Appendix K: Model Outcomes and Figures

# 1 SWDR Traffic impact assessment using WSTM3

## 1.1 List of option tests

1.1.1 As part of the South Wokingham corridor study three main options for South Wokingham Distributor Road (SWDR) have been considered, which are schematically shown in figure 1 and further detailed in table 1.



Figure 1: South Wokingham Distributor Road. Schematic representation of options A, B and C

	Table 1: SWDR option	is A, B and C
Option	WSTM3 test reference	Description
	number	
A	WSTM3_26am_Jan2013_C021g	Option A WDXINOHAA HITTING ALL ALL ALL ALL ALL ALL ALL ALL ALL AL
В	WSTM3_26am_Jan2013_C021	Option B UDDRODHAM Ing: Centry Produce Ing: Ce
С	WSTM3_26am_Jan2013_C021h	Option C VEX.0000244.04 Figure Company Figure Company Figu

1.1.2 Fourteen variations of Option B have been considered and the impact of each of them is summarised in table 2.

Option	WSTM3 test reference number	Description
B1	WSTM3_26am_Jan2013_C021b	Option B1 VDDNGHAM Here Remains Handler Handle
B2	WSTM3_26am_Jan2013_C021c	Determined WORMORAAM Engel Gregory Registerregery R

### Table 2:SWDR Option B variation tests

Option	WSTM3 test reference number	Description
В3	WSTM3_26am_Jan2013_C021d	Option B3 UCXXXVIIAUM Telefonter Manager Telefonter
Β4	WSTM3_26am_Jan2013_C021e	Option Bit UCDVDHAM Intervention For average For avera
В5	WSTM3_26am_Jan2013_C021f	Option B5       UDWDGAM       Die Genement       Die Genent       Die Genement </th

Option	WSTM3 test reference number	Description
В6	WSTM3_26am_Jan2013_C021i	Option Bill VCENNOHAM Mentanya Managana Managa Managana Managana Mana Managana Managana Mana
В7	WSTM3C_2026am_21J	Option B7 VORNOHAM Processory Annual Processory Annual Procesory Annual Processory Annual Processory Annual Processory A
B8	WSTM3C_2026am_21k	Option BB       VEX.VVDHAM       Market and

Option	WSTM3 test reference number	Description
В9	WSTM3C_2026am_211	Determine   Manual
B10	WSTM3C_2026am_21m	Option B10 VCOUVGHAM by Conversion weather wea
B11	WSTM3C_2026am_21n	Option B11 UCRNDIAN Det creases Det creases Det creases Det de

Option	WSTM3 test reference number	Description
B12	WSTM3C_2026am_21q	Option B12     UPCNIDHAM
B13	WSTM3C_2026am_21r	Option B13 WCONDHAM Eng Campany Manager Deshare Res Design
B14	WSTM3C_2026am_21s	Option B14 WDWWGHAM Hugher Handler Hugher Handler H

1.1.3 All scenarios have been tested using the WSTM3 model. The AM and PM peak hour 2026 Scenario C models (January 2013) were used as the basis for the assessment. The WSTM3 forecast model development is described in detail in the "WSTM3. Forecasting Report. Forecasting Methodology and Results", 26/03/2013.

## 1.2 Base year model validation

- 1.2.1 The development, calibration and validation of the WSTM3 to 2010 conditions are fully reported in the "WSTM3 Local Model Validation Report (LMVR), January 2013". This section summarises the results of the model validation in the South Wokingham area.
- 1.2.2 Figure 2 shows all highway survey data locations in Wokingham Town Centre (WTC) and South Wokingham, which were used to validate the model. The survey data includes Automatic Traffic Counts (ATC) and junction Manual Classified Turning Counts (MCTC).



Figure 2: Locations of the Survey Sites. Wokingham Town Centre and South Wokingham

1.2.3 Figure 3 and figure 4 show the link validation around the South Wokingham area. Most of the links have a GEH of less than five indicating that WSTM3 has been validated well for the South Wokingham area.



Figure 3: South Wokingham GEH. AM peak hour



Figure 4: South Wokingham GEH. PM peak hour

1.2.4 Junction turning count data was collected at the Finchampstead Road/Molly Millar's Lane junction. The observed and modelled turning movement validation statistics for this site are presented in table 3.



Table 3: Finchampstead Road/Molly Millar's Lane junction validation statistics

- 1.2.5 The Finchampstead Road/Molly Millar's Lane junction is reasonably well validated both in the AM and PM peak models with the GEH on the majority of movements being less than 5.0. In the AM peak the Finchampstead Road south north movement has a GEH value of 5.9 with the modelled flows being 158 vehicles higher than observed flows. In the PM peak model a number of movements show GEH values greater than 5.0. These are Finchampstead Road north south and south north movements and the Molly Millar's Lane Finchampstead Road North movement.
- 1.2.6 The discrepancies between the observed and modelled junction turning movements are taken into account when a local area assessment of the western end of the SWDR is undertaken using Paramics.

## 1.3 WSTM3 Base, Scenario A and B results

- 1.3.1 The development, calibration and validation of the WSTM3 to 2010 conditions are fully reported in the "WSTM3 Local Model Validation Report (LMVR), January 2013". To enable a comparison of network performance between alternative land use and infrastructure scenarios three forecast year scenarios were developed:
  - Scenario A: takes into account planned development outside Wokingham borough, committed development in the borough but no SDL development in the borough
  - **Scenario B**: includes development in Scenario A plus SDL development in the borough with onsite infrastructure provision
  - Scenario C: based on Scenario B plus off-site transport interventions required to mitigate impacts of SDL development. Scenario C is effectively the same as SWDR Option B test.
- 1.3.2 The WSTM3 forecast model development is described in detail in the "WSTM3. Forecasting Report. Forecasting Methodology and Results", 26/03/2013.
- 1.3.3 This section provides figures of modelled link flows and VoC values for the Base, forecast Scenarios A and B. Scenario C (SWDR Option B) values are presented later in the document in Section 1.4 "Option A, B and C test results".
- 1.3.4 The values are reproduced in this section to undertake the comparison of the SWDR results with the 2010 situation and 2026 different land use and infrastructure assumptions.

### 1.3.5 WSTM3 2026 forecast scenarios A, B and C should not be confused with SWDR Option Tests A, B and C.

- 1.3.6 The VoC figures show link VoC and maximum junction turning movement VoC. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.3.7 In comparison with the 2010 base year network performance becomes increasingly worse as additional trips are accommodated with minor improvements as included in scenario A with committed development and scenario B with full SDL delivery in 2026.



Figure 5: 2010 Base AM peak actual flows, pcu



Figure 6: 2010 Base AM peak link and maximum junction turning movement VoC, %



Figure 7: 2010 Base PM peak actual flows, pcu



Figure 8: 2010 Base PM peak link and maximum junction turning movement VoC, %



Figure 9: WSTM3 2026 Scenario A. AM peak actual flows, pcu



Figure 10: WSTM3 2026 Scenario A. AM peak link and maximum junction turning movement VoC, %



Figure 11: WSTM3 2026 Scenario A. PM peak actual flows, pcu



Figure 12: WSTM3 2026 Scenario A. PM peak link and maximum junction turning movement VoC, %



Figure 13: WSTM3 2026 Scenario B. AM peak actual flows, pcu



Figure 14: WSTM3 2026 Scenario B. AM peak link and maximum junction turning movement VoC, %



Figure 15: WSTM3 2026 Scenario B. PM peak actual flows, pcu



Figure 16: WSTM3 2026 Scenario B. PM peak link and maximum junction turning movement VoC, %

# 1.4 Option A, B and C test results

- 1.4.1 This section describes the traffic impacts of Options A, B and C. Option B results are described first followed by Option A and C results, which are compared against Option B.
- 1.4.2 The assessment of the SWDR options have been undertaken through examining the following network parameters:
  - traffic flows and flow differences on key links
  - Iink and maximum junction turning movement VoC.

### **OPTION B**

- 1.4.3 Option B assumes that the SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout as in the base. The A321 Finchampstead Road Road/Molly Millar's Lane junction also remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.4 Option B is described first in this section as it approximates to the SWDR alignment shown in the South Wokingham SDL Supplementary Planning Document adopted in October 2011. Schematic presentation of Option B alignment and test assumptions are shown in figure 17.



Figure 17: Option B assumptions

- 1.4.5 Modelled flows predicted under Option B are presented in figure 18 for the AM peak and figure 20 for the PM peak.
- 1.4.6 Figures 19 and 21 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.7 In Option B the SWDR is predicted to attract in the AM peak 556-989 pcu in the eastbound direction and 509-769 pcu in the westbound direction. In the PM peak the SWDR is forecast to carry 423-647 pcu in the eastbound direction and 426-811 pcu in the westbound direction.
- 1.4.8 Both the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values at these locations approaching or exceeding 100% both in the AM and PM peaks, indicating a need for considered junction designs.



Figure 18: Option B. 2026 AM peak actual flows, pcu



Figure 19: Option B. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 20: Option B. 2026 PM peak actual flows, pcu



Figure 21: Option B. 2026 PM peak link and maximum junction turning movement VoC, %

1.4.10 An additional analysis of traffic flows has been undertaken at the western end of the SWDR. An area of Finchampstead Road (as shown in figure 22) has been cordoned to produce the AM and PM peak cordoned matrices. The matrices will also be used to undertake a micro-simulation analysis of this area using Paramics. This is reported in a separate section of this document.



Figure 22: Cordoned area of Finchampstead Road

# 1.4.11 The AM and PM peak cordoned matrices of demand flows are reproduced in table 4 and 5 correspondingly.

### Table 4: Cordoned matrices of demand flows. AM peak hour.

WSTM3 Base 2010

AM	M Demand flow,pcu												
		То С											
		Wellington Ro	Denmark St	Langborou	Access to	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	11	23	52	13	168	3	6	0	4	15	295
	Denmark St	58	0	6	39	15	192	433	4	16	10	11	784
	Langborough Rd	50	6	0	2	4	63	122	4	7	4	3	265
	Access to Tesco (SWDR in th	6	0	2	0	0	17	38	0	0	0	0	63
	Tangley Dr	3	0	1	0	0	19	15	0	0	0	0	38
From	Finchampstead Rd	538	13	126	36	32	0	193	4	14	1	17	975
	Molly Millar's Ln	124	14	287	33	30	170	0	15	122	44	34	872
	Oakley Dr	4	0	4	0	0	0	4	0	0	0	0	13
	Crail Close	17	0	43	0	0	26	15	0	0	0	0	101
	Carey Rd	2	0	2	0	0	1	2	0	0	0	0	6
	Carnival Pool Car Park	4	0	1	0	0	3	0	0	0	0	0	8
	Grand Total	806	44	494	163	94	659	825	32	159	62	80	3,420

# Option B (Central case: 30MPH on the SDR, with the bridge and Waterloo road closure)

AIVI				Jemanum	Jw,pcu								
							То						Grand
		Wellington Ro	Denmark St	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	17	33	53	23	239	9	5	1	6	23	408
	Denmark St	96	0	31	20	17	262	261	6	28	12	25	758
	Langborough Rd	245	11	0	0	1	61	49	1	2	1	5	376
	SWDR	114	2	2	0	10	130	498	7	22	5	3	793
1	Tangley Dr	3	0	0	1	0	32	8	0	0	0	0	44
From	Finchampstead Rd	505	26	52	203	33	0	193	5	79	7	44	1,147
1	Molly Millar's Ln	94	26	191	400	14	144	0	17	69	64	39	1,058
1	Oakley Dr	4	0	0	6	0	0	4	0	0	0	0	14
1	Crail Close	5	0	0	78	0	30	30	0	0	0	0	144
	Carey Rd	1	0	0	2	0	1	2	0	0	0	0	6
	Carnival Pool Car Park	7	0	6	0	0	5	1	0	0	0	0	18
	Grand Total	1,074	83	315	763	99	904	1,054	40	201	95	140	4,768

#### Difference, Option B minus Base

AM				Demand fl	ow,pcu								
							То						Grand
		Wellington Ro	Denmark St	Langboro	SWDR	Tangley D	Finchamp	Molly Mil	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	5	9	0	10	71	6	-1	0	2	. 8	113
	Denmark St	38	0	25	-20	2	. 69	-173	2	12	. 3	. 14	-26
	Langborough Rd	195	6	0	-2	-3	-3	-72	-3	-6	-3	. 2	111
	SWDR	107	2	. 0	0	10	114	460	7	22	. 5	3	730
	Tangley Dr	0	0	0	1	0	13	-7	0	0	0	0	6
From	Finchampstead Rd	-34	13	-74	167	2	. 0	0	0	65	6	26	173
	Molly Millar's Ln	- 30	12	-96	368	-16	-27	0	2	-53	20	5	186
	Oakley Dr	0	0	-3	6	0	0	-1	0	0	0	0	2
	Crail Close	- 12	. 0	-43	78	0	5	16	0	0	0	0	43
	Carey Rd	0	0	-1	2	0	0	0	0	0	0	0	0
	Carnival Pool Car Park	3	, 0	5	0	0	1	0	0	0	0	0	10
	Grand Total	268	38	-179	601	5	244	229	8	42	. 33	60	1,348

#### Table 5:Cordoned matrices of demand flows. PM peak hour.

#### WSTM3 Base 2010

PM	V Demand flow,pcu												
			То										
		Wellingto	Denmark S	Langborou	Access to	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	6	38	9	3	482	14	2	1	2	1	559
	Denmark St	34	0	13	4	2	264	142	3	36	1	0	499
	Langborough Rd	40	6	0	6	3	37	133	1	3	1	0	231
	Access to Tesco (SWDR i	79	0	14	0	0	58	127	0	0	0	0	277
	Tangley Dr	18	0	32	0	0	16	59	0	0	0	0	125
From	Finchampstead Rd	455	15	68	20	11	0	129	1	11	1	3	713
	Molly Millar's Ln	30	7	225	47	17	260	0	10	30	7	20	653
	Oakley Dr	11	0	8	0	0	7	3	0	0	0	0	29
	Crail Close	13	0	31	0	0	12	37	0	0	0	0	93
	Carey Rd	19	0	5	0	0	1	57	0	0	0	0	83
	Carnival Pool Car Park	25	0	4	0	0	33	2	0	0	0	0	64
	Grand Total	723	36	437	86	36	1,171	703	17	81	12	25	3,327

Option B (Central case: 30MPH on the SDR, with the bridge and Waterloo road closure) PM Demand flow.pcu

		-		Boind	ina nomp	Ju							
							То						Grand
		Wellingto	Denmark	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	15	75	25	1	362	27	2	1	2	19	527
	Denmark St	194	0	32	20	3	267	83	2	11	1	7	622
	Langborough Rd	151	10	0	0	0	60	52	0	1	0	9	285
	SWDR	114	1	1	0	6	237	453	4	42	1	0	859
	Tangley Dr	19	0	1	69	0	22	60	0	0	0	0	171
From	Finchampstead Rd	599	23	71	120	16	1	165	0	20	6	12	1,035
	Molly Millar's Ln	50	12	126	393	23	337	0	12	31	2	13	999
	Oakley Dr	12	0	1	10	0	7	4	0	0	0	0	34
	Crail Close	4	0	1	43	0	14	56	0	0	0	0	119
	Carey Rd	39	0	13	2	0	1	42	0	0	0	0	97
	Carnival Pool Car Park	47	0	22	1	0	58	15	0	0	0	0	143
	Grand Total	1,230	60	343	683	50	1,367	957	20	107	13	60	4,890

#### Difference, Option B minus Base

PM	V Demand flow,pcu												
							То						Grand
		Wellingto	Denmark	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	8	37	16	-3	-120	13	0	0	0	17	- 32
	Denmark St	161	0	20	17	0	3	-59	-1	-25	0	7	123
	Langborough Rd	112	4	0	-6	-3	23	-82	-1	-2	-1	8	54
	SWDR	36	1	-12	0	6	179	326	4	42	1	0	582
	Tangley Dr	1	0	-31	69	0	5	1	0	0	0	0	45
From	Finchampstead Rd	144	7	3	100	6	0	36	0	9	6	9	321
	Molly Millar's Ln	20	4	-99	345	7	77	0	2	1	-5	-6	346
	Oakley Dr	2	0	-7	10	0	0	1	0	0	0	0	4
	Crail Close	-9	0	-29	43	0	2	19	0	0	0	0	26
	Carey Rd	20	0	7	2	0	0	-15	0	0	0	0	14
	Carnival Pool Car Park	22	0	18	1	0	25	13	0	0	0	0	79
	Grand Total	507	24	-94	597	13	196	254	3	26	1	36	1,563

- 1.4.12 Compared to the base year the volume of traffic going through the area is forecast to increase by 1,348 pcu in the AM peak and by 1,563 pcu in the PM peak, which is equivalent to a 38% and 47% increase in each of the peaks.
- 1.4.13 Option B cordoned matrices of demand flows show that the main movements through the two roundabouts on the western end of the SWDR are between Finchampstead Road and Wellington

road and SWDR and Molly Millar's Lane (both directions). The SWDR - Molly Millar's Lane movement shows a significant increase in traffic in Option B compared to the base resulting in increases in delays on the Finchampstead Road and Molly Millar's Lane approaches. This indicates that any mitigation in this area should consider this interaction.

### **OPTION A**

- 1.4.14 Schematic presentation of Option A alignment and test assumptions are shown in figure 23.
- 1.4.15 Option A assumes that SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road between the SWDR and Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.16 This Option A is very similar to Option B but assumes that the SWDR runs closer to the railway line thus providing a slightly shorter route.



Figure 23: Option A assumptions

- 1.4.17 Modelled flows predicted under Option A are presented in figure 24 for the AM peak and figure 27 for the PM peak. Option A flows have been compared against Option B flows and the changes in flows are demonstrated in figures 25 and 28 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic in the northern option whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.4.18 Figures 26 and 29 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC

value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.19 The shorter northern route in Option A is forecast to attract up to 179 more pcu in the AM peak and up to 89 additional pcu in the PM peak thus further reducing the traffic levels in Wokingham.
- 1.4.20 Similar to Option B in the northern Option A the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 24: Option A. 2026 AM peak actual flows, pcu



Figure 25: Option A minus Option B. 2026 AM peak actual flows, pcu



Figure 26: Option A. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 27: Option A. 2026 PM peak actual flows, pcu



Figure 28: Option A minus Option B. 2026 PM peak actual flows, pcu



Figure 29: Option A. 2026 PM peak link and maximum junction turning movement VoC, %

### **OPTION C**

- 1.4.21 Schematic presentation of Option C alignment and test assumptions are shown in figure 30.
- 1.4.22 Option C assumes that SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road between the SWDR and Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.23 This Option C very similar to Option B but assumes that the SWDR runs further away from the railway line thus providing a slightly longer route.



Figure 30: Option C assumptions

- 1.4.24 Modelled flows predicted under Option C are presented in figure 31 for the AM peak and figure 34 for the PM peak. Option C flows have been compared against Option B flows and the changes in flows are demonstrated in figures 32 and 35 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic in the southern option whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.4.25 Figures 33 and 36 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates a spare capacity. A

VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.26 In comparison with Option B the longer southern route is predicted to attract up to 357 less two-way pcu in the AM peak and up to 260 less pcu in the PM peak resulting in slightly higher volumes of traffic in Wokingham especially on the A329 London Road.
- 1.4.27 Similar to Option B in the southern Option C the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 31: Option C. 2026 AM peak actual flows, pcu

Appendix K: Model Outcomes and Figures

# 1 SWDR Traffic impact assessment using WSTM3

## 1.1 List of option tests

1.1.1 As part of the South Wokingham corridor study three main options for South Wokingham Distributor Road (SWDR) have been considered, which are schematically shown in figure 1 and further detailed in table 1.



Figure 1: South Wokingham Distributor Road. Schematic representation of options A, B and C
	Table 1: SWDR option	is A, B and C
Option	WSTM3 test reference	Description
	number	
A	WSTM3_26am_Jan2013_C021g	Option A WDXINOHAA HITTING ALL ALL ALL ALL ALL ALL ALL ALL ALL AL
В	WSTM3_26am_Jan2013_C021	Option B UDDRODHAM Ing: Centry Produce Ing: Ce
С	WSTM3_26am_Jan2013_C021h	Option C VEX.0000244.04 Figure Company Figure Company Figu

1.1.2 Fourteen variations of Option B have been considered and the impact of each of them is summarised in table 2.

Option	WSTM3 test reference number	Description
B1	WSTM3_26am_Jan2013_C021b	Option B1 VDDNGHAM Here Remains Handler Handle
B2	WSTM3_26am_Jan2013_C021c	Determined WORMORAAM Engel Gregory Registerregery R

### Table 2:SWDR Option B variation tests

Option	WSTM3 test reference number	Description
В3	WSTM3_26am_Jan2013_C021d	Option B3 UCXXXVIIAUM Telefonter Manager Telefonter
Β4	WSTM3_26am_Jan2013_C021e	Option Bit UCDVDHAM Intervention For average For avera
В5	WSTM3_26am_Jan2013_C021f	Option B5       UDWDGAM       Die Genement       Die Genent       Die Genement </th

Option	WSTM3 test reference number	Description
В6	WSTM3_26am_Jan2013_C021i	Option Bill VCENNOHAM Mentanya Managana Managa Managana Managana Mana Managana Managana Mana
В7	WSTM3C_2026am_21J	Option B7 VORNOHAM Processory Annual Processory Annual Procesory Annual Processory Annual Processory Annual Processory A
B8	WSTM3C_2026am_21k	Option BB       VEX.VVDHAM       Market and

Option	WSTM3 test reference number	Description
В9	WSTM3C_2026am_211	Determine   Manual
B10	WSTM3C_2026am_21m	Option B10 VCOUVGHAM by Conversion weather wea
B11	WSTM3C_2026am_21n	Option B11 UCRNDIAN Det creases Det creases Det creases Det de

Option	WSTM3 test reference number	Description
B12	WSTM3C_2026am_21q	Option B12     UPCNIDHAM
B13	WSTM3C_2026am_21r	Option B13 WCONDHAM Eng Campany Manager Deshare Res Design
B14	WSTM3C_2026am_21s	Option B14 WDWWGHAM Hugher Handler Hugher Handler H

1.1.3 All scenarios have been tested using the WSTM3 model. The AM and PM peak hour 2026 Scenario C models (January 2013) were used as the basis for the assessment. The WSTM3 forecast model development is described in detail in the "WSTM3. Forecasting Report. Forecasting Methodology and Results", 26/03/2013.

# 1.2 Base year model validation

- 1.2.1 The development, calibration and validation of the WSTM3 to 2010 conditions are fully reported in the "WSTM3 Local Model Validation Report (LMVR), January 2013". This section summarises the results of the model validation in the South Wokingham area.
- 1.2.2 Figure 2 shows all highway survey data locations in Wokingham Town Centre (WTC) and South Wokingham, which were used to validate the model. The survey data includes Automatic Traffic Counts (ATC) and junction Manual Classified Turning Counts (MCTC).



Figure 2: Locations of the Survey Sites. Wokingham Town Centre and South Wokingham

1.2.3 Figure 3 and figure 4 show the link validation around the South Wokingham area. Most of the links have a GEH of less than five indicating that WSTM3 has been validated well for the South Wokingham area.



Figure 3: South Wokingham GEH. AM peak hour



Figure 4: South Wokingham GEH. PM peak hour

1.2.4 Junction turning count data was collected at the Finchampstead Road/Molly Millar's Lane junction. The observed and modelled turning movement validation statistics for this site are presented in table 3.



Table 3: Finchampstead Road/Molly Millar's Lane junction validation statistics

- 1.2.5 The Finchampstead Road/Molly Millar's Lane junction is reasonably well validated both in the AM and PM peak models with the GEH on the majority of movements being less than 5.0. In the AM peak the Finchampstead Road south north movement has a GEH value of 5.9 with the modelled flows being 158 vehicles higher than observed flows. In the PM peak model a number of movements show GEH values greater than 5.0. These are Finchampstead Road north south and south north movements and the Molly Millar's Lane Finchampstead Road North movement.
- 1.2.6 The discrepancies between the observed and modelled junction turning movements are taken into account when a local area assessment of the western end of the SWDR is undertaken using Paramics.

# 1.3 WSTM3 Base, Scenario A and B results

- 1.3.1 The development, calibration and validation of the WSTM3 to 2010 conditions are fully reported in the "WSTM3 Local Model Validation Report (LMVR), January 2013". To enable a comparison of network performance between alternative land use and infrastructure scenarios three forecast year scenarios were developed:
  - Scenario A: takes into account planned development outside Wokingham borough, committed development in the borough but no SDL development in the borough
  - **Scenario B**: includes development in Scenario A plus SDL development in the borough with onsite infrastructure provision
  - Scenario C: based on Scenario B plus off-site transport interventions required to mitigate impacts of SDL development. Scenario C is effectively the same as SWDR Option B test.
- 1.3.2 The WSTM3 forecast model development is described in detail in the "WSTM3. Forecasting Report. Forecasting Methodology and Results", 26/03/2013.
- 1.3.3 This section provides figures of modelled link flows and VoC values for the Base, forecast Scenarios A and B. Scenario C (SWDR Option B) values are presented later in the document in Section 1.4 "Option A, B and C test results".
- 1.3.4 The values are reproduced in this section to undertake the comparison of the SWDR results with the 2010 situation and 2026 different land use and infrastructure assumptions.

### 1.3.5 WSTM3 2026 forecast scenarios A, B and C should not be confused with SWDR Option Tests A, B and C.

- 1.3.6 The VoC figures show link VoC and maximum junction turning movement VoC. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.3.7 In comparison with the 2010 base year network performance becomes increasingly worse as additional trips are accommodated with minor improvements as included in scenario A with committed development and scenario B with full SDL delivery in 2026.



Figure 5: 2010 Base AM peak actual flows, pcu



Figure 6: 2010 Base AM peak link and maximum junction turning movement VoC, %



Figure 7: 2010 Base PM peak actual flows, pcu



Figure 8: 2010 Base PM peak link and maximum junction turning movement VoC, %



Figure 9: WSTM3 2026 Scenario A. AM peak actual flows, pcu



Figure 10: WSTM3 2026 Scenario A. AM peak link and maximum junction turning movement VoC, %



Figure 11: WSTM3 2026 Scenario A. PM peak actual flows, pcu



Figure 12: WSTM3 2026 Scenario A. PM peak link and maximum junction turning movement VoC, %



Figure 13: WSTM3 2026 Scenario B. AM peak actual flows, pcu



Figure 14: WSTM3 2026 Scenario B. AM peak link and maximum junction turning movement VoC, %



Figure 15: WSTM3 2026 Scenario B. PM peak actual flows, pcu



Figure 16: WSTM3 2026 Scenario B. PM peak link and maximum junction turning movement VoC, %

# 1.4 Option A, B and C test results

- 1.4.1 This section describes the traffic impacts of Options A, B and C. Option B results are described first followed by Option A and C results, which are compared against Option B.
- 1.4.2 The assessment of the SWDR options have been undertaken through examining the following network parameters:
  - traffic flows and flow differences on key links
  - Iink and maximum junction turning movement VoC.

## **OPTION B**

- 1.4.3 Option B assumes that the SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout as in the base. The A321 Finchampstead Road Road/Molly Millar's Lane junction also remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.4 Option B is described first in this section as it approximates to the SWDR alignment shown in the South Wokingham SDL Supplementary Planning Document adopted in October 2011. Schematic presentation of Option B alignment and test assumptions are shown in figure 17.



Figure 17: Option B assumptions

- 1.4.5 Modelled flows predicted under Option B are presented in figure 18 for the AM peak and figure 20 for the PM peak.
- 1.4.6 Figures 19 and 21 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.7 In Option B the SWDR is predicted to attract in the AM peak 556-989 pcu in the eastbound direction and 509-769 pcu in the westbound direction. In the PM peak the SWDR is forecast to carry 423-647 pcu in the eastbound direction and 426-811 pcu in the westbound direction.
- 1.4.8 Both the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values at these locations approaching or exceeding 100% both in the AM and PM peaks, indicating a need for considered junction designs.



Figure 18: Option B. 2026 AM peak actual flows, pcu



Figure 19: Option B. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 20: Option B. 2026 PM peak actual flows, pcu



Figure 21: Option B. 2026 PM peak link and maximum junction turning movement VoC, %

1.4.10 An additional analysis of traffic flows has been undertaken at the western end of the SWDR. An area of Finchampstead Road (as shown in figure 22) has been cordoned to produce the AM and PM peak cordoned matrices. The matrices will also be used to undertake a micro-simulation analysis of this area using Paramics. This is reported in a separate section of this document.



Figure 22: Cordoned area of Finchampstead Road

# 1.4.11 The AM and PM peak cordoned matrices of demand flows are reproduced in table 4 and 5 correspondingly.

### Table 4: Cordoned matrices of demand flows. AM peak hour.

WSTM3 Base 2010

AM	M Demand flow,pcu												
		То С											
		Wellington Ro	Denmark St	Langborou	Access to	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	11	23	52	13	168	3	6	0	4	15	295
	Denmark St	58	0	6	39	15	192	433	4	16	10	11	784
	Langborough Rd	50	6	0	2	4	63	122	4	7	4	3	265
	Access to Tesco (SWDR in th	6	0	2	0	0	17	38	0	0	0	0	63
	Tangley Dr	3	0	1	0	0	19	15	0	0	0	0	38
From	Finchampstead Rd	538	13	126	36	32	0	193	4	14	1	17	975
	Molly Millar's Ln	124	14	287	33	30	170	0	15	122	44	34	872
	Oakley Dr	4	0	4	0	0	0	4	0	0	0	0	13
	Crail Close	17	0	43	0	0	26	15	0	0	0	0	101
	Carey Rd	2	0	2	0	0	1	2	0	0	0	0	6
	Carnival Pool Car Park	4	0	1	0	0	3	0	0	0	0	0	8
	Grand Total	806	44	494	163	94	659	825	32	159	62	80	3,420

# Option B (Central case: 30MPH on the SDR, with the bridge and Waterloo road closure)

AIVI				Jemanum	Jw,pcu								
							То						Grand
		Wellington Ro	Denmark St	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	17	33	53	23	239	9	5	1	6	23	408
	Denmark St	96	0	31	20	17	262	261	6	28	12	25	758
	Langborough Rd	245	11	0	0	1	61	49	1	2	1	5	376
	SWDR	114	2	2	0	10	130	498	7	22	5	3	793
1	Tangley Dr	3	0	0	1	0	32	8	0	0	0	0	44
From	Finchampstead Rd	505	26	52	203	33	0	193	5	79	7	44	1,147
1	Molly Millar's Ln	94	26	191	400	14	144	0	17	69	64	39	1,058
1	Oakley Dr	4	0	0	6	0	0	4	0	0	0	0	14
1	Crail Close	5	0	0	78	0	30	30	0	0	0	0	144
	Carey Rd	1	0	0	2	0	1	2	0	0	0	0	6
	Carnival Pool Car Park	7	0	6	0	0	5	1	0	0	0	0	18
	Grand Total	1,074	83	315	763	99	904	1,054	40	201	95	140	4,768

### Difference, Option B minus Base

AM				Demand fl	ow,pcu								
							То						Grand
		Wellington Ro	Denmark St	Langboro	SWDR	Tangley D	Finchamp	Molly Mil	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	5	9	0	10	71	6	-1	0	2	. 8	113
	Denmark St	38	0	25	-20	2	. 69	-173	2	12	. 3	. 14	-26
	Langborough Rd	195	6	0	-2	-3	-3	-72	-3	-6	-3	. 2	111
	SWDR	107	2	. 0	0	10	114	460	7	22	. 5	3	730
	Tangley Dr	0	0	0	1	0	13	-7	0	0	0	0	6
From	Finchampstead Rd	-34	13	-74	167	2	. 0	0	0	65	6	26	173
	Molly Millar's Ln	- 30	12	-96	368	-16	-27	0	2	-53	20	5	186
	Oakley Dr	0	0	-3	6	0	0	-1	0	0	0	0	2
	Crail Close	- 12	. 0	-43	78	0	5	16	0	0	0	0	43
	Carey Rd	0	0	-1	2	0	0	0	0	0	0	0	0
	Carnival Pool Car Park	3	, 0	5	0	0	1	0	0	0	0	0	10
	Grand Total	268	38	-179	601	5	244	229	8	42	. 33	60	1,348

### Table 5:Cordoned matrices of demand flows. PM peak hour.

#### WSTM3 Base 2010

PM	V Demand flow,pcu												
			То										
		Wellingto	Denmark S	Langborou	Access to	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	6	38	9	3	482	14	2	1	2	1	559
	Denmark St	34	0	13	4	2	264	142	3	36	1	0	499
	Langborough Rd	40	6	0	6	3	37	133	1	3	1	0	231
	Access to Tesco (SWDR i	79	0	14	0	0	58	127	0	0	0	0	277
	Tangley Dr	18	0	32	0	0	16	59	0	0	0	0	125
From	Finchampstead Rd	455	15	68	20	11	0	129	1	11	1	3	713
	Molly Millar's Ln	30	7	225	47	17	260	0	10	30	7	20	653
	Oakley Dr	11	0	8	0	0	7	3	0	0	0	0	29
	Crail Close	13	0	31	0	0	12	37	0	0	0	0	93
	Carey Rd	19	0	5	0	0	1	57	0	0	0	0	83
	Carnival Pool Car Park	25	0	4	0	0	33	2	0	0	0	0	64
	Grand Total	723	36	437	86	36	1,171	703	17	81	12	25	3,327

Option B (Central case: 30MPH on the SDR, with the bridge and Waterloo road closure) PM Demand flow.pcu

		-		Boind	ina nomp	Ju							
							То						Grand
		Wellingto	Denmark	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	15	75	25	1	362	27	2	1	2	19	527
	Denmark St	194	0	32	20	3	267	83	2	11	1	7	622
	Langborough Rd	151	10	0	0	0	60	52	0	1	0	9	285
	SWDR	114	1	1	0	6	237	453	4	42	1	0	859
	Tangley Dr	19	0	1	69	0	22	60	0	0	0	0	171
From	Finchampstead Rd	599	23	71	120	16	1	165	0	20	6	12	1,035
	Molly Millar's Ln	50	12	126	393	23	337	0	12	31	2	13	999
	Oakley Dr	12	0	1	10	0	7	4	0	0	0	0	34
	Crail Close	4	0	1	43	0	14	56	0	0	0	0	119
	Carey Rd	39	0	13	2	0	1	42	0	0	0	0	97
	Carnival Pool Car Park	47	0	22	1	0	58	15	0	0	0	0	143
	Grand Total	1,230	60	343	683	50	1,367	957	20	107	13	60	4,890

#### Difference, Option B minus Base

PM	V Demand flow,pcu												
							То						Grand
		Wellingto	Denmark	Langborou	SWDR	Tangley D	Finchamp	Molly Mill	Oakley Dr	Crail Close	Carey Rd	Carnival P	Total
	Wellington Rd	0	8	37	16	-3	-120	13	0	0	0	17	- 32
	Denmark St	161	0	20	17	0	3	-59	-1	-25	0	7	123
	Langborough Rd	112	4	0	-6	-3	23	-82	-1	-2	-1	8	54
	SWDR	36	1	-12	0	6	179	326	4	42	1	0	582
	Tangley Dr	1	0	-31	69	0	5	1	0	0	0	0	45
From	Finchampstead Rd	144	7	3	100	6	0	36	0	9	6	9	321
	Molly Millar's Ln	20	4	-99	345	7	77	0	2	1	-5	-6	346
	Oakley Dr	2	0	-7	10	0	0	1	0	0	0	0	4
	Crail Close	-9	0	-29	43	0	2	19	0	0	0	0	26
	Carey Rd	20	0	7	2	0	0	-15	0	0	0	0	14
	Carnival Pool Car Park	22	0	18	1	0	25	13	0	0	0	0	79
	Grand Total	507	24	-94	597	13	196	254	3	26	1	36	1,563

- 1.4.12 Compared to the base year the volume of traffic going through the area is forecast to increase by 1,348 pcu in the AM peak and by 1,563 pcu in the PM peak, which is equivalent to a 38% and 47% increase in each of the peaks.
- 1.4.13 Option B cordoned matrices of demand flows show that the main movements through the two roundabouts on the western end of the SWDR are between Finchampstead Road and Wellington

road and SWDR and Molly Millar's Lane (both directions). The SWDR - Molly Millar's Lane movement shows a significant increase in traffic in Option B compared to the base resulting in increases in delays on the Finchampstead Road and Molly Millar's Lane approaches. This indicates that any mitigation in this area should consider this interaction.

# **OPTION A**

- 1.4.14 Schematic presentation of Option A alignment and test assumptions are shown in figure 23.
- 1.4.15 Option A assumes that SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road between the SWDR and Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.16 This Option A is very similar to Option B but assumes that the SWDR runs closer to the railway line thus providing a slightly shorter route.



Figure 23: Option A assumptions

- 1.4.17 Modelled flows predicted under Option A are presented in figure 24 for the AM peak and figure 27 for the PM peak. Option A flows have been compared against Option B flows and the changes in flows are demonstrated in figures 25 and 28 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic in the northern option whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.4.18 Figures 26 and 29 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC

value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.19 The shorter northern route in Option A is forecast to attract up to 179 more pcu in the AM peak and up to 89 additional pcu in the PM peak thus further reducing the traffic levels in Wokingham.
- 1.4.20 Similar to Option B in the northern Option A the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 24: Option A. 2026 AM peak actual flows, pcu



Figure 25: Option A minus Option B. 2026 AM peak actual flows, pcu



Figure 26: Option A. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 27: Option A. 2026 PM peak actual flows, pcu



Figure 28: Option A minus Option B. 2026 PM peak actual flows, pcu



Figure 29: Option A. 2026 PM peak link and maximum junction turning movement VoC, %

## **OPTION C**

- 1.4.21 Schematic presentation of Option C alignment and test assumptions are shown in figure 30.
- 1.4.22 Option C assumes that SWDR is a single lane carriageway with a speed limit of 30 mph. The SWDR runs through the South Wokingham SDL and provides a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road between the SWDR and Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.4.23 This Option C very similar to Option B but assumes that the SWDR runs further away from the railway line thus providing a slightly longer route.



Figure 30: Option C assumptions

- 1.4.24 Modelled flows predicted under Option C are presented in figure 31 for the AM peak and figure 34 for the PM peak. Option C flows have been compared against Option B flows and the changes in flows are demonstrated in figures 32 and 35 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic in the southern option whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.4.25 Figures 33 and 36 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates a spare capacity. A

VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.4.26 In comparison with Option B the longer southern route is predicted to attract up to 357 less two-way pcu in the AM peak and up to 260 less pcu in the PM peak resulting in slightly higher volumes of traffic in Wokingham especially on the A329 London Road.
- 1.4.27 Similar to Option B in the southern Option C the western and the northern ends of the SWDR are predicted to be a source of congestion in 2026 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 31: Option C. 2026 AM peak actual flows, pcu



Figure 63: Option B4 minus Option B. 2026 PM peak actual flows, pcu



Figure 64: Option B4. 2026 PM peak link and maximum junction turning movement VoC, %

## **OPTION B5**

1.5.23 Option B4 assumes a single carriageway road between the Tesco and Molly Millar's Lane signalised junctions on Finchampstead Road. Option B4 results show considerable congestion at the respective junctions. Option B5 tests a dual two lane carriageway between the Tesco and Molly Millar's Lane roundabouts on Finchampstead Road using Option B4 test as the basis. Schematic presentation of Option B5 alignment and test assumptions are shown in figure 65.



Figure 65: Option B5 assumptions

- 1.5.24 Modelled flows predicted under Option B5 are presented in figure 66 for the AM peak and figure 69 for the PM peak. Option B5 flows have been compared against Option B4 flows and the changes in flows are demonstrated in figures 67 and 70 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic with an introduction of dualling between the Tesco and Molly Millar's Lane signalised junctions whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.25 Figures 68 and 71 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.26 The increased capacity on Finchampstead Road between the Tesco and Molly Millar's Lane signals results in negligible reassignment of traffic across the network. Changes in the VoC values are also

negligible with the exception of the section of Finchampstead Road between the Tesco and Molly Millar's Lane junctions. In the AM peak the VoC drops down from 98% in Option B4 to 90% in Option B5 in the northbound direction and from 89% to 75% in the southbound direction. In the PM peak the changes in VoC values are negligible.



Figure 66: Option B5. 2026 AM peak actual flows, pcu



Figure 67: Option B5 minus Option B4. 2026 AM peak actual flows, pcu



Figure 68: Option B5. 2026 AM peak link and maximum junction turning movement VoC, %


Figure 69: Option B5. 2026 PM peak actual flows, pcu



Figure 70: Option B5 minus Option B4. 2026 PM peak actual flows, pcu



Figure 71: Option B5. 2026 PM peak link and maximum junction turning movement VoC, %

1.5.27 Option B assumes a single carriageway road between the Tesco and Molly Millar's Lane roundabouts on Finchampstead Road, which results in a considerable congestion at the respective roundabouts. An alternative alignment has been tested at the western end of the SWDR to understand its impact particularly with regards to providing congestion relief in the area. Option B6 assumes a large roundabout at the Finchampstead Road/SWDR intersection. The Finchampstead Road/Molly Millar's Lane intersection is a signalised junction with no movement allowed between Molly Millar's Lane and Finchampstead Road North. Therefore the aspiration is that the additional link running between the SWDR and Molly Millar's Lane will serve as the main route between the two roads.



1.5.28 Schematic presentation of Option B6 alignment and test assumptions are shown in figure 72.

Figure 72: Option B6 assumptions

- 1.5.29 Modelled flows predicted under Option B6 are presented in figure 73 for the AM peak and figure 76 for the PM peak. Option B6 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 74 and 77 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic with an introduction of an alternative layout at the western end of the SWDR whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.30 Figures 75 and 78 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC

value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.5.31 The alternative layout provides a lot more capacity than the two roundabouts in Option B, which attracts substantial volumes of additional traffic from across the network into the Finchampstead Road and the SWDR Molly Millar's Lane corridors. In the AM and PM peaks the flow on Finchampstead Road increases by up to around 500 pcu in both directions. The increase in traffic flow on Molly Millar's Lane is of a similar magnitude.
- 1.5.32 The impact on the VoC in the area of interest is mixed with the SWDR-Molly Millar's Lane movement likely to experience less congestion than in Option B. There is little change to the travel conditions on Finchampstead Road with VoC values still being high which may be due to additional traffic attracted to the corridor.



Figure 73: Option B6. 2026 AM peak actual flows, pcu



Figure 74: Option B6 minus Option B. 2026 AM peak actual flows, pcu



Figure 75: Option B6. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 76: Option B6. 2026 PM peak actual flows, pcu



Figure 77: Option B6 minus Option B. 2026 PM peak actual flows, pcu



Figure 78: Option B6. 2026 PM peak link and maximum junction turning movement VoC, %

- 1.5.33 Option B8 tests an improved connection to Bracknell via Waterloo Road and Peacock Lane. Schematic presentation of Option B8 alignment and test assumptions are shown in figure 79. Option B8 assumes that the Old Wokingham/Peacock Lane/Waterloo Road junction is a roundabout. In Option B this intersection is a priority junction with Waterloo Road being a minor arm.
- 1.5.34 It should be noted that Option B8 is reported before Option B7 to show the incremental impact of changes associated with improved connection to Bracknell.



Figure 79: Option B8 assumptions

- 1.5.35 Modelled flows predicted under Option B8 are presented in figure 80 for the AM peak and figure 83 for the PM peak. Option B8 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 81 and 84 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic when the connection to Bracknell via Peacock Lane is improved whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.36 Figures 82 and 85 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.5.37 An improved connection to Bracknell is forecast to attract travellers that would otherwise use the A329M and A329 Berkshire Way to get to and from Bracknell and further to the M3. In the AM the flow on a section of Berkshire Way between Coppid Beech and Vigar Way reduces by 148 pcu in the eastbound direction and 167 pcu in the westbound direction. In the PM the impact is less material with a reduction of 51 pcu in the eastbound direction and no change in flow in the westbound direction.
- 1.5.38 The improved section of Waterloo Road also makes the north-south route through Old Wokingham route more attractive to traffic that used A321 Finchampstead Road, A3095 Mill Lane or A322 Bagshot Road in Option B attracting up to 258 and 240 additional pcu in the AM and PM respectively, predominantly in the southbound direction.
- 1.5.39 The change of the Old Wokingham/Peacock Lane/Waterloo Road junction type from a priority to a roundabout results in a reassignment of traffic from Easthampstead Road Old Wokingham Road route (around 142 pcu in the AM and 325 pcu in the PM) to a more logical shorter route via Waterloo Road.
- 1.5.40 In comparison with Option B the improved connection to Bracknell provides little change to congestion at the northern and western ends of the SWDR.



Figure 80: Option B8. 2026 AM peak actual flows, pcu



Figure 81: Option B8 minus Option B. 2026 AM peak actual flows, pcu



Figure 82: Option B8. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 83: Option B8. 2026 PM peak actual flows, pcu



Figure 84: Option B8 minus Option B. 2026 PM peak actual flows, pcu



Figure 85: Option B8. 2026 PM peak link and maximum junction turning movement VoC, %

- 1.5.41 Unlike Option B, Option B7 assumes that the bridge that would allow a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west is not provided but the connection to Bracknell via Peacock Lane is improved. Option B7 assumes that the Old Wokingham/Peacock Lane/Waterloo Road junction is a roundabout. In Option B this intersection is a priority junction with Waterloo Road being a minor arm.
- 1.5.42 The section of the SWDR between Waterloo Road and Finchampstead Road is assumed to be a single lane carriageway with a speed limit of 30 mph. Waterloo Road is assumed closed south of Priest Avenue. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road/Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.5.43 Schematic presentation of Option B6 alignment and test assumptions are shown in figure 86.



Figure 86: Option B7 assumptions

1.5.44 Modelled flows predicted under Option B7 are presented in figure 87 for the AM peak and figure 90 for the PM peak. To understand the incremental impact of not providing the bridge and an improved connection to Bracknell, Option B7 flows have been compared against Option B8 flows and the changes in flows are demonstrated in figures 88 and 91 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic when the bridge is not provided whereas those links coloured in different shades of blue are likely to carry less traffic.

- 1.5.45 Figures 89 and 92 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.46 If the bridge is not provided but the connection to Bracknell is improved traffic that used SWDR as a through route or to access the South Wokingham SDL development or other areas of Wokingham will be finding alternative routes to reach their destinations. The increases in traffic are likely to affect A329 London Road, A321 Finchampstead Road, Easthampstead Road, Priest Avenue, Rances Lane and others both in the AM and PM peaks. At the same time the improved connection to Jennet's Park in Bracknell attracts additional trips which further exacerbate congestion at BFC roundabouts.
- 1.5.47 The non-provision of the bridge makes little change to the operation of the SWDR junctions with the western end of the SWDR likely to be a source of congestion in 2026 both in the AM and PM peaks. As far as the northern end of the SWDR is concerned the congestion is likely to occur in the PM but not in the AM.



Figure 87: Option B7. 2026 AM peak actual flows, pcu



Figure 88: Option B7 minus Option B8. 2026 AM peak actual flows, pcu



Figure 89: Option B7. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 90: Option B7. 2026 PM peak actual flows, pcu



Figure 91: Option B7 minus Option B8. 2026 PM peak actual flows, pcu



Figure 92: Option B7. 2026 PM peak link and maximum junction turning movement VoC, %

1.5.48 Schematic presentation of Option B9 alignment and test assumptions are shown in figure 93. Option B9 is based on Option B but assumes that an additional connection is provided between the SWDR and Finchampstead Road south of Molly Millar's Lane. The additional link is connected to the A321 Finchampstead Road via a roundabout.



Figure 93: Option B9 assumptions

- 1.5.49 Modelled flows predicted under Option B9 are presented in figure 94 for the AM peak and figure 97 for the PM peak. Option B9 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 95 and 98 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic with an introduction of an additional link between the SWDR and Finchampstead Road whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.50 Figures 96 and 99 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates a spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.51 In the AM peak the additional link between the SWDR and Finchampstead Road is forecast to attract around 515 pcu in the eastbound direction and 271 pcu in the westbound direction thus relieving a section of Finchampstead Road by up to 283 pcu in both directions. In the PM peak the additional

connection is predicted to carry around 306 pcu in the eastbound direction and 528 pcu in the westbound direction with a proportion of this traffic reassigning from Finchampstead Road.

- 1.5.52 An introduction of a new connection, which provides additional capacity in the area around the two existing congested roundabouts, also results in a reassignment of traffic with traffic increases forecast on Finchampstead Road, Molly Millar's Lane and SWDR.
- 1.5.53 The western end of the SWDR is likely to remain congested in Option B9, which is mainly a result of the additional traffic attracted to the corridor.



Figure 94: Option B9. 2026 AM peak actual flows, pcu



Figure 95: Option B9 minus Option B. 2026 AM peak actual flows, pcu



Figure 96: Option B9. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 97: Option B9. 2026 PM peak actual flows, pcu



Figure 98: Option B9 minus Option B. 2026 PM peak actual flows, pcu



Figure 99: Option B9. 2026 PM peak link and maximum junction turning movement VoC, %

1.5.54 Schematic presentation of Option B10 alignment and test assumptions are shown in figure 100. Option B10 is based on Option B but assumes that the existing priority junction at the Heathlands Road/Easthampstead Road intersection is a roundabout with a two-lane approach on each arm. The objective of this test is to determine if an improvement at the Heathlands Road/Easthampstead Road junction would attract enough traffic from Finchampstead Road to Easthampstead Road and thus provide congestion relief at the western end of the SWDR.



*Figure 100:* Option B10 assumptions

- 1.5.55 Modelled flows predicted under Option B10 are presented in figure 101 for the AM peak and figure 104 for the PM peak. Option B10 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 102 and 105 for the AM and PM respectively. Links coloured in various shades of green are predicted to carry higher volumes of traffic when the Heathlands Road/Easthampstead Road intersection is a roundabout whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.56 Figures 103 and 106 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.5.57 In the AM peak an easier access from Heathlands Road to Easthampstead Road results in a reassignment of traffic to Heathlands Road (up to 196 northbound and up to 36 southbound pcu) from alternative parallel routes including Finchampstead Road and Easthampstead Road. A change in traffic flows between Option B10 and A in the PM peak test is negligible.
- 1.5.58 The modelling results are slightly different to an expectation that an improvement at this junction would encourage a greater transfer of traffic from Finchampstead Road to Easthampstead Road. The Select Link (SL) analysis undertaken on the A321 Sandhurst Road using the AM peak Option B scenario shows that there is a potential to transfer 200-300 pcu in each direction. However, the journey times achievable through Easthampstead Road may not be attractive enough due to delays along Nine Mile Ride and on the approach to Peach Street and due to capacity constraints caused by on-street parking and school access on Easthampstead Road.



Figure 101: Option B10. 2026 AM peak actual flows, pcu



Figure 102: Option B10 minus Option B. 2026 AM peak actual flows, pcu



Figure 103: Option B10. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 104: Option B10. 2026 PM peak actual flows, pcu



Figure 105: Option B10 minus Option B. 2026 PM peak actual flows, pcu



Figure 106: Option B10. 2026 PM peak link and maximum junction turning movement VoC, %

- 1.5.59 Option B11 assumes that the bridge that would allow a through route between the A329 London Road in the north and the A321 Finchampstead Road in the west is not provided but the connection to Bracknell via Waterloo Road and Peacock Lane is improved. Option B11 assumes that the Old Wokingham/Peacock Lane/Waterloo Road junction is a roundabout. In Option B this intersection is a priority junction with Waterloo Road being a minor arm.
- 1.5.60 The section of the SWDR between Waterloo Road and Finchampstead Road is assumed to be a single lane carriageway with a speed limit of 30 mph. The western end of the SWDR is assumed to be connected to the A321 Finchampstead Road via a roundabout. The A321 Finchampstead Road Road/Molly Millar's Lane junction remains a roundabout. The section of Finchampstead Road between the SWDR and Molly Millar's Lane has a single carriageway capacity (as in the base).
- 1.5.61 This Option B11 is similar to Option B7 but assumes that Waterloo Road remains open south of Priest Avenue.



1.5.62 Schematic presentation of Option B11 alignment and test assumptions are shown in figure 107.

Figure 107: Option B11 assumptions

1.5.63 Modelled flows predicted under Option B11 are presented in figure 108 for the AM peak and figure 111 for the PM peak. To understand the impact of closing Waterloo Road, Option B11 flows have been compared against Option B7 flows and the changes in flows are demonstrated in figures 109 and 112 for the AM and PM respectively (Option B7 flows minus Option B11 flows). Links coloured in various shades of green are predicted to carry higher volumes of traffic when Waterloo Road is closed whereas those links coloured in different shades of blue are likely to carry less traffic.

- 1.5.64 Figures 110 and 113 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.65 The Waterloo Road closure results in a reduction of around 477 pcu in the AM and 684 pcu in the PM driving through Priest Avenue in both directions. This traffic finds alternative routes via Rances Lane, Easthampstead Road, the SWDR and Wokingham Town Centre.
- 1.5.66 The closure of the Waterloo Road makes little change to the operation of the SWDR junctions with the western end of the SWDR likely to be a source of congestion in 2026 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 108: Option B11. 2026 AM peak actual flows, pcu



Figure 109: Option B7 minus Option B11. 2026 AM peak actual flows, pcu



Figure 110: Option B11. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 111: Option B11. 2026 PM peak actual flows, pcu



Figure 112: Option B7 minus Option B11. 2026 PM peak actual flows, pcu



Figure 113: Option B11. 2026 PM peak link and maximum junction turning movement VoC, %

1.5.67 Option B12 is based on Option B but assumes that the section of the SWDR between the Tesco's roundabout and the A321 Finchampstead Road is removed therefore the through connection between the A329 London Road and the A321 Finchampstead Road via the SWDR becomes unavailable. Option B12 alignment and test assumptions are shown in figure 114.



Figure 114: Option B12 assumptions

- 1.5.68 Modelled flows predicted under Option B12 are presented in figure 115 for the AM peak and figure 118 for the PM peak. To understand the impact of not providing the connection, Option B12 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 116 and 119 for the AM and PM respectively (Option B12 flows minus Option B flows). Links coloured in various shades of green are predicted to carry higher volumes of traffic when the connection is not provided whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.69 Figures 117 and 120 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.70 If the SWDR is not connected to the A321 Finchampstead Road at its western end, the through traffic is predicted to route via the Wokingham Town Centre instead using A329 London Road, Peach

Street, Denmark Street and Finchampstead Road north of Oakey Drive. Some of the traffic is forecast to use Easthampstead Road and Murdoch Road to access Denmark Street via the junction with Langborough Road. The traffic reassignment has a wider effect with increases in traffic flows also predicted along the NWDR.

1.5.71 An increase in traffic flows along the A329 London Road and in Wokingham Town Centre results in worsening of congestion at a number of junctions in Option B12 when compared to option B. The western end of the SWDR remains to be congested in Option B12 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 115: Option B12. 2026 AM peak actual flows, pcu



Figure 116: Option B12 minus Option B. 2026 AM peak actual flows, pcu



Figure 117: Option B12. 2026 AM peak link and maximum junction turning movement VoC, %


Figure 118: Option B12. 2026 PM peak actual flows, pcu



Figure 119: Option B12 minus Option B. 2026 PM peak actual flows, pcu



Figure 120: Option B12. 2026 PM peak link and maximum junction turning movement VoC, %

## **OPTION B13**

1.5.72 Option B13 is based on Option B but assumes that the connection between the Tesco's roundabout and the A321 Finchampstead Road is removed and the bridge on the eastern section of the SWDR is not delivered (the Waterloo Road level crossing remains operational). Schematic presentation of Option B13 alignment and test assumptions are shown in figure 121.



Figure 121: Option B13 assumptions

- 1.5.73 Modelled flows predicted under Option B13 are presented in figure 122 for the AM peak and figure 125 for the PM peak. To understand the impact of not providing the connection, Option B13 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 123 and 126 for the AM and PM respectively (Option B13 flows minus Option B flows). Links coloured in various shades of green are predicted to carry higher volumes of traffic when the connection is not provided whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.74 Figures 124 and 127 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.
- 1.5.75 In Option B13 the traffic that used to use the SWDR re-routes via the A329 London Road, Peach Street, Denmark Street and Finchampstead Road north of Oakey Drive. Some of the traffic is

forecast to use Easthampstead Road and Murdoch Road to access Denmark Street via the junction with Langborough Road. The traffic reassignment has a wider effect with increases in traffic flows also predicted along the NWDR.

1.5.76 An increase in traffic flows along the A329 London Road and in Wokingham Town Centre results in worsening of congestion at a number of junctions in Option B13 when compared to option B. The western end of the SWDR remains to be congested in Option B13 with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 122: Option B13. 2026 AM peak actual flows, pcu



Figure 123: Option B13 minus Option B. 2026 AM peak actual flows, pcu



Figure 124: Option B13. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 125: Option B13. 2026 PM peak actual flows, pcu



Figure 126: Option B13 minus Option B. 2026 PM peak actual flows, pcu



Figure 127: Option B13. 2026 PM peak link and maximum junction turning movement VoC, %

## **OPTION B14**

- 1.5.77 Option B14 is based on Option B but assumes that South Wokingham SDL including the associated on-site infrastructure and the SWDR are not delivered. This test has been undertaken to facilitate understanding of what would happen in 2026 without the SWDR and proposed housing in that location but with all other SDLs and Core Strategy infrastructure improvements delivered.
- 1.5.78 Schematic presentation of Option B14 alignment and test assumptions are shown in figure 128.



*Figure 128: Option B14 assumptions* 

- 1.5.79 Modelled flows predicted under Option B14 are presented in figure 129 for the AM peak and figure 132 for the PM peak. To understand the impact of not having the South Wokingham SDL and not providing the SWDR, Option B14 flows have been compared against Option B flows and the changes in flows are demonstrated in figures 130 and 133 for the AM and PM respectively (Option B14 flows minus Option B flows). Links coloured in various shades of green are predicted to carry higher volumes of traffic when the connection is not provided whereas those links coloured in different shades of blue are likely to carry less traffic.
- 1.5.80 Figures 131 and 134 show link VoC and maximum junction turning movement VoC in the AM and PM peaks. The maximum junction turning movement VoC is the highest VoC across all turning movements at a junction. In general, a VoC value of 85% and below indicates spare capacity. A VoC value of between 85% and 100% means that a junction or a turning movement operates within, but

approaching, capacity with signs of queuing and delays whereas a VoC value of 100% and above indicates that the junction operates at or above capacity, resulting in queues and delays.

- 1.5.81 A comparison in traffic flows between Option B14 (South Wokingham SDL is not delivered and the SWDR is not provided) and Option B (with the South Wokingham SDL and with the SWDR) shows that there is an increased impact on the Wokingham town centre routes without the link road, which is not a direct impact of the additional South Wokingham trips but traffic coming from somewhere else. The results therefore highlight the strategic nature of the SWDR.
- 1.5.82 Under Option B14 the A321 Finchampstead Road north of the Molly Millar's is predicted to be congested with the VoC values approaching or exceeding 100% both in the AM and PM peaks.



Figure 129: Option B14. 2026 AM peak actual flows, pcu



Figure 130: Option B14 minus Option B. 2026 AM peak actual flows, pcu



Figure 131: Option B14. 2026 AM peak link and maximum junction turning movement VoC, %



Figure 132: Option B14. 2026 PM peak actual flows, pcu



Figure 133: Option B14 minus Option B. 2026 PM peak actual flows, pcu



Figure 134: Option B14. 2026 PM peak link and maximum junction turning movement VoC, %