to manage the impact on the local non-strategic road network and consequences of blockages in North Staffs/ South Cheshire	Operational							GB	2
M6 J10a-6	Delays and unreliable journey times due to congestion and mix of traffic e.g. HGVs	Operational							BD	3
Whole network	Need to manage general capacity on motorways	Operational							AO	2
A5	Concerns about safety record	Safety							GB	2
M6 J8 and J7 to South	Insufficient capacity at motorway junctions	Capacity							SH	1
General	Impact of poorly maintained roads on truck tyres	Asset condition							BD	
Whole network	Congestion creates delays for freight traffic and this creates problems for HGV drivers – they cannot drive longer than the legal times	Operational							BD	

M6 / M42	<p>The LEPs' Strategic Economic Plan will have a major impact on growth and employment. This will require highway capacity, particularly on the strategic routes/junctions</p> <p>Key site is UK Central – the M42/Solihull corridor in the vicinity of M42 J5 and J6 and M6 J4</p> <p>Birmingham City Centre enterprise zone is major growth area and will affect traffic growth</p>						<p>Birmingham Mobility Action Plan outputs / analysis</p> <p>Birmingham Development Plan modelling / analysis</p> <p>Solihull MBC work on UK Central</p> <p>Birmingham Airport Surface Access work – SDG study</p> <p>Work being undertaken for GBS LGF investment packages</p> <p>GBS LTB KPMG economic development work</p> <p>Cross-LEP strategic connectivity work</p>		AO	
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Breakout Session 2: what should the priorities be?

Workshop Name	Birmingham	Date:	20/09/2013	Breakout Group	Blue
Group Facilitator	Alan Bain	Note-taker	Jan Gondzio		

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities? Why? Are there any trade-offs?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.
Nb. these could be from any of the groups – not limited to the ones raised by this group	Prompt if the same types are raised to consider whether they are viewed as a higher priority than other types	Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Solution Type (& additional notes) Maintenance & renewals / Operational / Junction improvement / Adding capacity / New road / other
Need to identify the appraisal criteria Need to identify strategic movements Consider the interaction between road and rail for long-distance travel Identify which issues are short-term (e.g. peak) vs those that are all-day Timescale of priorities (which are short-term vs long-term on a scale up to 2030) i54 / JLR / M54	All Operational	Need to consider what journey purposes/trips are high value and then what trips to prioritise e.g. commuting vs freight traffic Local trips are easier to re-route while e.g. freight can't be diverted	Challenge in the long term/trade off between commuting and freight traffic. What should have priority? Do they have the same value? Pinch-point schemes / quick wins need to keep future strategic objectives in mind but can be a good start in improving delays. Is there a trade-off between short term solutions that tackle congestion and answering the long term structural problems of rising car-use for example.	

<p>Integration/inter-connectivity across road and rail to get goods from train to shop via road</p>		<p>Short term priority (pre 2021)</p> <p>Long term priority (post 2021)</p> <p>Further comments raised in discussion:</p> <p>Do accidents have large knock-on effect on development – should safety be put first?</p> <p>Cost of traffic congestion estimated to cost economy £4.3 billion per year (CEBR?)</p> <p>Highway management structure/processes to help economic growth</p> <p>For business to operate, you need:</p> <ul style="list-style-type: none"> - Freight movement - Business travel ease - Access to pools of people - Reliability of journey times <p>Need to assess delivery risk of projects</p> <p>Need to consider how to prioritise for different timescales with available funds</p>		
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Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Greater Birmingham and Solihull, Black Country, Stoke and Staffs	Date:	20th September 2013	Breakout Group	Red
Group Facilitator	Danny Lamb	Note-taker	Oliver McLaughlin		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by	Number of sticky dots received
			Already is	2018-21	After 2021					
Network-wide	Are the traffic growth forecasts accurate enough to inform future strategies?	Capacity		x	x				GK	
Network-wide (related to supply chain)	Does the RBS process adequately understand the needs and locations of current major employers? Most of the future jobs growth will come from existing employers such as Jaguar Land Rover and JCB. The RBS evidence needs to cover existing employers particularly those that use/rely on the strategic network for access to their supply chain.	Capacity	x		x	Yes	More evidence can be provided by LAs and LEPS e.g. Stoke City Deal report		PD	5
Junction 15 (M6)	Traffic can be delayed and create unreliable journey times. Route management should be more focused on problem areas. There is a need for VMS to tell people to avoid M6 J15 when there are problems	Operational	x						PD	

A38 Lichfield Burton	Traffic delays create unreliability. There is a need for VMS/better traffic information to inform people about problems on the A38 so they can avoid the area or choose an alternative route/time.	Operational	x						EB	
M6 Toll	Under utilised due to prices. Suggestion that casualties on the A5 may relate to HGVs not using the toll due to pricing	Capacity Safety	x				Enquiry into M6 toll – reports being produced. Long term evidence already available.		EB/ AK/ PD	5
A50/A500 North	The route carries circa 50% of through traffic. The route severs the Stoke conurbation, as there are limited crossing points and limited opportunities for sustainable modes	Safety Society	x				Vulnerable users study (Stoke City Council/Sustrans)		AK	
M42 J6	Runs at 98% capacity and is often gridlocked. Not seasonal – remains constant. Concerns for future Solihull Gateway/Airport expansion.	Capacity	x				Anecdotal evidence from NEC; Arup study/gateway research		GM	3
Stafford	Growth plans for 10,000 houses will create additional transport demand. It is unlikely all the residents will work in Stafford so this will add pressure to the strategic network during peak periods for commuting traffic	Capacity		x					GK	
Birmingham	Need to address the impact that high levels of transport movements have on noise/air quality/ light pollution	Society & Environment	x				CPRE Studies; CPRE study demonstrated level of light pollution, this has not been updated for 8 years		GK	
A5	Perception that poor highway standards create HGV accidents at junctions	Safety	x						PD	

A38	Lack of slip roads can create safety issues.	Safety	x			Yes	Local Authority accident data		AK	
A50	Accidents caused by short slip roads. This creates traffic delays/congestion as the incidents are managed by local police, not HA traffic officers	Safety	x			Yes – accident data displayed on map/			AK	
Lichfield Trent Valley Station	Potential for people to shift to under-utilised rail mode. Better information could direct users to station.	Capacity	x						PD	
A500	Congestion at peak times could be alleviated with better traffic information/VMS	Capacity/Safety/Operational	x				North Staffs connectivity study		PD	5
M6 Junction 6-10	Traffic is diverted onto the local highway network during the peak hours due to congestion on M6	Capacity	x						PD/ AK	6
Key routes M6, M6 Toll, M42, M54, A38, A50	<p>There is a common challenge across the network to provide more/better/reliable/real time information about incidents and delays on the strategic routes.</p> <p>The consequences of congestion affect a wide range of issues including journey time reliability which has a knock on effect on business activity.</p> <p>It also adversely affects air quality with vehicles stuck in traffic.</p> <p>Opportunity to prioritise HGV movements.</p>		x							

A38 Fradley. HGVs queuing on to carriageway	Capacity Issues at junction with Fradley – HGVs queuing on to carriageway	Capacity	x							2
General	Adopted and emerging Core Strategies should be included in evidence base.				x	Yes				
General	HS2 may provide some opportunities for mode shift in some places and this could alleviate pressure on the HA network. But some areas will be marginalised/disadvantaged.						KPMG HS2 report			AK

Breakout Session 2: what should the priorities be?

Workshop Name	Greater Birmingham and Solihull, Black Country, Stoke and Staffs	Date:	20th September 2013	Breakout Group	Red
Group Facilitator	Danny Lamb	Note-taker	Oliver McLaughlin		

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities? Why? Are there any trade-offs?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.
Better traffic management in Staffordshire/Stoke City Deal locations This includes better information/VMS/incident management to reduce congestion and improve journey time reliability on A38/A500/A50	Safety Capacity	Access to jobs – current and future employment e.g. JCB. Everyone in agreement	Priority is to deal with current issues to enable businesses to support the economy	Controlling flow and increasing safety
M42 Gateway/UK Central is very important for supporting local economy, including M42 J6	Capacity	Need for economic growth in area can be supported at NEC/Airport/Solihull. GM		
Strategic road network through Birmingham	Maintenance	Asset management neglected over long period.		
To reduce congestion and improve reliability/resilience there is a need for better incident management/reliable real time traffic information/VMS and more traffic officers	Operational Safety	Whole group agreed this is a priority – to keep the routes running and reducing adverse impacts of congestion/delays		

M6 Toll underutilisation		Distribution of HGVs needs to be managed in order to increase safety/relieve congestion. All in agreement	Increasing the patronage of the M6 Toll will help alleviate many of the other issues detailed above.	Can toll for HGVs be reduced?
Need to encourage more people to change travel behaviour and mode shift off the strategic routes	Capacity	Expansion of the strategic network will encourage more road users. Mode shift will help to reduce congestion and pollution issues. GK		

Route-based strategies stakeholder events

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Birmingham	Date:	20th September 2013	Breakout Group	Yellow
Group Facilitator	Sarah Loynes	Note-taker	Derek Jones		

Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what <u>evidence</u> is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by	Number of sticky dots received
			Already is	2018-21	After 2021					
A50 JCB Uttoxeter and growth on A50 corridor generally	Rocester junction is not adequate for future growth. Concern that there is no strategy for A50. Not all employment sites are shown on HA map	Capacity		x	x	No	Scheme funding report	WS to provide scheme funding report. JCB can provide evidence	WS	8
A5 Staffordshire Area	Single carriageway sections create congestion	Capacity	x			Yes	A5 Strategy	HA has this document (Ominder Bharj)	WS	
Major employment sites; I54 in South Staffs, Alton Towers, JCB	RBS needs to take account of future plans for economic growth	Capacity		x	x	Yes	-	-	WS	
Motorway sections	Need to address the impact of noise on local residents due to the volume of traffic travelling on the motorway	Society & Environment	x			No	-	-	MC	
M5 J1 & J2. M6 J9 & J10	Need to address the consequences of congestion at these junctions	Capacity	x			Yes	Report re M6 Toll Free Lorry Trials	Ann Morris – Road Haulage Association	AM	

A49 Improvement Opportunity	The A49 could provide an opportunity to relieve traffic issues on M6	Capacity	x			No	-	-	AM	
Black country route approach to M6 J10	The area is already heavily congested and future development opportunities are likely to impact further on the road network	Capacity	x	x	x	No	-	-	AM	1
A50	To improve safety there is a need to close lay-bys	Safety	x			No	-	-	AM	
All; and in particular the M6	Need to improve air quality, therefore need to reduce congestion. Air quality needs research and monitoring	Society and Environment	x			Yes	-	-	AM C/M C	10
M6 J10, J9, J8, M5 J1, J2.	Traffic congestion and slow speeds affect public health issues (air quality). M6 creates severance and air quality issues on the east side of the M6 section	Capacity and Society and Environment	x	x	x	Yes- some	Information re growth and jobs and air quality action plan	Mark Corbin – Walsall Council	MC	
M5 J6	Need to accommodate development growth in Bromsgrove and Redditch	Capacity and Society and Environment		x	x	Yes - some	Transport Network Analysis and Mitigation Report (Halcrow/WCC May 2013); Air Quality Reports, AQMA M42 J1, AQMA Town Centre	Rosemary Williams – Bromsgrove District Council	RW	
M42 closures and diversion routes	Diversion routes cause issues on A38 on local road network	Capacity	x			Yes - some	Transport Network Analysis and Mitigation Report (Halcrow/WCC May 2013); Air Quality Reports, AQMA M42 J1, AQMA Town Centre	Rosemary Williams – Bromsgrove District Council	RW	
M6 corridor	Need to address the impacts on Enterprise Zone and future job creation in the area; employment growth and housing growth	Capacity		x	x	Yes	-	-	MC	3
A38 Fradley	Inadequate substandard junction at Fradley Village	Safety	x			No	A38 Pell Frischmann Modular Road Report	Held by HA – Ominder Bharj	WS	

Area Wide	Strategic network diversion routes impact on the local roads – need to consider how diversions should work in future	Capacity	x			No	-	-	MC	
M6 J15-J16	ATM will be provided in the surrounding sections why not this section?	Operational		x		No	-	-	WS	
A5 AQMA Bridgetown (Cannock)	The issues could have been resolved by the proposed HA pinchpoint scheme, but it was not taken forward. AQMA concerns remain	Society and Environment	x	x	x	No	-	-	WS	1
ATM Areas	Need to improve the relationship between ATM and local road network - sudden changes in signage type and understanding of this	Operational	x			No	-	-	MC	
ATM Areas	Public do not understand ATM so their driving behaviour causes congestion	Operational	x			No	-	-	AM	
ATM Areas	Need to consider and manage the effect of ATM on local roads and traffic volumes	Capacity	x			No	-	-	MC	
ATM Areas	Need to manage ATM. When signs are left on 'for no reason' this causes unnecessary congestion. Signs need to be reset faster	Operational Capacity	x			No	-	-	AM	
All Motorway	Need to manage the disruption created by continued roadworks	Operational	x			No	-	-	AM	
Bilston	Bilston Urban Village missing from map	Other	x			No	-	-	AM	

M6 J9/J10	Economic activity and general access to area is adversely affected by congestion	Capacity	x			Yes	-	-	MC	7
M6 Elevated Sections	Noise on elevated motorway sections of M6	Society and Environment	x			No	Noise Mapping	Mark Corbin – Walsall Council	MC	
Bromsgrove Area SRN	Air Quality Issues	Society and Environment	x			No	Air Quality Report	Rosemary Williams – Bromsgrove District Council	RW	
All Areas	Safety can be improved with concrete central reservations	Safety	x			No	-	-	AM	
A5 Cannock Area	Need to address safety issue	Safety	x			Yes	Year 2009 Staffordshire County Council Report	Will Spencer- Staffordshire County Council	WS	
M6T	M6T could provide more capacity and relieve congestion if it was not tolled/changed ownership	Capacity	x			No	-	-	AM C	
M6T	M6 experience congestion as the M6T is under utilised	Capacity	x			Yes	-	-	WS	1
All HA routes	Opportunity for HA to act in relation to the provision of electric charging points	Society and Environment	x	x	x	No	-	-	AM C	
M6 J15 Stoke	Safety Issue	Safety	x			Yes	-	-	WS & AM	
M5/M42 Bromsgrove Area	SRN capacity needs to facilitate growth. Site are still to be allocated (e.g. for 2500 homes)	Capacity		x	x	No	-	-	RW	
M5/M6 to west of Birmingham	Would congestion on M5/M6 be alleviated with the provision of a western relief road?	Capacity	x			Yes – in terms of existing capacity issue	-	-	AM	

M42 J1.	Problems on motorway means that traffic diverts through Bromsgrove along A38 southwards to rejoin M5 at M5 J5. This causes local congestion and air quality issues	Capacity Environment	x	x	x	Yes – in terms of existing capacity issue	-	-	RW	6
M5 J1 & J2	Need to address the adverse impacts of congestion at these junctions i.e. delays, unreliable journey times	Capacity	x	x	x	Yes	-	-	AM	3
Birmingham Motorway box	To support the activity and performance of the West Midlands the Motorway Box should run freely	Capacity	x	x	x	Yes – in terms of existing capacity issue	-	-	AM	2

Route-based strategies stakeholder events

Breakout Session 2: what should the priorities be?

Workshop Name	Birmingham	Date:	20th September 2013	Breakout Group	Yellow
Group Facilitator	Sarah Loynes	Note-taker	Derek Jones		

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities? Why? Are there any trade-offs?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities.
Nb. these could be from any of the groups – not limited to the ones raised by this group	Prompt if the same types are raised to consider whether they are viewed as a higher priority than other types	Nb. We are not asking the group to reach a consensus about the priorities, but to discuss their views. Include initials of the delegates so that we can follow up if necessary	Nb In this session we most interested in how they decide what should be a priority rather than what the priorities are. The sticky dot session will help show what the group think the priorities should be.	Solution Type (& additional notes) Maintenance & renewals / Operational / Junction improvement / Adding capacity / New road / other
M6 J10	Capacity	Development Growth – Enterprise Zones aspirations and poor existing situation re delays	MC – but noted importance of other issues as well	Needs large scale improvement
A5 in Staffordshire	Capacity Safety	Growth aspirations	Based on evidence presented in Staffordshire Area – WS	
Birmingham Motorway Box	Capacity	Affects performance of whole region	AM	
A50 Uttoxeter	Capacity Safety	JCB Growth Aspirations	Based on evidence presented in Staffordshire Area – WS	
M42 J1. Problems on motorway means that traffic diverts through Bromsgrove along A38 southwards to rejoin at M5 J5. This causes local congestion and air quality issues	Capacity	Likely to be exacerbated by significant future growth i.e. Bromsgrove 7000 homes, Redditch 7000 homes, Birmingham 30,000 homes (shortfall). Bromsgrove is 90% greenbelt, an attractive place to live and located centrally for business. This creates pressures for development	RW	

A5 Cannock Area	Safety	Significant safety issues to be resolved	AMC	
M6 J9	Safety	Pedestrian safety - school crossing route	MC	
M5 J1/J2	Capacity	Current capacity issues to be exacerbated by growth	MC/AM	
M6 J15-J16, for continuity should be ATM	Safety	For continuity/safety as is a 'missing link' of ATM	AM	
Resurfacing in urban areas to be prioritised to reduce road noise to receptors	Safety	Priority to urban areas as greater number of receptors	MC	

Breakout Session 1: what are the key challenges for the routes?

Workshop Name	Birmingham	Date:	20th September 2013	Breakout Group	Green
Group Facilitator	Lee White	Note-taker	Anthony Hogan		

Relevant RBS	Location	Description of challenge	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	When does this issue become critical?			Is the evidence for this challenge shown on our maps?	If not, what evidence is there to show this is/will become a challenge?	Promises to provide supporting evidence by (name, org)	Raised by	Number of sticky dots received
				Already is	2018-21	After 2021					
North and East Midlands	A50 JCB Uttoxeter and growth on A50 corridor generally	Rocester junction is not adequate for future growth. Concern that there is no strategy for A50. Not all employment sites are shown on HA map	Capacity		x	x	No	Scheme funding report	WS to provide scheme funding report. JCB can provide evidence	WS	8
South Midlands	A5 Staffordshire Area	Single carriageway sections create congestion	Capacity	x			Yes	A5 Strategy	HA has this document (Ominder Bharj)	WS	
London to Scotland West Midlands to Wales and Gloucestershire	Major employment sites; I54 in South Staffs, Alton Towers, JCB	RBS needs to take account of future plans for economic growth	Capacity		x	x	Yes	-	-	WS	
All	Motorway sections	Need to address the impact of noise on local residents due to the volume of traffic travelling on the motorway	Society & Environment	x			No	-	-	MC	
London to Scotland West	M5 J1 & J2. M6 J9 & J10	Need to address the consequences of congestion at these junctions	Capacity	x			Yes	Report re M6 Toll Free Lorry Trials	Ann Morris – Road Haulage Association	AM	
London to Scotland West Midlands to Wales and Gloucestershire	A49 Improvement Opportunity	The A49 could provide an opportunity to relieve traffic issues on M6	Capacity	x			No	-	-	AM	
London to Scotland West	Black country route approach to M6 J10	The area is already heavily congested and future development opportunities are likely to impact further on the road network	Capacity	x	x	x	No	-	-	AM	1
North and East Midlands	A50	To improve safety there is a need to close lay-bys	Safety	x			No	-	-	AM	
London to Scotland West	All; and in particular the M6	Need to improve air quality, therefore need to reduce congestion. Air quality needs research and monitoring	Society and Environment	x			Yes	-	-	AMC/MC	10

London to Scotland West	M6 J10, J9, J8, M5 J1, J2.	Traffic congestion and slow speeds affect public health issues (air quality). M6 creates severance and air quality issues on the east side of the M6 section	Capacity and Society and Environment	x	x	x	Yes- some	Information re growth and jobs and air quality action plan	Mark Corbin – Walsall Council	MC	
Birmingham to Exeter	M5 J6	Need to accommodate development growth in Bromsgrove and Redditch	Capacity and Society and Environment		x	x	Yes - some	Transport Network Analysis and Mitigation Report (Halcrow/WCC May 2013); Air Quality Reports, AQMA M42 J1, AQMA Town Centre	Rosemary Williams – Bromsgrove District Council	RW	
South Midlands	M42 closures and diversion routes	Diversion routes cause issues on A38 on local road network	Capacity	x			Yes - some	Transport Network Analysis and Mitigation Report (Halcrow/WCC May 2013); Air Quality Reports, AQMA M42 J1, AQMA Town Centre	Rosemary Williams – Bromsgrove District Council	RW	
London to Scotland West	M6 corridor	Need to address the impacts on Enterprise Zone and future job creation in the area; employment growth and housing growth	Capacity		x	x	Yes	-	-	MC	3
South Midlands	A38 Fradley	Inadequate substandard junction at Fradley Village	Safety	x			No	A38 Pell Frischmann Modular Road Report	Held by HA – Ominder Bharj	WS	
All	Area Wide	Strategic network diversion routes impact on the local roads – need to consider how diversions should work in future	Capacity	x			No	-	-	MC	
London to Scotland West	M6 J15-J16	ATM will be provided in the surrounding sections why not this section?	Operational		x		No	-	-	WS	
South Midlands	A5 AQMA Bridgetown (Cannock)	The issues could have been resolved by the proposed HA pinchpoint scheme, but it was not taken forward. AQMA concerns remain	Society and Environment	x	x	x	No	-	-	WS	1
London to Scotland West	MM Areas	Need to improve the relationship between MM and local road network - sudden changes in signage type and understanding of this	Operational	x			No	-	-	MC	

London to Scotland West	MM Areas	Public do not understand MM so their driving behaviour causes congestion	Operational	x			No	-	-	AM	
London to Scotland West	MM Areas	Need to consider and manage the effect of MM on local roads and traffic volumes	Capacity	x			No	-	-	MC	
London to Scotland West	MM Areas	Need to manage MM. When signs are left on 'for no reason' this causes unnecessary congestion. Signs need to be reset faster	Operational	x			No	-	-	AM	
All	All Motorway	Need to manage the disruption created by continued roadworks	Operational	x			No	-	-	AM	
London to Scotland West	Bilston	Bilston Urban Village missing from map	Other	x			No	-	-	AM	
London to Scotland West	M6 J9/J10	Economic activity and general access to area is adversely affected by congestion	Capacity	x			Yes	-	-	MC	7
London to Scotland West	M6 Elevated Sections	Noise on elevated motorway sections of M6	Society and Environment	x			No	Noise Mapping	Mark Corbin – Walsall Council	MC	
London to Scotland West Birmingham to Exeter	Bromsgrove Area SRN	Air Quality Issues	Society and Environment	x			No	Air Quality Report	Rosemary Williams – Bromsgrove District Council	RW	
All	All Areas	Safety can be improved with concrete central reservations	Safety	x			No	-	-	AM	
South Midlands	A5 Cannock Area	Need to address safety issue	Safety	x			Yes	Year 2009 Staffordshire County Council Report	Will Spencer-Staffordshire County Council	WS	
South Midlands	M6T	M6T could provide more capacity and relieve congestion if it was not tolled/changed ownership	Capacity	x			No	-	-	AMC	
South Midlands	M6T	M6 experience congestion as the M6T is under utilised	Capacity	x			Yes	-	-	WS	1
All	All HA routes	Opportunity for HA to act in relation to the provision of electric charging points	Society and Environment	x	x	x	No	-	-	AMC	
London to Scotland West	M6 J15 Stoke	Safety Issue	Safety	x			Yes	-	-	WS & AM	
London to Scotland West Birmingham to Exeter	M5/M42 Bromsgrove Area	SRN capacity needs to facilitate growth. Site are still to be allocated (e.g. for 2500 homes)	Capacity		x	x	No	-	-	RW	
London to Scotland West	M5/M6 to west of Birmingham	Would congestion on M5/M6 be alleviated with the provision of a western relief road?	Capacity	x			Yes – in terms of existing capacity issue	-	-	AM	
London to Scotland West	M42 J1.	Problems on motorway means that traffic diverts through Bromsgrove along A38 southwards to rejoin M5 at	Environment	x	x	x	Yes – in terms of existing capacity issue	-	-	RW	6

		M5 J5. This causes local congestion and air quality issues									
London to Scotland West	M5 J1 & J2	Need to address the adverse impacts of congestion at these junctions i.e. delays, unreliable journey times	Capacity	x	x	x	Yes	-	-	AM	3
London to Scotland West	Birmingham Motorway box	To support the activity and performance of the West Midlands the Motorway Box should run freely	Capacity	x	x	x	Yes – in terms of existing capacity issue	-	-	AM	2

Breakout Session 2: what should the priorities be?

Description of challenge / Location	Type of challenge Capacity / Safety / Asset Condition / Operational / Society & Environment	Why is this considered to be a priority?	How does this compare to other priorities?	Capture any solutions that are proposed and ensure people feel heard, but re-focus on discussing their views on the priorities. Solution Type (& additional notes) Maintenance & renewals / Operational / Junction improvement / Adding capacity / New road / other
M6 J10	Capacity	Development Growth – Enterprise Zones aspirations and poor existing situation re delays	MC – but noted importance of other issues as well	Needs large scale improvement
A5 in Staffordshire	Capacity / safety	Growth aspirations	Based on evidence presented in Staffordshire Area – WS	
Birmingham Motorway Box	Capacity	Affects performance of whole region	AM	
A50 Uttoxeter	Capacity / safety	JCB Growth Aspirations	Based on evidence presented in Staffordshire Area – WS	
M42 J1. Problems on motorway means that traffic diverts through Bromsgrove along A38 southwards to rejoin at M5 J5. This causes local congestion and air quality issues	Capacity	Likely to be exacerbated by significant future growth i.e. Bromsgrove 7000 homes, Redditch 7000 homes, Birmingham 30,000 homes (shortfall). Bromsgrove is 90% greenbelt, an attractive place to live and located centrally for business. This creates pressures for development	RW	
A5 Cannock Area	Safety	Significant safety issues to be resolved	AMC	
M6 J9	Safety	Pedestrian safety - school crossing route	MC	
M5 J1/J2	Capacity	Current capacity issues to be exacerbated by growth	MC/AM	
M6 J15-J16, for continuity should be ATM	Safety	For continuity/safety as is a 'missing link' of ATM	AM	
Resurfacing in urban areas to be prioritised to reduce road noise to receptors	Environment	Priority to urban areas as greater number of receptors	MC	
Need to increase use of M6T	Capacity	Everyone in group in agreement	No other viable solution to Midland congestion - seems ludicrous to have the infrastructure in place but not use it	

Part C Bibliography

C1.1 Chapter 2

Area 2 Asset Management Plan

Area 9 Asset Management Plan

South West regional safety report

Midlands regional safety report, April 2012

Paragraph 2.7.11 – Cotswolds AONB website

<http://www.cotswoldsaonb.org.uk/?page=sustainable-tourism>

Environmental Information system (EnvIS) - contains environmental data supplied by Service Providers, the HA and other third parties and displayed in the Highways Agency Geographical Information System (HAGIS). The data within EnvIS identifies the asset, location, condition and broad management requirements. EnvIS is divided into the following environmental topics:

- Landscape
- Nature Conservation and Ecology
- Water
- Cultural Heritage
- Noise
- Air Quality
- Waste and Material Resources

C1.2 Chapter 3

East Staffordshire Borough Council Pre-Submission Local Plan 2013

Staffordshire Moorlands District Council Revised Submission Core Strategy (scale up to and including 2026)

Newcastle-under-Lyme Borough Council SHLAA 2012/13 (scale up to and including 2026)

Newcastle-under-lyme and Stoke-on-Trent Core Strategy Adopted

Stafford New Local Plan Publication document

South Worcestershire Local Plan

Gloucester, Cheltenham and Tewkesbury Draft Joint Core Strategy

C1.3 Evidence from stakeholders

A417 Loop, connecting the M4 to M5, www.a417missinglink.co.uk

Evidence from the stakeholder events

Evidence title	Evidence source	Summary of content
Connectivity research in Gloucestershire - DRAFT	Gloucestershire LEP	Researching the impact of connectivity issues on local businesses. Covers A417, M5 junctions 9 and 10
Letter from John Franklin	CTC/Cyclenation	Overview of categories of abilities of different cyclists and local problems
Letter from Mark Ryan, attaching Draft Connectivity research paper, message to the Minister from Gloucester LEP and CC and project document	Gloucestershire airport	Concerns over the geographical composition of routes Submitted evidence on the A417
Email from Amanda Lawson-Smith	Gloucestershire County Council	Available evidence from the Council
Information on the Sustrans' Personalised Travel Planning Project (PTP)	Sustrans	Leaflet on work undertaken as part of PTP
Air Quality Action Plan 2011	Cotswold District Council	Plan covering the A417 Birdlip roundabout
Assessment of the economic value of the Cotswolds AONB	Cotswolds Conservation Board	Includes information on the importance of the AONB to the local and regional economy
A417 facilities	Campaign for Better Transport	Use of laybys on the A417
Percentage growth/decline A417 vs Swindon to Gloucester Strategic railway line	Campaign for Better Transport	Data from 1997 to 2001 regarding the A417
The modal shift resulting from the opening of the Latton, Cirencester Bypasses and the Northern online improvement	Campaign for Better Transport	Data from 1996/7 to 2000/1 regarding the A417 and M5 J11a
Email from Christine Shine	Campaign for Better Transport	Identification of solutions to issues with noise on the A417
Proposal by CfBT	Campaign for Better Transport	Proposal from CfBT on use of "smart motorway" techniques on the A417
A419/A417AONB subject:	Campaign for Better	Comments regarding the

design	Transport	design and layout of the A417 and impact on speeds of vehicles
Speed statistics	Campaign for Better Transport	General comments regarding the impact of speed for sustainable transport, original source the AA
Evidence regarding 'rat-running' through Elkstone (A435 to/from A417)	Campaign for Better Transport	Speed surveys from 2009

Evidence Title	Evidence source and key contacts	Summary of content	Relevance to the SRN
Cotswold Line Cycle Route	Sustrans	Route plan of a proposed Cotswold Line Cycle Route, running along the railway line from Worcester to Oxford.	<p>A46 crossing to east of Evesham is a problem, due to busyness and speed of road, and is only missing link in high-quality cycle route from Worcester-Oxford. Current un-signalised, at grade crossing, with central island not sufficient, and creates unsafe interface and severance of NCN and locally between Evesham and Wickhamford and Badsey.</p> <p>Report recommends an analysis of potential options as a first stage.</p>
Rotherwas Enterprise Zone (REZ) Transport Assessment	Herefordshire Council.	<p>-Transport Assessment pertaining to the development of Rotherwas Industrial Estate and Lower Bullingham mixed use development.</p> <p>-Predicted development impact: Planning permission exists for 84,014m² B1, 53,829m² B2, 4,731m² B8.</p> <p>-Lower Bullingham proposed Mixed Use development of 1,000 dwellings, 5ha of employment land, school, park and ride</p> <p>-Analysis of potential impacts based on ARCADY and TRANSYT modeling</p>	<p>Expansion limited by poor links to trunk road network. Sustainable Transport Audit identifies problems on the surrounding roads to REZ.</p> <p>By 2023, if all future development in the area is implemented, the A49 will soon become over capacity. Initial modelling results show significant peak congestion and delay at the A49 / Hinton Road, A49 / Holme Lacy Road and A49 / Bullingham Lane junctions.</p>

		<p>outputs.</p> <p>-Highway Safety in vicinity of REZ</p>	
<p>Hereford Scoot Review [Conditions on A49].</p>	<p>Herefordshire Council.</p>	<p>Review of SCOOT. Details saturation levels, congestion levels and whether max queue flags were reached of 10 SCOOT loops. The report also evaluated the junctions 'Congestion Importance Factor (CG)', evaluating the impact of congestion at a junction on the performance of the rest of the network, where 0 is low impact/not important, and 7 is high impact/very important.</p>	<p>SCOOT covers A49 junctions with A465/Belmont Road, Barton Rd/St Nicholas St (Loop M), A438/Eign St/Bewell St, A438/Newmarket St (Loops b and s on Northern approach).</p> <p>Loop M was at 182%/182% saturation, with congestion at 21%/37%. The Max Queue Flag was reached, resulting in default signals being used. GC: 1.</p> <p>Loop s was at 63%/31% saturation, 0%/0% congestion. GC: 0.</p> <p>Loop b was at 84%/72% saturation, 0%/0% congestion. GC: 4.</p> <p>(Two figures represent two cycles).</p> <p>Concludes the SCOOT system replicates on-street conditions, and therefore all outputs can be considered robust for future analysis of the network. Future evaluation required after regeneration and Edgar Street Grid developments.</p>
<p>Local Plan Core Strategy Modelling [Conditions on A49].</p>	<p>Herefordshire Council.</p>	<p>Evaluation of the future impacts of the Local Plan in 2032, against a base of 2012, both with and without a new Western Relief Road (WRR).</p>	<p>"The results from this initial group of tests demonstrate clearly that the 'with road' option is the only option which can help deliver the Core Strategy and meet HA requirements for nil detriment in journey times</p>

			on the A49.”
Herefordshire A49 Issues Report (.xls).	Herefordshire Council.	Unclear, probably list of complaints/suggestions from local residents about issues on A49, 2004-2012.	Details issues of A49 through Herefordshire. Of 14 comments/issues, 9 relate to safety, 2 for operational and 2 for environment (1 is unclear).

Evidence Title	Evidence source and key contacts	Summary of content	Relevance to the SRN
The Black Country Enterprise Zone	Black Country Enterprise Zone	- Advertisement brochure for the Black Country Enterprise Zone (which includes 19 sites for development).	- One of the selling points for many of the sites is their proximity to the SRN; 18 of the 19 sites are cited as being close/adjacent to either M54 J2 or M6 J10.
Transport and social justice	Sustrans	-A report which sets out the advantages of enhancing and promoting public transport and walking/cycling facilities at the expense of large capital investment road infrastructure improvement projects.	- that there is no statistically significant correlation between economic performance and accessibility to the motorway/trunk network (Whitelegg 1994).
Locked out: transport poverty in England	Sustrans	<p>-Highlights the issue of ‘transport poverty’ in England with more struggling with the financial demands of car ownership.</p> <p>-The report argues that the lack of practical alternatives (such as adequate public transport links/facilities) is forcing people to choose between debt (through owning a car despite challenging financial circumstances) and social exclusion.</p> <p>-It has a map</p>	- Case study example of someone who would like to cycle to work every day, but inadequate cycle facilities make this impossible and instead she has to own a car and use the trunk network to get to work.

		<p>showing the varying degrees of transport poverty across England.</p> <p>-It sets out ways of tackling the issue such as improving public transport facilities and making them affordable the entire cross-spectrum of the population.</p>	
Major employers along SRN	Staffordshire County Council	<p>-A map showing the locations of key employment sites, who regard the network as part of their supply chain. These include automotive, aerospace, advanced manufacturing and ceramics industries.</p>	<p>-Their location in relation to the SRN is displayed on the map. These sites have a direct relationship with the motorway and trunk road network.</p>
Letter to HA regarding RBS	South Staffordshire Council	<p>-Supports the principle of a M6/M54/M6 Toll Link Road in order to reduce traffic impact on villages, particularly at Featherstone. No movement on this project since 2006.</p> <p>-Supportive of Concept C (as proposed by the HA) which is displayed in a diagram at the end of the letter.</p> <p>-Highlights capacity issues at A449 and A5 which could have a detrimental impact on</p>	<p>-Stated as being key to facilitating South Staffordshire's economic growth whilst serving the needs of the local residents.</p>

		<p>economic growth.</p> <p>-The Council is in the early stages of assessing the feasibility of a Strategic Employment Site at Royal Ordnance Factory, Featherstone. Could be issues with access to the site from the SRN which would need to be explored in Stage 2 of the study.</p>	
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