Midhurst and Petersfield Junction Assessments

On behalf of **South Downs National Park Authority**

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1 Introduction

1.1 Overview

The South Downs National Park Authority (SDNPA) is preparing its Local Plan, which will shape growth and new development within the National Park up to 2032. Hampshire Services (HS) have previously undertaken a Transport Assessment (TA) of proposed housing, employment and strategic site allocations, in order to determine the traffic impacts that the proposed development scenarios would have on the surrounding highway network.

The TA (January 2017) was a strategic level exercise to identify the cumulative transport impact assessment of delivering the SDNPA housing and employment targets. The TA was prepared to be a robust assessment of the possible transport impacts of the allocation proposals. It therefore;

- Used vehicle trip rates (as opposed to person trip rates) to produce a robust assessment of traffic generation terms;
- Did not include the reassignment of traffic to sustainable modes of transport due to the lack of public transport opportunities within the SDNPand;
- Applied a fixed demand response e.g. taking no account of the potential, or lack thereof, for peak spreading of traffic to occur.

In June 2017, the SDNPA requested that HS undertake a addendum technical report to understand the traffic / transport related impacts of;

- Revised site allocation information for Midhurst; and to take into consideration
- Feedback from Highways England (HE) in respect of the A3 / A272 slip roads at Petersfield.

This document provides the technical assessment of the above, and has been prepared as an addendum report to the TA.

1.2 Report structure

The technical note is structured as follows;

- Chapter 2 provides an update on the methodology;
- Chapter 3 presents the impacts of the revised housing allocations in Midhurst;
- Chapter 4 presents the impacts on the A3 / A272 slip roads at Petersfield; and
- Chapter 5 summarises the findings and concludes the technical note.

2 Methodology

2.1 TEMPro 6.2

The assessment and analysis work for the January 2017 TA work was undertaken prior to the release of TEMPro NTEM 7.2 in July 2016. For consistency, this technical report continues to use dataset 6.2 to calculate growth based on housing and employment projections[1].

To ensure the robustness of this approach a comparison of both datasets has been undertaken to ascertain the variation in growth rates. Table 1 summarises the variation found between version 6.2 and 7.2 for Midhurst.

Table 1: TEMPro Comparisons

	6.2 Dataset		7.2 Dataset		Variation	
AF09	AM	PM	AM	PM	AM	PM
future HH baseline (4099)	1.26	1.27	1.23	1.23	-2%	-3%
future HH -150	1.23	1.25	1.21	1.21	-2%	-3%
future HH -202	1.23	1.24	1.20	1.25	-2%	1%

The results show that the maximum variation is two percent in the AM peak and 3% in the PM peak, with the growth factors from dataset 6.2, the higher of the two.

The continued use of dataset 6.2 therefore ensures that the assessment is robust and comparable to the previous TA. Furthermore, this relatively small level of variance would not have a significant effect on the overall results of the analysis.

2.2 Assessment of Impact

As per the January 2017 TA the parameters shown in Table 2 have been used to quantify the level at which the impacts of development over and above the reference case (2032 base) could be classified as severe.

Table 2: Parameters for Defining Impact of Development

	Acceptable	Over capacity	Severe
Delay (seconds)	<120	> 120 – 180	> 180
RFC (%)	<0.85	> 0.85 – 1.0	> 1.0

[1] Details of the changes can be found at http://assets.dft.gov.uk.s3.amazonaws.com/tempro/ntem/ntem7.0-planning-data-guidance.pdf

3 Midhurst

3.1 Summary of the January 2017 TA

The January 2017 TA assessed the following quantum of development for Midhurst (see Table 3).

Table 3: Midhurst Quantum of development (January 2017)

Settlement / Strategic Site	Residential		Employment[2] (sqm)
	Scenario 1	Scenario 2	
Midhurst	150	240	N/A

The following years / scenarios were tested as part of the January 2017 TA;

- Base year 2016;
- Reference case (RC) 2032
- Scenario 1: 2032 RC + Local Plan Preferred Options; and
- Scenario 2: 2032 RC + Medium Housing Target plus 60%.

The initial results demonstrated that the addition of the local plan development traffic would have a severe impact on the operation of the Rumbolds Hill / West Street / Bepton Road / Petersfield Road roundabout (see Table 4 and Table 5).

[2] Useable Land

Table 4: Scenario 1 and Scenario 2 Junction Assessment

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 1. BASE 2016							
A286 Rumbolds Hill	2.97	24.97	0.76	C	8.82	53.30	0.94	F
West Street	0.34	12.42	0.25	B	0.33	13.81	0.25	B
A286 Bepton Road	8.73	75.31	0.94	F	6.50	59.87	0.91	F
A272 Petersfield Road	3.92	27.66	0.82	D	2.05	16.83	0.68	C
	A1 - 2. BASE 2032							
A286 Rumbolds Hill	43.92	231.02	1.13	F	117.32	567.87	1.28	F
West Street	0.70	20.41	0.41	C	0.53	18.49	0.35	C
A286 Bepton Road	97.88	712.87	1.35	F	112.45	840.25	1.39	F
A272 Petersfield Road	20.16	97.26	1.06	F	9.92	60.26	0.95	F
	A1 - 3. BASE + DEV PO 2032							
A286 Rumbolds Hill	61.03	315.51	1.18	F	156.10	756.84	1.35	F
West Street	0.67	20.09	0.40	C	0.54	18.81	0.36	C
A286 Bepton Road	118.91	857.39	1.38	F	136.70	1014.32	1.46	F
A272 Petersfield Road	31.13	139.82	1.11	F	12.72	74.01	0.98	F
	A1 - 4. BASE + DEV MID+60% 2032							
A286 Rumbolds Hill	60.09	306.45	1.19	F	166.28	818.82	1.36	F
West Street	0.67	20.06	0.40	C	0.54	18.85	0.36	C
A286 Bepton Road	164.91	995.15	1.46	F	140.22	1046.61	1.47	F
A272 Petersfield Road	32.49	145.18	1.11	F	13.21	75.64	0.99	F

Table 5: Summary of Junction Assessments prior to sensitivity test

Settlement	Junction	2016		2032 RC		2032RC +S1		2032RC +S2	
		AM	PM	AM	PM	AM	PM	AM	PM
Midhurst	Rumbolds Hill / West Street / Bepton Road / Petersfield Road	Acceptable	Acceptable	Over capacity	Over capacity	Severe	Severe	Severe	Severe

It was considered that the scope for physical mitigation at the roundabout was extremely limited, without compromising access for non-motorised modes. Opportunities to divert through traffic away from the centre of Midhurst along existing roads within the vicinity of the town were considered at a high level. It was however, concluded that the existing road network was not suitable for carrying high volumes of traffic as the alternative routes are narrow single track country lanes - for example Hollist Lane - and it would be inappropriate in both environmental and economic terms to increase the capacity.

As a second stage to the January 2017 TA the West Sussex County Traffic Model (WSCTM) was interrogated to understand the level of longer distance trips that could potentially be reassigned away from Midhurst to free up capacity at the Rumbolds Hill roundabout. The sensitivity test was applied to both Scenario 1 and Scenario 2 and the results are represented in Table 6.

Table 6: Summary of Junction Assessments with 10% sensitivity test

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 1. BASE 2016							
A286 Rumbolds Hill	2.06	18.70	0.68	C	4.70	32.08	0.85	D
West Street	0.31	11.41	0.23	B	0.29	12.47	0.23	B
A286 Bepton Road	4.17	40.68	0.83	E	4.96	46.37	0.86	E
A272 Petersfield Road	2.49	19.26	0.73	C	1.60	14.12	0.62	B
	A1 - 2. BASE 2032							
A286 Rumbolds Hill	11.52	77.48	0.97	F	45.74	216.48	1.13	F
West Street	0.61	17.81	0.38	C	0.49	17.30	0.34	C
A286 Bepton Road	43.74	294.46	1.17	F	62.13	484.65	1.23	F
A272 Petersfield Road	10.71	60.86	0.98	F	4.45	31.78	0.84	D
	A1 - 3. BASE + DEV PO 2032							
A286 Rumbolds Hill	17.88	108.86	1.02	F	72.79	341.78	1.19	F
West Street	0.60	17.95	0.38	C	0.51	17.86	0.34	C
A286 Bepton Road	57.04	384.93	1.21	F	82.25	630.90	1.30	F
A272 Petersfield Road	14.89	78.38	1.02	F	5.27	36.49	0.86	E
	A1 - 4. BASE + DEV MID+60% 2032							
A286 Rumbolds Hill	19.41	119.12	1.02	F	80.85	387.97	1.20	F
West Street	0.62	18.37	0.38	C	0.51	18.00	0.35	C
A286 Bepton Road	61.40	421.54	1.23	F	85.98	658.06	1.31	F
A272 Petersfield Road	16.60	84.30	1.03	F	5.57	37.64	0.87	E

The conclusions of this sensitivity test are that achieving a 10% reassignment of traffic would result in delays at the junction falling to levels lower than in the 2032 RC, to a level that was considered acceptable to WSCC.

3.2 July 2017 Update

SDNP has requested that additional testing is undertaken on the Rumbolds Hill (A286) / West Street / Bepton Road (A286) / Petersfield Road (A272) roundabout within the centre of town. The purpose of this assessment is two-fold;

- To understand the impacts of changing the location of the site allocations; and
- To understand the impacts of increasing the number of dwellings (from Scenario 1).

SDNP requested that HS test the following;

- A maximum allocation of 202 dwellings within Midhurst, which is an increase of 52 dwellings compared to Scenario 1;
- An additional 60 dwellings within Easebourne; and
- Apply the 10% sensitivity test to the background traffic as per the January 2017 TA.

For the purpose of this technical note, the revised assessment will be referred to as Scenario 3.

A plan showing the revised housing allocations for Midhurst is provided in Figure 1, which demonstrates the following;

- More housing is allocated (+134) to the south of the roundabout compared to Scenario 1;
- No housing is allocated onto the A272 Petersfield Road, west of the roundabout, (-71 units compared to Scenario 1);
- Less housing is allocated to the north of the roundabout, -12 units compared to Scenario 1. However, this is off set by the additional housing allocation proposed in Easebourne.

Figure 1: Midhurst and Easebourne Housing Allocation Locations (Scenario 3)

Ref		Site Name	Quantum of Dwellings	Location Relative to Rbt
SD81	HEA27	Brickworks	90	South
SD82	HA29	Holmbush	70	South
SD83	HA28	Brisbane House	10	South
SD84	HA31	Lamberts Lane	20	North
SD85	HA34	Park Crescent	12	North
TOTAL			**202**	

To take account of the additional dwellings within Midhurst, the TEMPro planning assumptions have been updated and applied.

To take account of the additional dwellings within Easebourne, the trips were distributed by applying the 2011 Census Journey to Work Statistics. Based on the current location of workplace destinations the following distribution for these journeys was determined and are presented in Table 7.

Table 7: Easebourne Traffic Distribution

Direction of Travel	% of traffic	Impact on Roundabout
North on A286 towards Haselmere and East via A272 towards Petworth	35%	✗
South on A286 towards Chichester	22%	✓
West on A272 towards Petersfield	14%	✓
Within Midhurst	29%	✓

The following assumptions have been applied for the 29% of traffic that is predicted to remain within Midhurst;

- 50% would not have an impact on the roundabout i.e. its journey destination is to the north or east of the roundabout; and
- the remaining 50% would be distributed equally between the A286 southbound direction and the A272 westbound direction.

The assumptions are considered robust because the town centre, main car park and secondary school are all located to the north of the roundabout, regardless of the fact that the town's built up area extends to a greater distance to the south.

3.3 Scenario 3 Junction Assessment

The results of Scenario 3 are presented in Table 8 (without sensitivity) and Table 9 (with 10% sensitivity).

Table 8: Summary of Scenario 3 Junction Assessment without sensitivity

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 1. BASE 2016							
A286 Rumbolds Hill	2.97	24.97	0.76	C	9.50	56.93	0.95	F
West Street	0.34	12.44	0.25	B	0.33	14.02	0.25	B
A286 Bepton Road	8.73	75.31	0.94	F	10.75	87.92	0.98	F
A272 Petersfield Road	3.92	27.66	0.82	D	2.22	18.05	0.70	C
	A1 - 2. BASE 2032							
A286 Rumbolds Hill	29.34	163.63	1.07	F	104.44	503.99	1.26	F
West Street	0.64	19.36	0.39	C	0.53	18.44	0.35	C
A286 Bepton Road	85.88	604.73	1.30	F	110.67	820.24	1.37	F
A272 Petersfield Road	18.58	90.17	1.05	F	7.27	47.41	0.91	E
	A1 - 3. BASE + DEV PO 2032							
A286 Rumbolds Hill	49.53	259.79	1.15	F	158.16	770.38	1.35	F
West Street	0.63	19.54	0.39	C	0.54	18.83	0.36	C
A286 Bepton Road	135.44	933.26	1.41	F	137.07	978.10	1.45	F
A272 Petersfield Road	24.83	116.38	1.08	F	9.23	57.94	0.94	F

The junction modelling presented in Table 8 shows that in the 2016 base year, the roundabout is performing within the accepted parameters as defined in Table 2, although the results for Bepton Road in the AM and, Rumbolds Hill and Bepton Road in the PM indicate that these arms are operating close to capacity.

When the traffic is factored up to 2032 (reference case) the performance of roundabout reduces with the three main arms of the roundabout over capacity (i.e. a Ratio of Flow to Capacity (RFC) greater than 1.0), in both the AM and PM peak periods.

Table 9: Summary of Scenario 3 Junction Assessment with 10% Sensitivity

	AM				PM			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	A1 - 1. BASE 2016							
A286 Rumbolds Hill	2.06	18.70	0.68	C	4.89	33.19	0.86	D
West Street	0.31	11.41	0.23	B	0.30	12.55	0.23	B
A286 Bepton Road	4.17	40.68	0.83	E	5.21	48.88	0.87	E
A272 Petersfield Road	2.49	19.26	0.73	C	1.61	14.26	0.62	B
	A1 - 2. BASE 2032							
A286 Rumbolds Hill	11.20	75.02	0.96	F	45.89	220.02	1.13	F
West Street	0.57	17.23	0.36	C	0.50	17.48	0.34	C
A286 Bepton Road	41.09	283.49	1.15	F	62.87	494.41	1.24	F
A272 Petersfield Road	10.97	62.16	0.98	F	4.49	32.04	0.84	D
	A1 - 3. BASE + DEV PO 2032							
A286 Rumbolds Hill	20.26	121.43	1.03	F	99.11	480.14	1.22	F
West Street	0.58	17.95	0.37	C	0.53	18.54	0.35	C
A286 Bepton Road	74.10	521.77	1.26	F	94.78	716.13	1.32	F
A272 Petersfield Road	13.28	72.12	1.00	F	5.55	38.47	0.87	E

The junction modelling presented in Table 9 shows that in the 2016 AM base year, the roundabout is performing within the accepted parameters as defined in Table 2. In the 2016 PM, Rumbolds Hill and Bepton Road are both over capacity based on the parameters presented in Table 2 however, a much improved position compared to Table 4.

When the traffic is factored up to 2032 (reference case) the performance of roundabout reduces with the three main arms of the roundabout over capacity (i.e. a Ratio of Flow to Capacity (RFC) greater than 1.0), in both the AM and PM peak periods.

The results of the scenario 3 assessment with and without the sensitivity test demonstrates that the with sensitivity, with local plan development performs better than the without sensitivity 2032 reference case. This indicates that a 10% reassignment, however achieved, would be enough to improve performance over the worst case assessment without development.

3.4 Comparison of Scenario 3 Local Plan Housing Allocation

The 2032 Scenario 3 with sensitivity test results have been compared to the results from the 2032 Scenario 1 with and without sensitivity tests from the January 2017 TA, to quantify the impacts and implications of the increased quantum of development and the revised location of housing allocations. The results of these comparisons are presented in Table 10 for the AM peak and Table 11 for the PM peak.

Table 10: Comparison of 2032 Scenario 1 with and without sensitivity and Scenario 3 with sensitivity (AM Peak)

	Q (Veh)			Delay (S)			RFC		
	S1	S1 st	S3 st	S1	S1 st	S3 st	S1	S1 st	S3 st
A286 Rumbolds Hill	61	18	20	316	109	121	1.18	1.02	1.03
West Street	1	1	1	20	18	18	0.40	0.38	0.37
A286 Bepton Rd	119	57	74	857	385	522	1.38	1.21	1.26
A272 Petersfield Rd	31	15	13	140	78	72	1.11	1.02	1.0

Note
st = 10% Sensitivity Test

Morning (AM) Peak

Table 10 compares the Scenario 1 AM with sensitivity and Scenario 3 AM with sensitivity test. It shows that the addition of 52 units within Midhurst and a further 60 units within Easebourne has the following impacts on the operation of the roundabout;

- No impact on the West Street arm;
- Slight improvement on the Petersfield Road arm (-6 seconds);
- Slight adverse impact on Rumbolds Hill (+12 seconds); and a
- Significant reduction in performance on the Bepton Road arm (+137 seconds).

The reduced performance of the Bepton Road arm in the S3 sensitivity test, is due to the increased housing allocation to the south of the roundabout. In the new assessment, a total of 170 dwellings are proposed to the south of roundabout, as opposed to 35 / 56 dwellings in the January 2017 TA (for Scenario 1 and Scenario 2 respectively). A further factor to consider is that there are now no allocations proposed onto A272 Petersfield Road, whereas previously there were 71 / 113 dwellings respectively. This will also affect the operation of the roundabout, as with lower levels of traffic entering the roundabout from the A272, fewer gaps onto the circulatory carriageway are created.

The increase in delay on Bepton Road equates to an additional 137 seconds or 2.28 minutes, taking the total delay to 8.7 minutes. It should however be noted that once the RFC exceeds a value of 1.0 the results for queuing and delay become increasingly unreliable and should therefore be treated with caution.

Although there has been some deterioration in the performance of the Bepton Road arm, the overall conclusion is that the result of the Scenario 3 with sensitivity test is broadly similar to the results of the Scenario 1 with sensitivity test.

The results for Scenario 3 with sensitivity are however significantly better than those reported the Scenario 1 test. It is therefore recommended that West Sussex County Council should be asked to consider whether as Local Highway Authority it can accept this assessment in the context of securing housing and economic needs of the town.

Table 11: Comparison of 2032 Scenario 1 with sensitivity and Scenario 3 with sensitivity (PM Peak)

	Q (Veh)			Delay (S)			RFC		
	S1	S1 st	S3 st	S1	S1 st	S3 st	S1	S1 st	S3 st
A286 Rumbolds Hill	156	73	99	757	342	480	1.35	1.19	1.22
West Street	1	1	1	19	18	19	0.36	0.4	0.35
A286 Bepton Rd	137	82	95	1014	631	716	1.46	1.3	1.32
A272 Petersfield Rd	13	5	6	74	36	38	0.98	0.86	0.87

Afternoon (PM) Peak

The comparison of Scenario 1 with sensitivity and Scenario 3 with sensitivity test demonstrates the following impacts on the operation of the roundabout;

- No impact on the West Street arm;
- Slight reduction in performance of the Petersfield Road arm (-2 seconds);
- A significant impact on Rumbolds Hill (+138 seconds); and a
- Adverse reduction in performance on the Bepton Road arm (+85 seconds).

In the PM peak (Table 11) Petersfield Road's (A272) performance has reduced slightly, but not significantly with the RFC just above 0.85. The performance of both arms on the A286 (Rumbolds Hill and Bepton Road) deteriorates in the new assessment, compared to the Scenario 1 with sensitivity results. Although there is only a slight change in the RFC values, as these values are in excess of 1.0, this results in exaggerated increases in delay, particularly on Rumbolds Hill (+138 seconds or 2.3 minutes). The increase in delay on Bepton Road is much less than in the AM peak (+85 seconds / 1.4 minutes) which is considered to be acceptable delay.

Although there has been some deterioration in the performance of the Bepton Road and Rumbolds Hill arms, the overall conclusion is that the result of the Scenario 3 with sensitivity test is broadly similar to the results of the Scenario 1 with sensitivity test. The results for Scenario 3 with sensitivity are however significantly better than those reported the Scenario 1 test. It is therefore recommended that West Sussex County Council should be asked to consider whether as Local Highway Authority it can accept this assessment in the context of securing housing and economic needs of the town.

3.5 Summary

The results of the Scenario 3 assessment demonstrate that the revised housing allocations for Midhurst and Easebourne will have an adverse impact on the operation of the Rumbolds Hill / West Street / Bepton Road / Petersfield Road roundabout compared to the 2032 Scenario 1 sensitivity test. However, in comparison to the 2032 Scenario 1 without sensitivity test the effect of the revised allocations are shown to provide an overall benefit. It is therefore recommended that West Sussex County Council should be asked to consider whether as Local Highway Authority it can accept this assessment in the context of securing housing and economic needs of the town

4 Petersfield/A3 junction

4.1 Summary of January 2017 Assessment

The January 2017 TA did not specifically assess the operation of the A3 / A272 junction at Petersfield as the impact of development traffic was found to be under the 10% threshold set in the study methodology.

Highways England (HE) was consulted as part of the Duty to Co-operate, and provided the following feedback on the January 2017 TA;;

> *"Highways England has concerns about the A3 / Winchester Road / Bedford Road / Winchester Road junction as the impact has not been assessed because the impact is predicted to be less than 10% (pages 37-39). However, additional traffic using this junction will have implications on the congestion already experienced here (particularly on the A3 northbound offslip in the AM peak hour), and thus this junction should be assessed and reviewed in detail, because if there is a deterioration in operation of the junction, mitigation will be required." (*May, 2017)

4.2 July 2017 Assessment

To determine whether the HE's concerns are warranted, an assessment of the merge and diverges in accordance with the methodology set out in TD 22/06 has been undertaken. The purpose of this assessment is to test whether the merge and diverge lanes on the A3 on and off slip roads are sufficient to provide the necessary stacking capacity for the level of traffic growth predicted. The results of this assessment are presented in Table 12.

Table 12: A3 / A272 Merge / Diverge Assessment

	2032 Base Flows				2032 Base + PO Development Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound	Northbound	Southbound
Upstream Mainline Flow (VPH)	2692	1390	1482	2395	2692	1390	1482	2395
Merging Flow (VPH)	566	474	450	880	595	497	486	929
Required Layout (Fig. 2/3 AP)	E (2 to 3)	E (1 to 2)	E (1 to 2)	E (2 to 3)	E (2 to 3)	E (1 to 2)	E (1 to 2)	E (2 to 3)
Downstream Mainline Flow (VPH)	2692	1390	1482	2395	2692	1390	1482	2395
Diverge Flow (VPH)	914	861	385	734	946	903	411	759
Required Layout (Fig. 2/5 AP)	C (3 to 2)	A	A	A	C (3 to 2)	A	A	A

The assessment indicates that there are no cases where the addition of the development traffic causes a change in the required merge or diverge layout, based on TD 22/06.

With regards to the merges, the assessment suggests that in the AM peak northbound (n/b) and PM peak southbound (s/b) there should be a lane gain, from two lanes to three lanes. This requirement is borderline and is triggered in the baseline scenario and would require a third lane on the A3 n/b north of the junction and s/b south of the junction. Given the only slight increase in flow (3,200-3,300vph), a third lane on the A3 is not considered necessary. The assessment also suggests that in the PM peak n/b and AM peak s/b there should be a lane gain, from one to two lanes. This finding can however be ignored, as the road is already two lanes.

With regards to the diverges, the assessment suggests that in the AM peak n/b there should be a lane drop from three lanes to two lanes. This requirement is triggered in the baseline scenario and would require a third lane on the A3 n/b south of the junction. The overall flows (3,600vph) on the A3 are however not considered to be significant enough to warrant this major undertaking. In all other scenarios the assessment suggests that no change to the diverge layout is required.

The findings of this assessment will be confirmed with Highways England, prior to finalising this technical note.

5 Summary and Conclusions

The purpose of this addendum technical note has been two fold;

- to respond to the revised locations and increased quantum of development within Midhurst, including the impacts of additional dwellings in Easebourne;
- to respond to concerns from Highways England with regard to the operational capacity of the A3 slip roads at the junction with the A272 at Petersfield.

The technical note has considered the impact that the update of the TEMPro datasets from version 6.2 to 7.2 may have on the results. The assessment concluded that the changes made to the dataset (-2% AM peak and -3% PM peak) would have minimal impact on the overall conclusions. Therefore for consistency, comparability and a robust assessment, dataset 6.2 has been maintained.

The assessment in Midhurst focused on the Rumbolds Hill (A286), West Street, Bepton Road (A286) and Petersfield Road roundabout. The previous assessment concluded that the junction was operating over capacity in the 2032 reference case and was operating with severe delays when the local plan development traffic was added. A sensitivity test was undertaken to assess the effect of traffic management measures on the wider highway network to understand whether alternative signing to re-route longer distance trips away from this constrained location would result in the necessary level of improvement to within acceptable operational parameters.

The results of the reassignment modelling demonstrated that junction performance (assessed in terms of delay) improved considerably over the previous assessment particularly in the AM peak. However the reassignment would not completely mitigate the operational problems, with Bepton Road still predicted to experience severe delays in the PM peak in the with-development traffic scenario. The difference between the reference case and the reference case plus development traffic is however at a more acceptable level.

This technical note has considered the impact of;

- a total of 202 dwellings within Midhurst, 52 more than the previous assessment;
- a redistribution of the dwellings, with more dwellings located to the south of the roundabout and no dwellings located to the west of the roundabout;
- a further 60 dwellings within Easebourne to the north of Midhurst, a proportion of which will use the roundabout during the peak hours; and
- the 10% sensitivity test.

The findings of this assessment have concluded that the additional housing allocations will not have a severe impact on the performance of the roundabout compared to the 2032 Scenario 1 assessment. Although the performance of the junction is shown to decline with the revised housing allocations compared to the Scenario 1 with sensitivity test, the majority of the impact is generated by the background traffic growth between 2016 and 2032. The impact of the housing allocation on top of this background growth is marginal, and therefore it is not considered reasonable to require mitigation on the back of the proposed allocations.

The assessment of the A3 / A272 slip roads has been undertaken to demonstrate to Highways England that mitigation is not required to offset the impacts of development on the slip roads, particularly the northbound A3 off-slips in the AM peak. The assessment has applied best practise guidance from TD 22/06, the results of which indicate that the main factor is background growth in traffic with the local plan development from the surrounding areas[3] having only a minimal impact on the merge and diverges.

[3] e.g. Petersfield and Liss