

Slough Borough Council

RESPONSE TO EXAMINING AUTHORITY'S (ExA) QUESTION 4.9.9 REGARDING THE EFFECTS OF THE SCHEME ON THE LOCAL ROAD NETWORK

HIGHWAYS ENGLAND'S RESPONSE

Would the applicant and other interested parties please state the current position with regard to dialogue between them, highlighting areas now agreed, areas not yet agreed and proposals for action?

Background

1. *SBC raised concerns in its Local Impact Report (REP2-047) about the potential effect of the Scheme on the local road network bearing in mind the Council's experience of M4 traffic being diverted onto the local network through the Borough as a result of motorway incidents and congestion. These concerns were again raised in SBC's response to the ExA's Second Written Questions (REP5-014) and SBC reported that traffic flow data had been requested from Highways England (HE). This information was submitted by HE at Deadline VI 29th January (REP6-05, 07 and 08) and SBC has, in the limited time available, made an assessment of the modelling results. The SBC assessment is based on the data provided and on the methodology employed by HE, accepting that modelling has uncertainties.*

Dialogue with HE

2. *Because the requested traffic data has only been with SBC since Deadline VI it has not been possible to discuss the results with HE.*

Areas Not Yet Agreed

3. *SBC's assessment focuses on the impact on the A4, A355 and A412 in and close to Slough both during the construction phases (2017, 2020), at opening (2022) and at design year (2037). HE refers to daily and two-way flows at peak times. SBC assesses one-way peak flows.*
4. *SBC's assessment highlights the following locations where the HE forecasts points to traffic increases during the construction phases:*
 - *A4 London Rd Brands Hill: 4% increase in AM peak (0800 to 0900) westbound towards J5 in 2020;*

Highways England Response

- 4.1 Table 3, provided at Appendix A to this response, shows the forecast flows at M4 junction 5 during construction of the Scheme for the am peak in 2020. The flows for the movement between A4 / Heathrow and A4 / Slough are highlighted and show the flow to increase from 92 vehicles per hour to 96 vehicles per hour over two lanes (equivalent to just under 1 vehicle per minute per lane) – an increase of 4%. Highways England considers that this scale of

change in both numerical and percentage terms, does not constitute a material impact and accordingly no further assessment is required.

- *A355 Farnham Rd at Buckingham Ave junction: increase of >5% in AM peak (0700 to 0900) and PM peak northbound in 2017;*

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- 4.2 In Figure 1 below, the flows on the A355 Farnham Road at Buckingham Avenue junction are shown at point B. During construction of the Scheme in 2017, for the combined two modelled am peak hours in the northbound direction, the flow is forecast to increase from $(322+484) = 806$ vehicles per two hours to $(340+509) = 849$ vehicles per two hours, an increase of 43 vehicles over two hours (less than 1 vehicle per minute) or 5.3%. During the pm peak hour, the flow is forecast to increase from 427 to 451 vehicles per hour, an increase of 24 vehicles per hour (less than 1 vehicle per minute) or 5.6%.
- 4.3 At this location, the A355 is a single carriageway with mixed use frontage properties. With reference to the urban road capacities set out in Table 2 of TA79/99 in DMRB¹, a worst-case assumption drawn from the capacities set out in Table 2 would be that the A355 has a peak hour capacity of 1300 vehicles per hour. The maximum forecast flow of 509 vehicles per hour between 8am and 9am would only represent some 40% of available capacity and accordingly it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.
- 4.4 The junction with Buckingham Avenue is controlled by traffic signals. The A355 approaches are flared to two lanes in each direction at the signal stop lines to accommodate turning traffic, with one lane in each direction reserved for straight-ahead movements. Without access to details of the various turning movement traffic flows and signal phasing and times, it is not possible to provide a definitive conclusion. However, on the basis of the modelled traffic flows Highways England considers that it is unlikely that the junction would not be able to accommodate an additional vehicle per minute which would typically equate to one vehicle per cycle of the traffic lights.
- 4.5 During the pm peak, the maximum forecast flow of 451 vehicles per hour between 5pm and 6pm would only represent some 35% of available capacity and accordingly it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.

¹ DMRB Volume 5, Section 1, Part 3, TA79/99 Amendment No 1, Chapter 3 – Determination of Urban Road Capacity

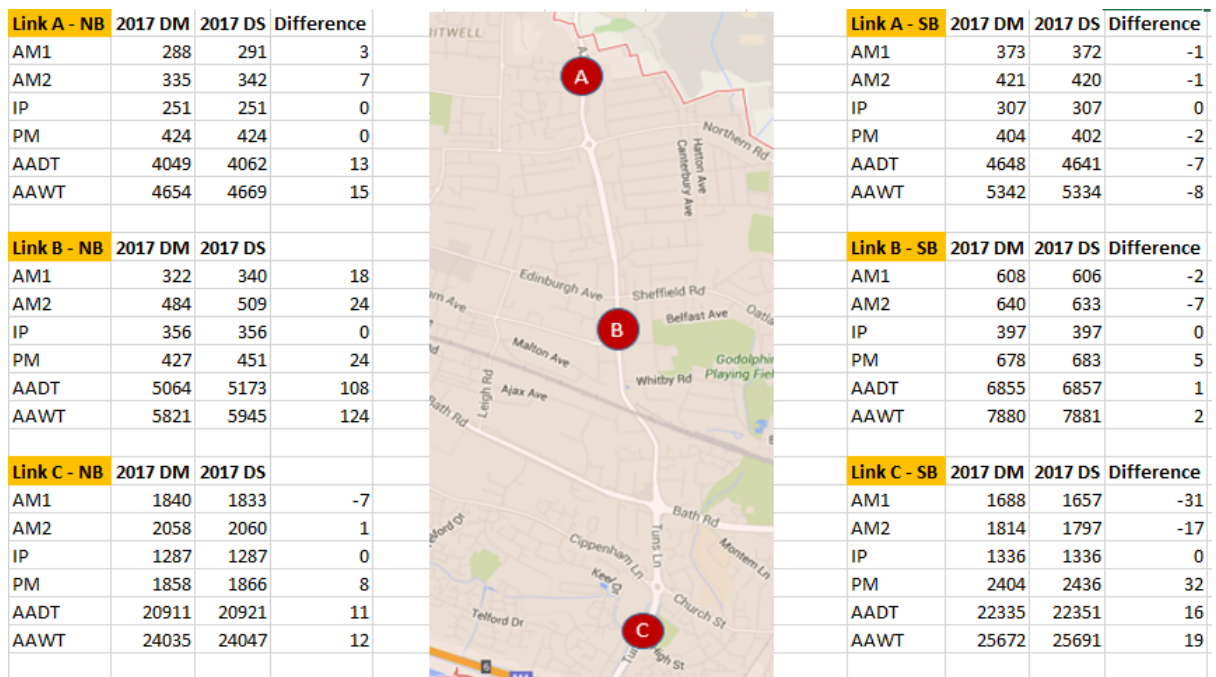


Figure 1: Traffic impact along A355 during construction TM – 2017

- A412 northbound: increases in 2020 in AM peak (0700 to 0900) flows in Yew Tree Rd (+12.5%); Uxbridge Road (+9.7%) and George Green (+7.9%);

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4.6 In Figure 2 below, the flows on the A412 at Yew Tree Road are shown at point C. During construction of the Scheme in 2020, for the combined two modelled am peak hours in the northbound direction, the flow is forecast to increase from $(424+480) = 904$ vehicles per two hours to $(489+528) = 1017$ vehicles per two hours, an increase of 113 vehicles over two hours (approximately 1 vehicle per minute) or 12.5%.

4.7 The section of the A412 at Yew Tree Road is a single carriageway with residential frontages and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 1300 vehicles per hour. The maximum forecast flow of 528 vehicles per hour between 8am and 9am would only represent some 40% of available capacity and accordingly it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.

4.8 In Figure 2 below, the flows on the A412 at Uxbridge Road are shown at point B. During construction of the Scheme in 2020, for the combined two modelled am peak hours in the northbound direction, the flow is forecast to increase from $(1245+1267) = 2512$ vehicles per two hours to $(1358+1397) = 2755$ vehicles per two hours, an increase of 243 vehicles over two hours (equivalent to 2 vehicles per minute) or 9.7%.

4.9 The section of the A412 at Uxbridge Road is a dual carriageway with mixed use frontages and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 2600 to 3200 vehicles per hour. As a worst case comparison, if the capacity were only 2600 vehicles per hour, the maximum forecast flow

of 1397 vehicles per hour between 8am and 9am would still only represent some 54% of available capacity and accordingly it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.

- 4.10 In Figure 2 below, the flows on the A412 at George Green are shown at point A. During construction of the Scheme in 2020, for the combined two modelled am peak hours in the northbound direction, the flow is forecast to increase from (1163+1196) = 2359 vehicles per two hours to (1255+1294) = 2549 vehicles per two hours, an increase of 190 vehicles over two hours and over two lanes (equivalent to 1.5 vehicles per minute per lane) or 7.9%.
- 4.11 The section of the A412 at George Green is a good standard dual carriageway with limited frontage access and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 3200 vehicles per hour. The maximum forecast flow of 1294 vehicles per hour between 8am and 9am would only represent some 40% of available capacity.
- 4.12 The junction with George Green Road is controlled by traffic signals. The A412 approaches are two lanes in each direction at the signal stop lines for straight ahead movements with separate provision for turning movements. Without access to details of the various turning movement traffic flows and signal phasing and times, it is not possible to provide a definitive conclusion. However, on the basis of the modelled traffic flows Highways England considers it unlikely that the junction would not be able to accommodate 1-2 additional vehicles per minute which would typically equate to 1-2 vehicles per cycle of the traffic lights. Accordingly, it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.

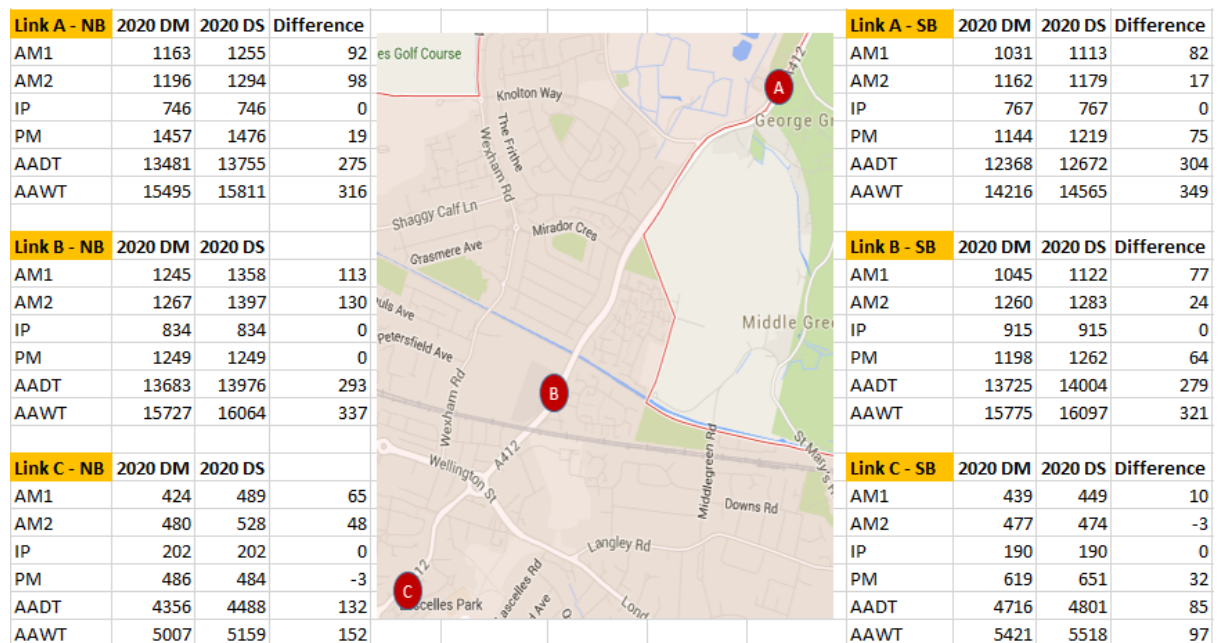


Figure 2: Traffic impact along A412 during construction TM - 2020

- *A412 southbound: increases in 2020 AM peak (0700 to 0900) flows in Uxbridge Road (+4%)_and George Green (+4.5%); and in PM peak in Yew Tree Rd (+5.3%), Uxbridge Rd (+5.3%); and George Green (+6.6%).*

Highways England Response

- 4.13 In Figure 2 above, the flows on the A412 at Uxbridge Road are shown at point B. During construction of the Scheme in 2020, for the combined two modelled am peak hours in the southbound direction, the flow is forecast to increase from $(1045+1260) = 2305$ vehicles per two hours to $(1122+1283) = 2405$ vehicles per two hours, an increase of 100 vehicles over two hours over two lanes (equivalent to less than 1 vehicle per minute per lane) or 4%.
- 4.14 The section of the A412 at Uxbridge Road is a dual carriageway with mixed use frontages and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 2600 to 3200 vehicles per hour. As a worst case comparison, if capacity were only 2600 vehicles per hour, the maximum forecast flow of 1283 vehicles per hour between 8am and 9am would still only represent some 50% of available capacity and accordingly it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.
- 4.15 In Figure 2 above, the flows on the A412 at George Green are shown at point A. During construction of the Scheme in 2020, for the combined two modelled am peak hours in the southbound direction, the flow is forecast to increase from $(1031+1162) = 2193$ vehicles per two hours to $(1113+1179) = 2292$ vehicles per two hours, an increase of 99 vehicles per two hours over two lanes (equivalent to less than 1 vehicle per minute per lane) or 4.5%.
- 4.16 The section of the A412 at George Green is a good standard dual carriageway with limited frontage access and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 3200 vehicles per hour. The maximum forecast flow of 1179 vehicles per hour between 8am and 9am would only represent some 37% of available capacity.
- 4.17 The junction with George Green Road is controlled by traffic signals. The A412 approaches are two lanes in each direction at the signal stop lines for straight ahead movements and separate provision for turning movements. Without access to details of the various turning movement traffic flows and signal phasing and times, it is not possible to provide a definitive conclusion. However, on the basis of the modelled traffic flows Highways England considers it unlikely that the junction would not be able to accommodate 1 additional vehicle per minute which would typically equate to 1 vehicle per cycle of the traffic lights. Accordingly, it is concluded that the additional traffic arising from the construction of the Scheme would not constitute a material impact.
- 4.18 During the pm peak hour, the flows at Yew Tree Road (point C) are forecast to increase from 619 to 651 vehicles per hour, an increase of 32 vehicles per hour (less than 1 vehicle per minute) or 5.2%. On the basis of a one-way peak hour capacity of 1300 vehicles per hour, a maximum forecast flow of 651 vehicles per hour between 5pm and 6pm would only represent some 50% of available

capacity. The flows at Uxbridge Road (point B) are forecast to increase from 1198 to 1262 vehicles per hour, an increase of 64 vehicles per hour over two lanes (equivalent to less than 1 vehicle per minute per lane) or 5.3%. On the basis of a one-way peak hour capacity of 2600 vehicles per hour, a maximum forecast flow of 1262 vehicles per hour between 5pm and 6pm would only represent some 49% of available capacity. The flows at George Green (point A) are forecast to increase from 1144 to 1219 vehicles per hour, an increase of 75 vehicles per hour over two lanes (equivalent to less than 1 vehicle per minute per lane) or 6.6%. On the basis of a one-way peak hour capacity of 3200 vehicles per hour and a maximum forecast flow of 1219 vehicles per hour between 5pm and 6pm would only represent some 38% of available capacity. It is concluded that in each of these cases, the additional traffic arising from the construction of the Scheme would not constitute a material impact.

5. *These increases are of concern to SBC in the light of the existing congested local road network particularly the likely impact on local junctions along the A355 and A412.*

Highways England Response

5.1 Highways England notes the concerns raised by Slough Borough Council in connection with the potential impacts arising during construction of the Scheme on the A355 and A412 routes within the Borough. Highways England has reviewed those concerns in respect of each of the routes and assessed the forecast increases in traffic against the capacity of each route to accommodate the forecast increases. Highways England's conclusion is that in each case the increases would not constitute a material impact and, as such, no further assessment is required.

6. *When the scheme becomes operational SBC's assessment of the HE data shows increase in traffic on the local road network as follows:*

- *J7 Huntercombe Spur northbound to A4: increases in AM peak in 2022 (+5.8%) and in 2037 (4.2%); and in PM peak in 2037 (+7.4%);*

Highways England Response

6.1 Table 21, provided at Appendix A to this response, shows the forecast flows at M4 junction 7 during operation of the Scheme for the am peak in 2022. The flows for the movement between M4 - East (London), M4 - West and Slough are highlighted and show the flows to increase from $(703 + 1165) = 1868$ vehicles per hour to $(829 + 1148) = 1977$ vehicles per hour – an increase of 109 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 5.8%. In 2037, the flows for the same movements are highlighted in Table 23 and forecast to increase from $(883 + 1132) = 2015$ vehicles per hour to $(890 + 1209) = 2099$ vehicles per hour – an increase of 84 vehicles per hour over two lanes (equivalent to less than 1 vehicle per minute per lane) or 4.2%.

6.2 Huntercombe Spur is a high standard dual carriageway with no frontage access and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 3600 vehicles per hour. The forecast flow in 2022 of 1977 vehicles per hour between 8am and 9am would only represent some 55% of available

capacity. Similarly, the forecast flow in 2037 of 2099 vehicles per hour between 8am and 9am would only represent some 58% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

6.3 The flow changes for the pm peak in 2037 are highlighted in Table 24 where the flows are forecast to increase from $((776 + 703) = 1479)$ vehicles per hour to $(849 + 738) = 1587$ vehicles per hour – an increase of 108 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 7.3%. The forecast flow in 2037 of 1587 vehicles per hour between 5pm and 6pm would only represent some 44% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

- *J7 Huntercombe Spur southbound from A4: increases in PM peak in 2022 (+5.5%) and in 2037 (+5.8%);*

Highways England Response

6.4 Table 22, provided at Appendix A to this response, shows the forecast flows at M4 junction 7 during operation of the Scheme for the pm peak in 2022. The flows for the movement between Slough and the M4 – East (London) and M4 – West are highlighted and show the flow to increase from $(603 + 1147) = 1750$ vehicles per hour to $(601 + 1245) = 1846$ vehicles per hour – an increase of 96 vehicles per hour over two lanes (equivalent to less than 1 vehicle per minute per lane) or 5.5%. The forecast flow in 2022 of 1846 vehicles per hour between 5pm and 6pm would only represent some 51% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

6.5 In 2037 the flows for the same movements are highlighted in Table 24 and forecast to increase from $(552 + 1153) = 1705$ vehicles per hour to $(520 + 1284) = 1804$ vehicles per hour – an increase of 99 vehicles per hour over two lanes (equivalent to less than 1 vehicle per minute per lane) or 5.8%. The forecast flow in 2037 of 1804 vehicles per hour between 5pm and 6pm would only represent some 50% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

- *A4 Bath Road (west of Huntercombe Spur roundabout): increase westbound in 2022 AM peak (+12%);*

Highways England Response

6.6 Figure 3 below shows the flow changes for the A4 Bath Road in the am peak in 2022 where an increase in flow is forecast from 1091 to 1222 vehicles per hour, an increase of 131 vehicles per hour, (equivalent to 2 vehicles per minute) or 12%.

6.7 The section of the A4 at Bath Road is a good standard single carriageway with limited frontages and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 1470 vehicles per hour. The maximum forecast flow of 1222

vehicles per hour between 8am and 9am would represent some 83% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

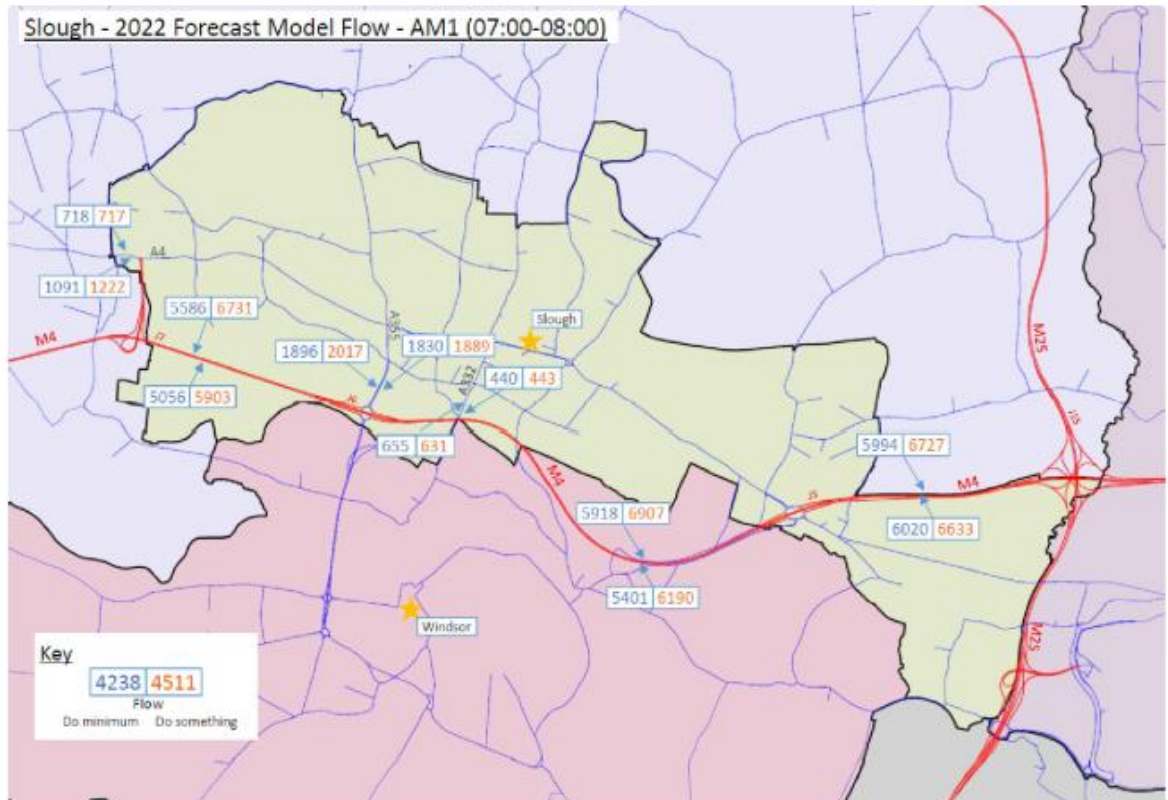


Figure 3: Forecast changes in am peak traffic flow in 2022 during operation of the Scheme

- A4 London Rd Langley westbound from J5: increases in AM peak in 2022 (+11.1%) and in 2037 (+11.9%); and

Highways England Response

6.8 Table 5, provided at Appendix A to this response, shows the forecast flows at M4 junction 5 during operation of the Scheme for the am peak in 2022. The flows for the movement between M4 - East (London), A4 / Heathrow, M4 – West and Slough are highlighted and show the flows to increase from $(432 + 89 + 494) = 1015$ vehicles per hour to $(425 + 81 + 622) = 1128$ vehicles per hour – an increase of 113 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 11.1%.

6.9 Westbound from Junction 5, the A4 London Road is a good standard dual carriageway with limited frontage access and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 3200 vehicles per hour. The forecast flow of 1128 vehicles per hour between 8am and 9am would only represent some 35% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

- 6.10 In 2037 the flows for the same movements are highlighted in Table 7 and forecast to increase from $(461 + 75 + 515) = 1051$ vehicles per hour to $(454 + 66 + 656) = 1176$ vehicles per hour – an increase of 125 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 11.9%. The forecast flow of 1176 vehicles per hour between 8am and 9am would only represent some 37% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.
- *A355 Tun's Lane northbound: increases in PM peak in 2022 (+6.1% to +9.5%) and in 2037 (+6%).*

Highways England Response

- 6.11 Table 14, provided at Appendix A to this response, shows the forecast flows at M4 junction 6 during operation of the Scheme for the pm peak in 2022. The flows for the movement between M4 - East (London), Windsor, M4 – West and Slough are highlighted and show the flows to increase from $(778 + 180 + 887) = 1845$ vehicles per hour to $(802 + 163 + 993) = 1958$ vehicles per hour – an increase of 113 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 6.1%.
- 6.12 Figure 4 below shows the derivation for the alternative value for the above flow quoted by Slough Borough Council. The northbound flow on the A355 is forecast to increase from 1785 to 1954 vehicles per hour, an increase of 169 vehicles per hour over two lanes (equivalent to 1.5 vehicles per minute per lane), or 9.5%.
- 6.13 The A355 Tun's Lane is a high standard dual carriageway with no frontage access and based on the DMRB TA79/99 guidance, a one-way peak hour capacity of 3600 vehicles per hour. The forecast flow in 2022 of 1958 vehicles per hour between 5pm and 6pm would only represent some 54% of available capacity. Similarly, the alternative forecast flow in 2037 of 1954 vehicles per hour between 5pm and 6pm would also only represent some 54% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.
- 6.14 Slough Borough Council in association with Thames Valley Berkshire Local Enterprise Partnership has developed proposals for improvements to the A355 north of Junction 6 with funding from the Government's Local Growth Fund. This includes a Hanger Lane style design at the Copthorne roundabout between the motorway and the A4 with traffic light controlled turning movements at Junction 6. Highways England and Slough Borough Council have agreed to continue their liaison over the design and construction of the two schemes to minimise any potential conflicts due to design and construction issues in their Statement of Common Ground. The A355 enhancement scheme includes the installation of a 30 mph speed limit between Junction 6 and the Copthorne roundabout. The traffic signals at the motorway junction are currently operated by Reading Borough Council and maintained by Slough Borough Council. Microprocessor Optimised Vehicle Actuation ("MOVA") is being installed. It is agreed in the Statement of Common

Ground that coordination between Highways England and Slough Borough Council will take place to ensure the smooth running of traffic between Junction 6 and the A355 in Slough, particularly for ‘high stress’ northbound movements.

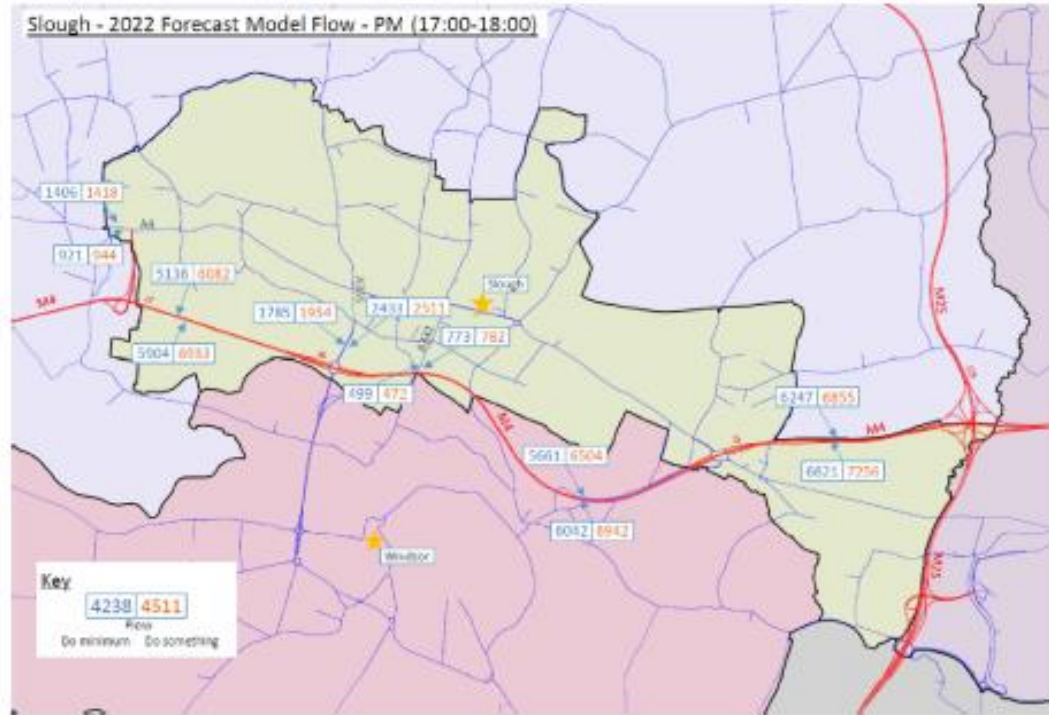


Figure 4: Forecast changes in pm peak traffic flow in 2022 during operation of the Scheme

6.15 In 2037 the flows for the same movements are highlighted in Table 16 and forecast to increase from $(795 + 171 + 883) = 1849$ vehicles per hour to $(812 + 146 + 1003) = 1961$ vehicles per hour – an increase of 112 vehicles per hour over two lanes (equivalent to 1 vehicle per minute per lane) or 6%. The forecast flow of 1961 vehicles per hour between 5pm and 6pm would only represent some 54% of available capacity and accordingly it is concluded that the additional traffic arising from the operation of the Scheme would not constitute a material impact.

7. *These increases are of concern to SBC in the light of the existing congested local road network particularly the likely impact on local junctions along the A4 (especially the junction with the Huntercombe Spur and at Langley) and A355 Tun's Lane.*

Highways England Response

7.1 Highways England notes the concerns raised by Slough Borough Council in connection with the potential impacts arising during operation of the Scheme on the Huntercombe Spur and A355 routes within the Borough. Highways England has reviewed those concerns in respect of each of the routes and assessed the forecast

increases in traffic against the capacity of each route to accommodate the forecast increases. Highways England concludes that in each case the increases would not constitute a material impact and, as such, no further assessment is required.

Proposals for Action

8. *Discussions are in progress between SBC and HE on the Statement of Common Ground with the aim of agreeing this by the Deadline VIII 29th February and it is anticipated that this will cover the issue of impact on the local road network summarised above.*

Highways England Response

- 8.1 Highways England notes the concerns raised by Slough Borough Council in connection with the potential impacts arising during operation of the Scheme on the Huntercombe Spur, A4 and A355 routes within the Borough. Highways England will continue to engage with the Borough Council to address these concerns and where appropriate undertake verification traffic surveys at relevant locations on these routes.
- 8.2 Highways England has commented further on this matter in its response to the Examining Authority's request for additional information on the proposed traffic modelling and mitigation requirement which has been submitted at Deadline VIII.

Appendix A - Highways England Traffic Information Tables

M4 – J5 Traffic Impact during Construction period 2017 / 2020

DM – Do Nothing Scenario, DS – With Construction TM (Phase 1 - 2017, Phase 2 – 2020)

Traffic figure are in Vehicles.

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	745	744	37	37	56	61
M4 - East (London)	413	409	0	0	293	295	4,614	4,417
A4/ Heathrow	93	94	239	245	9	9	577	578
M4 - West	413	420	4,183	3,965	541	537	0	0

Table 1 – 2017 Construction year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	755	764	20	20	168	176
M4 - East (London)	663	669	0	0	489	496	4,680	4,476
A4/ Heathrow	82	81	194	203	0	0	752	744
M4 - West	477	478	4,692	4,530	225	223	0	0

Table 2 – 2017 Construction year PM peak 17:00 - 18:00

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	761	746	38	39	52	49
M4 - East (London)	417	440	0	0	299	274	4,696	3,865
A4/ Heathrow	92	96	245	206	9	1	607	680
M4 - West	430	344	4,415	3,529	559	538	0	0

Table 3 – 2020 Construction year AM peak 08:00 - 09:00

To	A4/ Slough	M4 - East (London)	A4/ Heathrow	M4 - West
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From	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	806	800	20	26	154	107
M4 - East (London)	675	652	0	0	515	494	4,912	4,002
A4/ Heathrow	77	119	185	98	0	0	770	801
M4 - West	495	421	4,854	3,878	220	236	0	0

Table 4 – 2020 Construction year PM peak 17:00 - 18:00

M4 – J5 Traffic Impact during Operation 2022 / 2037

DM – Do Nothing Scenario, DS – With Smart Motorway (Opening year - 2022, Design Year – 2037)

Traffic figure are in Vehicles.

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	775	712	42	42	60	128
M4 - East (London)	432	425	0	0	311	274	4,802	5,474
A4/ Heathrow	89	81	280	263	1	0	609	648
M4 - West	494	622	4,583	5,279	592	642	0	0

Table 5 – 2022 Opening year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	800	756	24	22	196	193
M4 - East (London)	679	592	0	0	548	461	5,032	5,872
A4/ Heathrow	87	109	216	165	0	0	725	750
M4 - West	495	598	4,901	5,621	220	233	0	0

Table 6 – 2022 Opening year PM peak 17:00 - 18:00

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	783	683	43	40	87	188
M4 - East (London)	461	454	0	0	340	289	5,158	5,816
A4/ Heathrow	75	66	313	268	0	0	631	677
M4 - West	515	656	4,699	5,637	585	617	0	0

Table 7 – 2037 Design year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		A4/ Heathrow		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	852	812	20	19	167	175

M4 - East (London)	681	563	0	0	608	497	5,166	6,058
A4/ Heathrow	86	104	183	131	0	0	755	788
M4 - West	524	651	5,095	5,970	219	236	0	0

Table 8 – 2037 Design year PM peak 17:00 - 18:00

M4 – J6 Traffic Impact during Construction period 2017 / 2020

DM – Do Nothing Scenario, DS – With Construction TM (Phase 1 - 2017, Phase 2 – 2020)

Traffic figure are in Vehicles.

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	992	1,005	292	284	524	501
M4 - East (London)	709	701	0	0	377	383	4,160	3,971
Windsor	378	376	446	449	0	0	275	268
M4 - West	1,035	1,042	3,757	3,535	284	282	0	0

Table 9 – 2017 Construction year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,095	1,165	374	358	931	851
M4 - East (London)	749	759	0	0	603	615	4,332	4,107
Windsor	199	197	485	480	0	0	218	195
M4 - West	953	937	3,880	3,543	89	90	0	0

Table 10 – 2017 Construction year PM peak 17:00 - 18:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,017	897	256	305	557	536
M4 - East (London)	712	706	0	0	379	366	4,263	3,519
Windsor	356	406	475	432	0	0	260	174
M4 - West	1,050	946	3,976	3,146	283	268	0	0

Table 11 – 2020 Construction year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
From	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,079	985	383	363	939	973
M4 - East (London)	757	711	0	0	588	450	4,576	3,837
Windsor	196	228	487	437	0	0	226	196
M4 - West	960	903	4,075	3,164	78	112	0	0

Table 12 – 2020 Construction year PM peak 17:00 - 18:00

M4 – J6 Traffic Impact during Operation 2022 / 2037

DM – Do Nothing Scenario, DS – With Smart Motorway (Opening year - 2022, Design Year – 2037)

Traffic figure are in Vehicles.

To	A4/Slough		M4 – East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,153	1,171	246	229	610	695
M4 - East (London)	714	657	0	0	381	425	4,367	5,169
Windsor	349	291	486	544	0	0	283	306
M4 - West	1,081	1,221	4,105	4,931	257	339	0	0

Table 13 – 2022 Opening year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,105	1,063	379	350	951	983
M4 - East (London)	778	802	0	0	555	575	4,708	5,563
Windsor	180	163	495	500	0	0	216	331
M4 - West	887	993	4,095	4,799	157	157	0	0

Table 14 – 2022 Opening year PM peak 17:00 - 18:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,274	1,284	220	202	650	703
M4 - East (London)	681	623	0	0	427	474	4,763	5,594
Windsor	316	264	522	562	0	0	326	356
M4 - West	1,176	1,336	4,112	5,167	276	378	0	0

Table 15 – 2037 Design year AM peak 08:00 - 09:00

To	A4/ Slough		M4 - East (London)		Windsor		M4 - West	
	DM	DS	DM	DS	DM	DS	DM	DS
A4/ Slough	0	0	1,134	1,117	286	262	993	1,088
M4 - East (London)	795	812	0	0	546	584	4,851	5,803

Windsor	171	146	505	510	0	0	278	420
M4 - West	883	1,003	4,288	5,335	127	117	0	0

Table 16 – 2037 Design year PM peak 17:00 - 18:00

M4 – J7 Traffic Impact during Construction period 2017 / 2020

DM – Do Nothing Scenario, DS – With Construction TM (Phase 1 - 2017, Phase 2 – 2020)

Traffic figure are in Vehicles.

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	594	655	689	634
M4 - East (London)	589	655	0	0	4,326	4,045
M4 - West	1,115	997	4,482	4,199	0	0

Table 17 – 2017 Construction year AM peak 08:00 - 09:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	537	573	1,103	959
M4 - East (London)	750	793	0	0	4,758	4,381
M4 - West	626	559	4,358	4,071	0	0

Table 18 – 2017 Construction year PM peak 17:00 - 18:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	565	562	708	709
M4 - East (London)	589	470	0	0	4,439	3,713
M4 - West	1,204	1,258	4,747	3,794	0	0

Table 19 – 2020 Construction year AM peak 08:00 - 09:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	526	461	1,151	1,176
M4 - East (London)	744	680	0	0	5,042	4,338
M4 - West	691	699	4,568	3,705	0	0

Table 20 – 2020 Construction year PM peak 17:00 - 18:00

M4 – J7 Traffic Impact during Operation 2022 / 2037

DM – Do Nothing Scenario, DS – With Smart Motorway (Opening year - 2022, Design Year – 2037)

Traffic figure are in Vehicles.

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	571	622	683	649
M4 - East (London)	703	829	0	0	4,499	5,271
M4 - West	1,165	1,148	4,876	5,858	0	0

Table 21 – 2022 Opening year AM peak 08:00 - 09:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	603	601	1,147	1,245
M4 - East (London)	752	795	0	0	5,162	6,125
M4 - West	665	657	4,519	5,496	0	0

Table 22 – 2022 Opening year PM peak 17:00 - 18:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	544	551	651	659
M4 - East (London)	883	890	0	0	4,770	5,676
M4 - West	1,132	1,209	5,020	6,337	0	0

Table 23 – 2037 Design year AM peak 08:00 - 09:00

To	Slough		M4 - East (London)		M4 - West	
	DM	DS	DM	DS	DM	DS
Slough	0	0	552	520	1,153	1,284
M4 - East (London)	776	849	0	0	5,397	6,493

M4 - West	703	738	4,735	5,921	0	0
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Table 24 – 2037 Design year PM peak 17:00 - 18:00